Testimony from NYCHA's Executive Vice President for Operations Support Services Keith Grossman
Summer Preparedness in NYCHA Developments
Committee on Public Housing
Tuesday, June 13, 2023 – 1 p.m.
New York City Hall Council Chambers

Chair Alexa Avilés, members of the Committee on Public Housing, other distinguished members of the City Council, NYCHA residents, community advocates, and members of the public: good afternoon. I am Keith Grossman, NYCHA's Executive Vice President for Operations Support Services. I am pleased to be joined by Ukah Busgith, Executive Vice President for Resident Services, Partnerships, and Initiatives, and Vlada Kenniff, Senior Vice President for Sustainability.

Thank you for this opportunity to discuss how the Authority strives to keep residents safe and healthy during the summer season. Promoting the well-being of NYCHA residents and improving the community's quality of life is our top priority, as reflected by our greater mission as well as our day-to-day work.

Emergency Preparedness

NYCHA has teams and systems in place to address any emergencies that arise, from extreme heat to natural disasters such as extreme rain, coastal storms, and hurricanes. We recently merged our Emergency Services Department and Office of Emergency Management – the newly formed Emergency Management and Services Department (EMSD) can more comprehensively manage emergencies through emergency planning, response, and preventative infrastructure maintenance work across the Authority.

The EMSD team of more than 130 employees works to reduce NYCHA's vulnerability to hazards while assisting residents and staff to recover from day-to-day emergencies as well as large-scale disruptions. A key focus is on preventative measures, such as helping the community to proactively prepare for potential issues like extreme heat and storms. This involves disseminating informational materials to residents at events like Family Days, monitoring weather forecasts, planning for adequate response with City agencies, activating NYCHA's Emergency Operations Center (EOC) when needed, and prioritizing and deploying resources. Our responses to emergencies are coordinated not only internally, across departments, but also

with critical City, State, and federal partners – to ensure the availability of necessary resources, such as equipment, generators, and water stations, and to directly assist those who are impacted.

The EOC enables NYCHA to respond effectively to service interruptions as well as public safety hazards by coordinating the flow of resources and policy decisions. The EOC also communicates vital information and safety alerts to the NYCHA community through robocalls and social media advisories, amplifying the messaging of the City's Advance Warning System.

When extreme heat is forecasted, NYCHA staff will make hundreds of outreach calls to vulnerable residents to ensure they are equipped with the appropriate information, services, and resources, such as access to air conditioning or a cooling center. We also disseminate information on staying safe to resident associations. Although cooling centers are managed by our City agency partners, NYCHA ensures that cooling centers located on our campuses have sufficient cooling capabilities.

NYCHA also works with our utility partners to reduce electrical consumption, and thus the strain on the electrical system, when necessary.

NYCHA prepares for summer emergencies before the season even begins, proactively monitoring our work order system for potential issues and readying key equipment. For instance, NYCHA has 28 stand-by generators on hand in case of power outages, along with a light tower, command bus, emergency response truck, water truck, and water stations. Additionally, we systematized our response processes and emergency plans and have trained and briefed staff across departments on emergency preparedness. That includes training elevator staff on how to respond to power outages. Development staff are also regularly provided with key safety information.

Climate Change and Resilience

We recognize summers are getting hotter and extreme weather events more frequent. Numerous efforts are underway to make our developments more resilient. For instance, through the Clean Heat for All Challenge – a collaboration between NYCHA, the New York Power Authority (NYPA), and the New York State Energy Research and Development Authority – an initial $70

million investment is spurring the development and production of 30,000 new heat pumps for NYCHA residents. This electric, efficient, easily installable technology will provide reliable heating and, notably, universal cooling for thousands of residents.

Thanks to another partnership with NYPA, NYCHA is using a design-build delivery model to procure a solar and storage system that will power the critical loads of two senior buildings and a community center at Borinquen Plaza. Additionally, there are over 100 natural gas-powered generators in operation that can provide resilient electric back-up power to more than 10,500 NYCHA homes – and over 100 additional generators are on the way.

To prepare for extreme rains, NYCHA is designing cloudburst-resilient infrastructure at seven developments, with construction underway at one development. In addition, deployable and permanent infrastructure is in place to protect more than 170 of our buildings from coastal flooding.

Community Programming

We are proud to offer young people a safe and productive place to be this summer, thanks to the extended hours at our community centers supported by partners like the NYC Department of Youth and Community Development (DYCD). Summer meals are also available, and NYCHA residents are being hired for this effort at about 30 locations.

Productive Partnerships

Whether it's with partners like New York City Emergency Management, New York City Aging, DYCD, NYPD, or the City Council, collaboration enables us to help ensure safe and healthy communities. Thank you for supporting these critical efforts. We look forward to our continued work together, and we are happy to answer any questions you may have.

To: NYC Council Committee on Public Housing

From: April McIver, Executive Director, The Plumbing Foundation

Date: June 13, 2023

Re: Summer Preparedness in NYCHA Developments

INTRODUCTION

My name is April McIver, and I am the Executive Director of the Plumbing Foundation City of New York, Inc. The Plumbing Foundation was founded in 1986 and is a non-profit organization of small and large, union and non-union plumbing contractors, engineering associations, supply houses, and manufacturers whose mission is to protect the public health and safety of New York City through the enactment and enforcement of safe plumbing codes.

Discussing the topic of "Summer Preparedness" in NYCHA developments must include consideration of the historical increase in cases of Legionnaires' Disease seen every summer in NYC. The NYC Council has the opportunity now to address the problem of Legionella bacteria and hopefully prevent cases and deaths by moving Int. 0783-2022, a bill designed to address legionella bacteria throughout a building's water system and not just cooling towers which is the only current regulatory scheme for testing of Legionella bacteria in NYC. This is not only pertinent for our vulnerable populations in NYCHA developments, but for all residents and visitors in NYC.

