

Update on climate action planning

Climate Action Plan

Cut greenhouse gas emissions
Prevent the problem from getting worse

Adapt to climate hazards
Prepare for the projected impacts

Results in a more equitable and resilient Hennepin County

Purpose

Provide update on progress developing the climate action plan to provide context for briefing on July 16

Present findings of:

- Vulnerability assessment research to date and discuss connection to disparities reduction efforts
- Countywide greenhouse gas inventory and discuss county greenhouse gas reduction goals
- Engagement efforts to date and seek input and involvement for broader external engagement

Priorities for an impactful plan



Protect and engage people, especially vulnerable communities



Protect our buildings, roads, infrastructure and natural resources



Deliver services in times of disruption

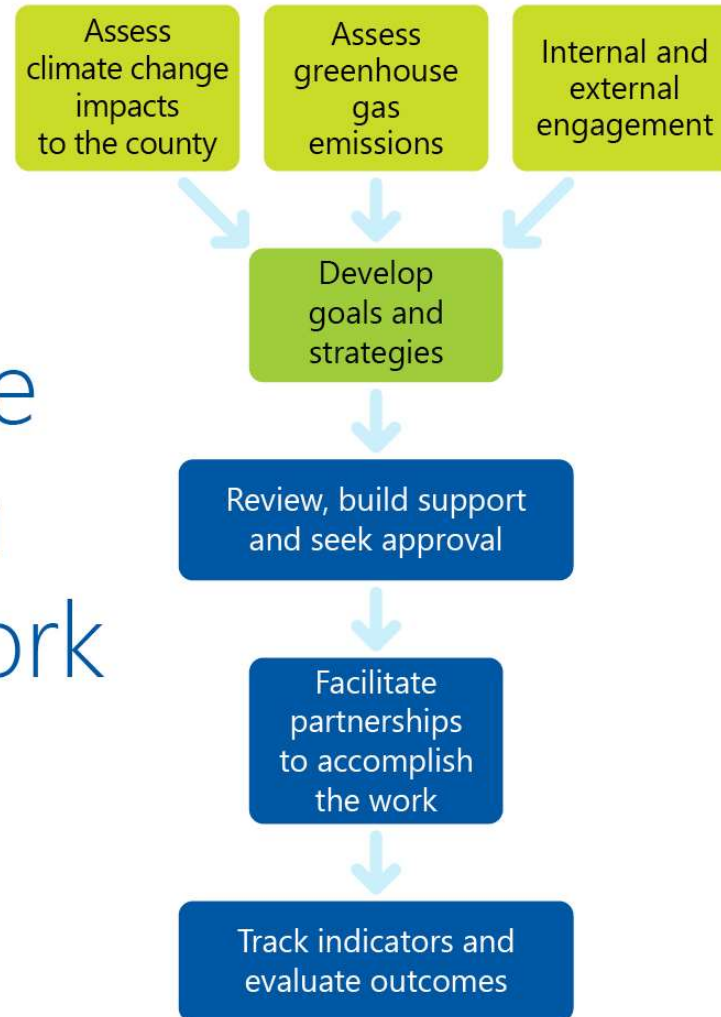


Reduce emissions in ways that align with core county functions and priorities



Partner in ways that can be most impactful

Climate action framework



Climate resilience framework



Climate vulnerability assessment

June 2020

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Two climate trends to address in Hennepin County

1. Wetter

Results in more flash flooding

- Most of the stormwater system is designed to 1960 standards, not the current standards, nor forward-looking, climate-driven projections
- Even systems designed to the current standards are increasingly overwhelmed by current conditions
- Existing stormwater systems will be frequently overwhelmed by projected climate models
- Susceptibilities to stormwater are similar on county roadways and facilities; as well as private property

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Two climate trends to address in Hennepin County

