

PILLAR 4 OF 8



■ ★ WE WILL CHICAGO

ENVIRONMENT, CLIMATE & ENERGY

Creating healthy and resilient
neighborhoods for Chicagoans
to thrive

ENVIRONMENT, CLIMATE & ENERGY



Chicago’s “Urbs in Horto” motto — City in a Garden — reflects the many environmental resources and neighborhood assets that benefit both people and wildlife.

The city’s 8,800-acre park system is considered one of the nation’s most effective in terms of access, amenities and acreage, according to the Trust for Public Land. Meanwhile, the city’s mass transit system provides comprehensive travel options, decreases traveler’s reliance on cars and contributes to a high level of neighborhood walkability for most residents, according to national studies.



At the same time, environmental burdens that stem from decades of inequitable development patterns persist citywide, primarily in majority Black and Latino communities. These negative impacts can include greater vulnerability to air pollution due to underlying health and social factors, increased flood risk and higher than average neighborhood temperatures. Populations who are most vulnerable to pollution impacts include health-compromised individuals, older adults, pregnant individuals, children, individuals with less income stability, communities located closer to sources of pollution and communities with limited access to goods, social services and other resources. Some of these vulnerabilities are the result of harmful discrimination and underinvestment policies.

The Environment, Climate & Energy pillar aims to utilize data- and stakeholder-informed approaches for greenhouse gas reduction, climate change resiliency and improvements to open space and natural ecosystems citywide.



KEY TERMS

Climate Change

A change in global or regional climate patterns from the mid-20th century onwards that are largely attributed to increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

Climate Resiliency

The ability to anticipate, prepare for and respond to hazardous events, trends or disturbances related to climate. Improving climate resilience involves assessing how climate change will create new or alter current climate-related risks and taking steps to better cope with these risks.

Environmental Justice

The fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation and enforcement of environmental laws, regulations and policies. (U.S. EPA)

“ The data can tell us one thing about the inequitable distribution of amenities and burdens in our city right now ... that was the product of conscious decisions about where to put resources and the only way to undo that is to make conscious decisions about putting resources different places now. ”

– Rob Weinstock | University of Chicago Law School, Assistant Clinical Professor of Law



GOAL 1

Prioritize climate resiliency efforts in overburdened communities and for low- income individuals through both public- and private- sector efforts.

Citywide strategies should be prioritized by neighborhood through geographic assessments of public health data, the availability of public resources, vulnerability to extreme weather events, energy efficiency and other factors that impact the resiliency and sustainability of local residents.

OBJECTIVES

To achieve this goal, We Will...

- 1.1** Ensure community input on development proposals, zoning and permitting.
- 1.2** Establish and enforce climate, health and environmental criteria and policies for development reviews.
- 1.3** Require decision makers to be transparent and provide community members access to environmental and scientific data used for decision-making.
- 1.4** Establish requirements for private sector participation and responsibility in climate resiliency efforts and control of neighborhood assets.

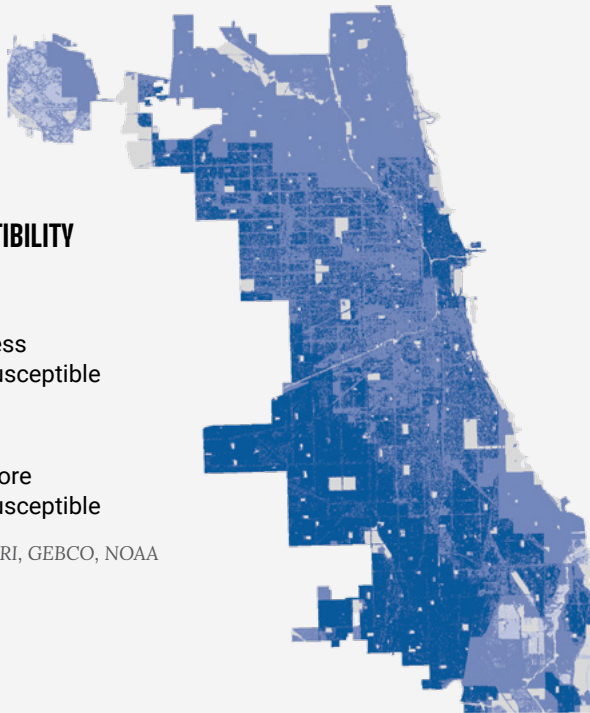
SUPPORTING DATA

Flood risk is higher on the South and West sides of the city.

