



# **IPA Power Hour 3—Climate Change and Health Equity**

April 26, 2024

# Agenda

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- 1. Introductions and Housekeeping**
- 2. Climate Change & Health Equity**
- 3. Health Indicators and EJ Designation**
- 4. Global and Local Health Equity Action**
- 5. Q&A**

# IPA Power Hour Webinars



- **Today's Power Hour:**

- Explore the connections between climate change and public health with a specific focus on equity.

**Power Hour is a series of educational and informative presentations on a wide range of clean energy topics and emerging issues.**

- Power Hour webinar series started in 2021.
- To-date, the Agency has hosted 30 Power Hour webinars.
- Invited energy thought leaders and experts locally and nationally.

**WEBINAR ARCHIVES: <https://ipa.illinois.gov/about-ipa/ipa-events/previous-power-hour-events.html>**

## About the IPA

### **Vision:**

*"A clean, reliable, and cost-effective energy future for residents and businesses across Illinois"*

- Independent State Agency created in 2007
- Responsible for the development of an annual Electricity Procurement Plan for customers of electric utilities
- Supports the Illinois Renewable Portfolio Standard (RPS) through the development and implementation of:
  - Long-Term Renewable Resources Procurement Plan
  - Competitive procurement for utility-scale projects
  - Solar incentive programs for homes and businesses

# Connecting the Dots: Health Equity and Climate Change

Dr. La Vonne Downey

Program Director of Health Sciences Administration  
Professor Health Sciences/ Health Administration, Roosevelt University  
Global Goals UN Ambassador for Good Health and Well Being

# Why Health Equity Matters

- Health in All Things
- What does health equity mean?
- Why should we care?

# Existing Health Disparities

- What public health disparities already exist?
- Altering our lived environment alters health outcomes

# Effects of Climate Change

- Climate Goals/SDG All Connected
- Climate change is a Threat Multiplier - Makes problems worse
- Factors like viruses, air quality, vector-borne diseases, and extreme weather events do not have uniform impacts

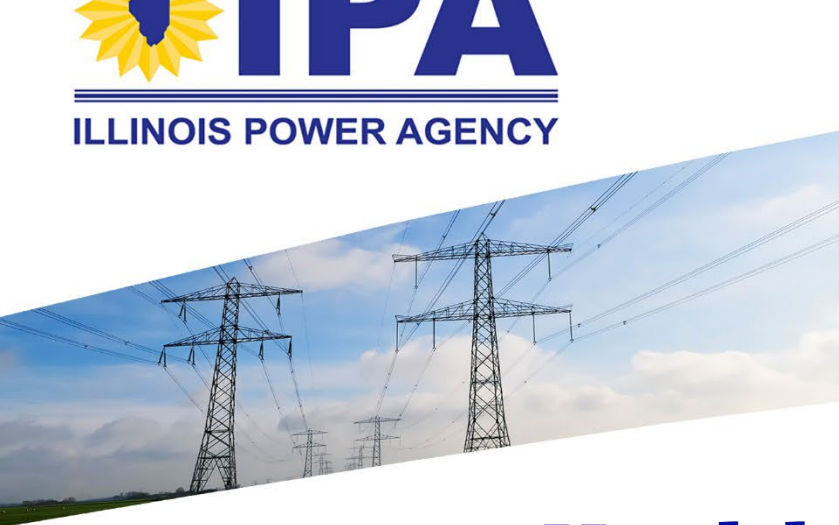


# Habitat Fragmentation

- How does climate change amplify health inequities?
- Disruptions in habitat change public health outcomes
- Co-exist? Or continue to destroy

# What can be done- what have we learned?

- Invest in alternative energy
- Most important lesson learned is moved from Me (I) to We
- I am learning that my actions impact wide populations
- What I do determines how healthy we all are
- We see how we belong to each other



# Health Indicators and EJ Designation ILSFA and Utility-Scale and Brownfield Projects

Sarah Duffy  
Deputy Legal Counsel  
Illinois Power Agency

# Illinois Solar for All

- **Incentives for solar projects serving LMI communities**
- **Subprograms:**
  - **Single-Family and Small Multifamily (1-4 units)**
  - **Large Multifamily (5+ units)**
  - **Low-Income Community Solar**
  - **Non-Profit and Public Facilities**
- **Job trainee requirements**
- **Consideration of climate and health equity:**
  - **25% reserved for EJ communities**