2. Warmer

Results in new challenges for government operations and residents

Now

- Heavy, mid-winter icy conditions
- Warmer nighttime low temperature

Projected

- More heavy, mid-winter icy conditions
- Summer heat waves within 30 years

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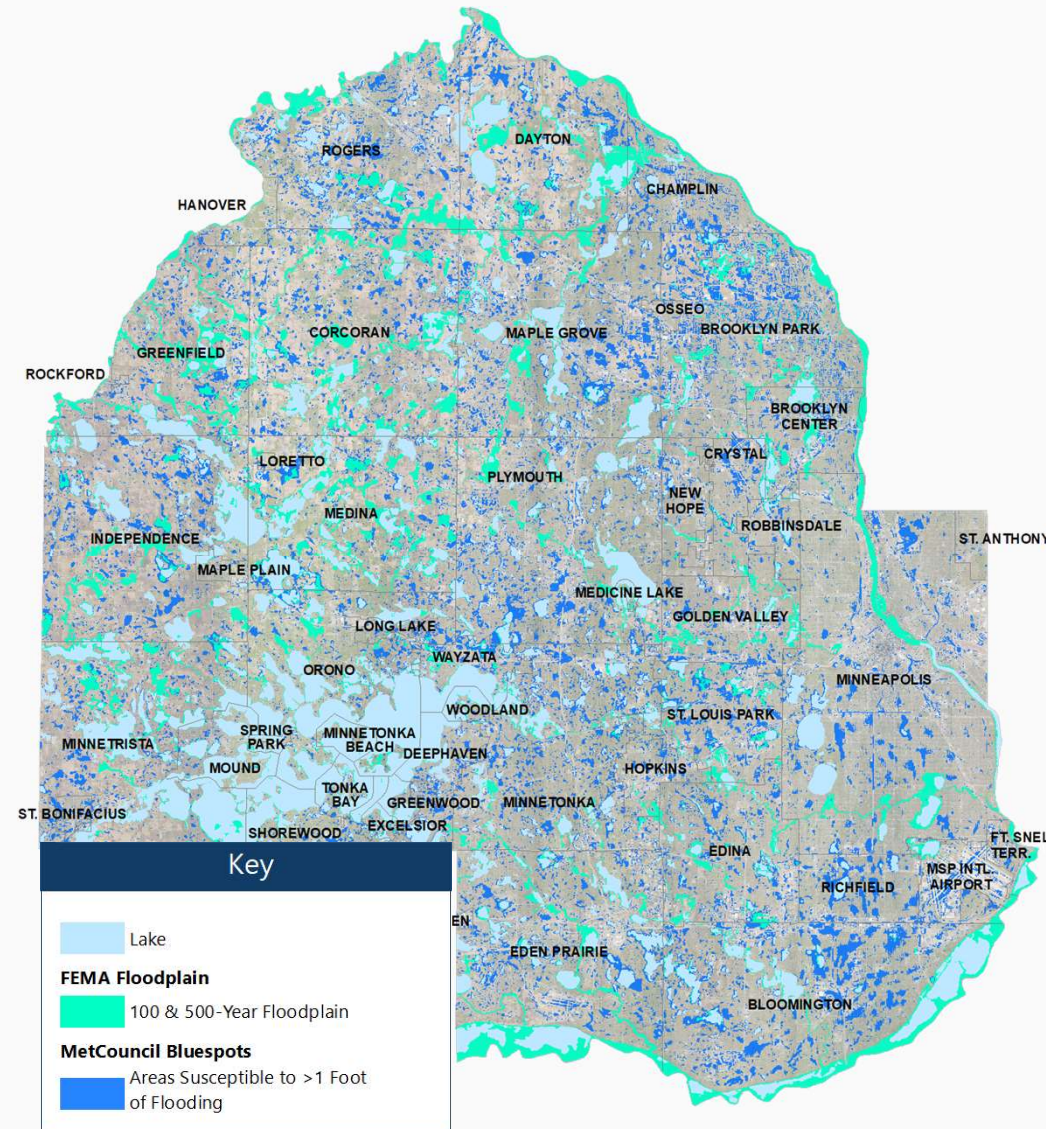
Which areas are susceptible to flash flooding?

Surface water impacts are determined by how much and how quickly precipitation falls and by water's ability to be drained into either soils or the stormwater network

Implications

- Analysis needed that considers the engineered stormwater network that drains surface water and better account for soil infiltration
- Examine potential impacts to infrastructure and vulnerable populations

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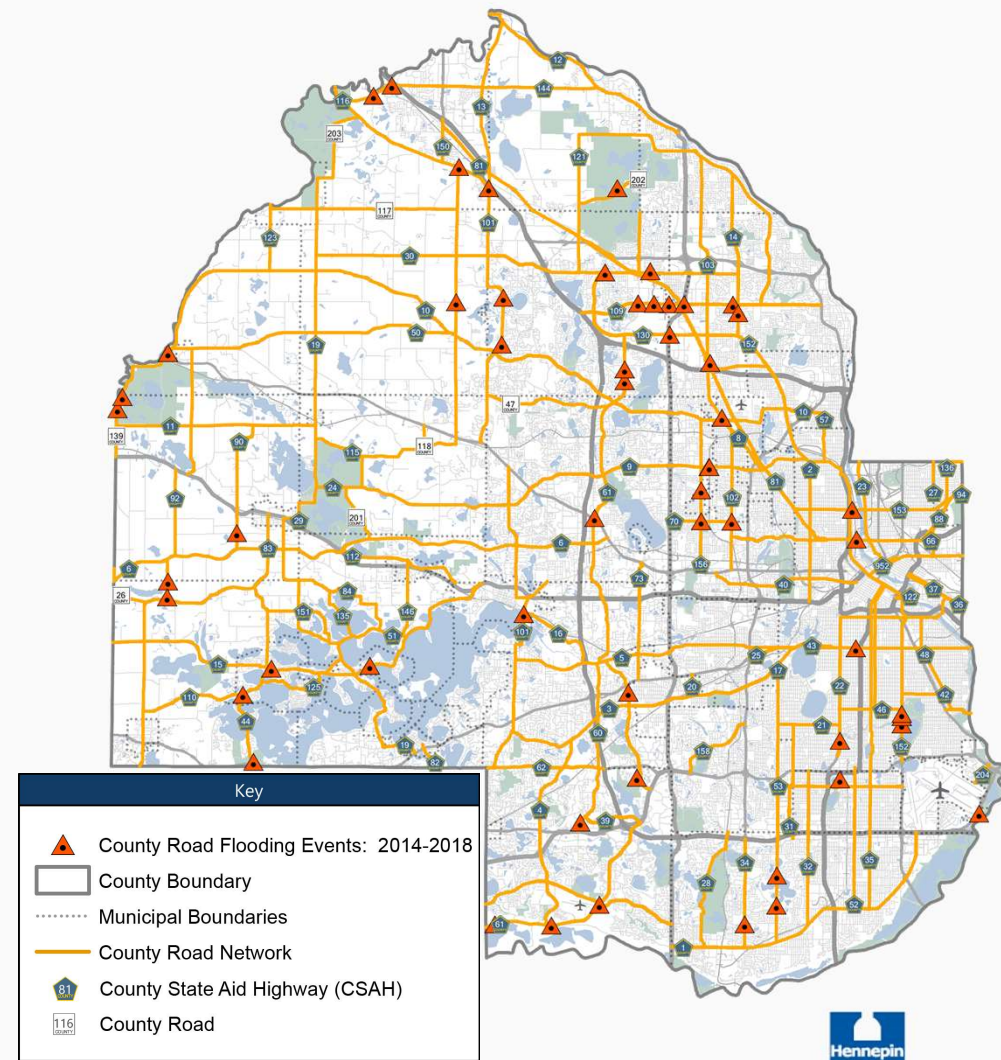