FLOOD SUSCEPTIBILITY INDEX
2018

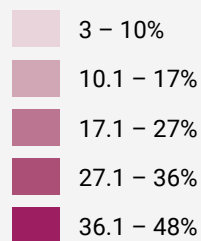


Source: ESRI, GEBCO, NOAA
NGDC

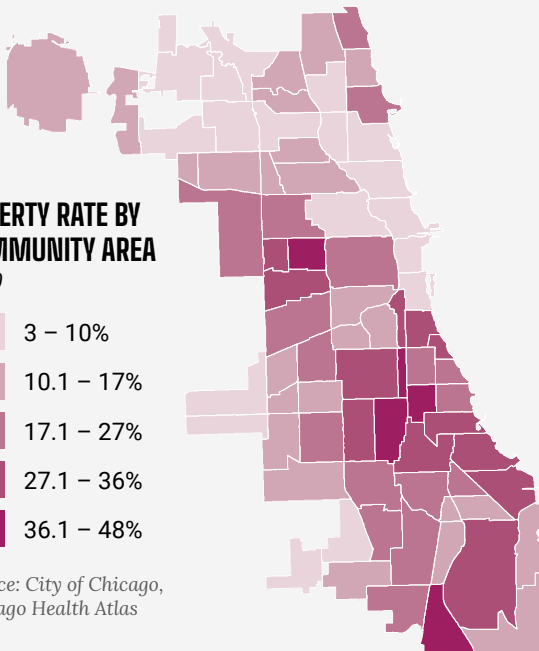


Communities with the highest poverty rates are also among the most susceptible to flooding and hardships.

POVERTY RATE BY COMMUNITY AREA
2020

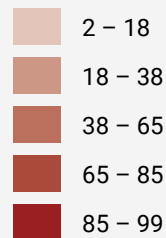


Source: City of Chicago,
Chicago Health Atlas



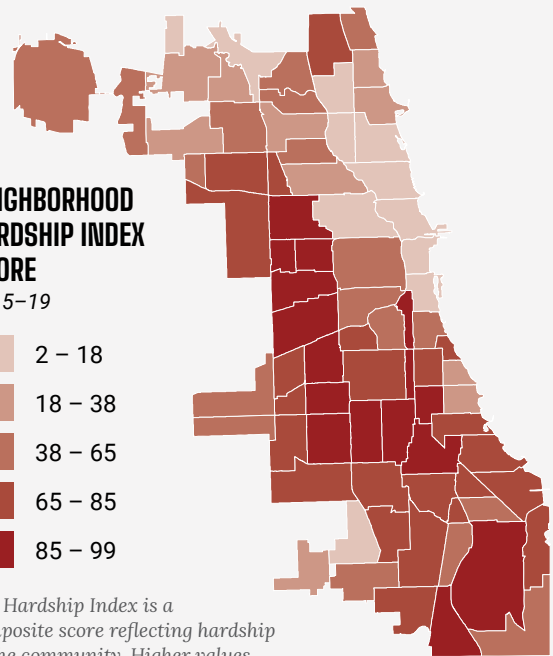
Community area hardship scores generally reflect their poverty rates.

NEIGHBORHOOD HARDSHIP INDEX SCORE
2015–19



The Hardship Index is a composite score reflecting hardship in the community. Higher values indicate greater hardship.

Source: Chicago Health Atlas



GOAL 2

Use environmental justice principles to establish criteria and policies for geographies harmed by environmental degradation.

Approximately half of Chicago's industrial businesses are located within 26 designated industrial corridors, with the remainder located in areas zoned for industry throughout the City. The effects associated with proximity to these businesses are currently inequitably distributed. According to the Chicago Health Atlas, the neighborhoods that are vulnerable to excessive air pollution and industrial traffic are primarily on the West, Southwest and Far South sides.

