



Building equity into CMAP's climate initiatives

Human and Community Development Committee

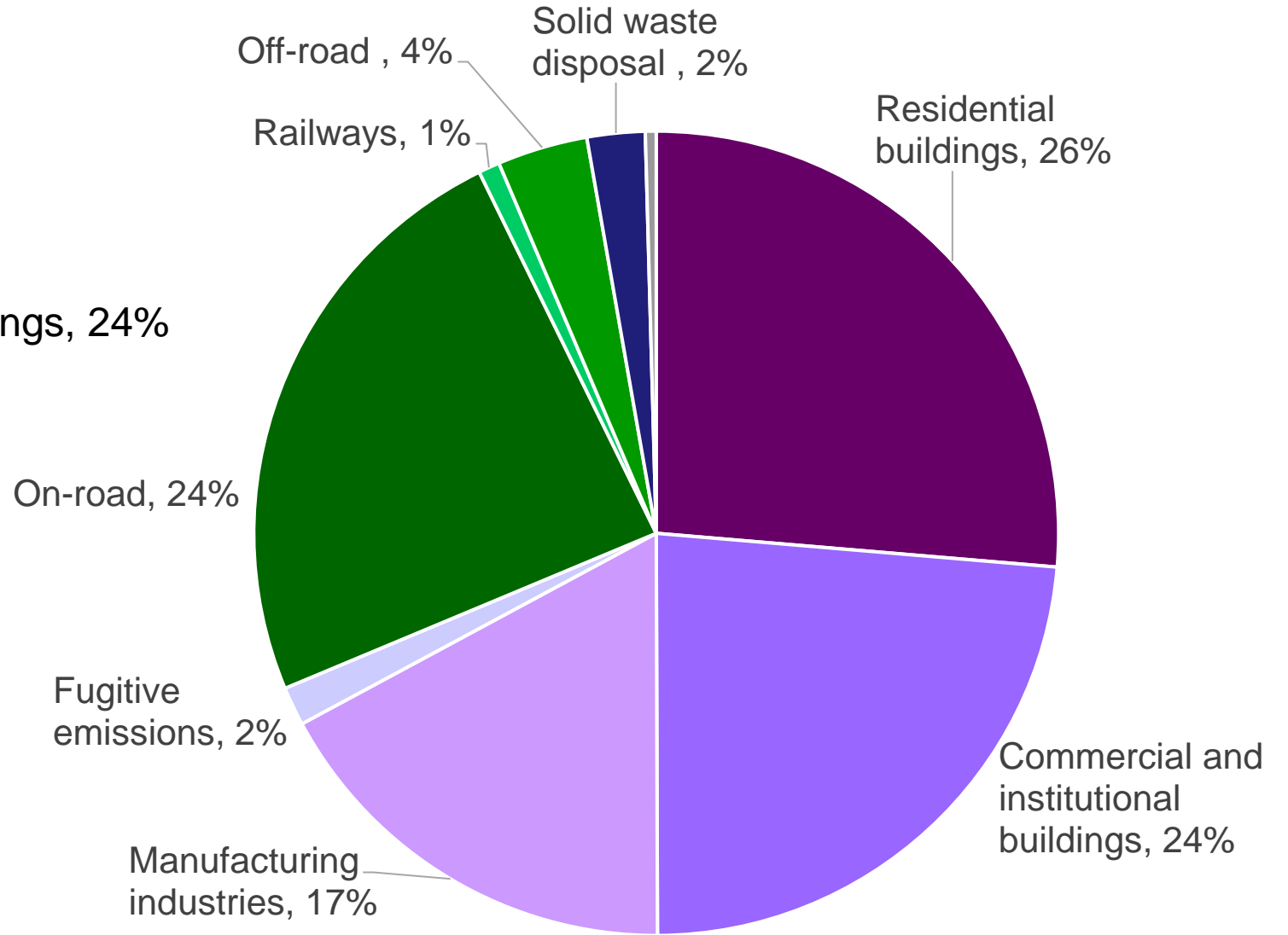
December 8, 2020

Agenda

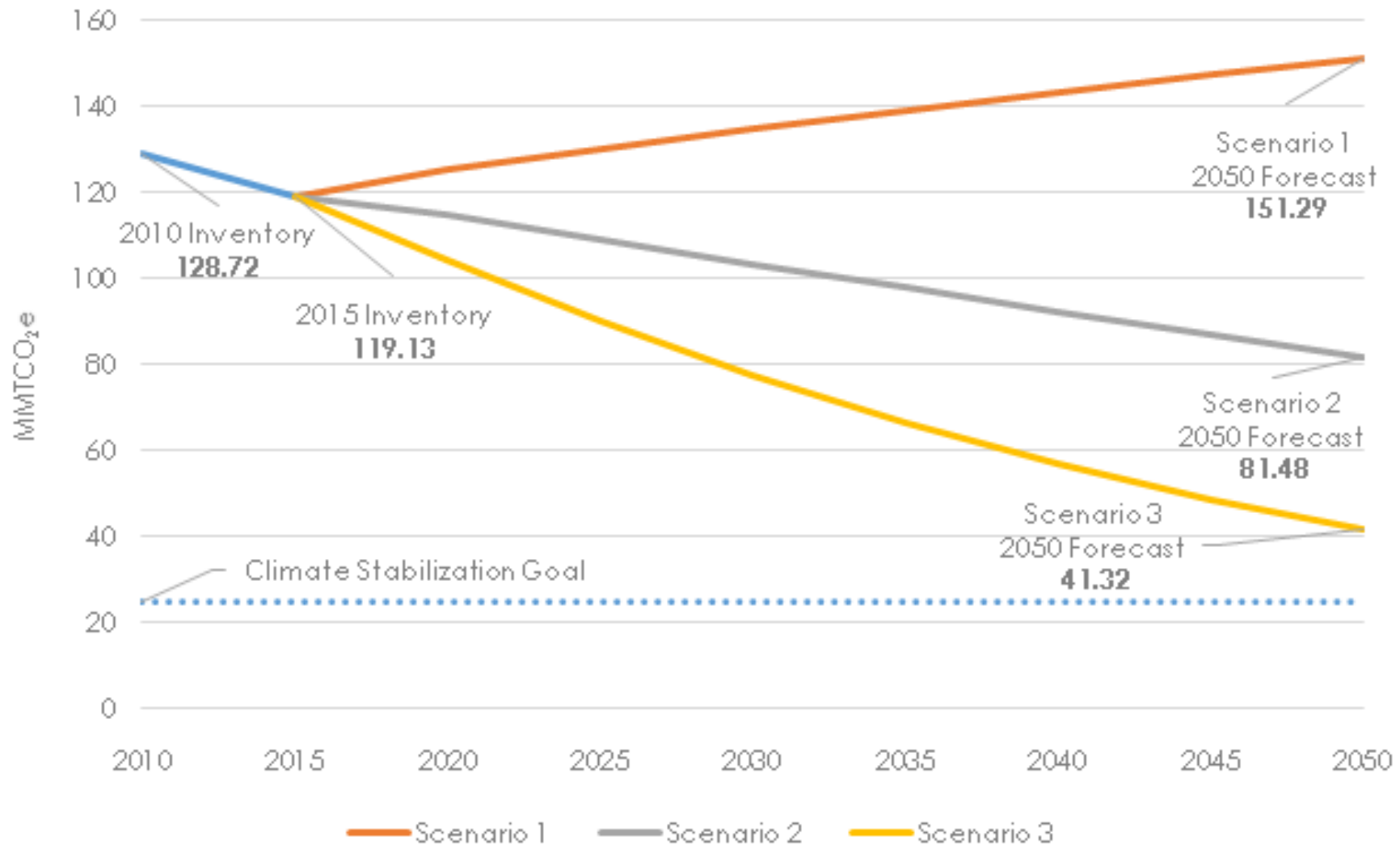
- Brief overview of climate change impacts
- ON TO 2050 climate recommendations & work this year
- Disproportionate impacts to certain populations
- Brainstorming

Greenhouse gas emissions by subsector for Chicago region, 2015

- Residential buildings, 26%
- Commercial and institutional buildings, 24%
- Manufacturing industries, 17%
- Fugitive emissions, 2%
- On-road, 24%
- Railways, 1%
- Off-road, 4%
- Disposal of solid waste, 2%
- Other, 0.43%*