Where do county roadways flood now?

- Existing stormwater systems are frequently overwhelmed by high-intensity rainfalls
- Stormwater susceptibilities are similar on county roadways and at many county facilities

Implications

- Existing stormwater system will become increasingly undersized, making facilities and roadways more susceptible to flooding
- Explore flood mitigation efforts
- Pursue interdepartmental and external partnerships to manage increased stormwater

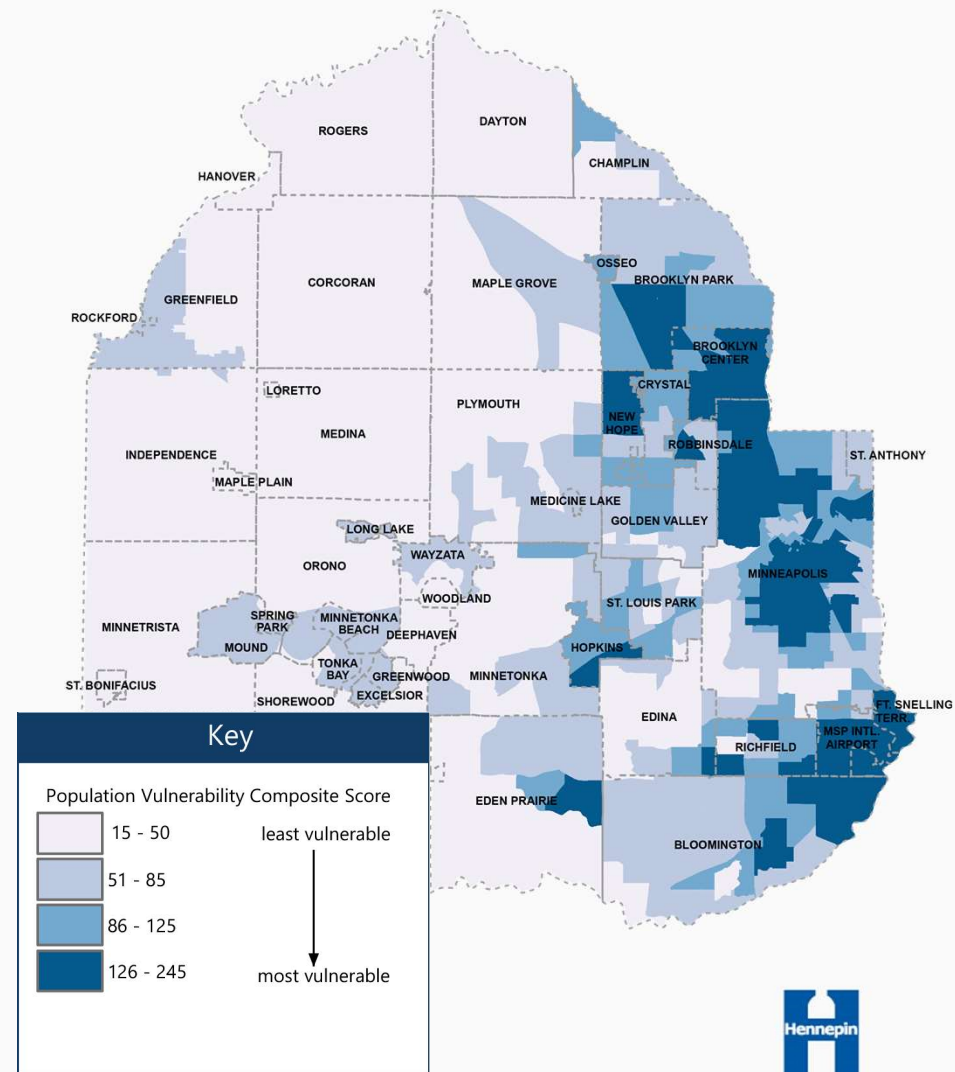


Who is most vulnerable to climate hazards and where do they live?