OBJECTIVES

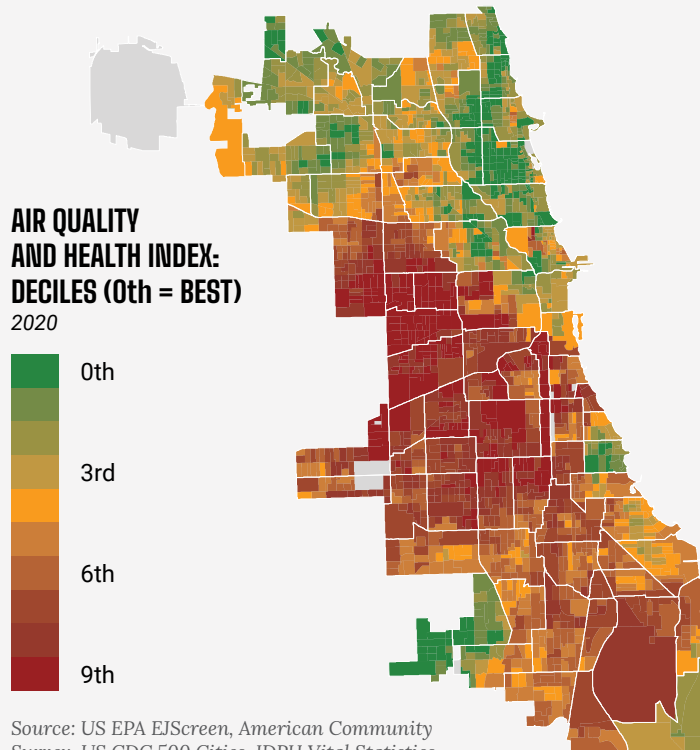
To achieve this goal, We Will...

- 2.1** Incorporate opportunities for residents to be part of land-use and transportation planning for their neighborhoods.
- 2.2** Help ensure community organizations have tools and resources to address the climate crisis.
- 2.3** Establish a process to identify, inventory and determine the value of historic disinvestment, inequitable policy and negative health impacts on residents.
- 2.4** Conduct a cumulative impact assessment and establish targets for positive outcomes in communities that are environmentally overburdened.



SUPPORTING DATA

The South and West sides of the City are more vulnerable to the effects of air pollution.