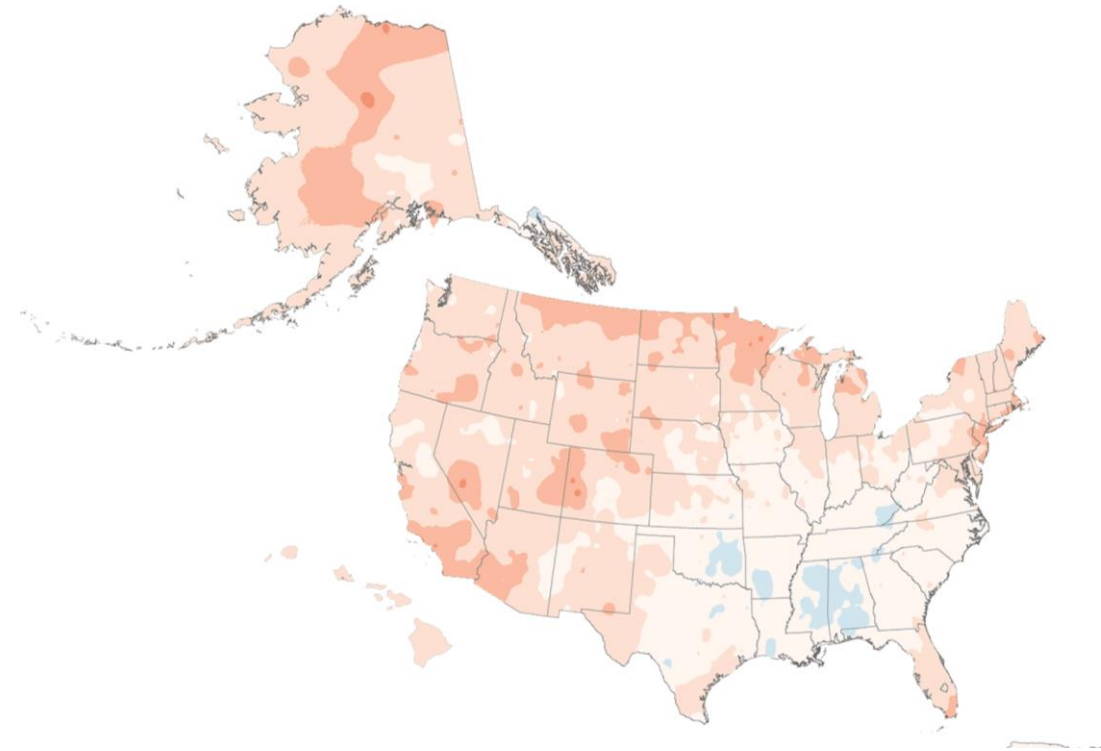
Emissions estimates and projections for Chicago region, 2010-2050



Source: CMAP 2015 Greenhouse Gas Emissions Inventory

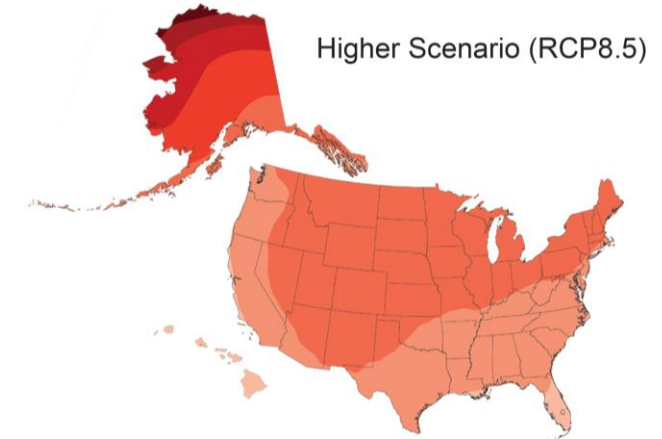
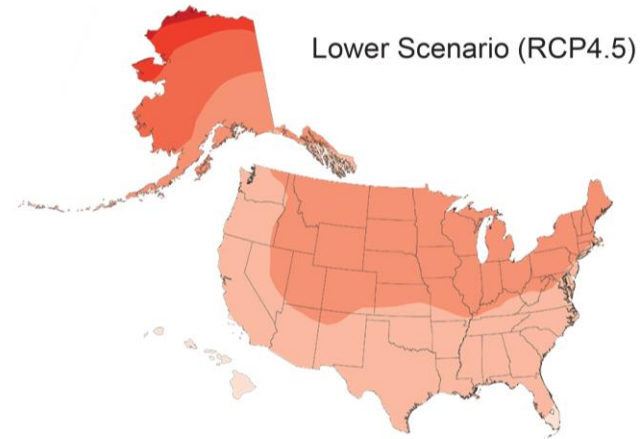
Steady increases in temperature