Vulnerability scoring based on 14 variables within six categories: race, income, language, ability, health, and social status

Implications

- Vulnerable residents will feel the impacts of climate change most acutely
- Individual vulnerability determines whether hazards are: an inconvenience, a manageable problem, or a catastrophic event



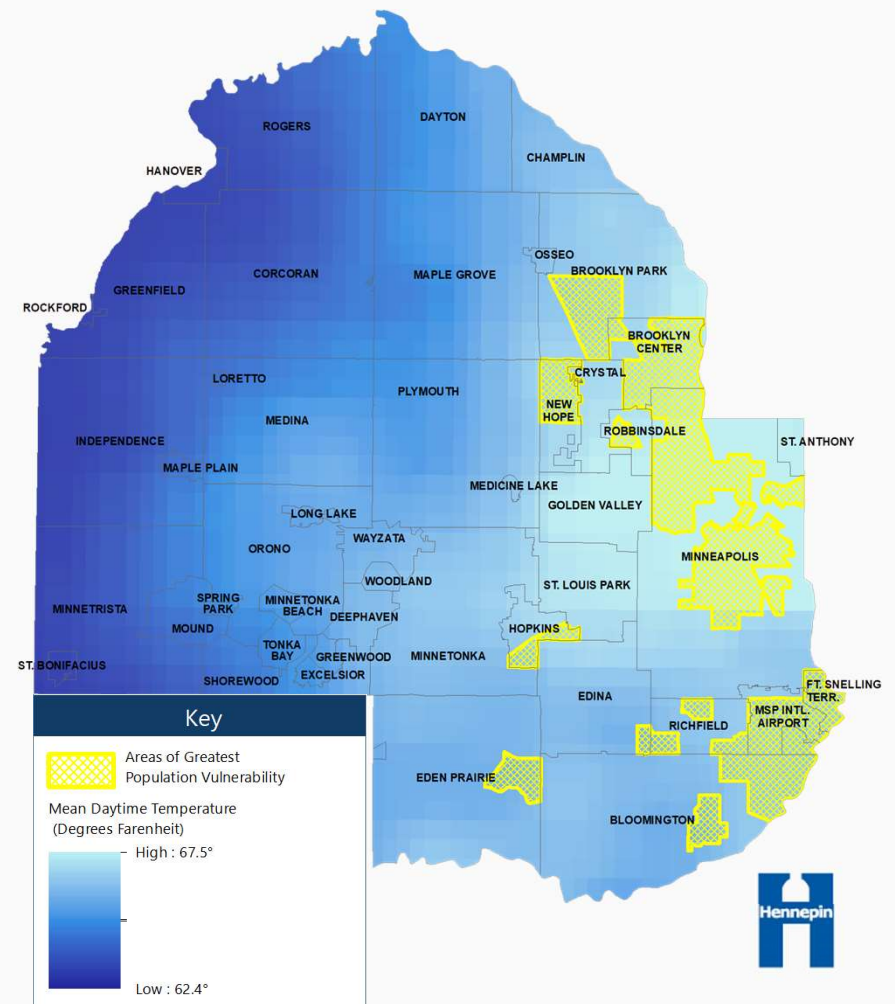
Extreme heat

Nighttime lows are increasing even though summertime high temperatures have dropped in the last 20 years. Blacktop, cement, and buildings absorb solar energy and release heat at night

Implications

- Bodies evolved to cool down at night. The inability to cool off exacerbates physical and mental health stresses
- Projections are that daytime extreme heat will increase by 2030
- Explore adaptation responses to protect the most vulnerable

