Cooling Centers

How NYC Beats the Heat!

New York City Independent Budget Office

August 14, 2025

Introduction

Rising temperatures and extreme heat are acutely felt in urban areas such as New York City. Extensive research contextualizes the need for cooling centers:

- A 2022 report by the New York City Comptroller's Office on cooling centers and extreme heat highlights how extreme heat is the leading cause of weather-related fatalities across the country.

- A 2025 report from the New York City Department of Health and Mental Hygiene (NYC Health) on heat mortality estimates over 500 people experience heat-related deaths annually in New York City. Urban

environments like New York City are especially at risk due to increased surface temperatures from the City's built environment, known as the Urban Heat Island Effect. This effect can lead to cities being up to 22°F hotter than surrounding suburban and rural areas.[i]

- The New York City Panel on Climate Change projects that average temperatures will increase by as much as 8.8°F with 87 days above 90°F each year by the 2080s (up from 57 by the 2050s).

- According to the 2024 Environmental Justice New York City report released by the Mayor's Office of Climate and Environmental Justice, there were 11 extreme heat emergencies between 2016 and 2020, and there will be four times as many emergencies in the 2030s, or around 44 a year. A heat emergency is declared when the predicted heat index for New York City is 95°F or higher for two or more days or when the predicted heat index for New York City is 100°F or higher for one or more days.[ii]

- The effects of rising temperatures are not equal across demographic groups. According to the 2022 Comptroller's report, extreme heat disproportionately impacts older adults, low-income households, and those who work physically demanding jobs. Black New Yorkers are particularly vulnerable, with heat mortality rates twice that of White New Yorkers.

Cities across the United States have increasingly looked towards cooling centers as a solution to mitigate some of the effects of rising temperatures induced by climate change. The Administrative Code of the City of New York defines a cooling center as "any facility that is designated to provide air-conditioned relief to the public whenever a National Weather Service heat advisory triggers a citywide

emergency response."[iii] New York City Emergency Management (NYCEM) maintains a map of all cooling centers in the City and updates it each time that the City declares a heat emergency. However, despite the importance of this program, it receives no funding and is therefore heavily reliant on organizations and businesses volunteering their spaces during heat emergencies. In addition, facilities are responsible for the operation of their site in its capacity as a cooling center. NYCEM coordinates with voluntary providers and updates its map of cooling centers accordingly.

The City has used cooling centers since the late 1990s and they have become an increasingly important tool for the City as the number of annual heat emergencies has increased, but the City has not previously provided a public rationale for where cooling centers are located. In previous years, NYCEM, along with NYC Health, released an annual Heat Emergency Plan that outlined the conditions under which a heat emergency is declared and the City's general plan to provide cooling options to the public, as mandated by the Administrative Code. In 2020, City Council passed Local Law 85, mostly focused on public education and communication about cooling centers. In September 2025, City Council passed Local Law 128 to codify the existing program and require an annual public plan specifically for cooling centers to be issued each May. Under the terms of the bill, the NYCEM Commissioner will issue this annual Heat Emergency plan, in consultation with NYC Health, beginning May 2026. The plan must consider multiple factors to determine need for cooling centers, including "areas in which vulnerable people reside and the Heat Vulnerability Index (HVI)", a measure used to quantify the relative risk extreme heat poses to an area, but still does not allocate funding for the program.

As the City begins to consider its first public cooling center plan, it will be important to understand where the program has operated so far, different ways of defining areas vulnerable to heat, and the challenges facing the program, especially the limitations from the lack of funding. In this report, IBO reviews the distribution of cooling centers across New York City last year (as of April 2024), considering both the City's Heat Emergency Plan as well as other City agency reports on the impact of extreme heat on different populations within New York City.

Part 1: Heat-Related Emergency Key Terms

What is an NTA?

Neighborhood Tabulation Areas (NTA) are aggregations of census tracts that are subsets of New York City's 55 Public Use Microdata Areas. They are smaller and more reflective of actual neighborhoods than Community Districts and are thus used by many City agencies. NTAs include multiple census tracts, defined by the Census Bureau as small, relatively permanent statistical subdivisions of a county or statistically equivalent entity that can be updated by local participants prior to each decennial census. Figure 1, below, shows a map of New York City divided by NTAs.

Figure 1: NTAs across New York City

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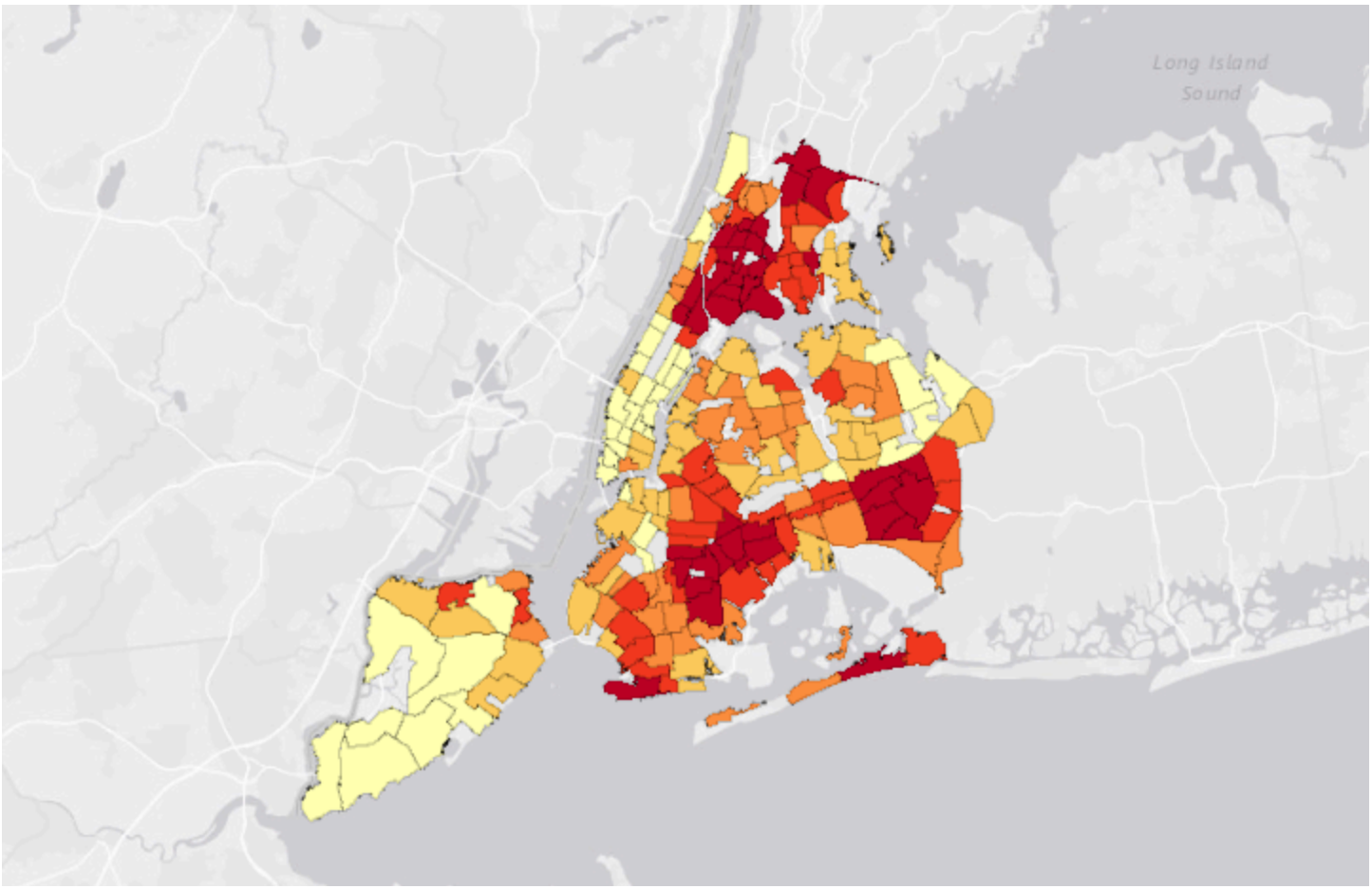
Source: NTA Shapefile From DCP

