



HENNEPIN COUNTY  
MINNESOTA

# Working Group Charge

County board directed staff to form a working group to research the impacts that flooding, floodplains, and climate change-driven precipitation increases will have on developable land over the next 50-100 years.





# Working Group Charge

How vulnerable are county priorities and investments to the impacts of flooding and climate change?

(Our mission and our vision for the future?)





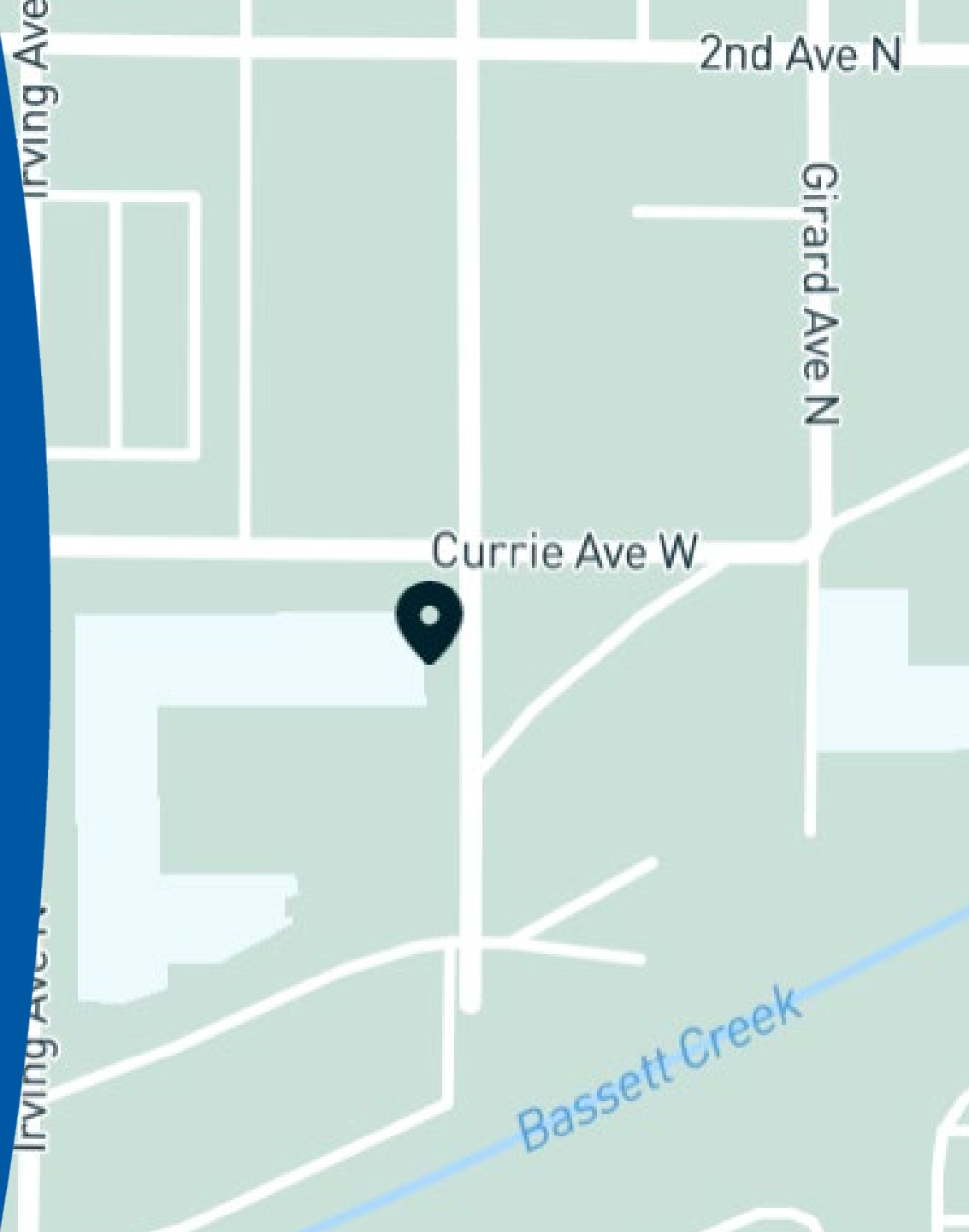
# County priorities & goals (examples)

- Support transit-oriented development
- Support development of and protect naturally occurring affordable housing
- Build complete and green streets
- Reduce disparities in health, housing, employment, income, education, justice, and transportation, particularly for people of color
- Increase the resilience of the built environment and protect natural resources
- Protect ... people [from climate change], especially vulnerable populations



# Working Group Approach

- Develop a detailed understanding of the Currie Commons project and the factors that led to per unit cost increases
- Learn about other local, regional, national, and global examples of mitigating and adapting to climate risks
- Geospatial analysis
- Identify themes, trends, data gaps, and additional research questions



# Currie Commons Case Study

# Key terminology

## Floodplains

Low-lying ground adjacent to a river or creek that is subject to higher risk of flooding.