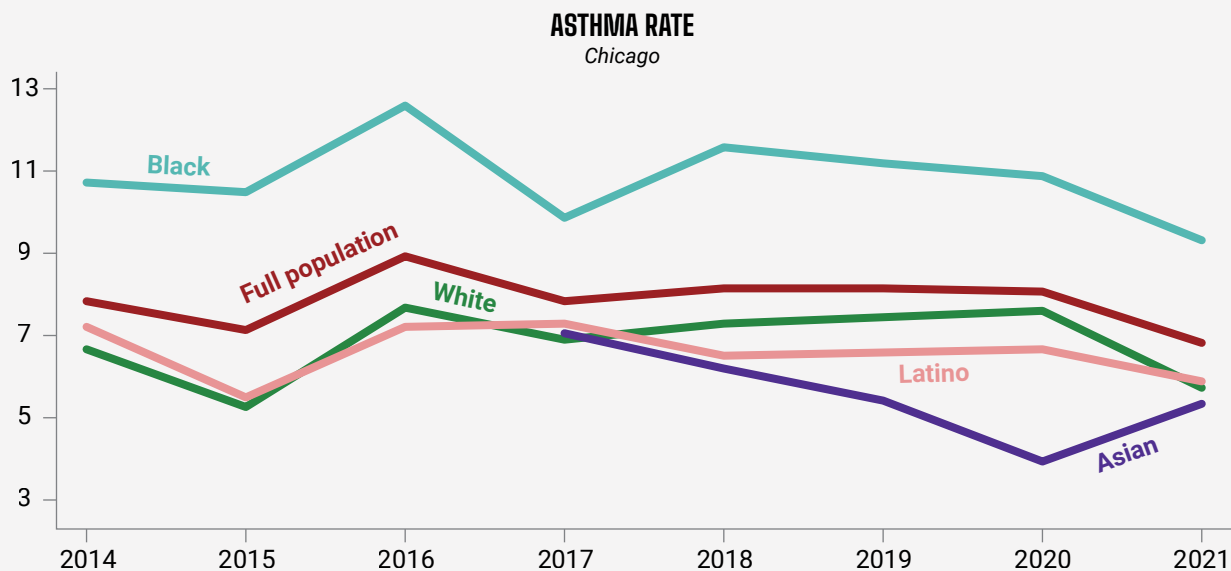


The Air Quality + Health Index combines community-level data on **AIR POLLUTION WITH HEALTH AND SOCIAL FACTORS** that identify areas that are most likely to experience negative impacts.

Census tracts in green **ARE LESS VULNERABLE**, while tracts in red **ARE MORE VULNERABLE.**

Source: US EPA EJScreen, American Community Survey, US CDC 500 Cities, IDPH Vital Statistics, Various Years combined, 2011-18

Black residents have higher rates of asthma than any other racial or ethnic group.



Source: Chicago Health Atlas

GOAL 3

Foster public and private partnerships to reduce waste and encourage the reuse of locally-produced materials, services and energy.

Despite campaigns designed to encourage residents and businesses to recycle, Chicago's recycling rate as a percentage of total waste was recently estimated at less than 9%, compared to rates exceeding 75% in cities like Los Angeles. More circular economic practices, where goods are produced, shipped, used and recycled within relatively short distances, can benefit all Chicagoans.

OBJECTIVES

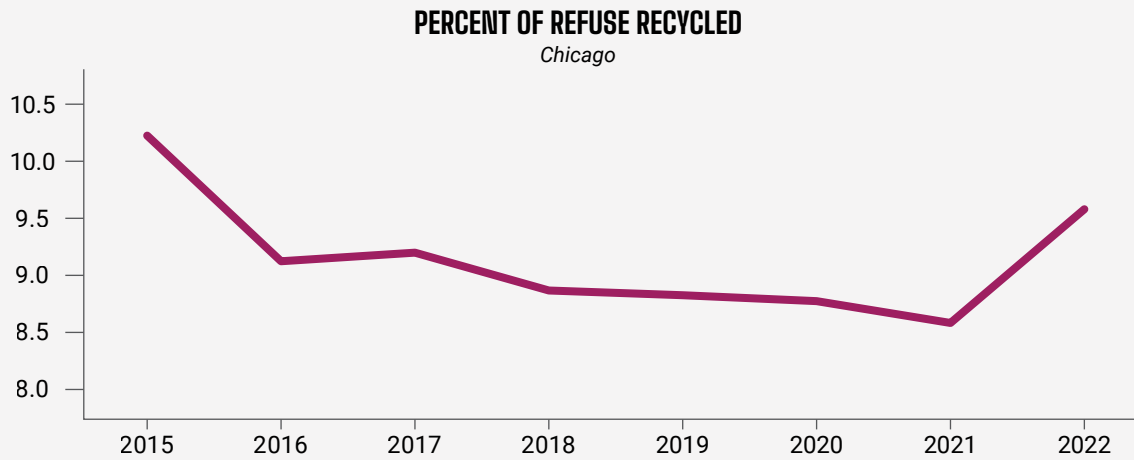
To achieve this goal, We Will...

- 3.1** Create cross-sector partnerships with racially diverse businesses to increase the City's waste reduction and diversion rates and leverage its buying power.
- 3.2** Establish contract requirements for the removal and disposal of materials from supply and waste chains.
- 3.3** Establish a community education curriculum that raises awareness about materials and waste handling.
- 3.4** Implement and support the development of urban agriculture.
- 3.5** Facilitate renewable energy generation and distribution including reuse and recycling.
- 3.6** Create development codes for new building technologies as they arise and prioritize the reuse of materials in construction.