What is HVI?

Figure 2: HVI By NTA

Source for map: NTA data from Department of City Planning. HVI data from the Department of Health and Mental Hygiene. NTA Shapefile provided by DCP as of 2023.



The nationwide Heat Vulnerability Index (HVI) was first developed by the Yale School of Public Health (Yale) to account for the disproportionate impact extreme heat has on different demographic groups. NYC Health, along with Columbia University, applied Yale's methodology to create the map of NTAs by HVI in New York City. In doing so, NYC Health and Columbia University adapted the factor weights used in the Yale model to reflect local characteristics. Each NTA is given an HVI rating between 1 and 5, with an HVI of 1 representing the lowest relative risk and an HVI of 5 representing the highest relative risk. It is important to note that residents of neighborhoods with low HVIs can still be at risk of heat illness or death from extreme heat.

The HVI is calculated using a combination of neighborhood-level factors: average daytime summer surface temperature, the percentage of households with air conditioners, the percentage of green space, the median

income, and the percentage of Black New Yorkers.[iv] An NTA's population of Black New Yorkers is a distinct measure because this group is disproportionately likely to die of heat-related illness compared to other races/ethnicities. From 2011 to 2020, heat stress deaths per million people were 2.2 for Black New Yorkers, almost 3 times that of White and Hispanic New Yorkers, which was 0.9 deaths per million people. Figure 2 shows the distribution of HVI across the City by NTA, with the darkest shades of red representing the neighborhoods with the highest HVIs. The accompanying table shows demographic data of NTAs by their HVI level, corresponding with the component variables of the HVI.

Part 2: Cooling Center Types and Locations

The City identifies potential cooling centers across the five boroughs but does not appropriate any specific funding for this program. As a result, the City uses many types of spaces as cooling centers, including public spaces, non-profit organizations, and private non-City businesses like Petco. Not all facilities are accessible to the general public outside of heat emergencies. For example, the City uses Older Adult Centers (OACs), free centers that offer meals and activities for New Yorkers 60 and older, as cooling

centers. (OACs are run through non-profits that contract with the Department for the Aging and operate in NYCHA or other City facilities.) According to NYCEM, while the majority of OACs are exclusive to older adults, there are some that have no age restrictions during weekday heat emergencies. Furthermore, no OACs have age restrictions when a heat emergency is declared on a weekend. However, it should be noted that many OACs are denoted with "Older Adults only" on the cooling center map. This contradictory messaging may be a source of confusion for New Yorkers seeking information on site availability. Cooling centers also vary in whether they allow individuals to bring pets with them, which is why the City identifies Petco stores in the program.[v]

Given funding constraints, the City must use sites that are already open, staffed, and familiar to the surrounding community. Since heat emergencies are announced with little warning, the City must also choose sites that can be available on short notice (within 24-48 hours). This is why the City tends to draw on sites with pre-existing programming, like OACs or sites for the Department of Youth and Community Development (DYCD) Cornerstone program which provides programming for youth and adults in New York City Housing Authority (NYCHA) facilities. However, not all neighborhoods have OACs, recreation centers, or other types of institutions that fit the outlined criteria. In cases where a neighborhood is both extremely heat vulnerable and has historically seen a lack of investment in community spaces, it may be more difficult to identify locations for potential new centers. NYCEM has also testified that lack of programming at sites can result in low participation and uptake, which can make it hard to open emergency centers in underserved neighborhoods. This has become clear at schools, which had low participation when opened as emergency cooling centers.

Since the City does not publish an explanation of the strategy for locating cooling centers, IBO examined the distribution of cooling centers and how that might map onto different neighborhood characteristics that can indicate high heat vulnerability, including the HVI. IBO included all the cooling centers that were open at least once during the summer of 2024 in its analysis. Figure 4 shows that almost half of the total cooling centers available in 2024 were OACs and almost a third were libraries.[vi]

Cooling Centers and HVI Ratings

Figure 5: Cooling Centers by NTA and HVI

Source for Map: HVI data from the Department of Health and Mental Hygiene. Cooling Center coordinate data provided by NYCEM. NTA Shapefile provided by Department of City Planning.