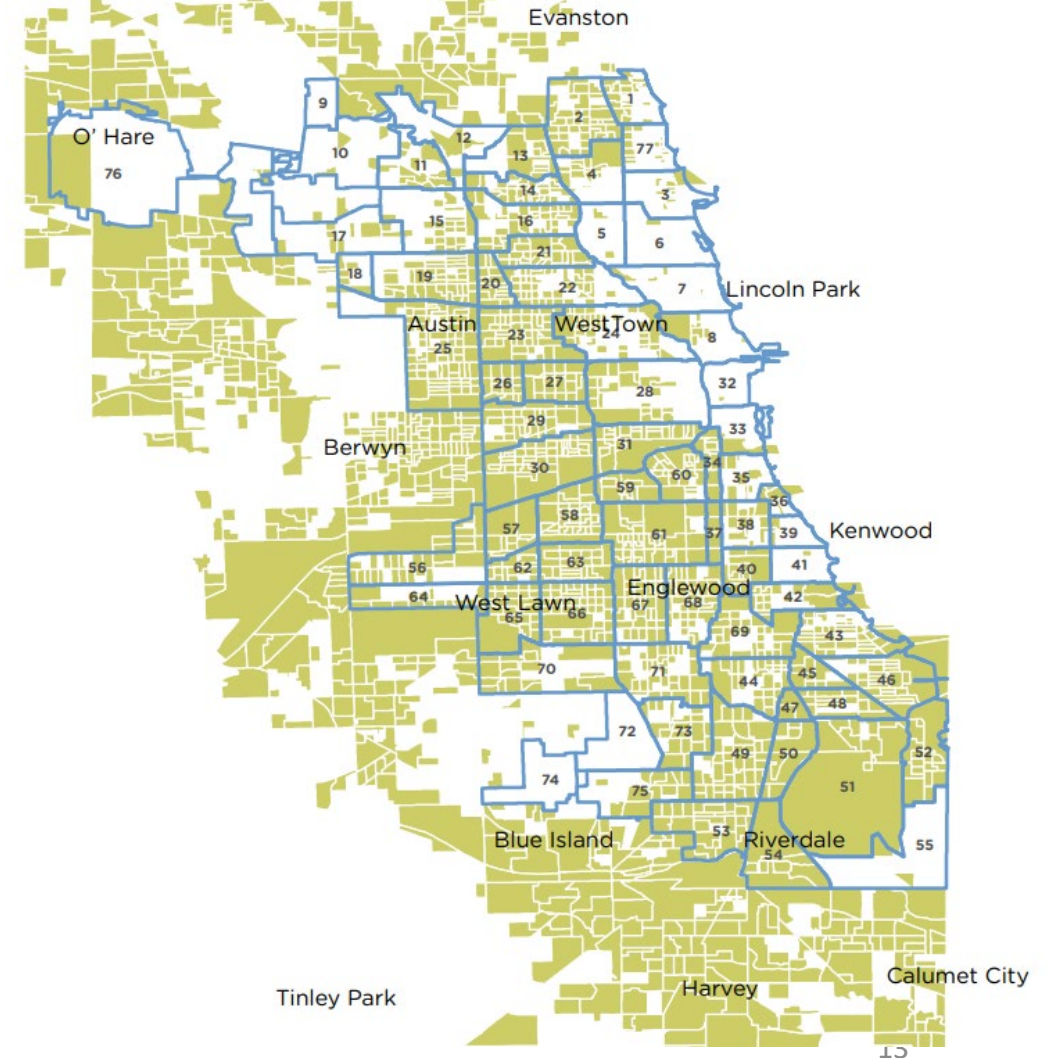


# Illinois Solar for All

- **Data sources:**
  - US Census
  - US EPA EJSCREEN tool
- **Top 25% of scores are designated EJ communities**
- **Demographic indicators used by IPA:**
  - Percent Low-Income
  - Percent Minority
  - Less than high school education
  - Linguistic isolation
  - Individuals under age 5
  - Individuals over age 64

## Top 25th Percentile of ILSfA Scores

Contains 3,100,239 people, approx. 1,187,831 households



- **Health indicator used by IPA:**

- National-Scale Air Toxics Assessment (NATA) air toxics cancer risk
- NATA respiratory hazard index
- NATA diesel particulate matter
- Particulate matter
- Ozone
- Traffic proximity and volume
- Lead paint indicator
- Proximity to Risk Management Plan sites
- Proximity to Hazardous Waste Treatment, Storage and Disposal Facilities
- Proximity to National Priorities List sites
- Wastewater Dischargers Indicator

- **Self-Designation application process**
- **Non-EJ communities seeking self-designation may also rely on:**
  - Asthma Emergency Department Visits (IDPH)
  - Low Birth Weight Infants (IDPH)
  - Drinking Water Watch Site (IEPA)
  - Leaking Underground Storage Tank Incident Tracking (IEPA)
  - Solid Waste Facilities (IEPA)