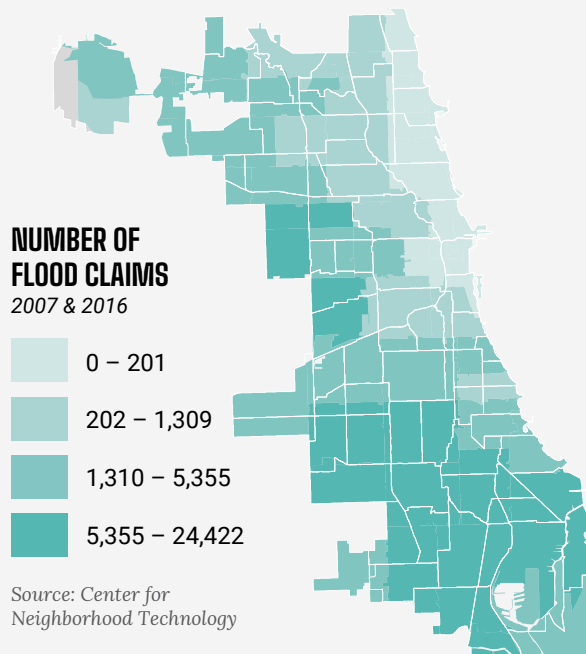
SUPPORTING DATA

Chicago's recycling rate increased in 2022 after declining for several years.



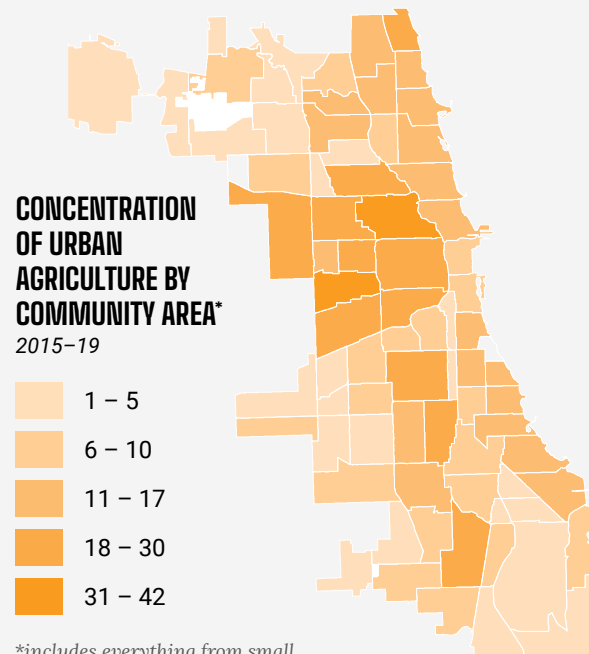
Source: City of Chicago

87% of flood claims are paid in Black and Latino communities.



Source: Center for Neighborhood Technology

Urban agriculture sites are located citywide.



*includes everything from small residential gardens to commercial urban farms

Source: Chicago Urban Agriculture Mapping Project



GOAL 4

Maintain and expand green space, natural resources and conservation efforts for the benefit of all Chicagoans.

With virtually all Chicagoans living within a 10-minute walk to a park, the City has ample existing open space resources that are known to improve personal mental and physical health. The benefits are partly offset by the City's ever-diminishing tree canopy coverage which, at 16%, is two-thirds the average coverage of other U.S. cities. Climate change compels us to restore our natural assets, particularly in communities with the most vulnerability to extreme heat and weather incidents, and protect and steward our freshwater resources for future generations.

