

An Owner's Guide to Cooling Tower Regulations

Do you own, operate, or maintain a cooling tower? Here's what you need to do under New York State regulations.

Any business that has a need for cooling on a large scale, whether seasonally (residential apartment buildings) or year-round (industry), may have a cooling tower. Examples of businesses that may have cooling towers include:

- High-rise apartment buildings
- Hospitals
- Nursing homes
- Hotels
- Dry cleaners
- Shopping centers
- Manufacturing plants
- Data centers
- Grocery stores
- Ice skating rinks

Make sure you know who is responsible for maintaining the cooling tower, and that they know what to do.



Questions?

E-mail cooling.tower@health.ny.gov or call 518-402-7650

More information

www.health.ny.gov/LegionellaRegulations

Why does New York State have regulations regarding cooling towers?

New York State (NYS) regulations are designed to protect against outbreaks of diseases associated with cooling towers.

If cooling towers are not operated and maintained properly they can grow bacteria called *Legionella*, which cause an illness called legionellosis. *Legionella* can be dispersed into the air in tiny water droplets or mist.

People can get legionellosis by breathing in the droplets or mist from a source that can be a couple of miles away. Legionnaires' disease and Pontiac Fever are both types of legionellosis. Legionnaires' disease is a form of pneumonia, while Pontiac Fever is a milder, influenza-like illness.

Legionellosis is increasing. The reported number of cases of legionellosis in the US quadrupled from 2000 to 2014, and cooling towers were responsible for over 20% of the outbreaks and about 45% of the cases, according to data from the CDC.

What does the regulation say?

All owners of cooling towers in NYS are required to register their cooling towers, sample for *Legionella*, and maintain their records in the online cooling tower registry. Specifically, the regulation requires that all cooling tower owners and operators:

- 1 **Register** cooling towers in the cooling tower registry
- 2 **Sample** towers regularly
- 3 **Report** *Legionella* culture sampling dates & results to the cooling tower registry, and any exceedances to the local or district health department for your area (health.ny.gov/environmentalcontacts) and to cooling.tower@health.ny.gov within 24 hours
- 4 **Inspect & certify** towers routinely & report dates in the registry
- 5 **Develop & follow** a maintenance plan
- 6 **Keep** appropriate records onsite for three years



Register cooling towers

How do I register a cooling tower?

Register your cooling tower on the NYS DOH website at ct.doh.ny.gov/. All cooling towers in NYS must be registered in this system.

More information about how to register can be found at health.ny.gov/LegionellaRegulations.

What information is needed to register?

- The building address
- The name, address, phone number, and email address of the owner(s) or property manager(s)
- Information about the equipment:
 - The manufacturer
 - Model
 - Serial number (if available)
 - Capacity (tonnage)
 - Basin capacity
 - Method of systematic disinfection
- The name of the person or business who inspects and certifies the cooling tower
- The commissioning date of the cooling tower

How long will it take to register?

Once you have all the information, it should take about 10 minutes to register each building and cooling tower.

How often do I need to update my cooling tower registry information?

Legionella culture and inspection information needs to be updated at intervals not to exceed 90 days while the tower is in use. Bacteriological sampling needs to be performed every 30 days and reported at intervals not to exceed 90 days.

A different person registered the cooling tower last year. What can I do?

The ownership of a registry account can be transferred to another user with this form: health.ny.gov/forms/doh-5229.pdf

How can I update the status of my registry account to show that my tower is offline for the season?

Change the "Tower Operation Duration" from "Year-round" to "Seasonal," and enter a "Seasonal Shutdown Date." Enter a "Seasonal Startup Date" when the tower is brought back online.

2 Sample

There are two kinds of sampling that need to be done: sampling for *Legionella*, and additional bacteriological culture sampling.

When and how should *Legionella* sampling be done?

Sampling for *Legionella* must be performed at intervals not to exceed 90 days by a knowledgeable maintenance staff member or cooling tower service provider.

Send these samples to a NYS Environmental Laboratory Approval Program (ELAP) certified laboratory. Please contact ELAP@health.ny.gov or call 518-485-5570 to find a certified laboratory.

When and how does additional sampling get done?

Bacteriological culture sample collection must be performed at least every 30 days using dip slides or heterotrophic plate counts. Your cooling tower service provider can perform this test and should be able to complete the analysis in house.

3 Report

What do I need to report to the cooling tower registry?

- The most recent inspection date
- Culture sampling dates and results, including exceedances
- The annual certification date
- Seasonal start-up and shut-down dates, if applicable

What are the specific reporting requirements if the samples exceed regulated levels?

Cooling tower owners must notify the local or district health department for their area (health.ny.gov/environmentalcontacts) and must email cooling.tower@health.ny.gov. Both of these notifications must be done within 24 hours of receipt of a *Legionella* culture sample result that exceeds 1,000 colony forming units per milliliter (CFU/mL).

Owners must also notify the public of test results in the manner determined by the local or district health department or NYS DOH (Subpart 4-1.6 and Appendix 4-A).

Owners should respond to *Legionella* culture results according to Appendix 4-A of the regulation.

You can read Subpart 4-1.6 and Appendix 4-A by visiting health.ny.gov/LegionellaRegulations.

4 Inspect & Certify Towers

What do I need to have inspected?

Inspections need to be done prior to start-up for seasonal towers and at intervals not to exceed 90 days for all towers. Remember to report inspection dates to the cooling tower registry.

Inspections must be performed by a NYS licensed professional engineer, certified industrial hygienist, certified water technologist, or environmental consultant. They should have training and experience performing inspections in accordance with current standard industry protocols. See the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) website at www.ashrae.org to purchase the 188-2015 standards.

What does the certification mean?

You must certify that your cooling tower was inspected, tested, cleaned, and disinfected in compliance with the regulation throughout the course of the reporting year.

When should certifications be done?

You must certify that your cooling tower has been in compliance with the regulation by November 1 of each year. A sample template for certification documentation can be found at health.ny.gov/LegionellaRegulations.

5 Develop & Follow a Maintenance Plan

When should a maintenance program and plan (MPP) be developed?

All existing cooling towers must have an MPP. New towers must have a plan in place before start-up.

What information should be included in a MPP?

A MPP should currently be in place and must be implemented according to Subpart 4-1. It should include:

- A process description of the tower system
- Maintenance details, including chemical treatments and monitoring procedures
- Tower operation procedures
- A schedule for routine bacteriological sampling and analysis
- Facility and personnel information
- A plan for emergency sample collection and analysis for *Legionella* culture testing, when needed
- A plan for immediate action in response to culture testing
- A plan to notify the local or district health department for your area (health.ny.gov/environmentalcontacts), and to email cooling.tower@health.ny.gov, when there is an exceedance

Visit health.ny.gov/LegionellaRegulations for a sample MPP template.

6 Keep Appropriate Records

What kind of records must be maintained?

Records should include:

- The maintenance program and plan
- Inspection dates and findings
- Deficiencies
- Corrective actions
- Cleaning
- Disinfection
- Certification

Where should records be kept?

Maintain sampling and inspection records on the cooling tower registry.

Additionally, the MPP, tests and certification must be kept in electronic or hard copy on the premises where the cooling tower is located so they will be readily available for inspection by NYS DOH, or the local or district health department.

Records must be maintained for at least three (3) years.

What else should I plan for?

If your building is being sold or leased to another party that will be responsible for cooling tower maintenance, or if a current staff member is leaving, plan ahead! The ownership of a registry account can be transferred to another user by completing a change of ownership form: health.ny.gov/forms/doh-5229.pdf

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