

NYC Health Department Climate Health Strategy

Updated March 2025

Introduction

The NYC Health Department plays a key role in NYC's citywide climate action and sustainability strategy, using an evidence-based approach to identify and mitigate climate change's impact on the health of New Yorkers. Health Department research and surveillance provide the foundation for action, with evidence identifying disproportionately impacted populations and neighborhoods where prioritized investment is needed most. We use our health data and expertise to demonstrate the need for *primary prevention*, i.e., tackling the root causes of climate change, in the interest of the public's current and future health. Recognizing that climate change is a risk amplifier, we layer climate health into our work across the Health Department. Since the Climate Health Program launched in 2010, the NYC Health Department has become a national leader in this field.

HealthyNYC identifies the impact of climate change on all major drivers of life expectancy, underscoring climate health as a multisectoral issue that cuts across Health Department divisions and city agencies. To accomplish the Health Department's climate work, we collaborate closely with the Mayor's Office of Climate and Environmental Justice, with sibling agencies like the Departments of Emergency Management, Housing Preservation and Development, Parks and Recreation, Environmental Protection, the NYC Housing Authority, and with the research community and civil society. Through the Climate Resilience Advisory Network, comprised of 11 community organizations convened by the Health Department to advise on climate health, we have embedded a structure to collaborate with community organizations and seek their feedback on our priorities, strategies, and programs. The Health Department Climate Health Task Force, launched in October 2023, is a mechanism to grow collaborations across the agency around climate-related research, policy, health interventions, and communications.

The Health Department has honed an approach across four domains to accomplish our work:

- Conduct surveillance and **applied public health research** on current and future climate-sensitive health impacts
- Develop and advocate for **research-based policies** to build equitable resilience and reduce climate-related health impacts
- Innovate and deliver **public health interventions** to respond to climate change and build local resilience to climate impacts
- Draw connections between climate change action and improved public health and equity through **climate health communications**

This strategy guides the NYC Health Department to meet its strategic priority to *mobilize against the health impacts of climate change*. It lays out the Health Department's priority topic areas, our policy and public health goals, examples of our approach to climate health action by domain, and a high-level map of our short- and longer-term activities by priority and approach domains.

This document was first drafted in March 2024 and was updated in March 2025. It will be reviewed and updated annually to reflect accomplishments and emerging priorities.

Climate Health Priority Areas and Goals

The Health Department's climate health work focuses on four priority topic areas: heat; coastal storms, intense rainfall and flooding; energy insecurity; and air quality. In all our work, we link research to policy goals and, ultimately, to goals to improve the health of New Yorkers now and in the future.

Priority area	Justification	Policy goal	Health goal
Heat	Heat and flooding are climate change's largest present threats to health in NYC, requiring both emergency and systemic response. Heat waves are, on average, the deadliest type of extreme weather in NYC and the nation.	Universal (100%) access to residential cooling via adoption of summer maximum temperature legislation or other building/housing code regulations	Elimination of preventable heat-related morbidity and mortality
Coastal storms, intense rainfall, and flooding	Public health can be impacted before, during, and after flooding events; an increase in extreme precipitation days and sea level rise are expected to contribute to more frequent flooding over wider areas. Shifting precipitation and temperature patterns contribute to increased vector reproduction rates, the amplification of vector-borne pathogens, and elongated seasonality (e.g. West Nile virus in mosquitoes); this can influence the distribution, abundance, and prevalence of pathogens and vectors, increasing the risk of disease in people and animals. Heat and flooding-related injury and death are preventable, especially when a health equity lens is applied to climate solutions.	Housing and emergency preparedness policies to protect New Yorkers living in basements, who are at greatest risk of life-threatening flooding, and to support post-disaster recovery	Elimination of preventable flooding-related morbidity and mortality
Energy insecurity and power outages	As the city moves toward clean energy, equitable access to affordable energy is a critical component to a just transition and reductions in climate-related health burden. Reducing energy insecurity is necessary to provide equitable access to residential cooling – and heating, as buildings electrify. A resilient power grid is necessary to protect population health during storms and other climate-related extreme weather.	Reduction of household energy cost burden to under 6% for all New Yorkers; energy burden is the percentage of household income spent on home energy bills	Elimination of health impacts associated with energy insecurity and power outages
Air quality	Air pollutants most dangerous to health come from many of the same sources that emit greenhouse gases and, in some cases, contribute directly to global warming. Climate actions hold potential for localized health co-benefits in air pollution reduction that can be maximized by strategic implementation in communities disproportionately burdened by air quality-related health effects.	Reduction in PM2.5, NOx and O3 through implementation of greenhouse gas reduction initiatives, focused on buildings (Local Law 97 and electrification), commercial cooking emissions (charbroiling regulations), and freight/last-mile delivery transportation (indirect source rule)	Elimination of inequitable air pollution-attributable health burden across NYC