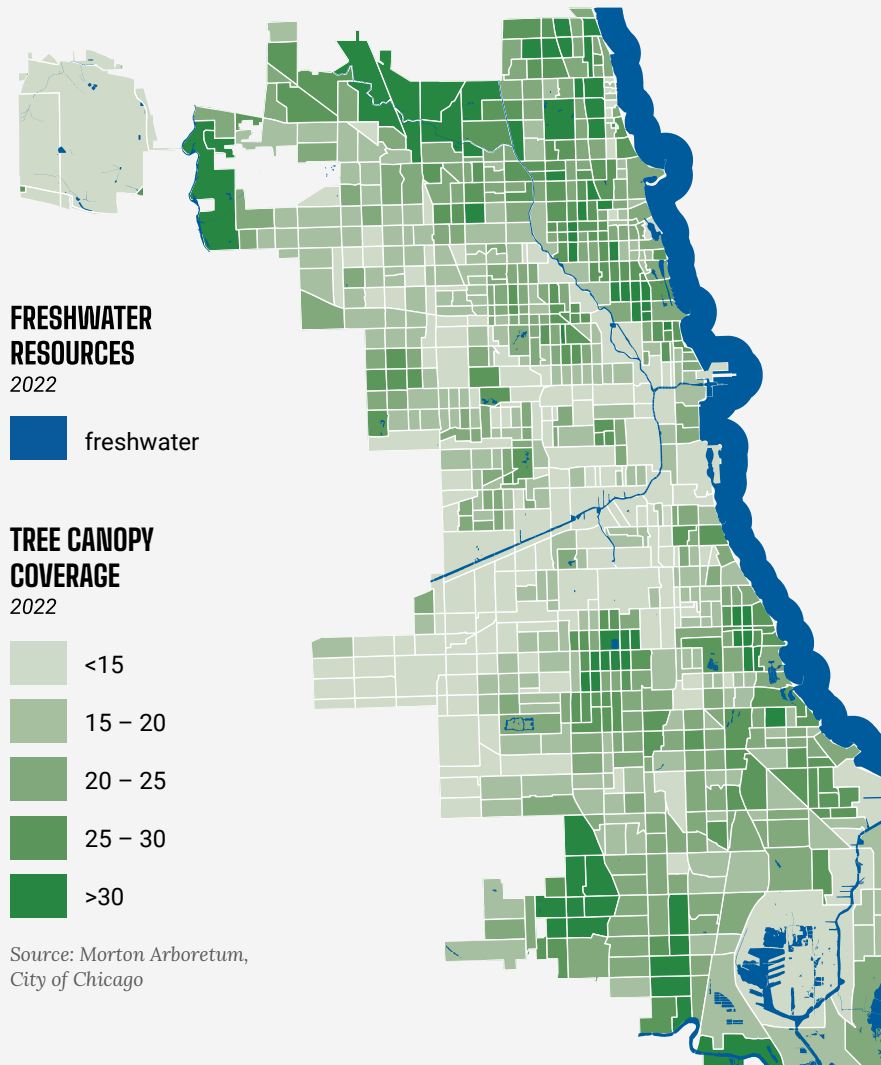
OBJECTIVES

To achieve this goal, We Will...

- 4.1** Invest in land restoration and stewardship, especially in neighborhoods with existing environmental burdens.
- 4.2** Acquire open space and provide equitable and improved access across the city.
- 4.3** Maximize the use of native plants in preserves, parks and parkways.
- 4.4** Invest in the expansion of Chicago's urban tree canopy.
- 4.5** Create open space or corridor easements around industrial zones.
- 4.6** Require infrastructure to be designed and built sustainably with public access for people of all abilities.
- 4.7** Protect Chicago's freshwater resources as the climate changes.
- 4.8** Work with Native American leaders to protect and support indigenous land stewardship principles.

