



**Testimony**

of

**Thomas Matte, MD**

**Assistant Commissioner, Bureau of Environmental Surveillance and Policy  
Division of Environmental Health  
New York City Department of Health and Mental Hygiene**

before the

**New York City Council Health Committee**

on

**Int 0703 – 215: Cooling Centers**

and

**Int 0712 - 2015: Requiring the Department of Health and Mental Hygiene to Conduct  
Community Air Quality Surveys and Publish the Results Annually**

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250 Broadway, 16<sup>th</sup> Floor  
New York City**

Good afternoon Chairman Johnson and members of the Committee. I am Thomas Matte, Assistant Commissioner for Environmental Surveillance and Policy of the Department of Health and Mental Hygiene. With me are Iyad Kheirbek, Air Quality Program Manager, Johanna Conroy, Human Services Director at New York City Emergency Management, Karen Taylor, Assistant Commissioner of the Bureau of Community Services from the City's Department for the Aging, and Rick Muller, Director of Intergovernmental Affairs, from the Department of Environmental Protection. On behalf of Commissioner Bassett, thank you for the opportunity to testify on this legislation concerning air quality and cooling centers.

New York City air quality has improved for several decades because of a significant reduction in pollutants from power plants, building boilers, motor vehicles and other sources. Despite improvements, the Health Department estimates that fine particles, the most harmful urban air pollutant, causes more than 2,000 premature deaths and 6,000 emergency department visits and hospitalizations each year. Research has shown that air pollution increases cancer risk, and may cause reduced birth weight and impaired brain development and function.

The Health Department's role in reducing air pollution health impacts includes studying air pollution levels and impacts on neighborhoods, and estimating the benefits of actions to reduce pollution. We provide critical data and studies to other agencies, to inform initiatives such as the Clean Heat program, the recent update to the City's air code, and OneNYC.

### **Int 712 – Requiring Annual Air Quality Surveys**

Introduction 712 requires the Department to conduct community air quality surveys and publish the results annually. We welcome the Council's interest in this issue; I want to describe our current work in this area as background for our comments.

The City's first long term sustainability plan, finalized in 2007, launched several air quality improvement initiatives. One program, the New York City Community Air Survey (NYCCAS), is the largest urban air monitoring program in the country. Since it launched, NYCCAS has provided data to inform local pollution control measures and track improvements. We collaborate with the City University of New York's Queens College to collect and analyze air samples using light-pole-mounted monitors near street level across the five boroughs. We measure common urban air pollutants that are important for public health, including fine particles, black carbon, oxides of nitrogen, sulfur dioxide, and ozone. We study how emissions from local sources affect air quality in different neighborhoods, create air quality maps, and inform pollution control strategies. This successful program has used proven, scientific methods

that are not fixed by law or regulation. This allows the Department to adapt the program methods and systematically assign monitor locations to support program objectives based on results, state of the science, and available resources.

NYCCAS results, since the first report in 2009, have been disseminated in seven public reports, annual on-line data summaries, and neighborhood pollution estimates through our interactive Environment and Health Data portal. The Department's air pollution team has contributed to 11 scientific publications on NYCCAS methods and results and other studies of air pollution exposure and health impacts. In our most recent report, from April 2015, we had a number of key findings: fine particles, nitrogen dioxide, and sulfur dioxide declined over a 5 year period by 16 percent, 19 percent and 69 percent, respectively. The large sulfur dioxide reduction is due to State and City actions to reduce sulfur content in heating oil and the phase out of residual heating oil use. Higher pollutant levels continue to occur in the most densely developed and trafficked communities, because of emissions from buildings and vehicles.

We appreciate the Council's interest in NYCCAS, and have also enjoyed working closely with our partners at the Department of Environmental Protection and the Office of Sustainability, along with Chair Richards and the Council's Committee Environmental Protection, in explaining NYCCAS and translating findings to pollution control actions. We are concerned, however, that this proposed legislation would prescribe guidelines, and limit NYCCAS from being able to adapt to evolving monitoring technology, changing air pollution levels, funding availability and results of past monitoring. By adjusting the number of locations, we have been able to study other toxic air pollutants and noise levels, conduct studies of traffic pollution, and perform health impact studies despite reductions in the overall NYCCAS budget. The law would remove needed flexibility by requiring continued monitoring at 150 locations, which our current funding level does not support.

In addition, the design and flexibility of our monitoring would also be compromised by the requirement that 20 percent of locations be at or near "arterial streets", which are often not as busy as interstate highway links, such as the Cross-Bronx Expressway. NYCCAS locations have already been identified to reflect a range of traffic and building emissions density and to oversample areas with high emissions. This allows us to study the relationship of traffic density to pollution levels and map 'hot spots' associated with traffic and building sources. We believe more can be done to use this data to inform actions to reduce traffic pollution, without placing more monitors near arterial roadways.

The bill also calls for us to identify regional pollution sources using NYCCAS data. NYCCAS is not designed to identify regional pollution sources, which generally cause a more uniform level of air pollution in the City. The Department is using other data and methods to study the impact of regional pollution sources; the New York State Department of Environmental Conservation also studies regional sources as required under the Clean Air Act.

The Department is also concerned about the issuance of a report on March 1<sup>st</sup> each year, with the results of the survey for the preceding calendar year. While we agree that annual reports are appropriate, air sample laboratory processing, quality control and data analysis to map pollution can take up to a year; the Department would not have information by March 1 to provide a full report that includes the preceding year's data.