Floodplains are subject to rules and mitigation requirements at a local level

## 100-year flood

Flood maps show how likely it is for an area to flood. Any place with a 1% chance or higher chance of experiencing a flood each year is considered to have a high risk.

# Water & Related Governance

## Local & Regional

- Cities:
  - Land use ordinances, zoning, building codes
  - Stormwater permits
  - Local control for state floodplains rules
- Watersheds:
  - Jurisdictional floodplain
  - Flood storage and level rules
  - Stormwater, erosion control rules
- Met Council:
  - Water supply & wastewater planning
  - Regional planning
  - Transit

## State

- MPCA:
  - Stormwater permits (MS4, NPDES) - building standards
  - Water quality standards
  - Contamination/brownfields
- DNR:
  - Shoreland and floodplain rules
  - Public waters permits
  - Groundwater appropriations and protection
- MDH
  - Wellhead protection

## Federal

- FEMA: floodplain mapping, flood insurance
- HUD: floodplain limitations on certain housing funds

## Not on the List

- Hennepin County: no land-use control and no direct jurisdiction in water governance



# Climate change and vulnerability

## Resilience to acute hazards

- The ability of a resident to respond determines whether a flood or other hazardous event is:
  - An inconvenience
  - A manageable problem
  - A catastrophic event

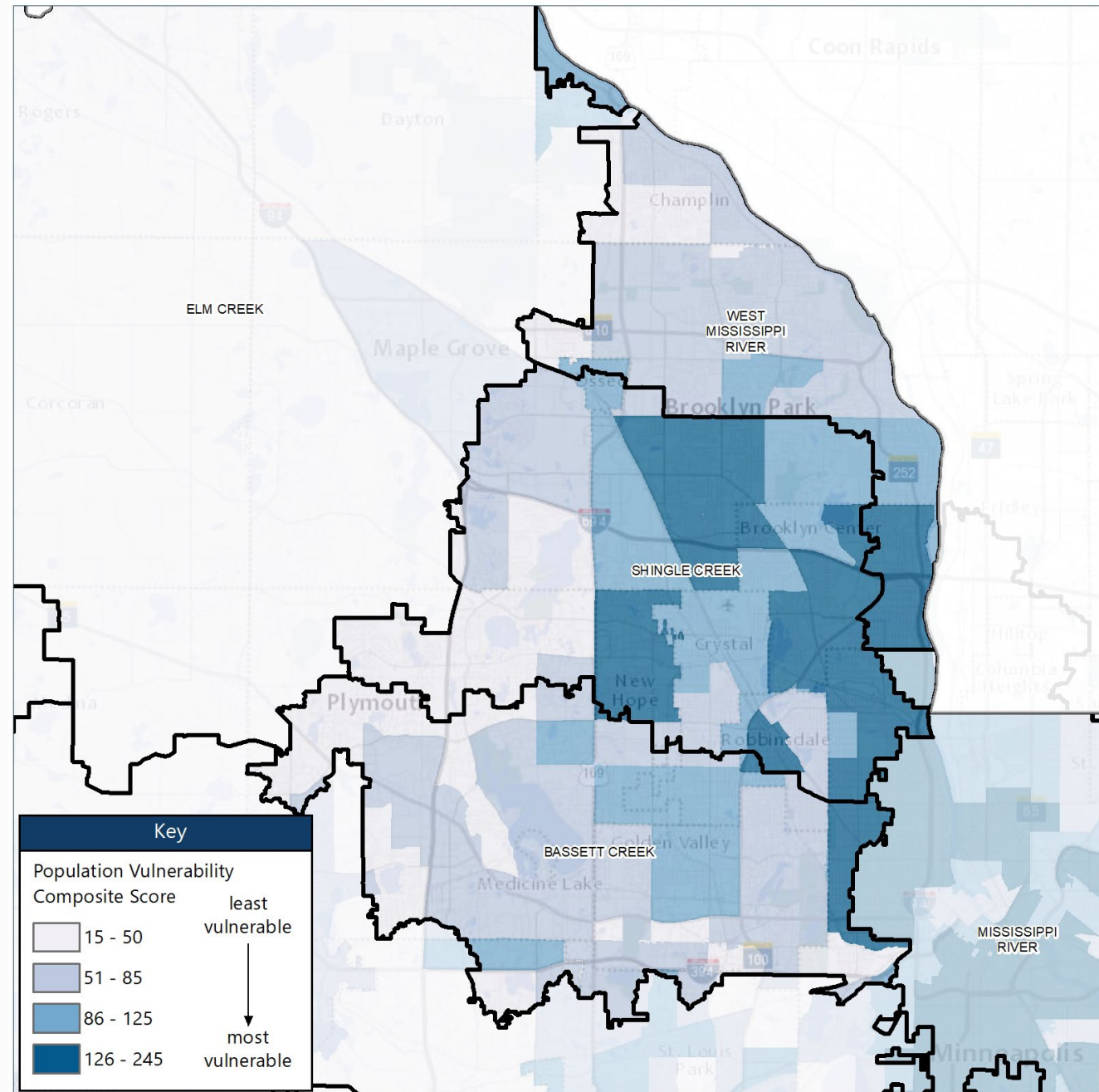


# Vulnerability to climate hazards

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
- Prioritize responses based on vulnerabilities