OBSERVED

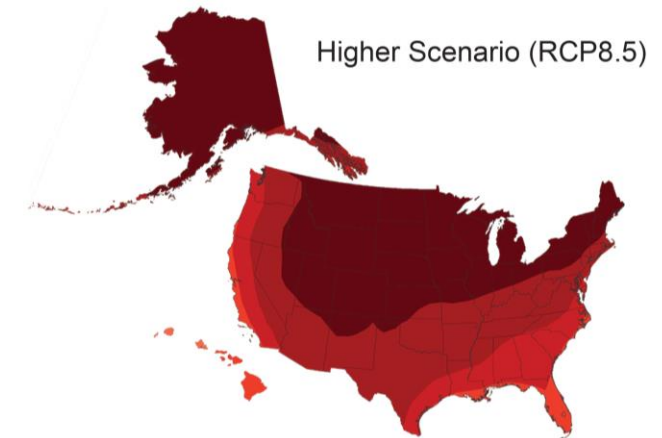
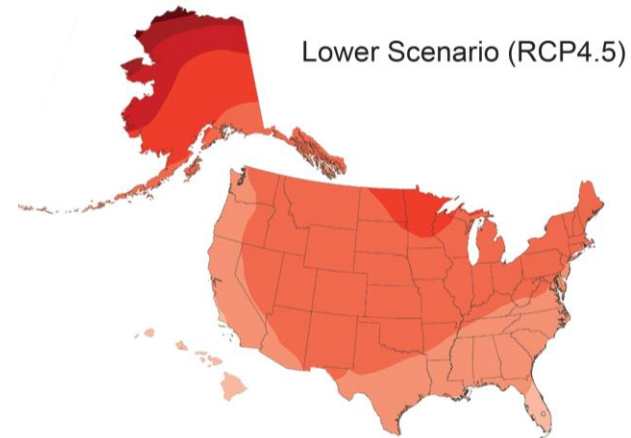


PROJECTED

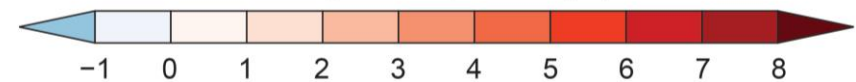
Mid-21st Century



Late 21st Century



Change in Temperature (°F)



Steady annual increases in precipitation

PROJECTED

Late 21st Century, Higher Scenario (RCP8.5)

OBSERVED

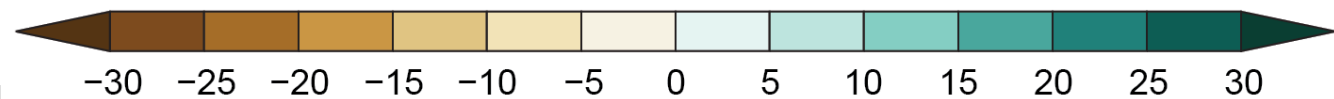
Winter

Spring

Summer

Fall

Change in Precipitation (%)





ON TO 2050 ENVIRONMENT CHAPTER GOAL

A region prepared for climate change

Intensify climate mitigation efforts

Plan for climate resilience

Explore priority ON TO 2050 strategies

- Transform transportation systems to reduce emissions
- Incorporate climate issues into planning and development
- Strengthen infrastructure to withstand climate change
- Explore a regional climate resilience platform to coordinate initiatives and provide data and resources
- Enhance economic innovation
- Address environmental challenges that disproportionately affect specific populations and disinvested areas

This year's climate work plan

- Climate multi-year implementation planning
- Transportation mitigation strategies
- Internal climate technical assistance guide
- Climate data inventory and refinement
- GHG reporting and performance monitoring
- Assist MMC / Global Covenant of Mayors with Chicago Region Municipal Climate Action Plan
- Heat Susceptibility Index

Multi-year implementation planning

3-5 year workplan to implement priority climate-related recommendations in ON TO 2050

- Understand the agency's role
- Identify specific, strategic projects
- Integrate equity considerations



A photograph of a bridge at sunset. The scene is filled with people engaged in various activities: a woman in a pink tank top and black leggings is walking in the foreground on the left; a man in a black shirt and shorts is running in the middle ground; a person is riding a bicycle in the center; and another person in an orange shirt and white cap is running on the right. A person with a stroller is also visible on the far right. The bridge has a metal railing with a large, riveted metal post in the foreground. The sky is a mix of orange, yellow, and blue, with a large, bright sun low on the horizon. The overall atmosphere is peaceful and active.