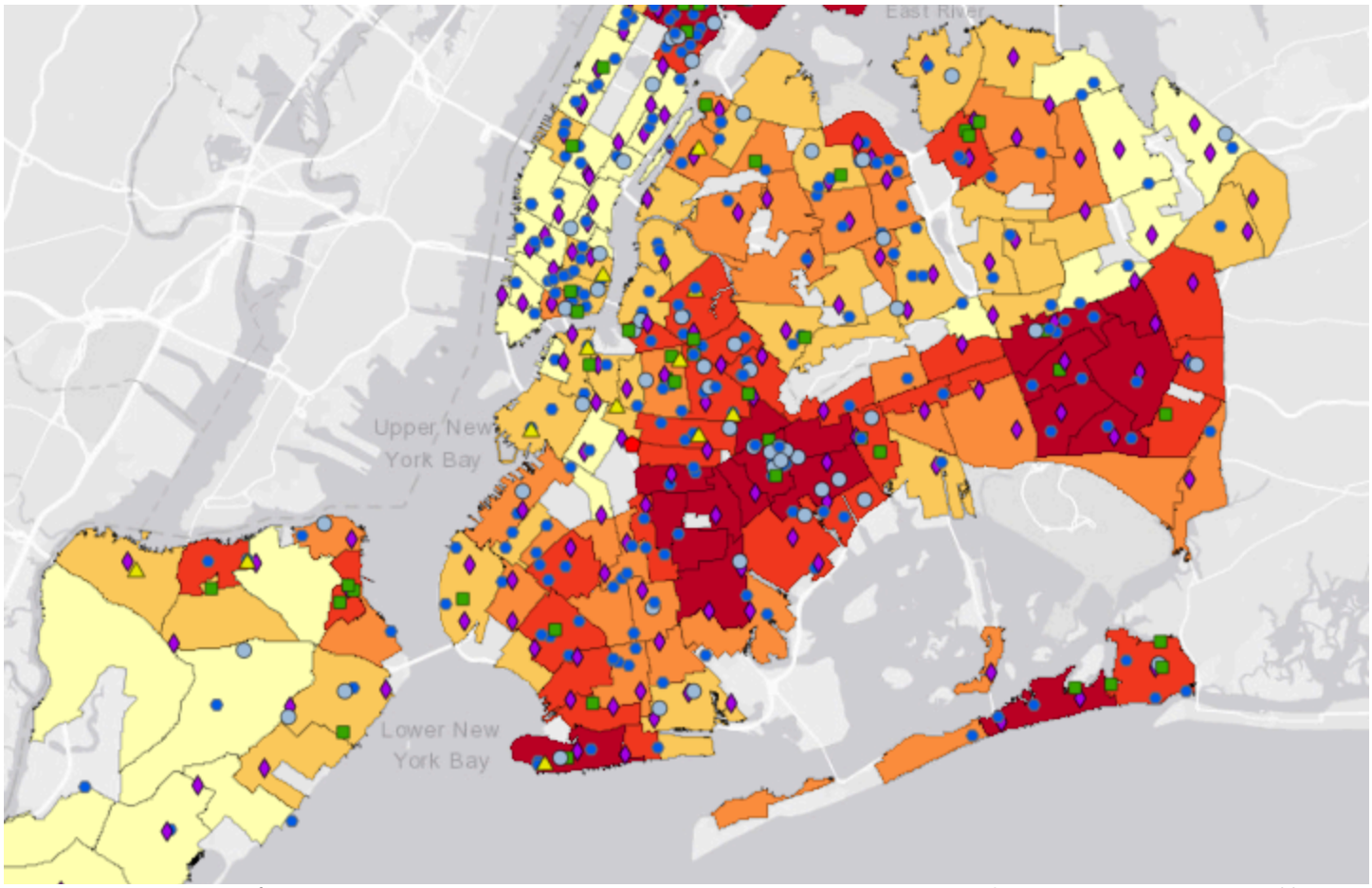
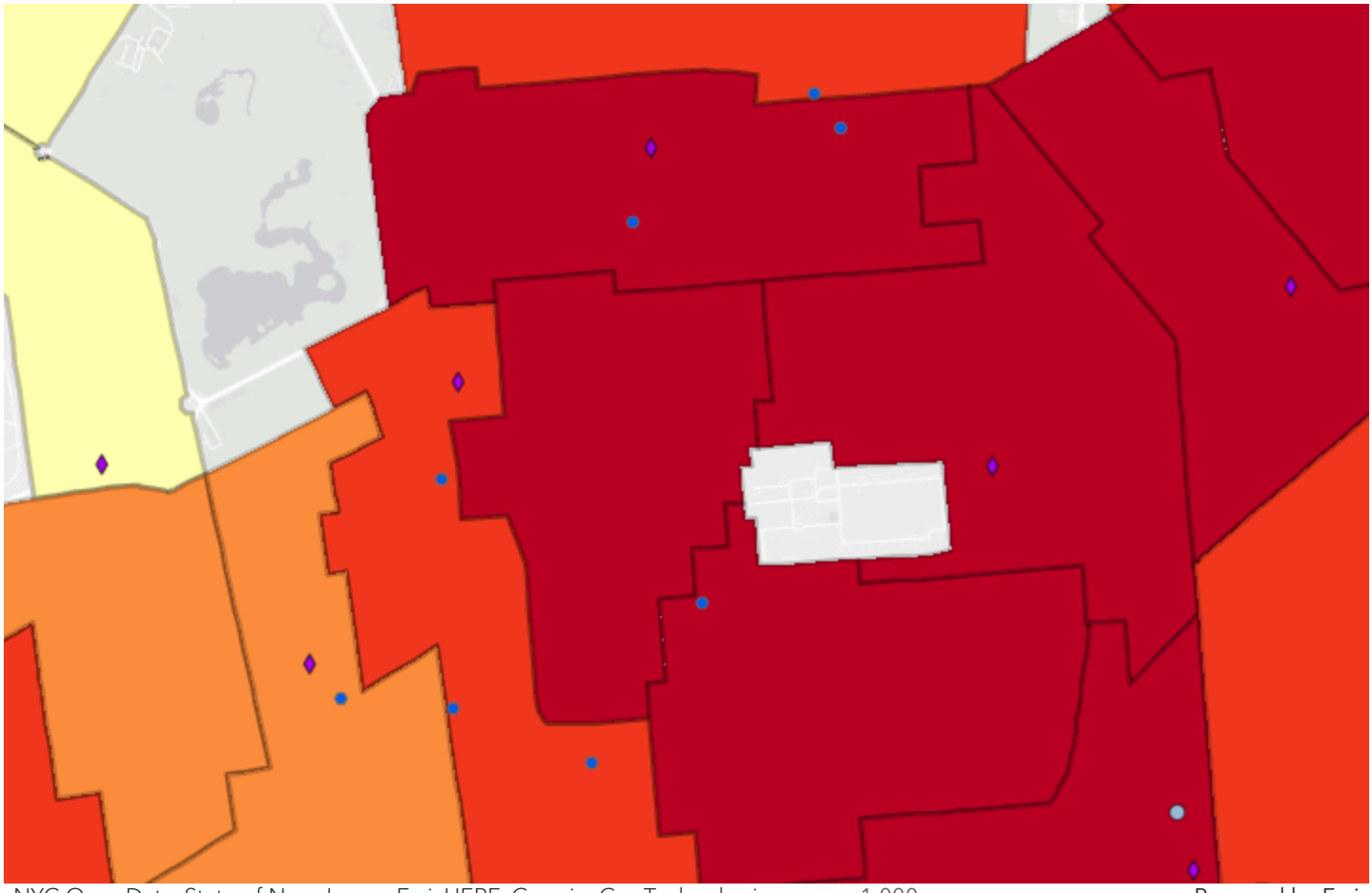