Below are our comments on Int. 0783, which includes amendments based on a joint effort with several industry experts consulted throughout the process, including but not limited to The International Association of Plumbing and Mechanical Officials (IAPMO), Special Pathogens Laboratory, and John T. Letson, the Vice President Plant Operations at Memorial Sloan Kettering Cancer Center (MSK).

COMMENTS

According to the U.S. Centers for Disease Control and Prevention (CDC), there has been an increase of more than **550%** of reported cases of Legionnaires' disease between 2000 and 2017, with an estimated 8,000–18,000 cases annually.[1] According to the National Academies of Sciences, Engineering, and Medicine as published by the National Academies Press (hereinafter "NAP

[1] Association of Water Technologies, *Legionella 2019: A position Statement and Guidance Document* (2019), *available at* https://www.awt.org/pub/?id=035C2942-03BE-3BFF-08C3-4C686FB7395C, at 1 (stating "Surveillance data by the Centers for Disease Control and Prevention (CDC) for the United States shows an increase of more than 550% in the annual incidence of Legionnaires' disease cases reported from 2000-2017").

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Report"), there has been an increase of more than **six-fold** from 2000–2018.[2] The NAP Report states that the number of cases is likely unreported and estimates that the actual number of people with Legionnaires' disease ranges from **52,000–70,000 per year** (in the United States alone).[3]

In a 2016 *Morbidity and Mortality Weekly Report* from the CDC, while the most frequent outbreaks of *Legionella* were from hotels, health care facilities, etc., **potable water was the most frequent *source* of the exposure**.[4] A report by the Association of Water Technologies (AWT) states:

> [W]hile building waters and evaporative condensers are also a potential source related to Legionnaires' disease, and long thought to be the major source of Legionella-causing disease, ***current data suggest that domestic (potable) water plumbing systems are responsible for an even larger number of cases of legionellosis***.[5]

AWT further states that people can be exposed to *Legionella* simply by washing their hands and face, showering, or brushing their teeth.[6]

In 2016, the New York City Council passed a law requiring maintenance of cooling towers to help prevent the spread of *Legionella*. While this law and ensuing regulations passed by the New York City Department of Health and Mental Hygiene (DOHMH) have certainly assisted in the prevention of Legionnaires' disease outbreaks that would otherwise stem from poorly maintained cooling towers, the City's laws do not address domestic/potable water systems, despite scientific evidence that such systems are a major source of *Legionella*. We have seen outbreaks every year since.

Several research-based organizations (cited herein) have cried out to policymakers to address domestic/potable water systems in order to control the spread of *Legionella* more effectively. The Plumbing Foundation City of New York, Inc. has attempted to have such conversations with DOHMH to no avail. While the scientific community does not state there is one single solution, rather sets forth a multitude of preventative actions that can and should be taken, for NYC to decide to take **no action** at this time is not a solution and can and will lead to another dangerous outbreak of Legionnaires' disease.

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[2] National Academies of Sciences, Engineering, and Medicine, *Management of Legionella in Water Systems*, The National Academies Press (2020), available at https://www.nap.edu/catalog/25474/management-of-legionella-in-water-systems, at 1.

[3] *Id.* at 5. Part of the reasoning as asserted in the NAP Report is that there is a lack of adequate testing among pneumonia patients in most U.S. hospitals and a virtual absence of diagnosis for outpatients. The NAP report states that it is generally acknowledged that Legionnaires' disease is underreported by 8–10 fold.

[4] Laurel E. Garrison, MPH et al., *Vital Signs: Deficiencies in Environmental Control Identified in Outbreaks of Legionnaires' Disease — North America, 2000–2014*, Morbidity and Mortality Weekly Report (June 10, 2016) *available at* https://www.cdc.gov/mmwr/volumes/65/wr/mm6522e1.htm?s_cid=mm6522e1_w (also acknowledging that there was a large number of cooling tower cases).

[5] Association of Water Technologies, *supra* note 1, at 5 (emphasis added).

[6] *Id.*

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Further, in 2019, lawmakers in NYS and NYC passed ambitious climate-friendly laws to push our buildings to become more "green."[7] An unintended consequence of the otherwise well-intentioned policies is that green buildings can, and do, worsen *Legionella* problems due to lengthened water residence, stagnation, lowered hot water temperatures, and low-flow fixtures.[8] According to the NAP Report, net-zero buildings pose various health concerns with regards to water; for example, use of heat pumps or solar hot-water heating may result in water temperatures insufficient to prevent *Legionella* growth.[9]

It is for these reasons the Plumbing Foundation strongly advises that the City Council take into consideration the entirety of the legislation submitted below rather than the current version of 0783-2022. While we are very supportive of the legislation in theory, we must emphasize that without including a detailed definition section, risk management assessment including of dead legs and stagnant water, process control measures and compliance inspections, references to the NYC Construction Code to make it clear that replacement in kind must in compliance with that Code, increasing testing to 90 days, copper ionization as a technique, and revising the law on hot water temperature, it is truly a disservice to the public health. These provisions, as included in the full draft below, are vital to ensuring the public health and safety of NYC. Due to our experiences of trying to work with the DOHMH, we have lost confidence that not providing them with more direction is to both their detriment and the City's. This is one reason the City Council passed Local Law 86 of 2019, which sets forth qualification requirements for those inspecting and maintaining/cleaning water tanks, was passed in response to DOHMH's failure to set any real standards. Because of this lack of oversight, a building superintendent could technically have "completed" a required water tank inspection with absolutely no experience, not to mention which puts them in a dangerous situation climbing up the tower. The City Council had to step in which is what they should be doing with 0783-2022.

