



# Transportation System Performance Evaluation

Transportation Committee  
Information Item



August 14, 2023 Liz Roten, Jonathan Ehrlich

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# An interactive, web-native approach

## Overview

- 98 interactive charts and maps
- 128 tables
- 60+ distinct data sources
- Primarily web-based
- Static PDF available on request

**Available now**

Transportation System Performance Evaluation

[Preface](#)

**Stewardship** >

- 1 Efficiently preserve and maintain the transportation system
- 2 Operate the regional transportation system efficiently and cost - effectively

**Safety and Security** >

- 3 Reduce vulnerability
- 4 Reduce crashes and improve safety and security

**Access to Destinations** >

## Transportation System Performance Evaluation

AUTHOR  
Metropolitan Council

PUBLISHED  
April 14, 2023

### Preface

This report is a comprehensive review of the Twin Cities transportation system as prepared by Metropolitan Council in 2023. The Minnesota State Legislature adopted statutes in 1996 requiring the Metropolitan Council to produce this report (previously called the Transportation System Audit). This report was prepared to inform the 2024 update of the region's long-range transportation plan, the 2050 Transportation Policy Plan (2050 TPP).

### Metropolitan Council

*The Council's mission is to foster efficient and economic growth for a prosperous metropolitan region*

Chair: Charlie Zelle

Table 1: Metropolitan Council Members

|            |                  |             |                        |
|------------|------------------|-------------|------------------------|
| District 1 | Judy Johnson     | District 10 | Peter Lindstrom        |
| District 2 | Reva Chamblis    | District 11 | Susan Vento            |
| District 3 | Tyronne Carter   | District 12 | Gail Cederberg         |
| District 4 | Deb Barber       | District 13 | Chai Lee               |
| District 5 | Anjuli Cameron   | District 14 | Willetha (Toni) Carter |
| District 6 | John Pacheco Jr. | District 15 | Tenzin Dolkar          |

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**Stewardship** >

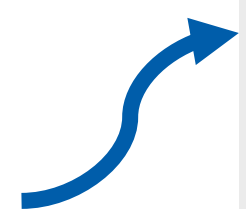
- 1 Efficiently preserve and maintain the transportation system
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Organized by goal



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# 4.1 Perception of Safety When Walking and Bicycling

Context

Metro respondents to [MnDOT's public opinion survey](#) are asked to rate perceptions of safety for bicycling and walking in their communities using a four point scale. 1 corresponds to a perception that bicycling and walking is not at all safe and 4 corresponds to a perception that bicycling and walking is very safe. MnDOT tracks the percentage of respondents who perceive their environment as safe by totaling those who respond with 3 (somewhat safe) or 4 (very safe). The survey is typically done every two years.

[Figure 4.1](#) shows how people's responses to the question **How safe do you think your community is for walking (or using a wheelchair or personal mobility device)?** over time. In recent years, the amount of people who felt "not very safe" or "not at all safe" has increased. For instance, those who felt "not at all safe" increased from 2% in 2015 to 4% in 2019.

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- 4.1 Perception of Safety When Walking and Bicycling
- 4.2 Transit safety
- 4.3 Status of At-Grade Rail/Roadway Crossing Infrastructure
- 4.4 Traffic Fatalities and Injuries