- **Competitive procurement process awards REC delivery contracts to utility-scale projects**
- **Projects in “adjacent” states that can demonstrate “the operation of such facility ... will help promote the State's interest in the health, safety, and welfare of its residents based on the public interest criteria” (20 ILCS 3855/1-75(c)(1)(I))**



# Utility-Scale and Brownfield Sites



## • Public interest criteria:

- **Minimizing sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), and other pollution that adversely affects public health in this State**
- Increasing fuel and resource diversity in this State
- Enhancing the reliability and resiliency of the electricity distribution system in this State
- Meeting goals to limit carbon dioxide emissions under federal or state law
- **Contributing to a cleaner and healthier environment for the citizens of this State**

**Table 4-1: Natural Gas-Fired Combined-Cycle Generation Emissions Rates**

Pollutant	Pounds/ MWh
SO <sub>2</sub>	0.006
NO <sub>x</sub>	0.048
CO <sub>2</sub>	745

**Table 4-2: Wind Duration/Direction on Factors**

Adjacent State	Wind Direction Sectors	Wind Direction and Duration Factor <sup>[1]</sup>
Indiana	SSE, SE, ESE, E, NNE, NE, ENE	0.319
Kentucky	S, SSE, SE	0.216
Missouri	W, WSW, SW, SSW, S	0.456
Iowa	W, WNW, NW, NNW	0.258
Wisconsin	N, NNW, NNE	0.128
Michigan	NE, NNE	0.083

[1] Total factors exceed 1.0 because there may be more than one state represented in a given wind direction sector.



**Think Globally, Act Locally: Climate Change, Health, Equity, and Action**

**Elena Grossman, MPH**

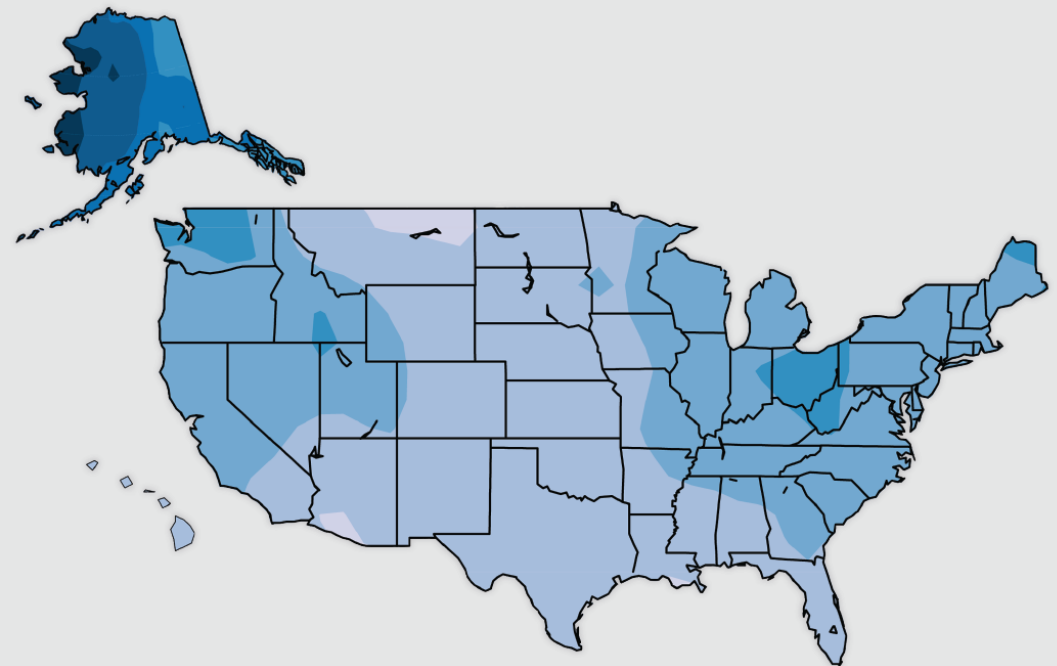
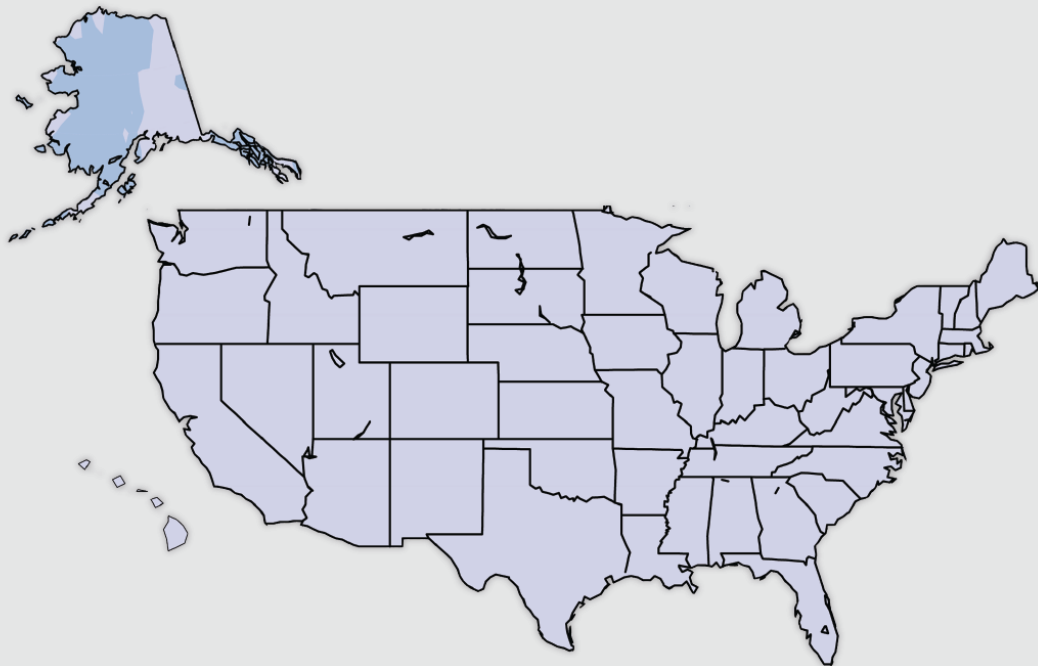
**Community Benefits Program Manager, GTI Energy**