Therefore, what the below language does is address *Legionella* in the entire building water system, defined as all potable and nonpotable water systems in the building or on the site, including hot and cold plumbing systems, whirlpool spas or pools, ornamental foundations, misters, atomizers, air washers, humidifiers, ice machines, water tanks, pumps, heaters and piping of a redundant water distribution system, and other water systems and devices that release water aerosols. The proposed language requires NYC building owners to take certain actions, as suggested by **science-backed research**, including: creating a building water system management program and plan, using disinfectants, ensuring water circulation to avoid stagnation, environmental monitoring by use of *Legionella* culture tests, increasing hot water storage temperatures, and monitoring/reporting of building water systems by qualified individuals. The DOHMH will have enforcement authority and will be allowed to inspect building properties at any time and issue penalties for non-compliance. The proposed legislation also increases transparency

[7] 2019 N.Y. Laws 106; N.Y.C. Local Law 97 of 2019.
[8] National Academies of Sciences, Engineering, and Medicine, *supra* note 2, at 7.
[9] *Id.* at 212.

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by requiring DOHMH to publish its procedures for identifying and addressing Legionnaires' disease outbreaks/clusters and requiring all reports to be made publicly available. Building owners will be required to notify residents and visitors of the presence of *Legionella*. Finally, the proposed language requires certain actions by building owners for shutdowns and start-ups of their building water systems.

PROPOSED AMENDMENTS

Section 1. A new section 17-194.2 is added to Chapter 1 of Title 17 of the Administrative Code of New York City to read as follows:

§ 17-194.2 Building water systems; maintenance and inspection.

a. ***Definitions.*** For purposes of section 17-194.2, the following terms have the following meanings:

(1) Bacteriological indicator. The term "bacteriological indicator" means a biological process control indicator that estimates microbial content in the building water system, such as heterotrophic plate count (HPC) as measured in a water sample or by a dip slide.

(2) Biocidal indicator. The term "biocidal indicator" means a direct or indirect measure of the effectiveness of biocide, consisting of free halogen residual concentration or oxidation reduction potential (ORP), as specified in the management program and plan.

(3) Building. The term "building" has the same meaning as in section 28-101.5 of this code but shall not include healthcare facilities otherwise governed by the New York State Department of Health for purposes of *Legionella* prevention.

(4) Building water system. The term "building water system" refers to all potable and nonpotable water systems in the building or on the site, including hot and cold plumbing systems, whirlpool spas or pools, ornamental fountains, misters, atomizers, air washers, humidifiers, ice machines, and water tanks, pumps, heaters and piping of a redundant water distribution system, and other water systems and devices that release water aerosols, but does not include open and closed-circuit cooling towers as governed by section 17-194.1 of this chapter.

(5) Chain of Custody. The term "chain of custody" means a written record of individuals who had physical possession of the sample. The chain of custody shall be prepared by a "qualified

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person" or "qualified third-party water sampler" when taking the sample, and shall follow the sample to the lab. The "qualified person" or "qualified third-party water sampler" shall indicate his/her full name, qualifying title with New York State or New York City agency, and number shown on his/her license, registration, or certification, with signature, time and date. Any person/s who subsequently relinquishes the sample, or accepts the sample, must acknowledge doing so with their signature, time, and date.

(6) Cleaning. The term "cleaning" means physical, mechanical or other removal of biofilm, scale, debris, rust, other corrosion products, sludge, algae, and other potential sources of contamination.

(7) Cluster. The term "cluster" shall mean two or more cases of Legionnaires' disease and/or Pontiac fever that appear to be linked by space (for example, area of residence, work, or other setting such as a neighborhood or community) and which have sufficient proximity in dates of onset of illness to warrant further investigation. "Sufficient proximity in dates" shall mean any time within a twelve-month period.

(8) Corrective action(s). Actions to be taken to return control values found to be outside of control limits to within established control limits when monitoring or measurement indicates the control values as defined by Table A and the water management plan are outside the established control limits. Corrective actions may include cleaning, disinfecting, and/or other non-chemical water treatment methods approved by the Department, including but not limited to copper silver ionization.

(9) Compliance inspection. The term "compliance inspection" means the inspection, testing and other activities that are required on a regular basis (at least every 90 days) in accordance with the management program and plan and section 17-194.2, including the completion of a written or electronic checklist, and which must be conducted and certified by a qualified person.

(10) Dead legs. A section of pipe, a component, or a vessel that contains water but has no flow or is infrequently used.

(11) Department. The term "Department" refers to the New York City Department of Health and Mental Hygiene.

(12) Disinfection. The term "disinfection" means using one or more of the biocides registered with the New York State Department

of Environmental Conservation at a defined concentration, under specific conditions and for an established period that will kill or inactivate pathogenic microorganisms.

(13) Hyperhalogenate or hyperhalogenation. The term "hyperhalogenate" or "hyperhalogenation" refers to a one-time dosing of higher than normal levels of chlorine or bromine based biocide to ensure the maintenance of a minimum of 5 parts per million (ppm) free halogen residual in the building water system for at least 6 hours.

(14) Large building. The term "large building" refers to buildings with ten or more floors, are over seventy-five feet in height, or are more than one hundred thousand gross square feet.

(15) Legionella. The term "*Legionella*" refers to the bacteria that can cause Legionnaires' disease.

(16) Legionnaires' disease. The term "Legionnaires' disease" means a serious type of pneumonia caused by *Legionella* bacteria.

(17) Owner. The term "owner" has the same meaning as in section 28-101.5 of this code.

(18) Pontiac fever. The term "Pontiac fever" means a mild, flu-like illness caused by *Legionella* bacteria that usually resolves without treatment.

(19) Process control measures. The term "process control measures" means actions that must be taken to evaluate internal functioning of the building water system, including monitoring conductivity, pH, biological indicators and other parameters, and observing phenomena such as scaling, corrosion, and biofilm.

(20) Qualified person. The term "qualified person" means a New York City licensed master plumber; a New York State licensed and registered professional engineer; an ASSE 12061 certified water quality professional; a certified industrial hygienist; a certified water technologist or New York State certified water technician with training and experience developing management plans and performing inspections in accordance with current standard industry protocols including, but not limited to, ANSI/ASHRAE 188-2018, ASSE/IAPMO/ANSI 12080, or subsequent publications; a person holding a New York State Department of Environmental Conversation category 7G pesticide applicator certification; or an environmental consultant who has at least two (2) years of operational experience in water management planning and operation.