# About Currie Commons

- 187 unit rent-restricted affordable housing development
- North Minneapolis in the Bassett Creek Watershed
- Developers: Wellington Management
- Funding: Federal, state, county, and city sources
- Just one example, other projects have and will face similar challenges

# Floodplain & Stormwater Challenges

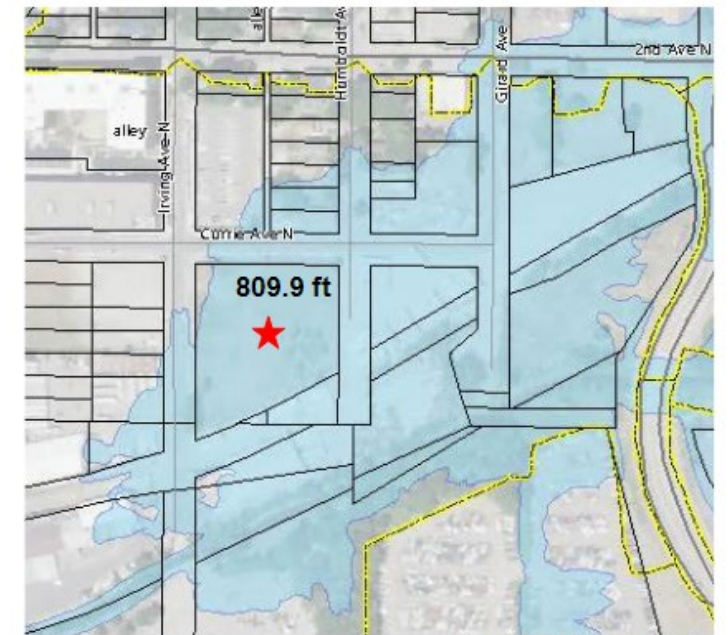
- Different floodplain boundaries
- Floodplain-related adjustments:
  - Parking as a buffer area
  - Multiple conditional use permits
  - Raised first floor elevation
- Stormwater economics – constrained parcels, development costs

FEMA/City of Minneapolis Map



FEMA Floodplain Maps, 2016

Bassett Creek Watershed Map



Bassett Creek Watershed, 2023



# Other challenges contributing to cost increases

- Geotechnical Instability
  - Steel pilings to hold the structure and provide stability – increased materials, labor, planning
- Remediated soils
  - Remediated superfund in the early 2000's
  - Additional clean-up of excavated soil occurring as part of ongoing construction
- Inflation
  - Inflation, supply chain, COVID-19 pandemic
  - Net-operating costs doubled annually from 2020-2022



# Technical challenges universal to Bassett Creek Valley

## Geotechnical Instability

- Buried bedrock valley
- Unconsolidated sediment
- Poor load-bearing building capacity

## Soil Contamination

- Pervasive throughout this area, especially site of former impound lot (likely be important to any creek/creek access project concept)

## Flood Risk + Stormwater

- Social vulnerability + future flood risk
- Emergency planning and preparedness
- Stormwater requirements challenging on a parcel-by-parcel basis



# Climate resiliency opportunities unique to Bassett Creek Valley

## Natural and built environment

- Reconnect the Bassett Creek to its floodplain; enhance natural features and create opportunities for residents to enjoy and experience open spaces
- Reduce and manage future flood risks for residents
- Use landscapes to connect to creek

## Housing & Economic Development

- Opportunity to add thousands of housing units; millions of square feet of commercial space
- Mirror economic diversity of surrounding neighborhoods
- Employ anti-displacement strategies so that redevelopment benefits existing community

## Proximity to transit & jobs

- Easy access to downtown
- Green line extension, Bassett Creek Valley station
- Opportunity for job training; community-based hiring for new and existing residents



# BCV Insights

- Center vulnerable people and climate resilience
  - Use reasonable proxies to estimate future flood risk exist and/or model future risk based on precipitation projections
- It is no one individual entity's role to develop Bassett Creek Valley in a way that accomplishes the broad community benefits inherent in a climate resilient vision





# Questions?

Karen Galles

[Karen.Galles@hennepin.us](mailto:Karen.Galles@hennepin.us), 612-235-0712