Heat island effect – August nighttime



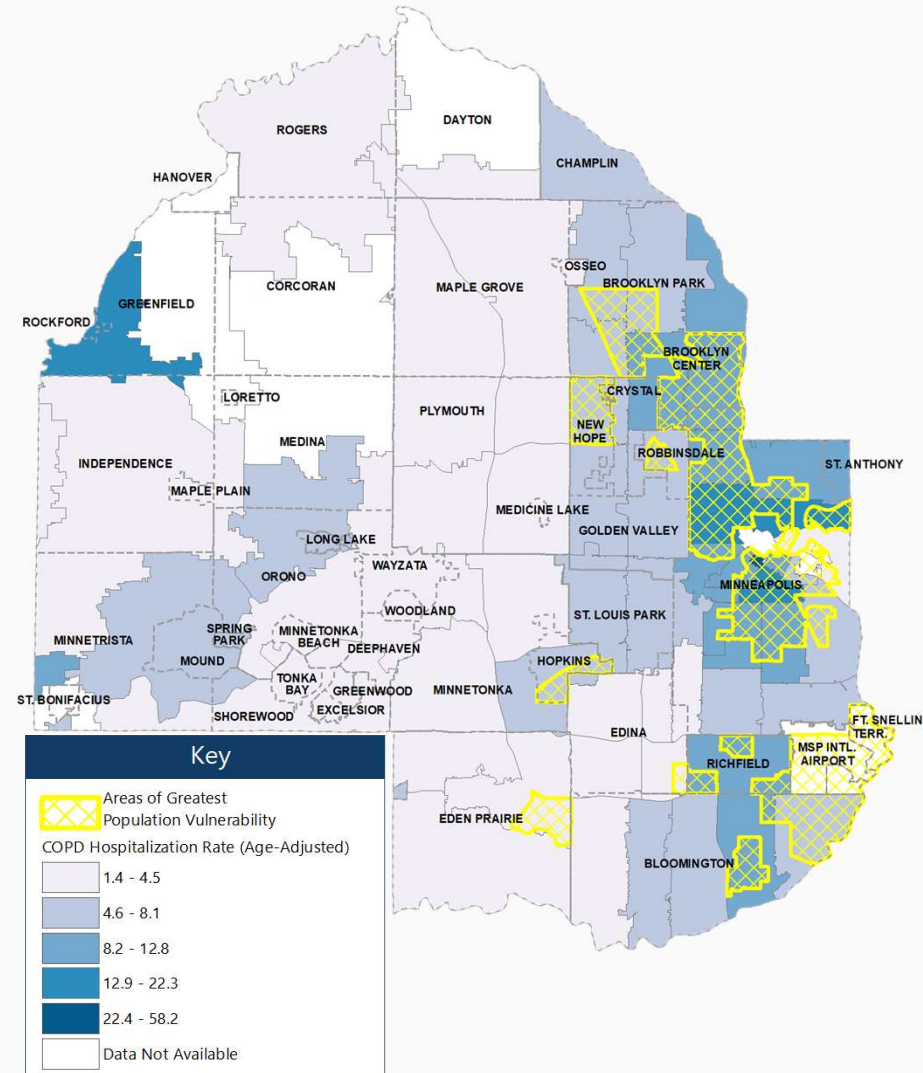
Air quality and health

- COPD, the chronic inflammatory lung disease, has surpassed asthma as an indicator of poor air quality
- Air quality is most negatively impacted by transportation and business activities. Hennepin lacks authority to regulate land use or air quality but does operate a transportation network

Implications

- Seek partnership opportunities for air quality and emissions reduction goals
- Explore tactics such as planting trees, which can both improve air quality and sequester carbon