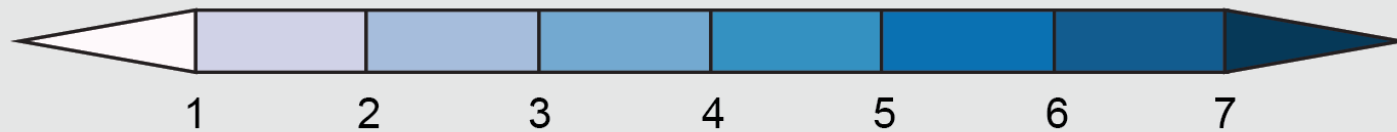
# Projected Change in Heavy Precipitation Events

Rapid Emissions Reductions (RCP 2.6)

Continued Emissions Increases (RCP 8.5)



Future Change Multiplier





Chicago,  
IL 2013



Johnston City,  
IL 2017



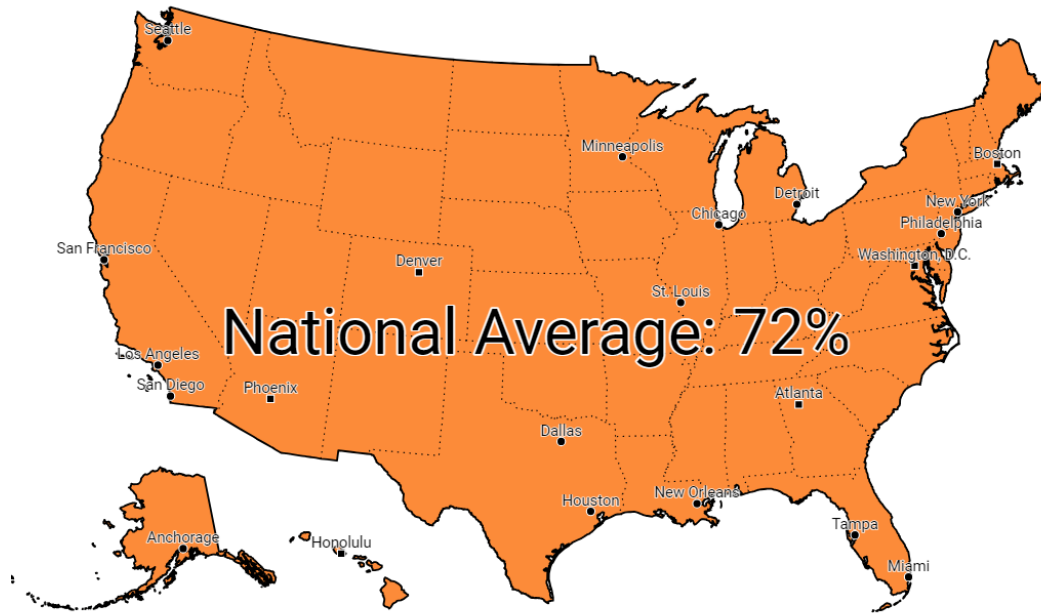
Waukegan,  
IL 2015



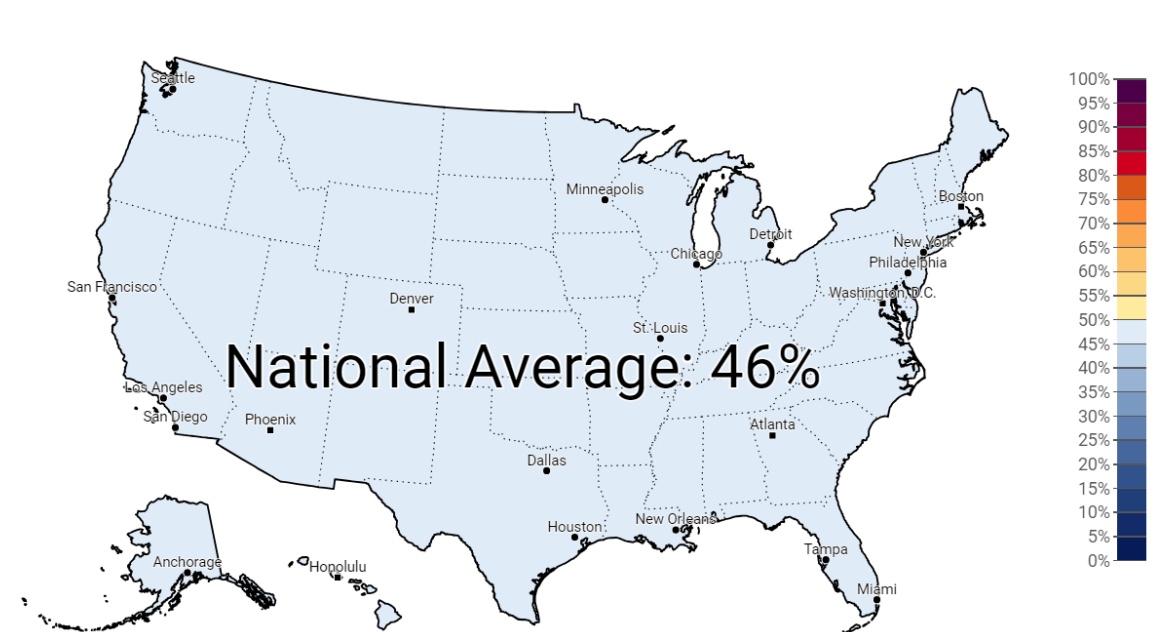
Gurnee,  
IL 2017

# Yale Program on Climate Change Communication: Opinion Maps, 2023

Estimated % of adults who think global warming is happening



Estimated % of adults who think global warming will harm them personally



**RIGHT HERE**



**RIGHT NOW**

# Building Public Health Practice: Building Resilience Against Climate Effects (BRACE) Illinois

- Educating and increasing awareness
  - Expanding the knowledge base
  - Designing and implementing adaptation strategies and tools
  - **Promoting climate change in public health planning**
1. Lecture on climate change, health, and equity
  2. Facilitate prioritization of health impacts of most concern to the community
  3. Facilitate process to identify strategies to address the health impacts
  4. Create a work plan



Yesterday we collected approximately 30 Deer ticks, the known carriers of Lyme disease. Learn more and how to protect yourself at TickEncounter Resource Center and <http://www.kendallhealth.org/environmental-health/ticks/>



2,867 People Reached      763 Engagements      [Boost Post](#)