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(21) Qualified Third-Party Water Sampler. The term "qualified third-party water sampler" means a building water system expert, not directly employed by the owner, who is additionally licensed, registered, or certified with a New York State or New York City agency as follows: a New York State licensed and registered professional engineer; a New York City licensed master plumber; a New York City registered journeyman plumber certified to ASSE 12061 and in the direct employ of a New York City licensed master plumber; or a New York State Department of Health certified water treatment operator or New York State certified water technician. The requirement for a third-party water sampler to not be directly employed by the owner does not apply to healthcare facilities and hospitals as defined under New York State Law.

(22) Responsible person. The term "responsible person" means a person employed or whose services are retained by an owner, who understands and is capable of performing the required water quality measurements, system monitoring and operation and maintenance of a building water system in accordance with the management program and water management plan, and making recommendations for diagnosing anomalous conditions that require corrective actions.

(23) Risk management assessment. The term "risk management assessment" means a process for comprehensively identifying, describing and evaluating in detail all aspects of a building water system that may potentially contribute to the growth and dissemination of *Legionella* bacteria.

(24) Routine monitoring. The term "routine monitoring" means evaluation and other activities that must be completed periodically in accordance with the management program and water management plan and section 17-194.2.

(25) Stagnation. Water which has very little, if any, flow and which enhances the growth of biofilm, allows for a significant shift in water temperature, and reduces the amount of residual disinfectant.

(26) Standard methods. The term "standard methods" means accepted protocols for sampling, recording, laboratory testing, reporting, and other procedures related to environmental and water quality sampling, including, but not limited to, those set forth in Standard Methods for the Examination of Water and Wastewater 22nd Edition, 2012, a publication issued jointly by the American Public Health Association, the American Water Works Association and the Water Environment Federation and the

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Standards Microbiological Methods (TC 147/SC4) published by the International Organization for Standardization, or successor editions.

(27) Water Sampling. The term "water sampling" means the process of taking a portion of water for analysis or testing. A qualified third-party water sampler shall perform all water sampling and be the initial party in the chain of custody in accordance with the requirements of this section.

(28) Water quality parameters. The term "water quality parameters" means temperature, pH, conductivity, biocidal indicator, bacteriological indicator, and other chemical and physical indicators of system process control.

b. Building Water System Management; Risk Management Program and Plan.

(1) Management Program and Plan. No later than one year after the effective date of this law building owners shall develop and implement a building water system management program and plan to minimize the growth and transmission of *Legionella* bacteria in the building's water system, consistent with the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Standard 188-2018 or subsequent publication, or comparable standards adopted by a nationally-recognized, accepted, and appropriate organization, and the requirements of this section. Such program and plan shall be developed by a Program Team. The Program Team shall include the building owner or designee, a qualified person, employees, suppliers, consultants, or other individuals that the building owner recognizes to have authority and responsibility for the actions required by the Program. The plan must be kept current and amended by a responsible person or persons as needed to reflect any changes in the management team, system design, operation or system control requirements for the building water system. The plan must be kept in the building where the building water system is located, and must be made available to the Department for inspection upon and at the time of a request. At a minimum, the plan must include and describe:

i. Management team. Identification, including names and contact information (mail and email addresses and telephone numbers) and description of the function of each person on the building water system management team, including:

a) The owner of the building where each building water system is located and any manager or other person designated by the owner as responsible for compliance with the requirements of section 17-194.2;

b) Any person designated by the owner as a responsible person; and

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c) Every consultant, service company and qualified person who cleans, disinfects, delivers chemicals or services the building water system.

ii. Building water system. Identification, specifications and description of each building water system and all components, including hot and cold plumbing systems,ice machines, whirlpool spas or pools, ornamental foundations, misters, atomizers, air washers, humidifiers, and other water systems and devices that release water aerosols. The plan shall include a process flow diagram to explain the building water system.

iii. Risk management assessment. The assessment must identify risk factors for *Legionella* proliferation and specify risk management procedures for all or parts of the building water system and anticipated conditions including:

a) Any dead legs or stagnation in the system;

b) Operating configurations and conditions that may occur after periods of extended inactivity lasting more than three (3) days, including idling or low circulation while not being fully drained;

c) System parts that require continual operation throughout the year making regular, periodic offline cleaning and disinfection difficult;

d) Any components that may add additional risk factors for organic material buildup and microbial growth such as strainers and filters;

e) Sources of elevated organic contamination, including, but not limited to, pipe corrosion, rust, and dirt;

f) Design configurations that present risk;

g) System components adversely affecting water quality management procedures;

h) Other risk or limiting factors or constraints in the building water system's design and functioning.

iv. Building water operation.

a) Control measures, corrective actions, documentation, including a written checklist for routine monitoring, and reporting to comply with section 17-194.2 and any routine maintenance activities recommended by the manufacturer's instructions, including performance measures, which may sufficiently demonstrate adequate implementation of the operation requirements described in the management program and plan. Where there is a conflict between the requirements of section 17-194.2, Part 4 of the State Sanitary Code, the manufacturer's instructions, the management program and plan must reflect the most stringent requirement(s).

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b) Specific, detailed seasonal and temporary shutdown and start-up procedures as required by paragraph k of section 17-194.2.

c) Notification and communication strategies among management team members regarding the required corrective actions in response to process control activities, monitoring, sampling results and other actions taken to maintain the building water system.