Figure 5 shows the distribution of all cooling centers in the summer of 2024 and the HVI of each NTA. Dark red denotes a neighborhood with an HVI of 5, and light yellow denotes a neighborhood with an HVI of 1. IBO used different symbols to show the different types of cooling centers. Neighborhoods with an HVI of 5, the highest level of vulnerability, had the most total cooling centers (155), and neighborhoods with an HVI of 4 had the second largest number (145). There are some areas with a high HVI and many cooling centers, like the south Bronx, and other neighborhoods with a high HVI and relatively fewer cooling centers, like eastern Queens and central Brooklyn.[vii]

Though there were 12 neighborhoods that did not have any cooling centers in 2024, it is worth noting that 95% of the City's population live in an NTA with at least one cooling center. Of the 12 NTAs with no centers, eight were neighborhoods with an HVI of 1 or 2, but four were in

neighborhoods with an HVI ranging from 3 to 5. After scrolling through Figures 5 and 6, Figures 7 through 11 show these four high-HVI NTAs with no cooling centers within them in more detail.

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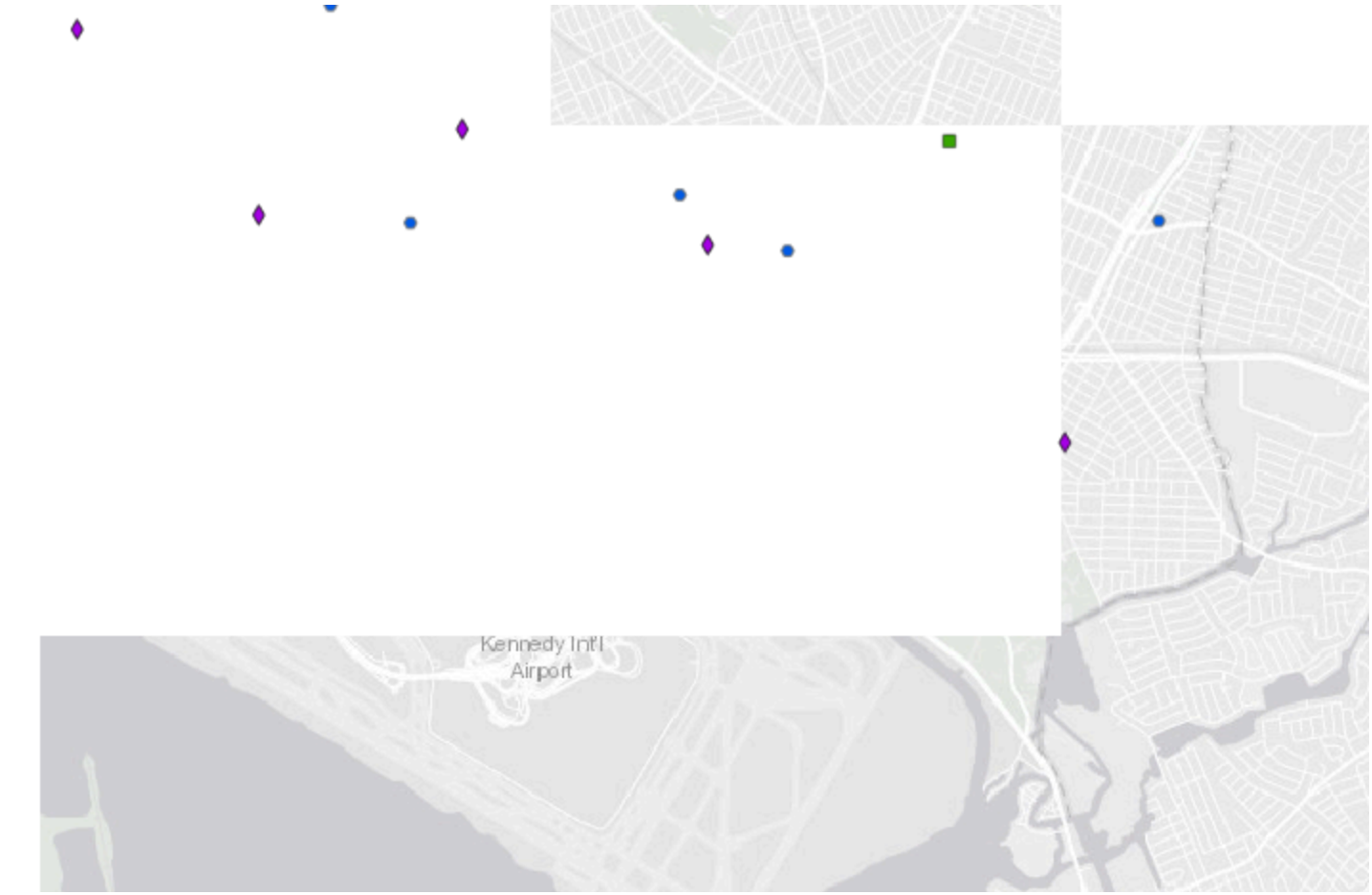
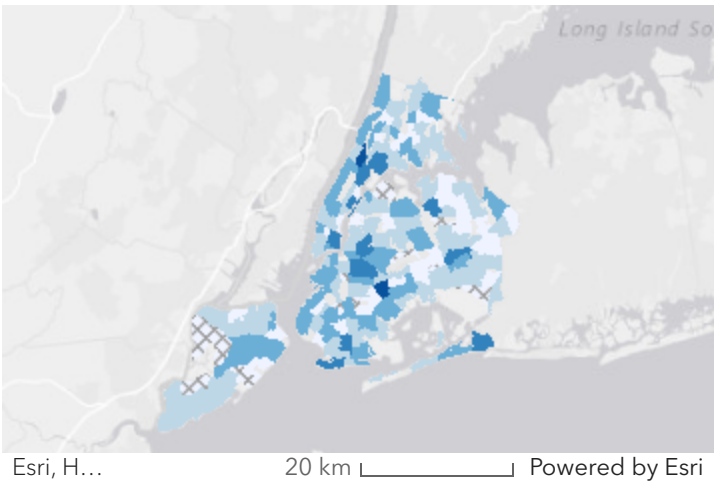
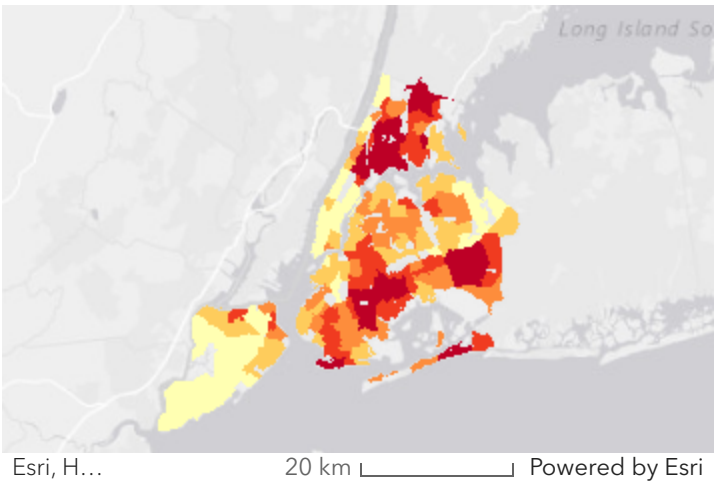