Disproportionate impacts on vulnerable populations

Climate impacts

INFRASTRUCTURE



PUBLIC HEALTH



PROPERTY



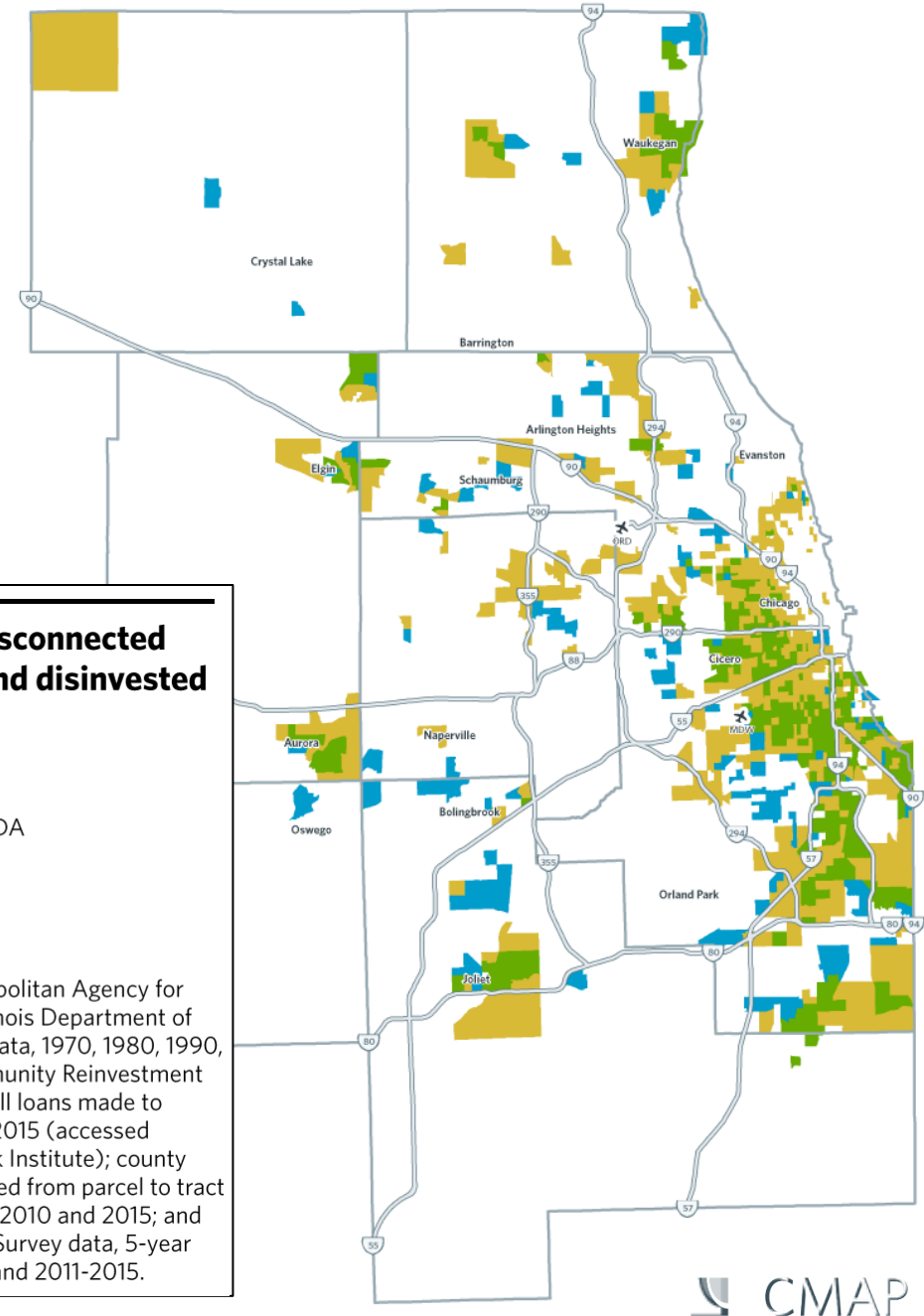
ECONOMY

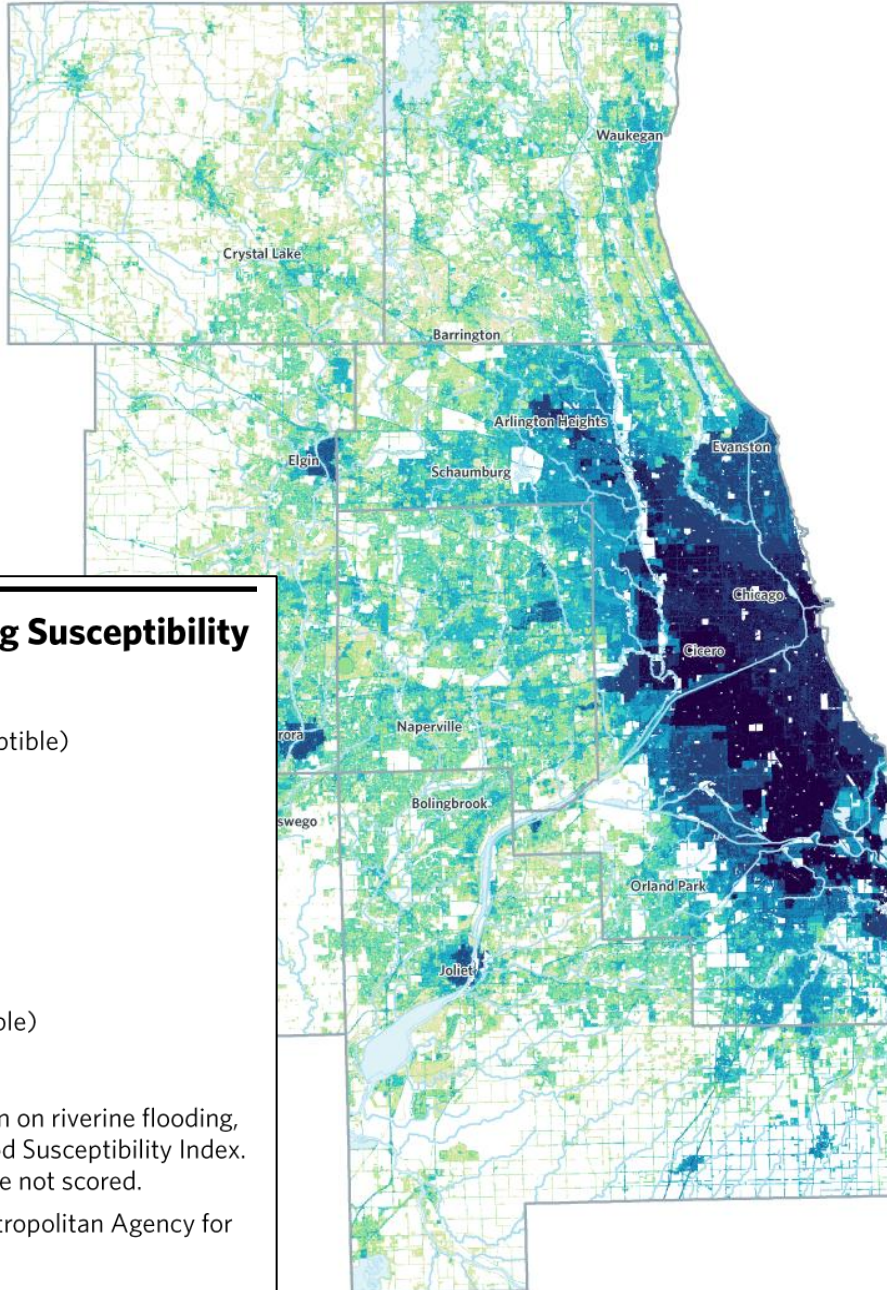
Terminology

Vulnerable populations

On top of EDAs, could include:

- Elderly
- People with chronic health conditions
- People without health insurance
- People with disabilities
- Renters (access to A/C)
- Others