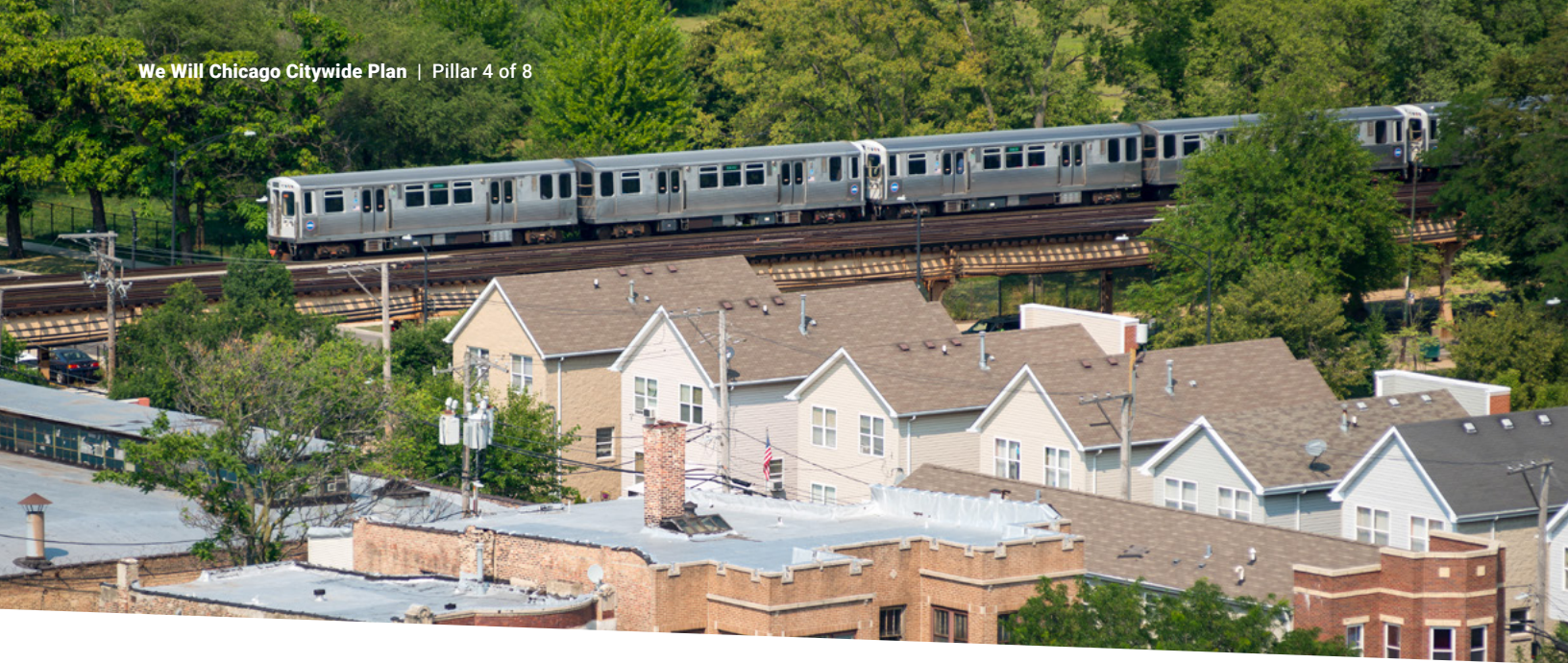
SUPPORTING DATA

Chicago's Freshwater Resources



“ We also need to discuss bridging the gap between labor and environmental justice – that's a big issue for our group and probably many others here. ”

– Martha Torres Allen | Southeast Side Coalition to Ban Petcoke, Co-Chair



GOAL 5

Mitigate and eliminate sources of carbon emissions in alignment with state, national and global climate goals.

Because 70% of Chicago emissions come from buildings, focus should be on eliminating harmful fossil fuels, retrofitting existing buildings, designing new buildings to the highest efficiency standards, expanding renewable energy and implementing savings opportunities for cost-burdened households. Buildings should be designed to minimize their impacts and enable green infrastructure, native landscaping and trees to alleviate urban heat islands and flood damage. Finally, housing near transit should be equitably advanced to provide increased access and lower emissions from car trips.