(2) Process Control measures.

i. Routine system monitoring. An owner must designate a qualified person to monitor each building water system at least weekly while such system is in use and to assure compliance with section 17-194.2.

a) The qualified person must enter on a written or electronic checklist provided and maintained by the owner all visual observations of the building water system and associated equipment.

b) The qualified person must possess the skills and have the knowledge necessary to be able to monitor the system under the guidance of a responsible person, in accordance with the management program and plan.

c) The qualified person must observe and note the condition of, where used, chemical dosing and control equipment and the bleed-off system, and determine if there is sufficient storage and delivery of treatment chemicals.

d) Any system anomalies or problems must be recorded on the checklist and reported to the management team for immediate corrective action.

ii. Compliance inspections. An owner must retain a qualified person to conduct a compliance inspection at least once every ninety (90) days while a building water system is in operation. The qualified person must complete and the owner must maintain a written or electronic checklist containing observations and findings as determined by the Department but shall include the following:

a) General condition of the components of the

b) Quality of water connections and control.

c) Proper functioning of all dosing equipment, where used (pumps, strain gauges).

d) Review of routine maintenance records to ensure proper implementation of required activities and corrective actions as needed.

(3) System Maintenance.

i. Routine maintenance. Building water systems must be maintained and operated in accordance with the management program and plan. Routine maintenance must address all components and operations, including, but not limited to,

general system cleanliness, overall distribution operation, and flushing dead legs and areas of stagnation.

ii. Replacement in kind. Any replacement part or equipment used in a building water system must comply with the manufacturer's design and performance specifications. As applicable, replacement materials must be corrosion resistant. Any alteration or replacement of a building water system must comply with the New York City Construction Codes, including the requirement for a licensed master plumber to conduct any and all plumbing work as defined by the Building Code.

iii. Cleaning. The building water system must be cleaned, flushed, and purged whenever routine monitoring indicates a need for cleaning in accordance with the management program and plan. Cleaning protocol indicated by the manufacturer's instructions or industry standards, and worker protective measures, as required by applicable law must be specified in the management program and plan.

iv. Aerosol and mist control. The building water system must be operated at all times to minimize the formation and release of aerosols and mist.

v. Maintenance under this section must comply with all requirements of the New York City Construction Code, including but not limited to licensing requirements prescribed in Chapter 4.

(4) Water quality monitoring. Water quality parameters must be measured and recorded as specified in the water management plan and in accordance with this section and Department rules. The water management plan must identify the procedures, responsible parties, required response time(s) and notification protocol for corrective actions and must include, at a minimum, corrective actions that must be implemented according to the result levels in TABLE A. System monitoring must be representative of the entire building water system.

(5) Inspections. All inspections required by this section shall be performed by a qualified person.

(6) Cleaning, disinfection, and other approved methods. All cleaning, disinfection, and other non-chemical water treatment methods approved by the Department including copper silver ionization, when required by this section and the management plan shall be performed by a New York City Licensed Master Plumber or a qualified person in the direct employ of a New York City Licensed Master Plumber, or a person holding a New York State Department of Environmental Conservation category 7G pesticide applicator certification, and at a minimum meet the requirements of TABLE A of this section or the requirements for disinfection of potable water systems as prescribed in Chapter 6 of

the New York City Plumbing Code. Any action taken under this section must be compliant with the NYC Construction Codes, including but not limited to the licensing requirements as prescribed in Chapter 4 of such Construction Codes.

c. Monitor sampling.

(1) Building owners subject to the provisions of section 17-194.2 shall retain the services of a qualified third-party water sampler to sample the building water at all locations identified in this provision at least once every 90 days. The qualified third-party water sampler shall initiate the chain of custody and independently cause the samples to be delivered to the laboratory of the owner's choice to be tested for the presence of *Legionella* bacteria.

(2) Sampling locations must be representative of the entire building water system and shall include but not be limited to: the inlet cold water supply at the first available tap; the return piping of the circulated potable water heating system(s); tap closest to the first delivery of hot water from the riser, the middle of the system, the last outlet before the water returns to the piping that conveys water back to the heater, if applicable on each floor; and each loop if risers feed multiple circulation loops. Large buildings as defined in section 17-194.2 shall sample every other floor or no less than one sample per every twenty thousand square feet. The system must be operating with water circulating in the system for at least one hour prior to water quality measurements or collection of samples.

(3) Each test and all *Legionella* culture analyses shall be performed by a laboratory that is approved to perform such analysis by the New York State Environmental Laboratory Approval Program (ELAP).

(4) Test results of all *Legionella* species at or above the magnitude of level 4 as indicated in TABLE A must be reported to the Department within 24 hours of receiving the test results. Additional emergency *Legionella* sampling must be conducted if any of the following occur:

i. At the request of the Department upon a determination that one or more cases of legionellosis is or may be associated with the building water, based on epidemiological data or laboratory testing;

ii. Any time two consecutive bacteriological indicator sample results are above Level 4 as indicated in TABLE A; or

iii. Any other conditions specified by the Department.

(5) Building owners are required to take any corrective actions as specified in the management program if the *Legionella* sample yields a positive result as indicated by TABLE A and must notify tenants and

visitors immediately if a *Legionella* sample results in level 3 through 4 as described in TABLE A.

TABLE A

Level	***Legionella* Culture Result**	**Process Triggered by *Legionella* Culture Results**
1	<10 CFU/ml	Maintain water chemistry.
2	≥10 CFU/ml to <50 CFU/ml	Monitor conditions for 30 days, retest after 30 days. If CFU/ML increases, complete steps as indicated for level 3 until level 1 is reached.
3	≥ 50 CFU/ml to <100 CFU/ml	Initiate immediate disinfection within 24 hours, reviewing treatment program, performing visual inspection to evaluate need to perform cleaning and further disinfection. Retest water within 3-7 days. Subsequent test results must be interpreted in accordance with this Table until level 1 is reached.
4	≥ 100 CFU/ml	Initiate immediate disinfection within 24 hours. Within 48 hours perform full remediation of the potable water system by hyperhalogenating, draining, cleaning, and flushing. Review treatment program, retest water within 3-7 days. Subsequent test results must be interpreted in accordance with this Table until level 1 is reached. For *Legionella* results at this level, notify Department within 24 hours of receiving test result.

d. *Building Water System Requirements*.

(1) Minimum hot water temperature. All buildings shall maintain a hot water temperature in accordance with section 27-2031 of the Administrative Code of the City of New York.