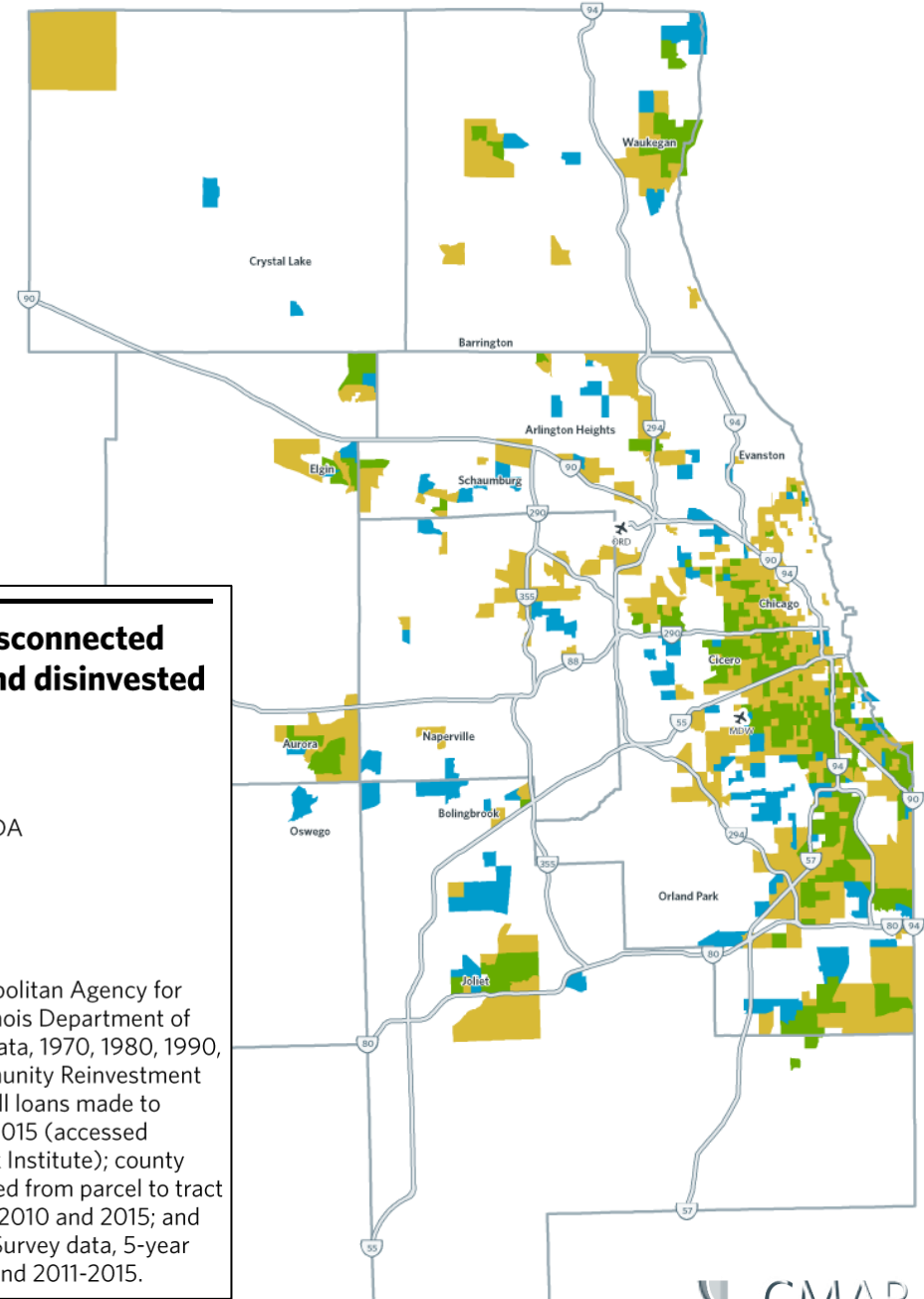


Urban Flooding Susceptibility Index

- 10 (more susceptible)
- 9
- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1 (less susceptible)

Note: For information on riverine flooding, see the Riverine Flood Susceptibility Index. Open space areas are not scored.

Source: Chicago Metropolitan Agency for Planning, 2018.



Economically Disconnected Areas (EDAs) and disinvested areas

- Disinvested and EDA
- Disinvested area
- EDA

Source: Chicago Metropolitan Agency for Planning analysis of Illinois Department of Employment Security data, 1970, 1980, 1990, 2000, and 2015; Community Reinvestment Act (CRA) data on small loans made to businesses, 2007 and 2015 (accessed through the Woodstock Institute); county assessor data aggregated from parcel to tract level by property class, 2010 and 2015; and American Community Survey data, 5-year estimates, 2010-2014 and 2011-2015.