Figure 12 shows the number of cooling centers and HVI by NTA. To use the map, move the slider from left to right. The blue map on the left shows the number of cooling centers for each NTA and the red map on the right shows the HVI for each NTA.[viii] Darker colors reflect NTAs that have more cooling centers or a higher HVI rating, respectively. The legend reflects the range in the number of cooling centers, or the HVI rating in NTAs shaded in that color, respectively.

Figure 12: Number of Cooling Centers and HVI by NTA





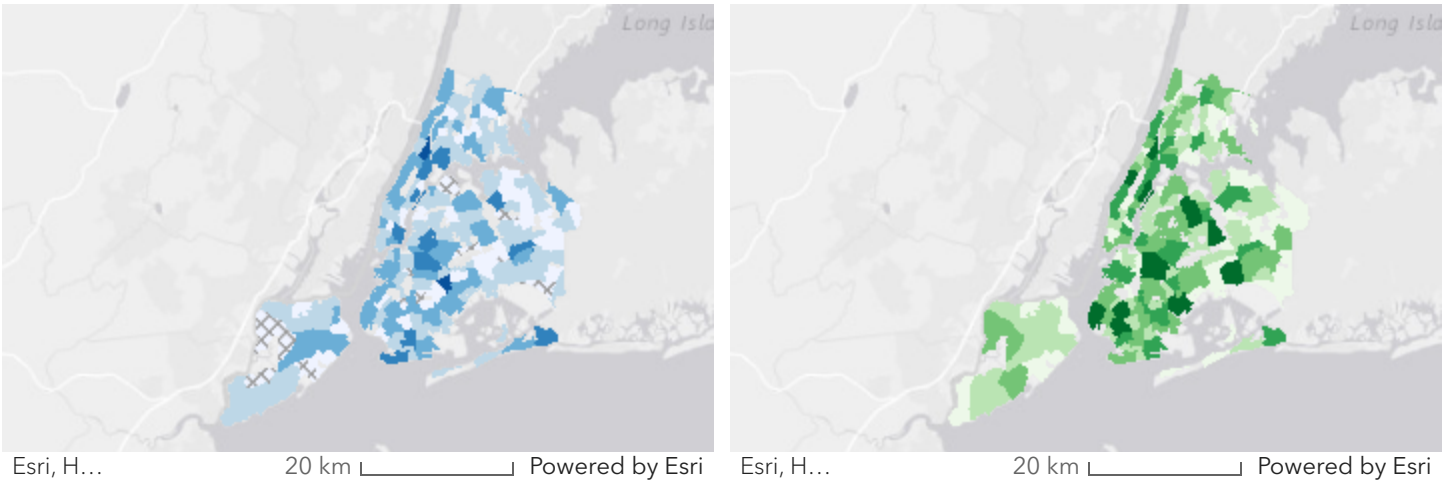
Source for Map: Data for Cooling Center addresses provided by NYCEM. Data for population by NTA provided by Decennial Census aggregated to NTAs by DCP. NTA Shapefile provided by DCP.

Part 3: Cooling Centers and Neighborhood Characteristics

Though HVI is a measure of heat vulnerability, it is not the only potential measure for the City to consider when identifying cooling center needs. The following section includes three maps with different examples of measures of need that the City could consider. The first map ranks neighborhoods by total population, the second map ranks neighborhoods by the share of older adults, and the third map ranks neighborhoods by the share of the population with access to air conditioning (AC). Each map has the 2024 cooling center locations on the left and different neighborhood characteristics that relate to cooling center need on the right.[ix]

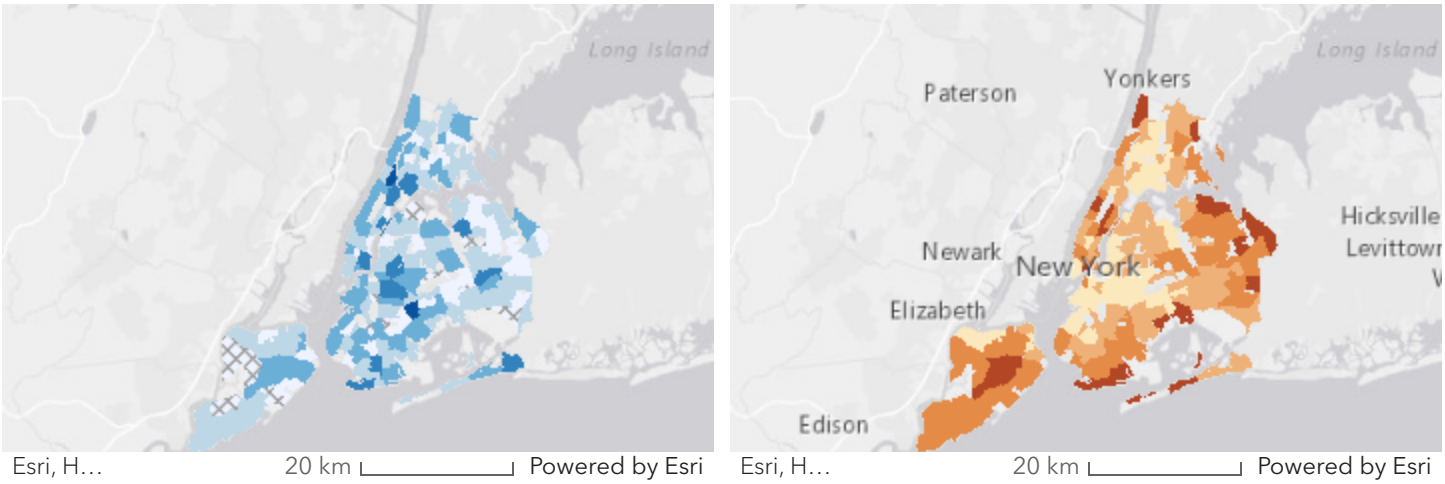
To use each map, move the slider from left to right to see how the distribution of cooling centers (left map) relates to the distribution of these neighborhood characteristics (right map). The legend reflects the range in the total population, share of older adults, or share of residents with access to AC in NTAs shaded in that color, respectively.