Kay Hatcher, Sue Kowalczyk and 3 others      5 Comments      26 Shares

Like      Comment      Share

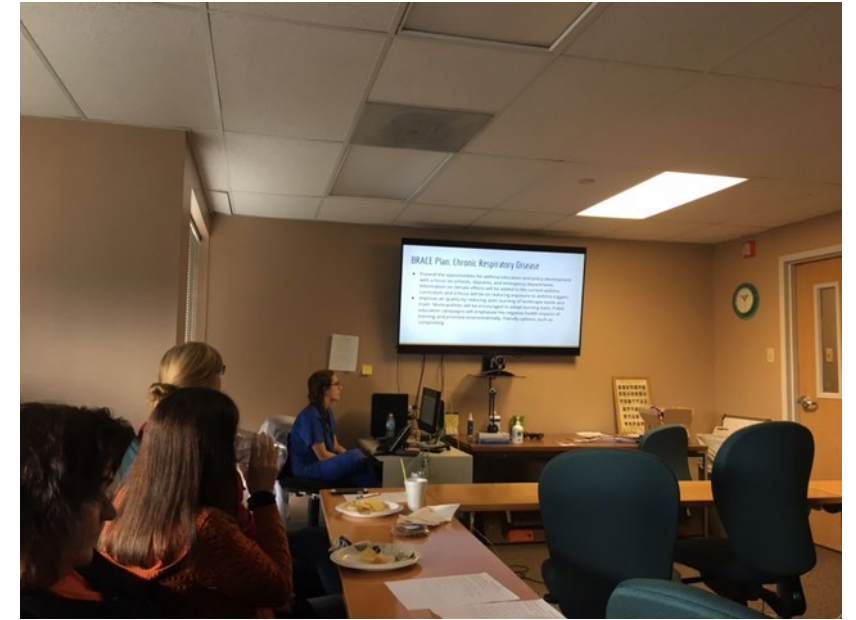
Most Relevant

Write a comment...

Cathy Dillon Uh oh it's early. 1  
Like · Reply · Message · 1y

# Work Examples

**A**ttack  
**S**moking  
**T**reatment  
**H**ealth  
**M**anagement  
**A**llergens  
**Breather's**  
**Guide**  
 2017  
 1<sup>st</sup> Edition



HOME    CALENDAR    MESSAGES 64    REPORTS	
Sleep:	History of inpatient or outpatient mental health or substance abuse services:
Current and Past Psychotropic Medications:	Date of Most Recent Psychiatric Evaluation (Date/Provider/Results):
Family history of mental illness, developmental disabilities, psychiatric hospitalizations, or suicides:	Is there a history of experiencing any abuse or trauma, including verbal, physical, emotional or sexual (include dates/duration):
FOR MINOR CLIENTS ONLY:	
FOR MINORS: Describe parent/child relationship:	FOR MINORS: Describe how the child relates to family and peers:
FOR MINORS: Describe the method of discipline in the family:	FOR MINORS: Describe the changes you would like to see in your child and family:

# Climate Action Plans for the Chicago Region



## HEAT AND HEALTH

Average temperatures in the Chicago region are increasing, not only during the day but also at night. This trend is projected to increase, with heat waves becoming more prevalent. This is adding stress to people, regional power supply, water resources, and ecosystems.

Residents need to cool their homes for longer each day, further burdening household budgets. This may be particularly difficult for socially vulnerable populations, including people on fixed incomes and families living below the poverty line.

Communities may need to provide more places and ways for these vulnerable populations to stay well—urban shade, splash pads, parks in neighborhoods, or community cooling centers. Home owners may build adaptive capacity by replacing dark roof materials with light-colored shingles or green roofs.

**MITIGATION CO-BENEFITS:**  
Cooler neighborhoods and homes save energy, especially during very hot weather when energy demands are high.

**City of Des Plaines Land Surface Temperature (LST)**

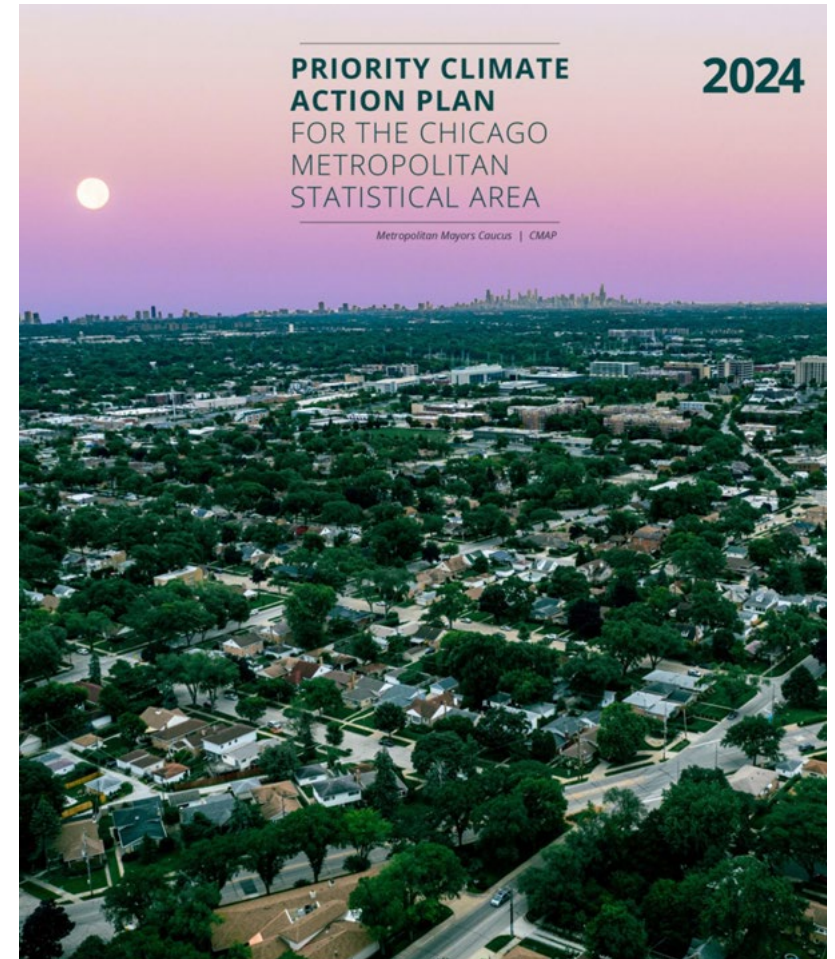
LOW 60 (°F) HIGH 120 (°F)