Current and Future Climate Health Activities

The NYC Health Department Climate Health Strategy serves as a guide for a wide portfolio of programmatic and policy work across divisions, led by the Climate Health Program in Environmental Health and the Climate Health Task Force of cross-divisional expertise. The Strategy defines high-level short- and longer-term activities (“now,” “future,” and “both”) to prioritize and appropriately resource these efforts, organized by priority area and action domains.

Priority area	Research & Surveillance	Policy	Public health interventions	Communications
Heat	<i>Now:</i> Indoor temperature, energy and building characteristic analyses <i>Now:</i> Vector and vector-borne disease surveillance <i>Future:</i> Heat morbidity analyses, including excess morbidity and mental health intersections	<i>Now:</i> Maximum temperature policy development and implementation <i>Now:</i> Occupational heat safety guidance or standards <i>Future:</i> Use of health care sector funding and data for climate health interventions	<i>Now:</i> Be a Buddy climate resiliency programs in community organizations; Climate Resilience Advisory Network <i>Now:</i> Heat emergency planning and response in partnership with NYCCEM <i>Both:</i> Trainings & engagement of trusted messengers (e.g., Community Health Workers, maternal-child health home visiting programs)	<i>Now:</i> Expanded online and print materials on documented climate health impacts, including data stories on latest NYC Panel on Climate Change report <i>Now:</i> Flooding health communications <i>Now:</i> Targeted communications to providers and community partners on chronic and emergent climate health concerns
Coastal storms, intense rainfall & flooding	<i>Now:</i> Flooding and intersecting structural and behavioral risks <i>Future:</i> Flooding-related morbidity and mortality surveillance	<i>Both:</i> Greenspace and built environment policies that reduce flooding and heat risks <i>Future:</i> Climate-resilient housing policies; Policies addressing climate-induced displacement risks, especially for renters	<i>Both:</i> Communications & partnerships with community organizations serving priority sub-populations (e.g. people w/ disabilities, LGBTQ+ populations, pregnant people) <i>Future:</i> Expansion of climate resiliency programs; development of neighborhood resiliency hubs	<i>Both:</i> Expanded communication strategies to reach diverse audiences and prioritize accessibility
Energy insecurity	<i>Now:</i> Household Energy and Health Survey analyses and manuscripts <i>Future:</i> Innovative EI surveillance methods	<i>Both:</i> HEAP advocacy for summer utility benefits; Support utility rate case and efforts around rate reform; Protect and expand existing heat disconnection policies; Reinstate matching across means-tested benefit programs <i>Future:</i> Expand low- and middle- income households’ access to weatherization	<i>Future:</i> Incorporate climate considerations into drug overdose prevention and outreach programs	

Air quality	<i>Now:</i> Perceptions of air quality survey <i>Both:</i> Congestion pricing evaluation <i>Future:</i> Ground-level ozone patterns following nitrogen oxides (NOx) reductions, health impact trade-offs	<i>Now:</i> Implementation of commercial cooking emission regulations; equitable implementation of Local Law 97 <i>Both:</i> Sustainable freight and last-mile transportation policy, specifically NYC Indirect Source rule	<i>Now:</i> Growing NYC community of practice for local-level air quality monitoring	<i>Now:</i> Storytelling for NO₂ health impacts and addition of NO₂ health impact rates to EH Data Portal <i>Now:</i> Guidance/engagement on causes of asthma and air quality's contribution <i>Both:</i> Intersection of climate and air quality benefits
Cross-cutting	<i>Now:</i> NYC Panel on Climate Change <i>Future:</i> Climate health analyses for priority sub-populations (e.g., people with disabilities, LGBTQ+ populations, pregnant people)	<i>Both:</i> Lead by example through agency sustainability efforts and Climate Budgeting <i>Future:</i> HealthyNYC climate strategy map, which outlines evidence-based strategies, sub-strategies, and activities that can contribute to achieving the 2030 HealthyNYC goals	<i>Now:</i> Climate Health Task Force and associated divisional climate health goals <i>Now:</i> Divisional (e.g., Office of Preparedness and Response; Mental Hygiene) and topical (e.g., maternal child health) climate health workgroups to broaden collaborations and knowledge <i>Both:</i> HealthyNYC x climate health interventions <i>Future:</i> Further embedding climate into health emergency preparedness, e.g. through Hospital Preparedness Program <i>Future:</i> As a mental health intervention, support civic engagement and public advocacy for climate action	<i>Now:</i> Year of Climate (2024-25) to build internal agency capacity on climate health <i>Both:</i> Provider and hospital system engagement through existing agency channels <i>Future:</i> Increase awareness of health care providers and public on relationship between climate change and mental health