Easy navigation

Interactive charts

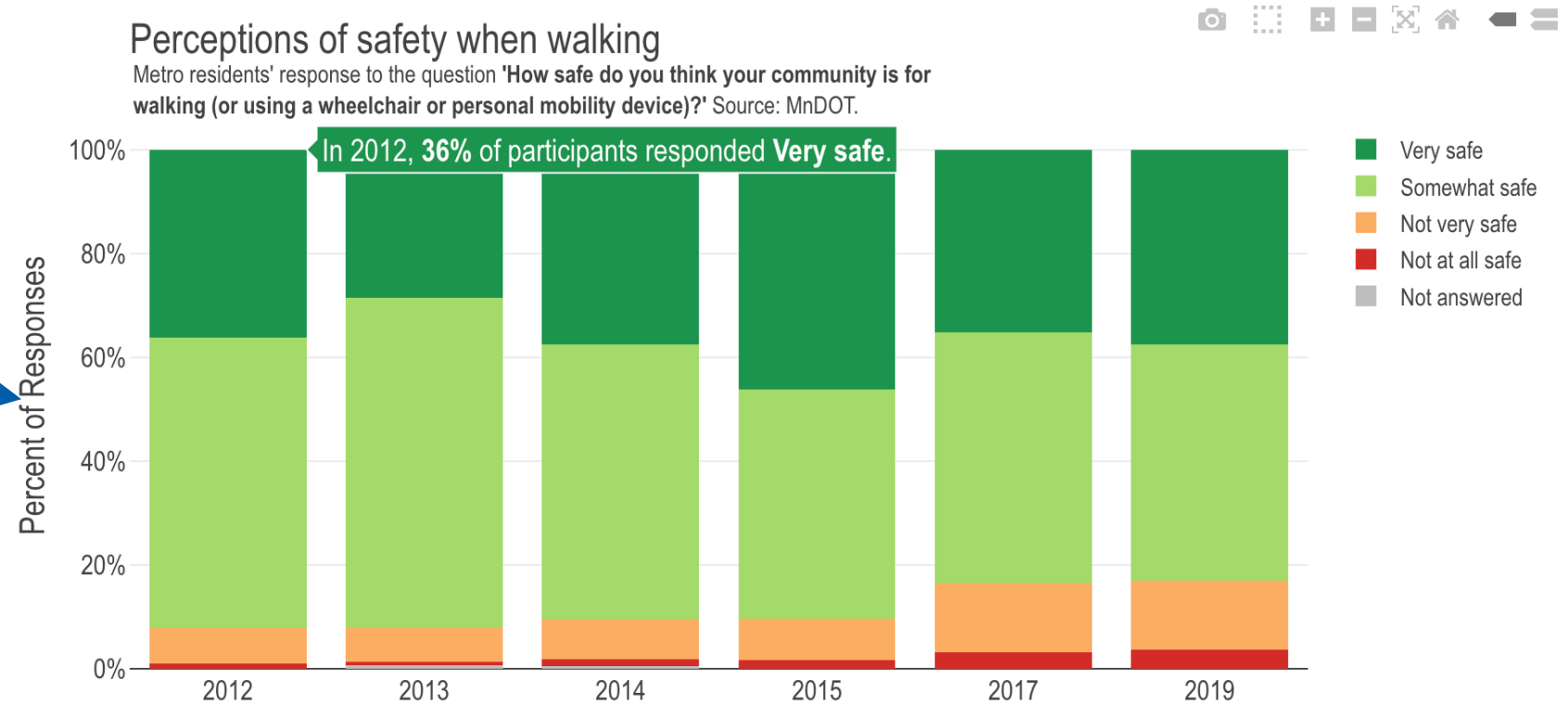


Figure 4.1: Perceptions of safety when walking

# Current 2040 TPP Goals



## Transportation System Stewardship

Sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets.



## Safety and Security

The regional transportation system is safe and secure for all users.



## Access to Destinations

A reliable, affordable, and efficient multimodal transportation system supports the prosperity of people and businesses by connecting them to destinations throughout the region and beyond.



## Competitive Economy

The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and state.



## Healthy and Equitable Communities

The regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.



## Leveraging Transportation Investments to Guide Land Use

The region leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.