OBJECTIVES

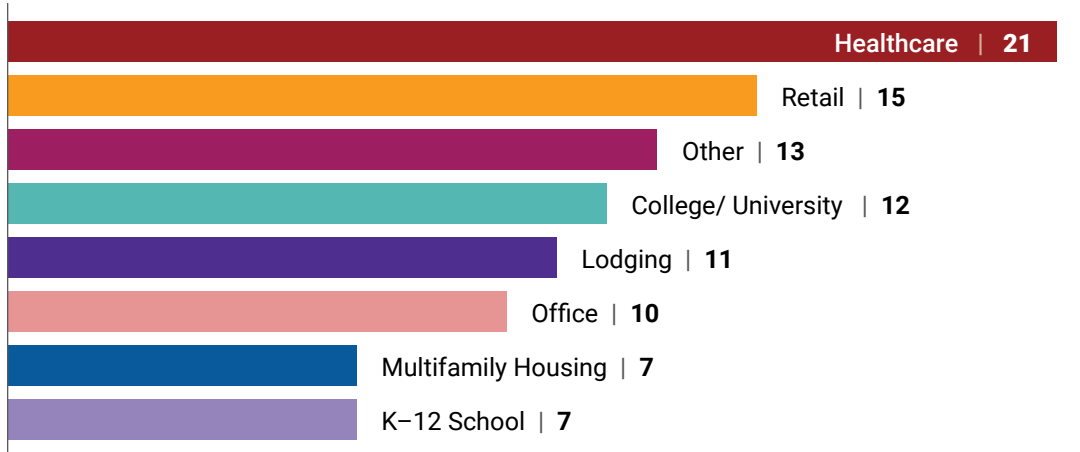
To achieve this goal, We Will...

- 5.1** Significantly reduce the ongoing impact of climate change in our neighborhoods.
- 5.2** Plan for green infrastructure that reduces the overall carbon impact of the City in public and private development.
- 5.3** Expand transit infrastructure as a climate mitigation strategy, especially in Black, Latino and Native American communities.

SUPPORTING DATA

Greenhouse gas emissions vary widely by building uses.

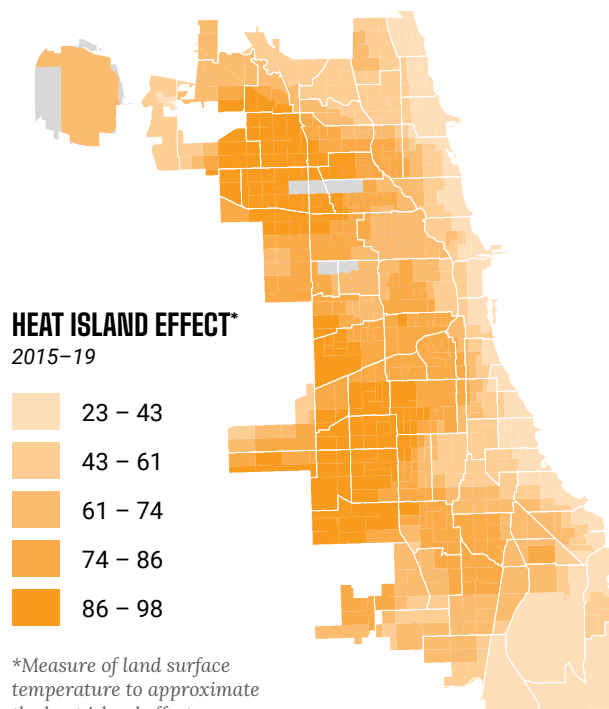
MEDIAN GREENHOUSE GAS INTENSITY BY BUILDING USE
 2016–20, Chicago, GHG Emissions Intensity (kg CO₂e/square foot)



Note: Other includes mixed use, convention and other public assembly, courthouse and prisons, laboratories, museums, libraries, adult educations and preschool/daycare.

Source: Chicago Energy Benchmarking Report, 2020

Chicago's surface temperatures are highest on the Northwest and Southwest sides.



*Measure of land surface temperature to approximate the heat island effect.

Source: Compiled by the University of Chicago Healthy Regions and Policies Lab, with support from the Partnership for Healthy Cities in partnership with the University of Chicago Center for Spatial Data Science and the Chicago Department of Public Health

“ I think if you institute a planning policy where natural areas and tree canopy has to be considered at either every population density or geographic distance, you’re going to address a lot of these issues that you’re talking about like heat island effect, flood mitigation, carbon sequestration, all of these things. ”

– Matt Freer | Chicago Park District, Assistant Director of Landscape



To see the policy ideas developed by the **Environment, Climate & Energy** pillar team, visit wewillchicago.com