Source: CMAP 2018

Areas with more concrete absorb and hold heat, increasing the impact for heat waves on vulnerable populations.

### ACTIONS TO BUILD RESILIENCE

- ENGAGE AND EDUCATE THE COMMUNITY:**  
Inform the community about changing heat hazards and risks; encourage preparation. Foster social cohesion. Engage residents with services that support health and wellness.
- INCORPORATE EQUITY AND INCLUSION:**  
Collaborate to ensure vulnerable residents are connected to relief services. Include vulnerable residents in planning, and prioritize investments to protect them. Provide effective, accessible, and desired cooling interventions to vulnerable communities. Assure vital messages are accessible in all languages and formats.
- COLLABORATE AND BUILD CAPACITY:**  
Strengthen emergency and adaptive response skills among staff, civic leaders, and allied organizations. Identify and mitigate urban heat islands. Facilitate compliance with federal air quality standards by businesses.
- ENACT PLANS AND POLICIES:**  
Promote connected, complete and walkable neighborhoods. Optimize tree planting. Protect existing trees for maximum shading. Reduce sprawl by promoting infill development. Incentivize or require resilient building design. Proactively update building codes to reflect evolving conditions.



# Built Environment: City of Chicago – Our Roots

- City's canopy coverage is 16%
- Underserved communities: 4-10%
- Plant 75,000 new trees in 5 years
- \$46 million budget
- Focus on neighborhoods with low tree canopy cover
- Historically marginalized and underserved communities on South and West sides
- Tree Ambassador Program
- Seeks to empower people to request a free city tree in their community and educate Chicagoans on the benefits of trees



**CHICAGO**

The City of Chicago presents  
**OUR ROOTS CHICAGO**

City data shows that our urban tree canopy is not equally distributed across Chicago. The City of Chicago is working to reverse this trend through Our Roots Chicago, a program with an historic commitment to greatly expand the City's tree planting operations by planting 75,000 trees over the next five years. This community-driven plan will prioritize the equitable planting of trees in historically marginalized and underserved neighborhoods. Trees provide numerous health benefits and can help our communities be more resilient to the impact of climate events and reduce greenhouse gasses, one of the leading causes of climate change.

Join communities around the city and request a free parkway tree in front of your home.  
**The process is easy as 1-2-Tree!**

**Step 1:** Request a free parkway tree by either calling 3-1-1, downloading the CHI311 mobile app and search for "TREE", or visit the City website: [www.311.chicago.gov/s/article/Tree-planting](http://www.311.chicago.gov/s/article/Tree-planting).

**Step 2:** Once requested, DSS will assess whether a tree can be planted in your parkway. If eligible for a tree, DSS will leave a door hanger to confirm and notify that a new tree is on its way!

**Step 3:** A new tree is planted. Parkway trees are trimmed by request at no cost. To request a tree trim, call 3-1-1.

**OUR ROOTS CHICAGO**

For more information on the benefits of trees or to learn more about the City of Chicago's tree planting strategy, visit [chicago.gov/ourroots](http://chicago.gov/ourroots)

scan the code!