# System Stewardship

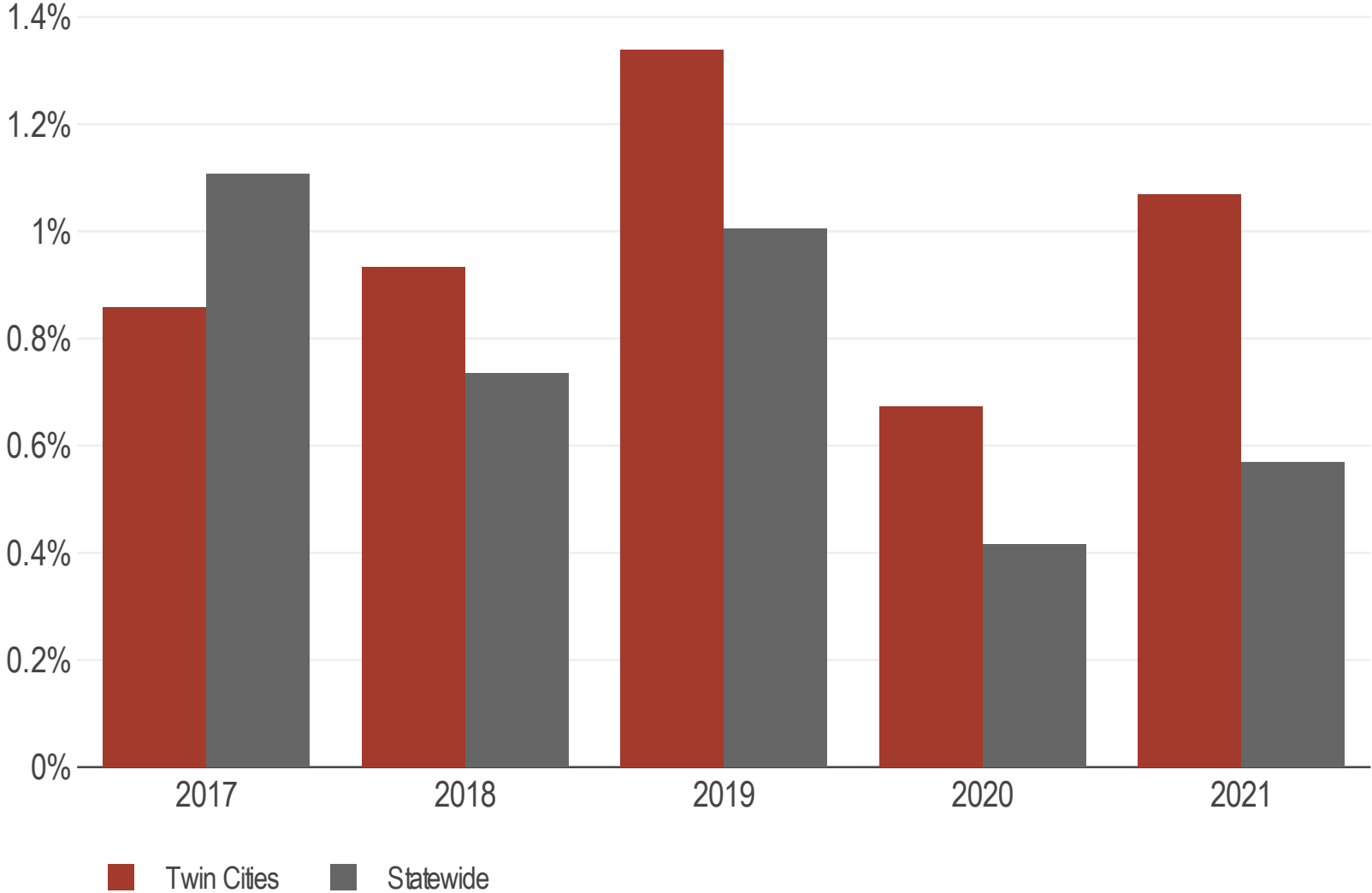
Efficiently preserves and maintain the regional transportation system in a state of good repair

Operate the regional transportation system to efficiently and cost-effectively connect people and freight to destinations.