(2) Flushing requirements. At least annually, building owners shall flush their entire building water systems in accordance with rules promulgated by the Department. The owner is required to notify tenants of the building 72 hours prior to a building water system flush.

e. *Reporting and Recordkeeping*. An owner shall submit a certified report containing all information required by paragraphs b and c of section 17-194.2 in a manner and format determined by the Department on an annual basis which shall be submitted no later than January 31st of the year following the year subject to the report. The Department may require any submission required by section 17-194.2 be submitted electronically. An owner shall keep and maintain records of all inspections, sampling, and tests performed pursuant to section 17-194.2 for at least three years. An owner shall maintain a copy of the management program and plan required by section 17-194.2 on the

premises of such building water system. Such records and plan shall be made available to the Department immediately upon request. An owner shall make available the results of each inspection conducted pursuant to section 17-194.2 to any member of the public within five business days of a request, or within five business days of the receipt of such results by such owner, whichever is later.

f. Enforcement.

(1) Department investigation. The Department is authorized to investigate any building subject to section 17-194.2 whether it is based on a complaint and/or through random audit. The Department may enter the premise of such building subject to investigation without prior notice to the building owner to enforce the provisions of section 17-194.2.

(2) Civil penalties. Any owner subject to the provisions of section 17-194.2 found in violation shall be fined in an amount determined by the Department but shall not be less than $500 for the first violation and $1,000 for the second violation and $5,000 for each subsequent violation.

(3) Environmental control board. A notice of violation served for civil penalties pursuant to this section shall be returnable at the environmental control board or any tribunal established within the office of administrative trials and hearings.

g. Transparency.

(1) Department transparency. The Department shall post conspicuously on its website in clear, detailed manner the procedure by which the Department follows when investigating a *Legionella* cluster, which shall include but not be limited to the threshold and criteria that triggers such investigation, the steps taken by the Department to investigate and identify the cluster, the public outreach conducted by the Department, the results of such investigation, and the steps taken by the Department to rectify the outbreak. The Department shall post conspicuously on its website the detailed information regarding the cluster identified, including but not limited to the geographical area identified as well as the potential source and potential health effects of Legionnaires' disease and Pontiac Fever to at-risk populations. If a source has been identified, the Department shall post the estimated length of time that the level of *Legionella* bacteria may remain elevated in or could be an infection risk from that source.

(2) Building water system reports. The Department shall create a publicly searchable platform containing all reports required under paragraphs b and c of section 17-194.2.

(3) Dedicated contact number. The Department shall have a dedicated phone number specifically for *Legionella*-related questions and concerns.

h. *New Construction.* For any building subject to the provisions of section 17-194.2 for which construction begins on January 1, 2020 or after shall ensure prior to issuance of occupancy certificate that such building water system has been thoroughly cleaned, sanitized, and flushed.

i. *Waiver or Modification.* The Commissioner or designee may grant a waiver or modification when strict application of any provision of section 17-194.2 presents practical difficulties or unusual hardships. The Commissioner in a specific instance may modify the application of such provision consistent with the general purpose of section 17-194.2 and upon such conditions as, in his or her opinion, are necessary to protect the health or safety of the public.

j. *Guidance.* The Department, in consultation with the New York City Department of Buildings, shall hold information sessions, at least twice annually, for interested building owners and other stakeholders, regarding the requirements for maintaining, cleaning, and inspecting building water systems in accordance with section 17-194.2. The information provided in such information sessions shall also be posted on the website of the Department in simple and understandable terms.

k. *Extended building water system shutdown and start-up.* If a building water system has been shut down for an extended period of time not less than 30 days, in order for the building to start-up, the building owner is required to:

1. Either fully clean and disinfect, drain to waste and disinfect, or sufficiently hyperhalogenate or hyperchlorinate, where applicable, the recirculated water before startup; and
2. Collect samples for *Legionella* culture under paragraph c of section 17-194.2 and take any necessary corrective actions as required under section 17-194.2.

l. *Department Report.* The Commissioner, in consultation with the New York City Department of Buildings, shall submit a report to the mayor and the speaker of the city council on or before May 15 each year until May 15, 2031, reporting at minimum on the following information for the prior year:

1. The number of annual certifications that a building water system was inspected, tested, cleaned and disinfected;
2. The number of reports of tests for the presence of microbes that reveal levels that present a serious health threat received by the Department as indicated by levels 2, 3, or 4 in TABLE A;

3. The number of inspections of building water systems conducted pursuant to this section and the rules of the Department, the number and types of any violations cited during such inspections, and the number of buildings that were not inspected;
4. The number of cleanings, disinfections, or other actions performed by or on behalf of the Department; and
5. The number of persons diagnosed with Legionnaires' disease in the city in each of the previous 10 years, to the extent known or reasonably discoverable by the Department.

§ 2. Section 27-2031 of the Administrative Code of the City of New York is amended to read as follows:

§ 27-2031. Supply of hot water; when required. Except as otherwise provided in this article, every bath, shower, washbasin and sink in any dwelling unit in a multiple dwelling or tenant occupied one-family or two-family dwelling shall be supplied at all times ~~between the hours of six a. m. and midnight~~ with hot water at a constant minimum temperature of one hundred twenty degrees Fahrenheit. ~~from a central source of supply constructed in accordance with the provisions of the building code and the regulations of the department, provided however that baths and showers equipped with balanced pressure mixing valves, thermostatic mixing valves or combination pressure balancing/thermostatic valves may produce a discharge temperature less than one hundred twenty degrees Fahrenheit but in no event less than one hundred ten degrees Fahrenheit.~~

Where storage water heaters are used, the unit must be set to deliver an outlet temperature of no less than 135 degrees Fahrenheit. The storage tank must be listed to ASSE Standard 1082-2018 *Performance Requirements for Water Heaters with Integral Temperature Control Devices for Hot Water Distribution Systems* or be equipped with a temperature actuated mixing valve listed to ASSE 1017-2009 *Performance Requirements for Temperature Actuated Mixing Valves for Hot Water Distribution Systems* at or near the water heater.

