

Report on Local Law 77

This report is submitted pursuant to Local Law 77, which requires the Commissioner of the Department of Health and Mental Hygiene (the Department) to provide the Mayor and City Council Speaker with information about the implementation of the Local Law and its effectiveness in preventing outbreaks of Legionnaires' disease, as well as provide recommendations for modifications to the local law and any rules promulgated thereunder.

This report covers the period from August 19, 2015, the effective date of Local Law 77, to January 31, 2017.

Overview of Local Law 77

Local Law 77 was enacted in response to an outbreak of Legionnaires' disease in the summer of 2015 and growing concerns about the role of improperly operated and maintained cooling towers in the incidence of Legionnaires' disease across the city. Local Law 77 amended sections of the Administrative Code of the City of New York to do the following:

- Require all cooling tower owners to register such towers with the Department of Buildings (DOB)
- Require that the owner of a building with a cooling tower develop a Maintenance Program and Plan (MPP)
- Establish minimum requirements for the frequency and content of inspections (including bacteriological testing) to be performed by a qualified person
- Establish requirements for the cleaning and disinfection of cooling towers
- Establish recordkeeping practices
- Outline enforcement practices and civil penalties
- Establish reporting requirements for DOHMH to the Mayor and City Council
- Require all owners of cooling towers to certify annually that the cooling tower was maintained and operated in accordance with the MPP
- Establish authority for promulgation of rules by DOHMH

Program Implementation

Following enactment of Local Law 77, the Department promulgated Title 24, Chapter 8 of the Rules of the City of New York ("Chapter 8"), to define in more detail the content of the MPP and requirements for sampling, operational records, water treatment, process control measures (including periodic inspections and maintenance) and cooling tower systems startup and shutdown procedures.

In May 2016, the Department established the Building Water Supply Oversight (BWSO) program to promote compliance with Local Law 77 and Chapter 8. As of January 31, 2017, BWSO had 56 staff on board, with hiring underway for the remaining 6 budgeted positions; 42 staff members work in the field conducting inspections, with 2 remaining field positions to be filled shortly. Staff were trained to inspect cooling towers and the Department launched a new handheld computer system that allows inspectors to record inspection findings while in the field.

In addition, in December 2016, BWSO hosted a cooling tower seminar where six different cooling tower consulting and water treatment firms presented on various topics surrounding the maintenance of cooling towers. There were 104 attendees that included staff from the Department, water treatment consulting firms, the NYS Department of Health (SDOH), the National Sanitation Foundation and other New York City agencies responsible for cooling tower management and operations.

To promote compliance with Local Law 77, the Department drafted and distributed guidance documents for the regulated community, including an MPP template, guidance on how to build a cooling tower system team, and general FAQs.

As of January 31, 2017, 6,235 cooling towers were registered with DOB, representing 4,804 cooling tower systems in 4,052 buildings across all five boroughs. Between April 7, 2016 (the first day routine inspections were performed) and January 31, 2017, the Department inspected 1,644 cooling tower systems; after a grace period summons for violations began on June 9, 2016. Inspections were prioritized among 600 cooling towers located in areas at highest risk for Legionnaires' disease, including the sites of the 2015 outbreaks, all other sites located in the South and East Bronx, and sites located in areas where household incomes are below the federal poverty level.

Inspection efforts have improved operation and maintenance of cooling towers. The inspection program has identified cooling towers with significant levels of legionella and were ordered to remediate the risk within 24 hours. Routine testing by building owners has triggered interventions prior to legionella levels amplifying. Additionally, the cooling tower registration system has allowed the Department to quickly inspect cooling towers in areas that have seen increases in Legionnaires' disease.

Effectiveness of the requirements of this local law in preventing outbreaks of Legionnaires' disease

Less than a year has passed since the rules detailing cooling tower operation, maintenance and testing, "Chapter 8", became effective. Therefore, it is too early to truly measure the impact of the legislation on rates of disease.

The number of cases of Legionnaires' disease in NYC in 2015 and 2016 are shown in the table below. Excluding cases associated with the 2015 outbreak in the South Bronx, the number of cases of Legionnaires' disease that occurred in 2015 and 2016 were similar, and within the typical range of 200 to 300 cases that are seen in NYC annually. The number of potential clusters¹ were also similar in 2015 and 2016, with 7 identified in 2015, and 4 identified in 2016.

¹ A cluster is an increase in cases over a defined time period and in a defined geographic area above an historical baseline.

Table. Legionnaires’ disease Cases, New York City, 2015-2016

	2015		2016
	All Cases	Excluding South Bronx Outbreak	All Cases
Total Cases	439	306	268
Peak Cooling Tower Season (April-October)	369	236	178
Cooling Tower Off Season	70	70	90

The Department, in conjunction with the Centers for Disease Control and Prevention, are undertaking a 5-year city-wide evaluation of the cooling tower legislation to assess its effectiveness. The primary objectives of the project are to measure the impact of NYC’s cooling tower regulations on 1) Legionnaires’ disease incidence and clustering and 2) *Legionella* bacteria colonization in NYC cooling towers. The secondary objectives are to 1) describe cooling tower characteristics associated with *Legionella* bacteria colonization, 2) monitor and describe adherence to cooling tower regulations among cooling tower owners in NYC, and 3) explore other factors associated with *Legionella* bacteria colonization and/or Legionnaires’ disease cases in NYC, such as cooling tower density and weather.

Among other benefits, this evaluation will allow us to provide evidence-based recommendations to further refine NYC’s cooling tower rules and regulations, and streamline implementation of cooling tower inspections.

Recommendations for Improvements or Modifications to Local Law 77 and Rules Promulgated Thereunder

The Department does not recommend any change to the Local Law, which represents the first large-scale effort in North America to regulate cooling tower operation and maintenance. The Law sets forth the necessary requirements and provides the Department with the authority necessary to implement the Law’s mandates. The Department is currently reviewing Chapter 8 to determine whether any revision would further facilitate compliance by building owners.