Figure 15: Number of Cooling Centers and Total Population by NTA



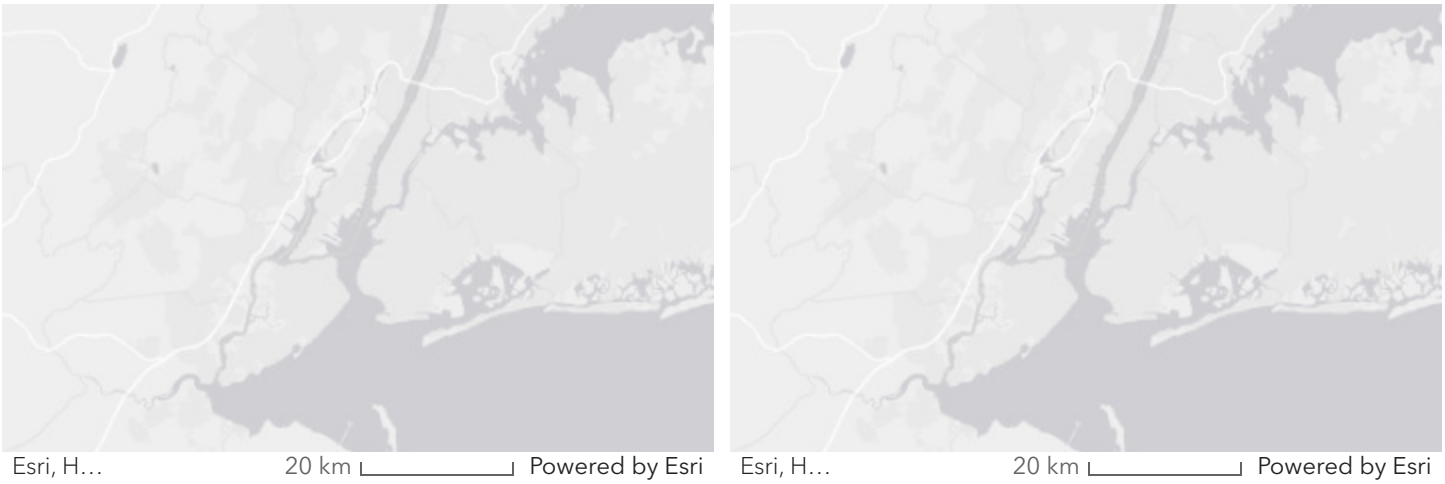
Source for Map: Data for Cooling Center addresses provided by NYCEM. Data for population by NTA provided by Decennial Census aggregated to NTAs by DCP. NTA Shapefile provided by DCP.

FIgure 16: Number of Cooling Centers and Share of Older Adults by NTA



Source for Map: Data for Cooling Center addresses provided by NYCEM. Data for population by NTA provided by Decennial Census aggregated to NTAs by Department of City Planning.

Figure 17: Number of Cooling Centers and Share of Residents with Access to Air Conditioning by NTA



Source for Map: Data for Cooling Center addresses provided by NYCEM. Data for population by NTA provided by Decennial Census aggregated to NTAs by Department of City Planning. Data from 2023, from the New York City Housing and Vacancy Survey (NYCHVS).

There are six neighborhoods that have both a higher number of older adults and lower levels of AC: Gravesend (South), Coney Island - Sea Gate, Brighton Beach, Springfield Gardens (North) - Rochdale Village, St. Albans, and Breezy Point. These neighborhoods are all in the

second-highest definitions of need in each map (greater than 15.8% of the population above 65, and more than 12.5% of households without AC). Despite these similarities, there was a range of cooling center placement across these areas in 2024, from 7 in Coney Island to 2 in Gravesend, Brighton Beach, St. Albans, and Breezy Point. Of these six neighborhoods, only Coney Island had more than one cooling center per 10,000 residents (1.4 per 10,000). Three of these neighborhoods have an HVI of 5 (St. Albans, Springfield Gardens - North, and Coney Island), two have an HVI of 4 (Brighton Beach and Gravesend), and one has an HVI of 3 (Breezy Point).

There is no one neighborhood that meets the highest level of all these categories of need. The neighborhoods with the least AC coverage (more than 18.2% without AC) have an average age of 32.8; in the neighborhoods with the highest share of older adults, 92% of the households have AC. For context, looking across all neighborhoods with an HVI rating of 5, the average age is 36 and 16.3% of households did not have air conditioning.

Part 4: Operational Challenges

Operating Hours

The maps in the previous sections show all the cooling centers in the City open at any point during the summer of 2024, but those cooling centers were not open every day. Whether or not a cooling center is available for use during a heat emergency depends on a variety of factors, including the day of the week and the hours of the day when the cooling center is open. Heat emergencies are generally evenly distributed throughout the week, and even though some neighborhoods cool down at night, the Urban Heat Island effect keeps many neighborhoods hot even later in