Where distribution water delivered to a fixture intended for bathing or washing is supplied with water in excess of 130 degrees Fahrenheit, the distribution water must be regulated at the fixture or fixture group by an ASSE 1070-2020/ASME A112.1070-2020/CSA B125.70:20 Performance Requirements for Water Temperature Limiting Devices, an ASSE 1069 Performance Requirements for Automatic Temperature Control Mixing Valves or an ASSE 1084 Performance Requirements for Water Heaters with Temperature Limiting Capacity. Distribution water must be regulated at the shower or tub/shower combination by an ASSE 1016-2017/ASME A112.1016-2017/CSA B125.16-17

Performance Requirements for Automatic Compensating Shower Valves for Individual Showers and Tub/Shower Combinations. Distribution water must be regulated at plumbed emergency equipment by an ASSE 1071 Performance Requirements for Temperature Actuated Mixing Valves for Plumbed Emergency Equipment or an ASSE 1085 Performance Requirements for Water Heaters for Emergency Equipment.

Gas or electric water heaters may, if approved by the department, be utilized in lieu of a central source of supply of hot water if such heaters:

(1) are lawfully in use on July fourteenth, nineteen hundred sixty-seven; or

(2) are approved by the appropriate city agencies having jurisdiction and are installed in a structure or building erected, converted, substantially rehabilitated, or completely vacated after July fourteenth, nineteen hundred sixty-seven.

(3) where the gas or electric water heater is a storage type water heater, the unit must be set to deliver an outlet temperature of no less than 135 degrees Fahrenheit. The water heater must be equipped with a temperature actuated mixing valve listed to ASSE 1017-2009 Performance Requirements for Temperature Actuated Mixing Valves for Hot Water Distribution Systems at or near the water heater. The mixing valve must be set to deliver water to all outlets at a temperature no less than 120 degrees fahrenheit.

(4) where the gas or electric water heater is a non-storage (instantaneous type) water heater, the water heater must be listed to ASSE Standard 1082-2018 Performance Requirements for Water Heaters with Integral Temperature Control Devices for Hot Water Distribution Systems or be equipped with an ASSE 1017-2009 Performance Requirements for Temperature Actuated Mixing Valves for Hot Water Distribution Systems at or near the water heater. The ASSE Standard 1082-2018 listed water heater or ASSE 1017-2009 temperature actuated mixing valve shall be set to deliver a temperature of not less than 120 degrees Fahrenheit.

§ 3. Section 202 of Chapter 2 of the Plumbing Code of New York City is amended to read as follows:

…

LEGIONNAIRES' DISEASE. The term "Legionnaires' Disease" means a serious type of pneumonia caused by Legionella bacteria.

…

§ 4. A new section 610.2 is added to Article 6 the Plumbing Code of New York City to read as follows:

610.2 Legionnaires' Disease. Where a confirmed case of Legionnaires' Disease has been traced to a building potable water system, disinfection shall be conducted in accordance with the provisions of Chapter 1 of Title 17 of the Administrative Code.

§ 5. This act shall take effect immediately; however, the provisions requiring the Department to publicly post on its website the Department procedure for investigating Legionnaires' disease clusters and investigation history is effective 30 days from the date of passage.

CONCLUSION

The Plumbing Foundation, in conjunction with technical experts and based on the most up to date scientific data and research, has drafted the above proposed legislation with the most important goal in mind: the health and safety of New York City. We cannot thrive as the greatest city in the world without having our residents healthy and cannot continue being a major tourist destination without ensuring our visitors are safe, especially given the COVID-19 pandemic that has impacted us all so greatly. Summer is beginning and now is not the time to put anyone's health and life in additional danger. The Plumbing Foundation strongly urges the NYC Council to amend 0783-2022 and pass the legislation before another major summer Legionella outbreak occurs.

We thank the Chair and the Committee for their consideration of our comments and proposed amendments. Please do not hesitate to contact us for any reason.

June 13, 2023 - Delos Testimony - Committee on Public Housing

The impact of wildfires this past week, on top of the last three plus years amidst the pandemic, have placed a spotlight on the importance of creating healthy indoor environments for New York City residents, most notably as it relates to indoor air quality. We have a responsibility to evaluate the environments that our residents spend the majority of their lives in, the spaces that they expect to be supportive of their health and well-being, and to ensure that we are indeed creating and providing spaces that improve the health and well-being of occupants and, promote productivity and potentially lower short and long term health care costs for the city.

Many experts recognize that another pandemic is inevitable, the question is simply when. At the same time, extreme weather events are becoming more and more common due to climate change and an incident like last week's wildfire smoke in New York - while new to many city residents - is not likely to be an isolated incident. Indoor air quality can be two to five times worse than outdoor air quality; pathogen transmission concerns, particulate concerns driven from increased traffic and industrial equipment emissions, particulate concerns driven from wildfire smoke, or even particulate and volatile compound related concerns driven from human activities like cooking and smoking indoors, all contribute to indoor air quality issues. The short and long term health impacts of these environmental challenges are clear and many studies have tied the cost of human exposure to air quality issues to significant economic related productivity loss as well as short and long term health care costs.

Delos is the pioneer of the healthy buildings movement, having researched the health impacts of indoor environments for over a decade. Delos has researched hundreds of products in the market utilizing a science-backed approach to evaluate the performance of health and wellness products and their impact on human health outcomes. Through product interventions such as portable air purification devices, which require no installation or costly renovations and efficiently remove airborne pollutants, Delos offers its support and encourages a collaboration with NYCHA to deploy pilot programs in an effort to create healthier spaces for residents.

Actively deploying health and wellness interventions will be critical in supporting the health and well-being of NYCHA residents, and may also provide a significant benefit to the city budget for years to come through lower health care costs. Learning from the challenges we faced in recent weeks and years, it is imperative to take a more proactive approach to better the health and well-being of New York City residents.