Finally, the law charges the Department with making recommendations for City, State, and federal actions to improve air quality. We appreciate the intention, but we do not feel it is the role of the Department to issue public recommendations to our partners in government on specific control measures. We identify important sources, neighborhoods with more pollution, health impacts and share this information with agencies that regulate the sources of air pollution and with the public.

**Intro 703: A Local Law in relation to Cooling Centers.**

Extreme heat events are, on average, the most dangerous type of extreme weather. The City, coordinated by our colleagues at Emergency Management, activates a plan when the National Weather Service issues a heat advisory, based on the forecasted heat index. Advisories recommend that vulnerable people use their home air conditioner if they have one or go to an air conditioned place, such as a cooling center, mall, or the home of a friend. These advisories also urge the public and service providers to check on people who are vulnerable, especially those without residential air conditioning, who have a chronic physical or mental health problem, or are elderly. Most cooling centers are public community centers, senior centers, and public libraries; Emergency Management has identified 502 potential cooling center locations for 2015.

There are several reasons for opening of cooling centers and recommending that vulnerable people seek refuge from the heat at home or another air conditioned place during periods of extreme heat. First, the health risk from extreme heat can be quite high. While even seasonal hot weather can contribute to heat stress, when the heat index reaches about 95 degrees and above for two or more days or 100 for a single day, the risk of serious illness or death increases rapidly. Second, heat stress is cumulative. Consecutive days of extreme heat

compound the risk as the body temperature rises and dehydration worsens. Third, there is strong evidence from our data that lack of air conditioning during extreme heat is the strongest risk factor for heat stroke death. Nearly 90 percent of adult New Yorkers have home air conditioning and about three-quarters of vulnerable adults use home air conditioning often during extreme heat. But about 80 percent of victims of lethal heat stroke die at home, almost always without working air conditioning. For all these reasons, cooling centers make sense as part of an extreme heat public health protection strategy.

Cooling centers are part of a heat protection strategy; yet it is important to note that they have limitations. Only a small proportion of the at-risk population – perhaps 10 percent -- goes to a community center, library, or other public place, according to a survey we conducted in 2011. Many of the most vulnerable New Yorkers stay at home by choice or necessity or go to other cool places. For those who are vulnerable because of physical frailty, serious mental health problems, developmental disability or dementia, getting to and staying at a facility they do not regularly attend may be difficult. For vulnerable people who are more mobile and socially connected, it may be possible to increase use of cooling centers and other cooled public during heat waves by providing additional funds to offer food, refreshments, entertainment, and free transportation. Ultimately, increasing access to residential air conditioning for vulnerable people is the most reliable way to protect them from extreme heat and seasonal hot weather.

The Health Department has several concerns about Introduction 703. While we appreciate the intent of the bill, the Department does not have the capacity, experience, and role in the City's incident management system (CIMS) to coordinate the cooling center function.

This legislation, which requires opening cooling centers on days with air quality health advisories, could result in cooling centers opening twice as often or more per year as they currently do. This intervention will be costly, might not decrease pollution exposure, and could even increase it in some cases. When there is extreme heat, cooling centers definitely lower heat exposure and allow recovery from heat stress. In contrast, when the air quality is poor, a person's short term exposure could be increased if they travel to a cooling center along a busy roadway or if they visit a center in a more polluted location than their home or workplace because fine particles can filter into a building with regular air conditioning.

There is also concern that by increasing the number of days cooling centers are opened not every center will be able to continue to operate due to staff availability, budget or the terms of their leases. The majority of centers are facilities that are independently run by nonprofits and

have agreed to operate as cooling centers when the City activates its heat plan. The hours for each center vary, as the nonprofits determine their staffing capability and decide individually if they can operate over extended periods of time such as weekends and evenings.

This legislation would also require publicizing a list of cooling centers when there is not a heat emergency. Publishing a fixed, standing list of facilities that might serve as cooling centers could cause confusion with New Yorkers travelling outside during extreme temperatures to a site that may not be open. The locations of available cooling centers change day-to-day for several reasons, and some centers that were previously open may need to close if their air conditioning stops working. This is why we direct New Yorkers to the Cooling Center Finder only during heat *emergencies*; this information is available at NYC.gov, the NYCEM website, and 311 – which is the most reliable way to determine which sites are open on a particular day. NYC Emergency Management will also send a notification to the City’s elected officials when the heat plan is activated and cooling centers will be open, and send a notification to Notify NYC subscribers. This notification contains a link to an American Sign Language video with subtitles.

A final concern about this bill is that the much greater level of health risk during extreme heat events around which the cooling center program was designed does not apply to air quality health advisory days as we experience them today. Because our air is much cleaner than it used to be, New York City pollution levels on air quality health advisory days are much lower than in years past. Also, in contrast to the rapid rise in health risk associated with extreme heat, air pollution health effects increase more gradually. For these reasons, air pollution health advisory days in New York City currently are much less dangerous to public health than extreme heat episodes. Furthermore, EPA-recommended public advisory language on our poor air quality days does not include warnings to stay in an air conditioned place. Instead, vulnerable people are encouraged to reduce or avoid prolonged or heavy outdoor exertion. *The best way to protect vulnerable New Yorkers from air pollution will be to continue to implement programs to reduce levels of air pollution and the chronic exposures that have the greatest impact on health.*

Thank you for the opportunity to testify. I am pleased by the Committee’s interest in this issue, and the Department looks forward to exploring solutions that will continue improving air quality in our City. My colleagues and I would be happy to answer any questions you may have.