Climate Health Action Domains

I. Surveillance and applied public health research on current and future climate-sensitive health impacts

Awareness of the adverse health consequences of climate change can drive equitable policy and the prioritization of resources and interventions. The Health Department has been laying the groundwork evidence of the health impacts

of climate change, while simultaneously asking new questions through innovative methods, data sources and partnerships.

Examples

- Heat: The Health Department developed a [Heat Vulnerability Index](#), which is an online map that uses environmental and social factors to identify and prioritizes neighborhoods with the greatest risk of heat-related mortality. The Heat Vulnerability Index and other Health Department analyses of heat-related health impacts provided the foundation for creation of NYC's first comprehensive heat adaptation and mitigation plan "Cool Neighborhoods NYC" and subsequent policies and investments. Our research serves as the justification for the Extreme Heat section of PlaNYC, the City's sustainability plan released in 2023.
- Storms & Flooding: The Health Department conducted mortality reviews of both Superstorm Sandy and Hurricane Ida to understand individual risk factors for health impacts during flooding events. Particularly during Ida, a primary risk factor was residence in basement apartments – the majority of which are unregulated (illegal). To protect health, we are bringing this analysis into City policymaking to further highlight the urgent need for more affordable housing and to inform the process to regulate basement apartment conversions to maximize both housing and health.
- Energy Insecurity: The Health Department and Columbia University researchers collaborated to conduct the first representative survey of household energy use and health of New York City residents, resulting in a series of peer-reviewed papers. The findings further define energy insecurity as a health issue and deepen the evidence base for policy advocacy by the Health Department and civil society.
- Air Quality: In partnership with the Mayor's Office of Sustainability, the Health Department conducted a health impact analysis of the city's plan to reduce GHG emissions by 80% by 2050, called *80x50*. We identified significant air quality co-benefits of the plan, which would translate into hundreds of averted deaths, if implemented. In addition, we found that the greatest health benefits would accrue to residents of the lowest-income communities, demonstrating an opportunity for climate action to ameliorate persistent health inequities.
- Vector-borne Diseases: Climate disruptions and land use changes can create conditions that increase mosquito and tick populations. We have developed and deployed a framework to describe how climate change-associated factors, including temperature and precipitation, may impact the occurrence of diseases (number of cases in space, time, or affected populations). This guides our longstanding surveillance program to monitor mosquito and tick populations and disease prevalence, and to analyze trends in mosquito-borne and tick-borne diseases in both people and animals.

II. Develop and advocate for research-based policies to build equitable resilience to climate health impacts

Climate change impacts health, but frequently, public health and health equity are critically missing from climate change policy development, implementation, and evaluation. The Health Department has dedicated our efforts to inserting public health and equity into all facets of citywide and community-level action for sustainability, climate adaptation, and air quality improvement.

Examples

- Heat: Due to the Health Department's research-driven policy advocacy, NYC made a commitment in PlaNYC to protect New Yorkers against climate impacts in their homes during summer months by developing indoor temperature regulations that mirror those in place for the winter months. The Health Department actively shapes the discourse in the interagency planning group on maximum temperature policy implementation with applied public health and health equity research and principles.

- Storms & Flooding: The Health Department leveraged its analysis of flooding deaths during Hurricane Ida to gain a place at the table to develop policies related to basement accessory dwelling units (ADUs), advocating for a health- and equity-centered, precautionary approach. Through legislation, City Council enabled ADUs under certain conditions, with restrictions informed by our analysis of flood risk maps.
- Energy Insecurity: The Health Department plays a critical role in centering health equity in energy policy, resulting in the city's first energy plan, *PowerUp*, naming utility rate restructuring and other policy avenues to address energy insecurity. We also provided health data and analysis to support a 2020 petition to the Public Service Commission, which secured \$70 million in summer utility subsidies for 440,000 low-income families. We supported the 2019 and 2022 utility rate cases with testimony, resulting in revised disconnection policy that expands protections for NYC ConEd customers during hot summer weather.
- Air Quality: A critical component of the Health Department's local air quality surveillance -- the largest ongoing urban air monitoring program of any U.S. city -- is using our health impact analyses to inform and evaluate climate sustainability action. The New York City Community Air Survey (NYCCAS) was started with our advocacy for transition to cleaner fuel oil; we estimated averted deaths (moral imperative) from the policy and established Health Department expertise and benefit in this work. As a result, our Air Quality Program also brought health equity to the implementation table for congestion pricing, evaluating air quality and related health impacts and securing revenue commitments for asthma mitigation strategies in overburdened communities.