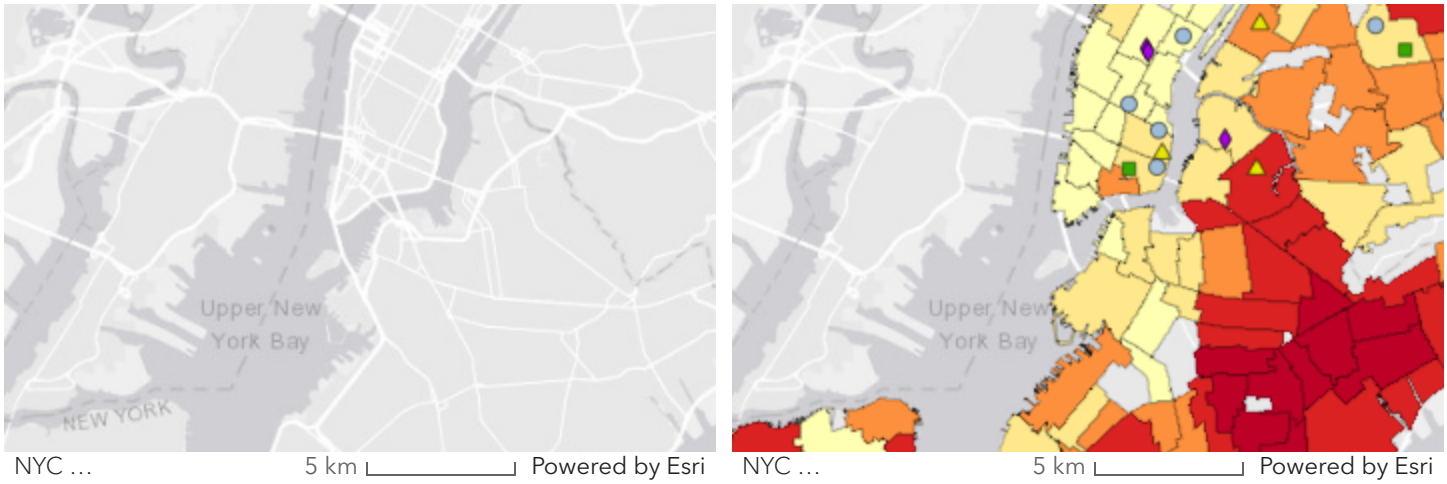
the day. On weekdays, only 43% of cooling centers were open after 6 PM—which is before sunset in the summer. No cooling centers were open past 11 PM or allowed for individuals to sleep there overnight.

Substantially fewer cooling centers are open during the weekend. In the summer of 2024 across all heat emergencies, on average there were 616 centers open Monday through Friday, and less than half open on a Saturday or a Sunday. Even fewer were open all weekend long. Most cooling centers open on the weekend were open after 6 PM, but this still leaves many high HVI neighborhoods without any cooling center coverage for a significant amount of time. This may also be a result of the voluntary nature of the program, which makes cooling center weekend availability sensitive to the operating hours of libraries, OACs, and other types of spaces the City can use without funding.

The following map, Figure 19, shows the change in available cooling centers depending on the day of the week and time of day. When the slider on Figure 19 is on the right side, all cooling centers that were open at any point during 2024 are visible; when the slider is on the left side, the cooling centers that were both open all weekend (centers

open both Saturday and Sunday) are visible. This stark drop-off in the number of centers shows how many high-HVI neighborhoods lose cooling center coverage on the weekends.

Figure 19: All Cooling Centers vs Cooling Centers Open Only on Weekends



Source for map: Cooling Center Addresses provided by NYCEM. HVI provided by NYC Health. NTA Shapefile provided by DCP.

Quality Control

In testimony to the City Council Committee on Health, the First Deputy Commissioner for NYCEM outlined the basic requirements for a facility to be an eligible cooling center partner. These standards include a center being open to the general public, air conditioning (though a specific temperature was not specified), seating, access to water, a contact person for coordination, and a preference for accessibility. In her testimony, the First Deputy Commissioner emphasized how the program's requirements are structured to encourage as many entities to partner with the City as possible. NYCEM also provided IBO with their standards for potential cooling center sites to be admitted into the program. Any partnering site must be free and open to the public, be air-conditioned, be able to accommodate a minimum of 10 visitors, be able to provide

drinking water, and must be staffed and operate during daytime hours (operating at a minimum between 10 AM and 3 PM). However, none of these standards are formalized in any publicly available document.

NYCEM also provides training to partnering cooling center location staff once annually before the summer season. NYCEM provided IBO with the training materials their liaisons present to participating cooling center staff. These trainings include material on the warning signs of heat illnesses and how staff can respond, how staff can create a welcoming environment at their centers, and direction towards other City-offered trainings ranging from mental health first aid to Naloxone trainings. The training also suggests additional resources partnering cooling centers can provide if they are able (without additional City support). NYCEM's training materials include cooling center staff expectations and guidelines for facility setup preparation, signage, accessibility, expectations for contact with NYCEM throughout a heat emergency, and site deactivation. NYCEM also indicated to IBO that they conduct some no-notice onsite inspections of cooling center locations during heat emergencies where the functionality of air conditioning, site signage, available staffing, restroom and facility accessibility, and site safety are all measured.

Due to a lack of public data on cooling center quality, the Comptroller's Office has previously pointed towards a cooling center audit developed by West Harlem Environmental Justice (WE ACT) as an example of a cooling center quality assessment. In 2021, WE ACT, a nonprofit environmental justice organization based in Harlem, conducted an informal survey audit of 32 cooling center sites in Northern Manhattan. Their audit evaluated cooling centers on the following conditions: operations, accessibility, accommodations and resources, atmosphere

and facility, and staff training. WE ACT found that the average internal temperature of the assessed cooling centers was 89°F, 91% were fully open and operational, 47% had outdoor signage indicating the site was a cooling center, 28% of staff were trained in identifying and responding to signs of heat exhaustion, and 16% of sites had wayfinding (meaning indoor signage to indicate where to go). Only 75% of surveyed cooling centers had staff that were informed it was a cooling center. NYCEM has challenged the validity of this survey but has not published information on its own inspections.

While the WE ACT survey only examined 32 sites, the findings highlight the importance of quality control. Without a budget or designated funding, NYCEM has a limited ability to ensure that cooling centers are cool, accessible, and have staff prepared to recognize and respond to individuals suffering from heat exhaustion. Public information on quality control is also important to building and maintaining trust in the program.

Alternative Cooling Mechanisms

The City also tracks other cooling mechanisms, such as spray showers, pools, and other places. Cooling mechanisms were not included in the cooling center database during the summer of 2024 but have since been added to the database. While air-conditioned indoor spaces are ideal for mitigating the effects of extreme heat, outdoor cooling mechanisms such as spray showers (including fire hydrants with spray caps), drinking fountains, and pools may provide some relief from extreme heat and function as inexpensive alternatives to cooling centers.[X] The New York City Parks Department maintains a map of some cooling mechanisms in the city, specifically spray showers and drinking fountains, as well as neighborhood tree canopy coverage. Figure 19 shows that there are 4,160 spray

showers and drinking fountains in the City, of which drinking fountains make up significant majority. Furthermore, 33% of all spray showers and drinking fountains are located in playgrounds which are only accessible to families with children. This is especially true for spray showers, of which 56% are located in playgrounds. The Parks Department identifies these features as “Cooling Options.” In addition to the spray showers and drinking fountains included in the data, there are 90 public pools across New York City which can also function as a cooling mechanism.