COPD hospitalization rates

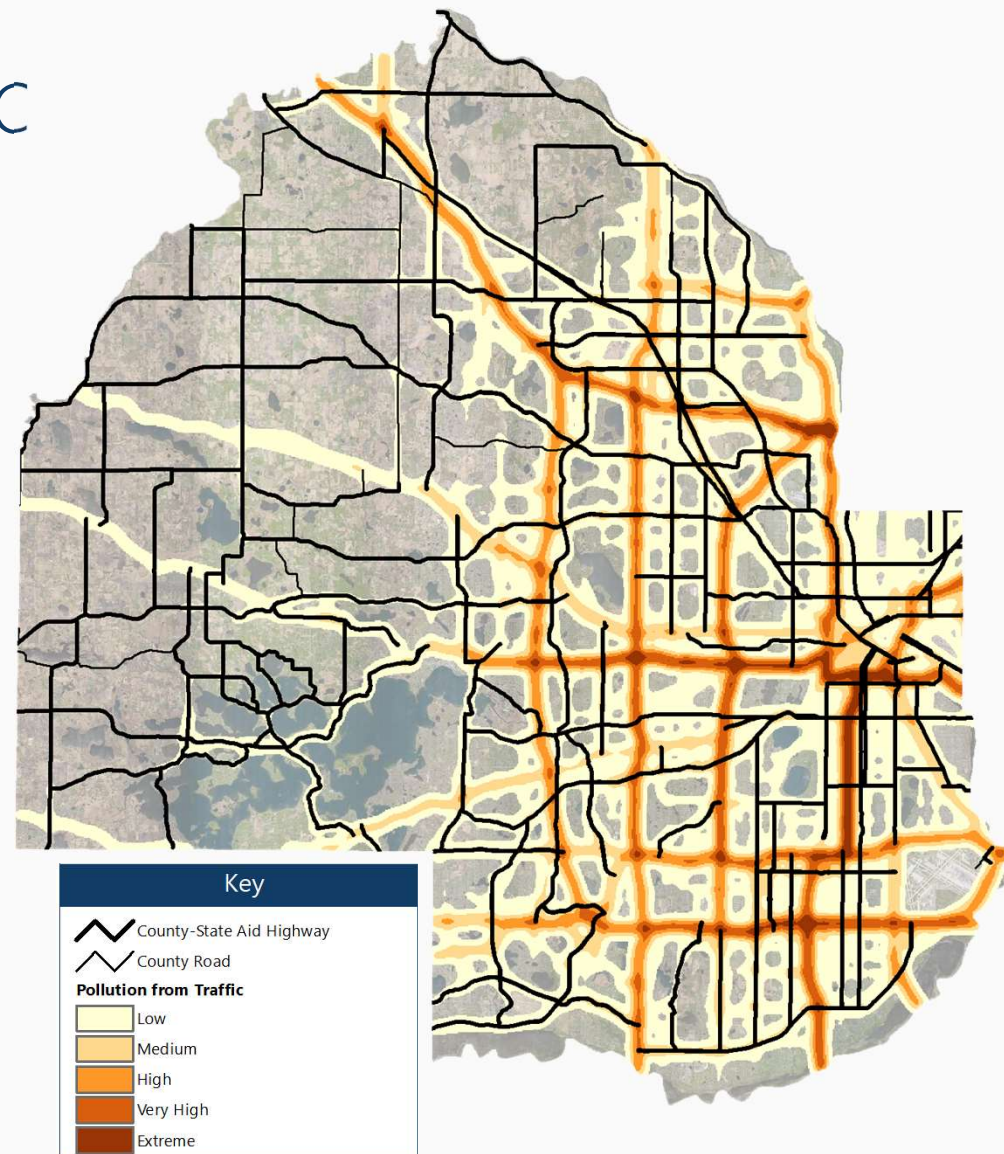


Air pollution from traffic

- Air pollution and greenhouse gas emissions are linked to every roadway in the system
- According to MPCA, communities of color bear a disproportionate burden of traffic-related health impacts

Implications

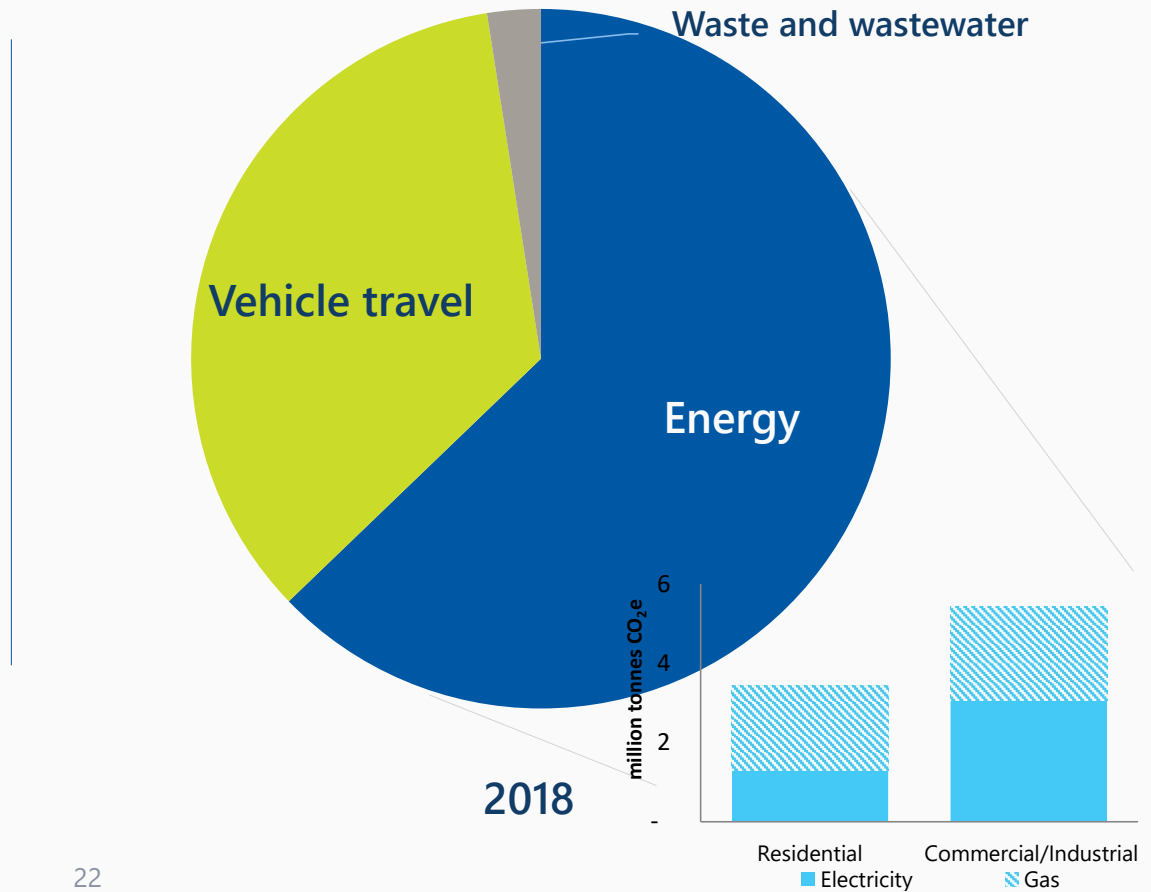
- The county can reduce air pollution and greenhouse emissions with our roadway network and support for low and no carbon transportation options
- Advancing partnerships with cities, regional, state and federal partners needed to address inequities and reduce greenhouse gas emissions