Sincerely,

Paul Scialla
Founder and Chief Executive Officer
Delos Living LLC

URBAN UPBOUND
tackling poverty, changing lives.

Good afternoon,

My name is Alex Malescio and I am the Senior Director of Government Relations at the East River Development Alliance, Inc. (DBA Urban Upbound) a nonprofit organization that was founded to break cycles of poverty in Western Queens public housing neighborhoods. Today, we provide underserved youth and adults in every borough with the tools and resources needed to achieve economic prosperity and self-sufficiency through seven comprehensive, integrated programs: workforce development, college access & youth development, financial fitness & affordable housing access, tax prep & income support services, worker cooperative & small business support, mental health counseling, and financial inclusion through the Urban Upbound Federal Credit Union.

I am speaking today to share two of Urban Upbound's most pressing recommendations for how NYCHA can contribute to a safe summer for its hundreds of thousands of residents.

Firstly, economic disenfranchisement is a major root cause of violence in public housing communities. At Urban Upbound, we constantly hear from our clients that they would like access to the career opportunities created by NYCHA, either through direct employment or through contracted maintenance & construction work. Many of our clients feel that by doing so, they can not only earn a paycheck, but also give back to their community and others like it.

NYCHA has shown an initial willingness to work with us to place public housing residents into these jobs, but the agency must do more to remove the barriers that prevent many NYCHA residents from accessing these jobs. Specifically, NYCHA should commit to holding quarterly or bi-annual job forecasting meetings with workforce development-focused nonprofits that serve their residents. By sharing upcoming maintenance projects, work timelines, and connections to contractors and relevant unions, NYCHA can assist local workforce development nonprofits in helping NYCHA residents get the prep and certifications they need to access these jobs. Advanced notice is key here. Far too often, NYCHA residents only hear about NYCHA's employment opportunities shortly before hiring starts, leaving little time for preparation.

Urban Upbound's second recommendation today is that NYCHA find creative ways to increase funding to its Residents Associations. Residents Associations across the City plan essential events for their residents, such as holiday parties, turkey giveaways, Family Days, and basketball tournaments. These events, especially during the summer, are key for providing public housing communities with fun and safe space for people to come together. Unfortunately, with a limited budget, Residents Associations can only host a handful of events per year, let alone organize any regular programming. Furthermore, at current budget levels, Resident Associations are often left to crowdsource or seek sponsorships to pay for the type of activities that their communities deserve.

Thank you for hearing my testimony today.

12-11 40th Avenue, Long Island City, NY 11101 • T: 718-784-0877 • F: 718-729-1288
www.UrbanUpbound.org

URBAN UPBOUND
tackling poverty, changing lives.

Alex Malescio
Senior Director of Government Relations
Urban Upbound

June 13, 2023

Good afternoon Chair and members of the New York City Council,

My name is Claudia Coger. I have lived in the Astoria Houses for 68 years, during many of which I served as a member of my community's Resident Association. I am here today to speak about one of the most pressing issues facing the Astoria Houses community: the lack of a large community space that can be used and programmed year-round.

I can remember how decades ago, the Astoria Houses had access to several community spaces. Our neighborhood's youth always had a safe place to go after school and in the summer where there was plenty of age appropriate programming. Today, the Astoria Houses lacks a large, modern, community space.

NYCHA can help promote a safe summer by ensuring that youth in the Astoria Houses have access to a large community space 12 months a year. This space should be large enough for recreational sports leagues, large community meetings, and programming from local nonprofits. Our children should have a place where they can play basketball in the dead of winter, receive homework help, access art programming, all in one location. The space could also serve the needs of our community's seniors.

I hope that NYCHA will work with the Astoria Houses Residents Association to find us such a space. One such idea, which was raised in the past but did not move forward, would be to put a dome over our basketball courts, at least until a more permanent structure can be built.

Additionally, as the summer approaches, NYCHA should do its part to communicate to its residents the programming that is available for them currently. Years ago, NYCHA would publish and distribute to residents a newspaper, covering everything from available nonprofit programming, a calendar of events, and updates on construction and repairs. This would be a good initiative to bring back.

Thank you for hearing my testimony today.

Claudia Coger

June 15, 2023

Dear Committee of Public Housing,

My name is Ximena Frankel, and although I own my co-op in Forest Hills, NY, my parents are not so fortunate. My parents, both in their 60s and 70s, who currently live on Medicaid, Medicare and Social Security, would not be able to afford to live in their apartment if the rent were to increase, even a little. Mayor Adams is raising the rents while New Yorkers struggle in a city that is deeply unaffordable, which impacts communities, like my parents: aging adults, adults with disabilities, and every day working families. The Rent Guidelines Board has the power to stand with tenants – or stand with real estate.

I write to you to ask to not increase rents for struggling tenants – a rent increase will put many over the edge. We're in the midst of an affordability crisis and a report by the Fund for New York City found half of all city households do not make enough to meet the minimum cost of living. Nearly 80% are considered "housing burdened," which means more than 30% of household income is going toward rent.

The Rent Guidelines Board's original charge is to ensure that rents remain affordable – not to protect landlords' profits. We need to maintain that change, not affect the livelihoods of every day New Yorkers.

I appreciate your urgent consideration of this matter.

Sincerely,

Ximena Frankel
Forest Hills, NY

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: _____

(PLEASE PRINT)

Name: Alex Malescio

Address: _____

I represent: Urban Upbound

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: 6/13/2023

(PLEASE PRINT)

Name: Sheila Duke

Address: 174 E 104th St NY NY 10029

I represent: Roads to Success

Address: Same as above

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(PLEASE PRINT)

Name: Keith Grossman

Address: _____

I represent: NYCHA, EVP for Operations Support Services

Address: _____

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Name: Vikan Bussgith

Address: _____

I represent: NYCHA, EVP for Resident Services, Partnerships & Initiatives

Address: _____

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Date: _____

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Name: Vlada Kennff

Address: _____

I represent: NYCHA, SVP for Sustainability

Address: _____

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