III. Innovate and deliver public health interventions to respond to climate change and build local resilience to climate impacts

Neighborhood-based programs have the potential to empower communities to be resilient in the face of climate hazards. Through cross-division and interagency collaboration, the Health Department is working to build social infrastructure in partnership with community organizations to reduce the public health impacts of both acute climate crises, as well as the "slow-motion" emergencies of poverty, racism, and community disenfranchisement that dictate inequitable outcomes in climate health. Layering climate health onto the agency's existing programs and health interventions, such as its health action centers and its home visiting programs, builds on the Health Department's strong community ties while recognizing climate change's cumulative risks to health.

Examples

- Cross-cutting: The Be A Buddy program is a multi-partner initiative, innovated by the Health Department, that builds on local strengths within neighborhoods to achieve greater social cohesion and, as a result, community resiliency. The program works with partner organizations to activate community response to heat, flooding and other climate health events. From June 2018 to February 2020, a 20-month period, the Be a Buddy program successfully reached communities 1,653 times. During COVID, the Be a Buddy program successfully reached communities 4,014 times in a 2-month period. The program relaunched under the Bureau of Health Equity Capacity Building in February 2025 with six community partner organizations.
- Cross-cutting: Through a cross-divisional partnership, we developed and delivered a training program for Community Health Workers as "trusted messengers" in Bureaus of Neighborhood Health on heat, flooding, and cold weather health and safety. The trainees then trained community leaders and distributed "cool kits" to outdoor workers and street vendors in Bronx and Queens, in partnership with NYC Emergency Management and local CBOs. Such collaboration with CHWs and community partners informs our future engagement actions to build community knowledge and power to address climate health.
- Cross-cutting: The Health Department formed the Climate Resilience Advisory Network (CRAN) in 2023 to better integrate community feedback into the agency's climate health priorities and programming and to facilitate collaborations across CRAN member organizations. The CRAN offers the opportunity for intersecting assessments from an intentionally crafted group, representing many different and entwined perspectives,

and is an essential tool for incorporating local government involvement to increase unified and sustainable climate health efforts. CRAN's 11 member organizations are advising the Health Department on topics including the maximum temperature policy, heat outreach materials, and air quality perceptions research.

IV. Draw connections between climate change action and improved public health and equity through climate health communications

The Health Department provides credible and usable information to New Yorkers about how climate change affects their health and what they can do to protect themselves and their families. We use outlets including social media, webpages, community presentations, printed materials, and the Environment and Data Portal.

Examples

- Cross-cutting: The Health Department uses visual storytelling and compelling data on the [Environment and Health Data Portal](#) to convey difficult climate, air quality and health concepts and findings on both an intellectual and emotional level to inspire action. The [Climate and Health Hub](#) and the [Air Quality Hub](#) feature interactive tools to allow visitors to visualize the magnitude of health impacts citywide and the impacts that hyperlocal societal and environmental change can have on climate and community resiliency.
- Cross-cutting: The Health Department issues Health Alert Network advisories to medical providers, as well as messages to mental health providers, when heat advisories are issued. We also integrated a climate lens into provider advisories for spring pollen, wildfire smoke, tick-borne disease, West Nile virus, leptospirosis, and harmful algal blooms.
- Heat: Annually, the Health Department produces a city-mandated New York City Heat Mortality Report, available online in the Climate and Health Hub. The report's statistics, like the number of heat-related deaths annually, and its analysis of the inequitable conditions putting people at risk, are regularly cited by local and national news articles. Through this earned media, we shape the public understanding of heat as a health equity issue and frame solutions using evidence-based recommendations.
- Air Quality: The Health Department and Queens College annually conduct the New York City Community Air Survey to evaluate how pollutants impact air quality in different neighborhoods. The resulting city-mandated report is often cited in news articles. The Data Portal also provides to the public real-time, hourly measurements of PM2.5 levels at 7 monitoring sites citywide. During the June 2023 wildfire smoke event, that site handled unprecedented web traffic.