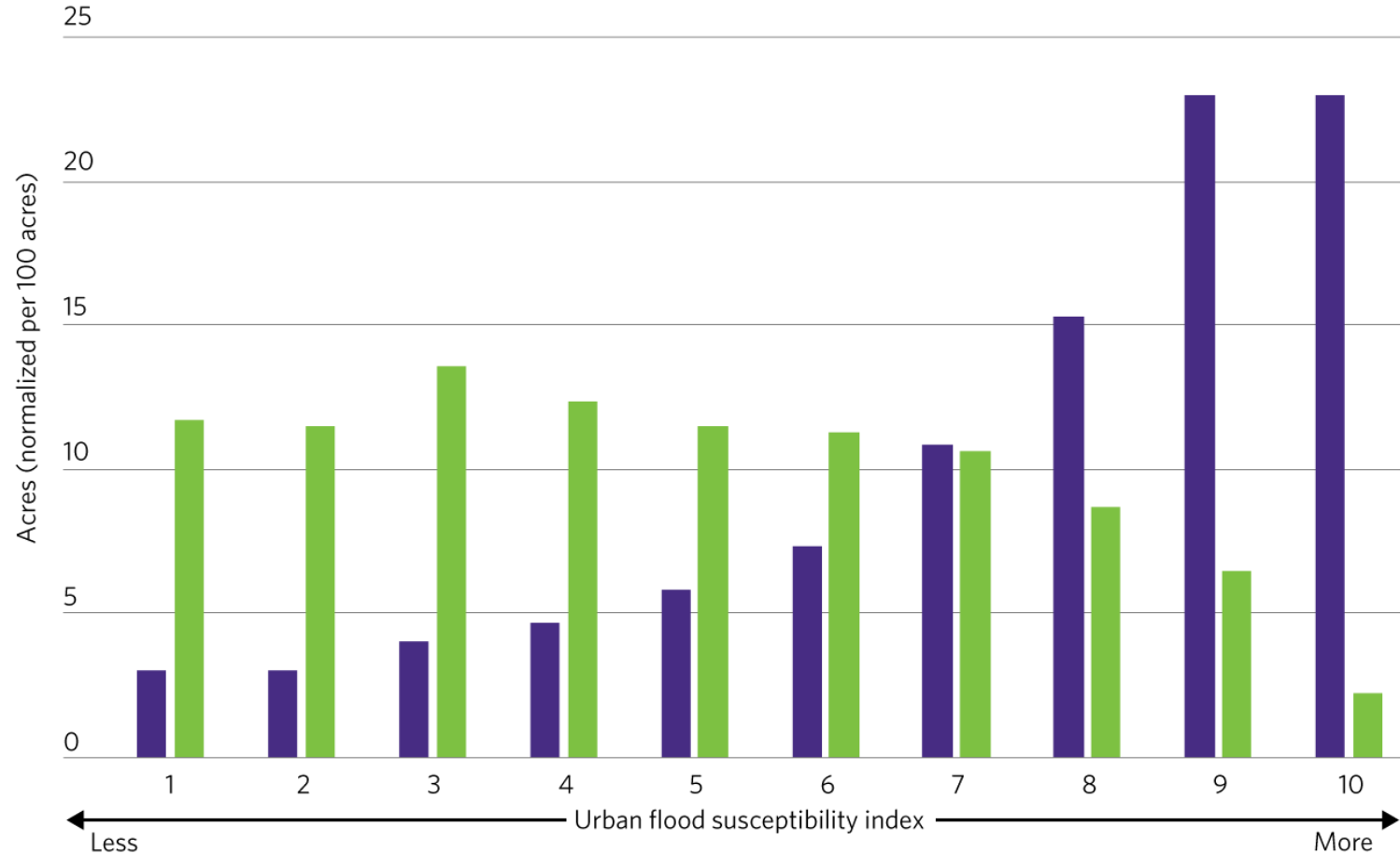
Flooding vulnerability

Urban flood susceptibility in disinvested and Economically Disconnected Areas (EDAs) compared with the rest of the region

- Disinvested and EDAs
- Rest of region

Note: Economically Disconnected and disinvested areas are more likely to be in flood susceptible locations. However, this varies by county and is most significant in Cook, Kane, and Lake.

Source: Chicago Metropolitan Agency for Planning, 2018.



Heat vulnerability

Socioeconomic Characteristic	Regional Population		Top 10% Hottest Census Tracts (Land Surface Temperature)	
	Count	Percent	Count	Percent
Total Population	8,459,768	100%	511,171	100%
Elderly Population (over 65 years)	1,013,640	12.0%	45,368	9.2%
People of Color	4,030,135	47.6%	381,249	73.7%
Limited English Proficiency	1,029,670	12.2%	144,993	27.2%
Family Income below Poverty Level	1,160,842	13.7%	101,134	19.7%
No Health Insurance Coverage	1,146,328	13.6%	125,787	23.0%

Source: 2010-14 American Community Survey, 2010 U.S. Census, and CMAP analysis derived from Landsat 8.

ON TO 2050 strategy

Address environmental challenges that disproportionately affect specific populations (*people*) and disinvested areas (*land use*)

Revised 3-5 year goal

Understand climate impacts on vulnerable populations and identify CMAP's role in mitigating those impacts

Understand climate impacts on vulnerable populations (VPs) and identify actions for CMAP

- **Define vulnerable populations**, building on previous definitions such as EDAs to include climate-specific vulnerabilities
- **Define and measure climate impacts** -- such as extreme temperatures, repetitive flooding, and reduced air quality -- on vulnerable populations, including measuring the geographic distribution of social and physical vulnerability and identifying the causes of this distribution
- Engage VPs and regional responders to **collaboratively develop solutions** responsive to historic levels of investment and currently available resources
- **Identify action steps for CMAP**, as well as for other stakeholders, in mitigating climate impacts to VPs

Questions and comments

Brainstorming

- What efforts are underway that could help inform our work?
What groups should we connect with?
- What do you think CMAP's role should be in building resilience across all populations?
- How can we take action sooner than later?



Thank you!

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