A. Side Walk  
B. Parkway  
C. Curb

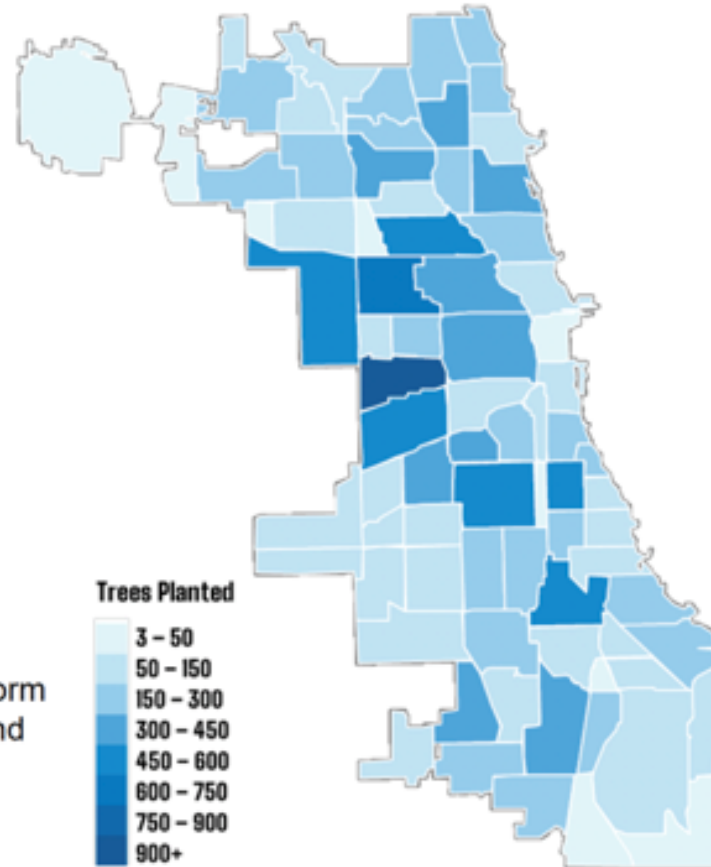
Parkway is the area between the sidewalk and the curb of the street, in front of most homes that is not fenced. Not all homes have parkways or greenspace.

# Built Environment: City of Chicago – Our Roots

## 2022 Tree Plantings

Total 18,728 (as of December 3):

- DSS 10,654
- CDOT 5,174
- Parks 2,900
- Efficiencies in Planting Requests
- 33% went to 11 priority communities
- 3 Year Backlog for Tree Requests Fulfilled
- Removed 11,358 (combination of storm damaged, diseased, dead, DWM, and Aldermanic requests)
- 2022 Baseline for years to come to prioritize equity areas



Map shows tree plantings on arterial & residential streets in 2022

Community	Trees Planted	Percent of Planting
1. North Lawndale (TA Pilot)	957	6%
2. Humboldt Park	695	4%
3. New City	553	3%
5. South Lawndale (TA Pilot)	529	3%
6. Austin	462	3%
7. Greater Grand Crossing	460	3%
10. Near West Side	435	3%
12. McKinley Park	394	2%
13. Brighton Park	393	2%
23. East Garfield Park	257	2%
57. Armour Square	87	1%
<b>Subtotal</b>	<b>5,222</b>	<b>33%</b>
<b>Total City-Wide</b>	<b>15,882</b>	<b>100%</b>

# Built Environment:606 (Bloomingdale Line)

- 2.7 miles of converted rails to trail
- Originally a railroad built after the Great Chicago Fire
- By the mid-90s, it wasn't being used
- Talks of converting to public space started in the late-90s
- The 606 opened in 2015
- Perceived benefits: health, social, nature
- Urban trails are part of the solution
- Green Gentrification
- Median sales price of buildings with 4 or fewer units, including single-family homes, along westernmost part rose 344% in 7 years (\$97,000 > \$430,500)
- Historically Latinx and low-income communities (Humboldt Park, Logan Square, Hermosa)
- Solutions: land banks/trusts or affordable housing trust funds



# Social infrastructure: Green space and social connectedness in Chicago Public Housing

People in buildings with greenery were much more likely to:

- Know their neighbors
- Speak to their neighbors
- Know neighbors on first-name basis
- Rely on their neighbors for a favor – take care of kids if had an emergency



During the 1960s and 1970s, the Chicago Housing Authority completed construction of a series of projects along State Street including the Robert Taylor Homes



**Q&A**

# Contact Us



**Dr. La Vonne Downey**  
**Public Admin & Prog. Dir of Health Science Administration,**  
**Roosevelt University**  
**[linkedin.com/in/lavonne-downey-9195a825](https://www.linkedin.com/in/lavonne-downey-9195a825)**

**Sarah Duffy**  
**IPA Deputy Legal Counsel**  
**312-814-5105**  
**[sarah.duffy@illinois.gov](mailto:sarah.duffy@illinois.gov)**

**Elena Grossman, MPH**  
**Community Benefits Program Manager, GTI Energy**  
**[egrossman@gti.energy](mailto:egrossman@gti.energy)**