Given that 33% of spray showers and drinking fountains are in playgrounds, cooling mechanisms are not a meaningful substitute for cooling centers, especially for older adults. Also, some cooling mechanisms—like open fire hydrants—may be inactive on any given day and require City assistance to use. There are 109,531 fire hydrants in the City, per the Department of Environmental Protection’s database. Per the 311 website, spray caps for fire hydrants can be requested by anyone over the age of 18 with a valid ID after filling out a form and submitting one to one’s local firehouse. The firehouse will then schedule a time to turn the hydrant on and off.

What Other Cities Are Doing

The City can also look to other municipalities that use cooling centers as part of emergency heat response plans, especially western states with longer-running programs relative to New York. For example, Los Angeles maintains the Adverse Weather Hazard Specific Annex which details the heat vulnerability statistics policymakers use to gauge relative heat risk, general hours of operations for cooling centers and a live cooling center map, minimum requirements for their cooling centers such as American with Disabilities Act compliance, and detailed publicly available protocols to open cooling centers beyond default hours.[xi]

Phoenix has a very similar heat response plan, including a database of designated municipal cooling centers for both regular and extended hours. The guide from the Maricopa Association of Governments (an association of local governments in Maricopa County, Arizona) also distinguishes between standard cooling centers and respite centers, which are extended hour sites allowing for uninterrupted rest, sitting, or lying down for a minimum of 2 hours unless at capacity or at scheduled closing time. It should be noted that these other cities have far fewer cooling center locations than New York City, with Los Angeles County having 179 sites and Maricopa County having around 240 sites compared to New York City's 620 sites.

Conclusion

Cooling centers are one of the City's main tools to manage heat emergencies, but there is no budget for the program and no strategic plan for locating these centers. IBO found that cooling centers were sometimes located in areas of high heat vulnerability, but there were also areas of high heat vulnerability with few to no cooling centers, a likely

consequence of the voluntary and ad hoc nature of the current program. This voluntary approach also limits the pool of available partner spaces, leading to fewer centers in some vulnerable neighborhoods. As extreme heat events become more common, it will be increasingly important for the City to have a clear strategy in place for determining the location of centers, including incorporating the needs of different populations, how many to put in different areas, and how to ensure they fulfil their purpose through quality controls.

Data Sources

Data for Population and Populations 65+ - 2020 Decennial Census for NTAs created by Department of City Planning

Data for HVI and Household AC by NTA - NYC Department of Health and Mental Hygiene

Data for NTA Shapefiles from Open Data - 2020 Neighborhood Tabulation Areas (NTAs) - Mapped | NYC Open Data

Data in Tables:

- **Tables 1-9 -** NYC Health Heat Vulnerability Index (Interactive heat vulnerability index); NYCEM cooling center data came from a direct data request to NYCEM; Decennial Census

- **Table 10 -** NYC Parks Cool it NYC 2020 Dataset

Appendix

The following tables provide the z-scores for different components that make up the HVI. Z-scores measure the difference between a given data point and the mean of the

data set. A z-score of 0 signifies a data point is equal to the data set mean. A z-score of 1 signifies that the data point is one standard deviation above the data set mean, while a score of -1 signifies it is one standard deviation below.

Source for Appendix Tables - A Case-Only Study of Vulnerability to Heat Wave–Related Mortality in New York City (2000–2011) Jaime Madrigano,1 Kazuhiko Ito,2 Sarah Johnson,2 Patrick L. Kinney,3 and Thomas Matte2 1Department of Environmental and Occupational Health, School of Public Health, Rutgers, The State University of New Jersey, Piscataway, New Jersey, USA; 2Bureau of Environmental Surveillance and Policy, New York City Department of Health and Mental Hygiene, New York, New York, USA; 3Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, New York, New York, USA

Footnotes

i. Cool Neighborhoods NYC: A Comprehensive Approach to Keep Communities Safe in Extreme Heat (2017). https://www1.nyc.gov/assets/orr/pdf/Cool_Neighborhoods_NYC_Report.pdf

ii. The heat index is a National Weather Service measurement of the combined air temperature and relative humidity that estimates the human-perceived equivalent temperature.

iii. The National Weather Service (NWS) is a federal agency. After cuts at the NWS earlier this year that reduce the workforce by 560 people, the Trump Administration

announced plans to hire125 meteorologists in August 2025. It is unclear if these will be new staff or staff previously let go. National Weather Service adding around 125 new hires after laying off hundreds | CNN

iv. The HVI map on an NTA level is composed of z-scores of the following variables: (+) proportion of homes receiving public assistance, (+) proportion of non-Hispanic black residents, (+) proportion of overall deaths occurring in the home, (+) relative surface temperature, (-) proportion of trees. A higher composite index score indicates a higher risk of heat-related mortality. See Appendix for details.

v. In summer 2025, the City had one center identified by NYCEM as pet-friendly that was not a Petco, Woodside on the Move. This was not listed as a cooling center in summer 2024.

vi. “Government Other” in Figure 4 refers to the Brooklyn Museum, because it is a non-profit located in a City-owned building. Most museums are not near high HVI neighborhoods.

vii. There is no HVI for NTAs that are parks, cemeteries, or military bases. The City also has cooling centers in three NTAs without an HVI: Prospect Park, Marine Park – Plumb Island, and Freshkills Park (South).

viii. NTAs were split into five natural groups following ArcGIS’s methodology to minimize variation within each group.

ix. NTAs were split into five natural groups following ArcGIS’s methodology to minimize variation within each group and darker colors reflect NTAs that have larger total populations, larger shares of older adults, or smaller shares of residents with access to AC, respectively.

x. Expanding Cooling Center Access Report - NYC Comptroller.pdf

xi. According to the LA Emergency Operations Plan for Adverse Weather, if the Department of Recreation and Parks (RAP) determines that cooling centers should stay open beyond default hours, the agency will make recommendations to the Emergency Management Department and the Chief Heat Officer on which cooling centers should stay open based on heat risk, HVAC information, ADA accessibility, and other considerations. The Emergency Management Department will then convene RAP, the Chief Heat Officer, Libraries, and the Mayor's Office of Public Safety. The Plan details the responsibility of each agency, and the Mayor's Office of Public Safety will make final decisions on which cooling centers should remain open. Plan information: https://emergency.lacity.gov/sites/g/files/wph1791/files/2023-02/Adverse%20Weather%20Annex_%202022_MASTER%20FINAL%20.%20aa.pdf. Inter-departmental guidance further specifies how the City can consider the marginal cost of increased hours, including overtime for required staff.

Credits

This report was prepared by Cassandra Stuart, Claire Salant, Gianpaolo Defelice, and Elliot Jackson-Ontkush. Supervised by Jacob Berman and Sarita Subramanian. Report Production by Elliot Jackson-Ontkush