Greenhouse gas inventory: preliminary results

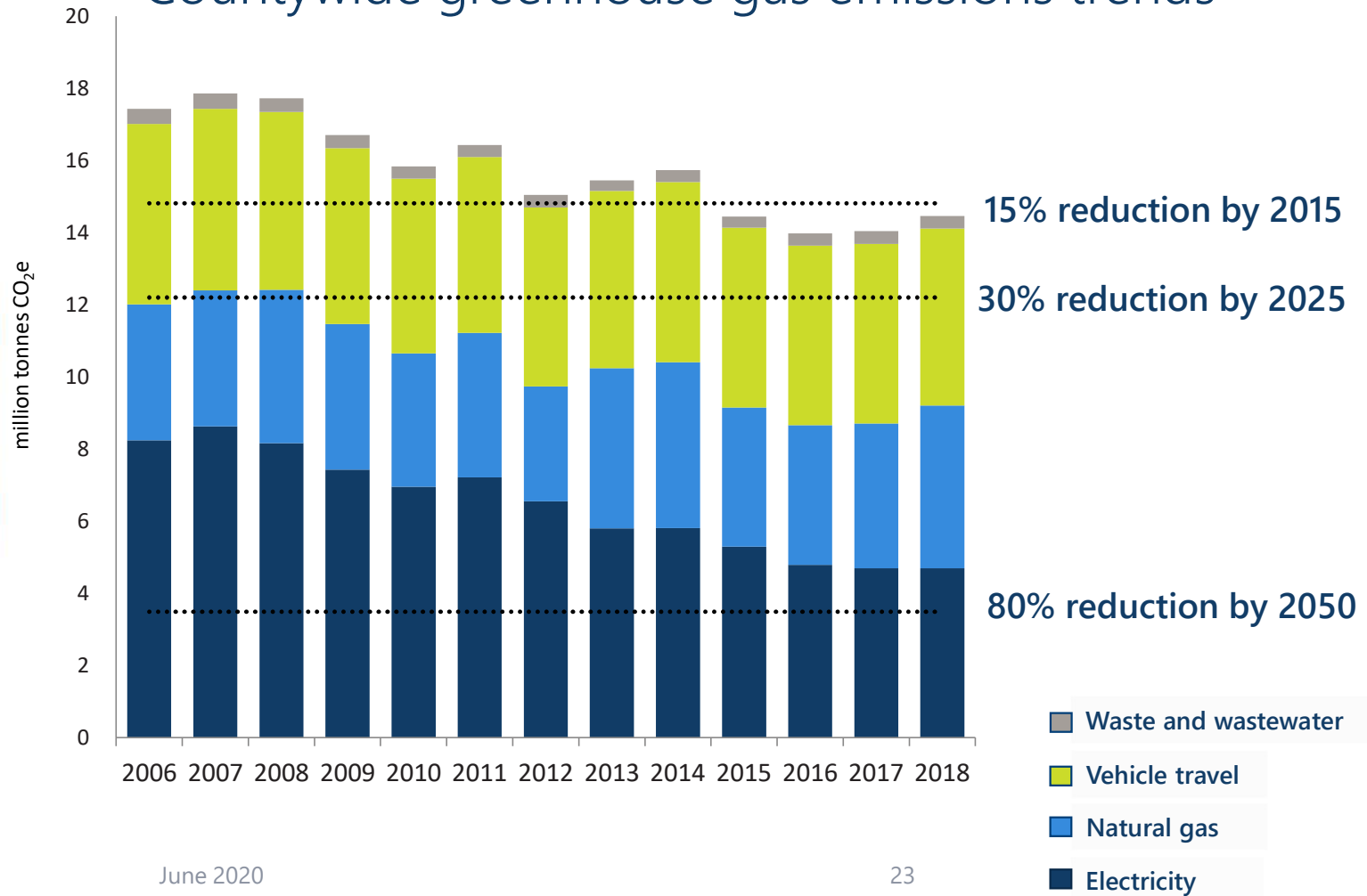


Builds on 2006-2012 inventory.
Uses ICLEI's U.S. Community Protocol, version 1.2

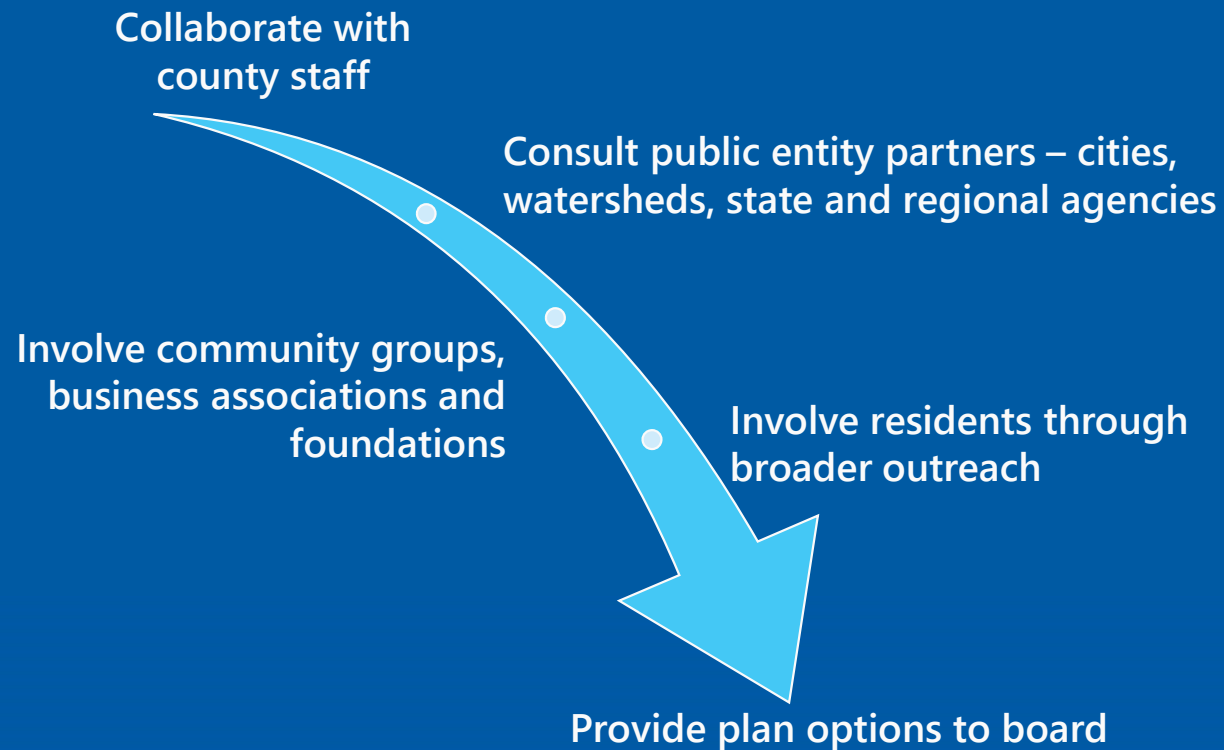


Greenhouse gas emissions goals

Countywide greenhouse gas emissions trends



Engagement



Internal engagement: Staff work teams



People: health,
behavior and
disparity reduction

9 departments
11 members



Transportation
and infrastructure

7 departments
16 members



Buildings and
energy

4 departments
10 members



Waste and
materials

9 departments
13 members

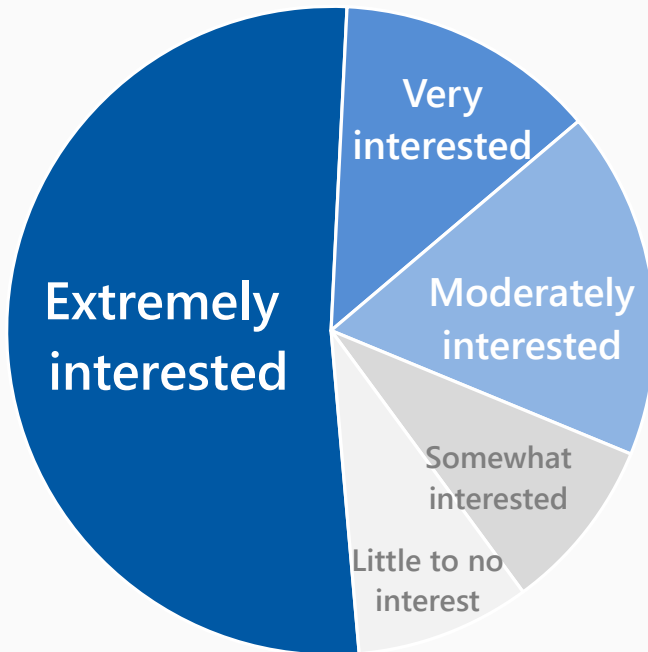


Water, natural
resources and
land use

7 departments
8 members

External engagement: public partners

Interest in exploring partnership models driven by mutual and regionally beneficial climate goals



June 2020

Online surveys and meetings – participation by:

- Brooklyn Park
- Crystal
- Eden Prairie
- Edina
- Excelsior
- Golden Valley
- Greenfield
- Maple Grove
- Medina
- Minneapolis
- Minnetonka
- Mound
- Robbinsdale
- St. Louis Park
- Minneapolis Park Board
- Three Rivers Park District
- Bassett Creek Watershed Management Commission
- Minnehaha Creek Watershed District
- Mississippi Watershed Management Organization
- Nine Mile Creek Watershed District
- Riley Purgatory Bluff Creek Watershed District
- Metropolitan Council/MetroTransit
- MnDOT
- MnDNR
- MPCA

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Priorities identified by public partners

Goals, policy, and planning



- Coordinate and collaborate
- Better modeling/data
- Achieve (accelerate) greenhouse reduction goals
- Build resiliency
- Weave equity into the work

Priorities by topic areas



- Stormwater management
- Plan for resilient and sustainable infrastructure



- Decarbonize transportation & electrify vehicles and fleets
- Increase transit and no carbon modes of transportation



- Reducing energy use and decarbonizing buildings
- Renewable energy communitywide
- Reduce waste, recycle more