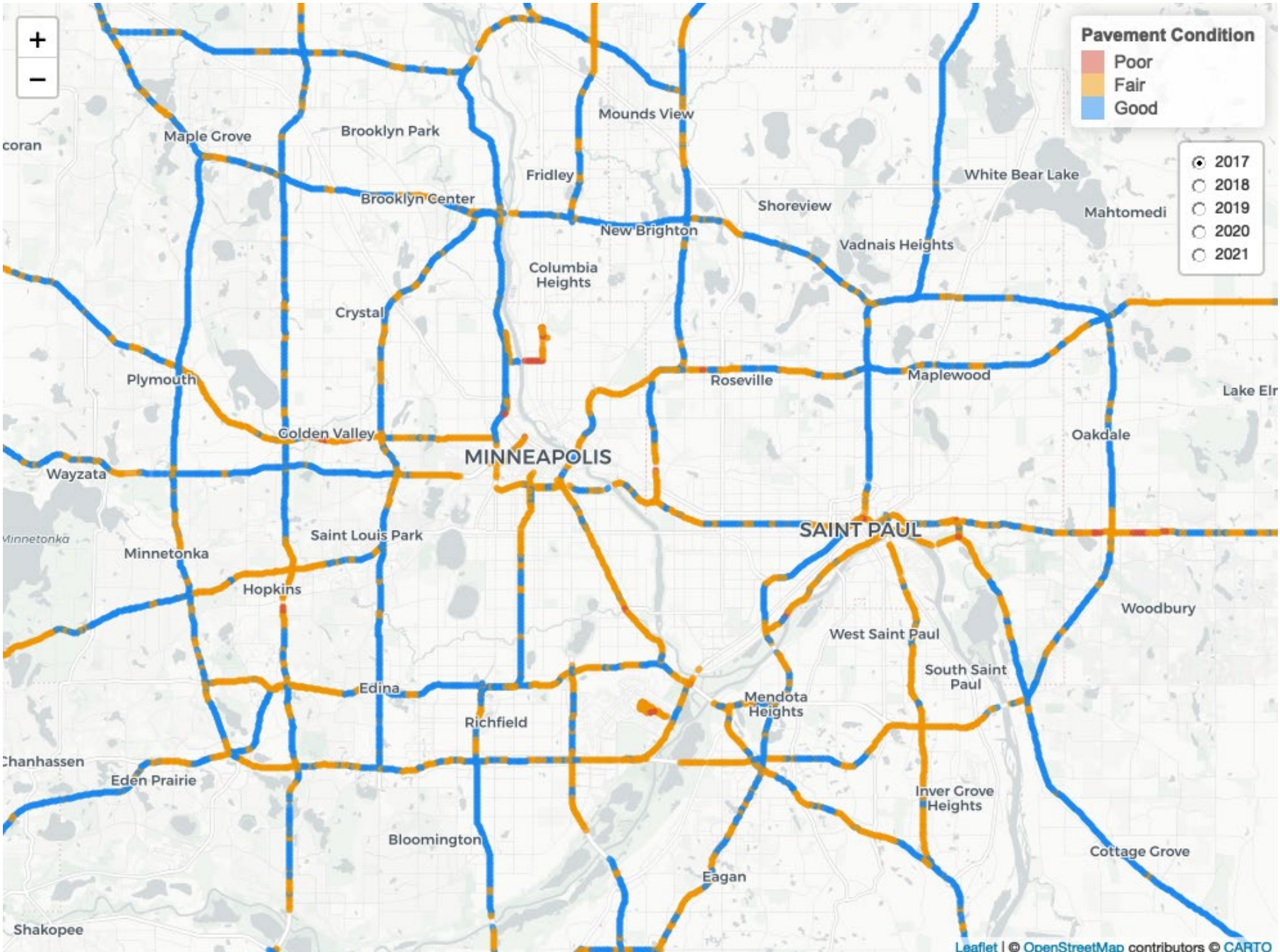
# Pavement Condition

## Pavement in 'Poor' Category (Interstate and NHS)

Twin Cities and Minnesota. Source: MnDOT



# Pavement Condition Map

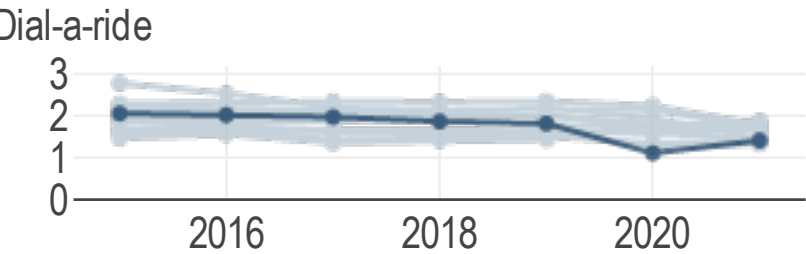
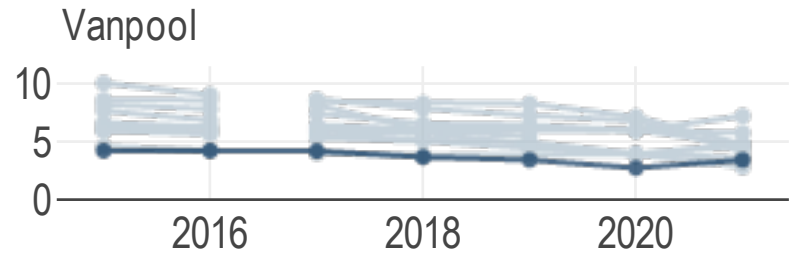
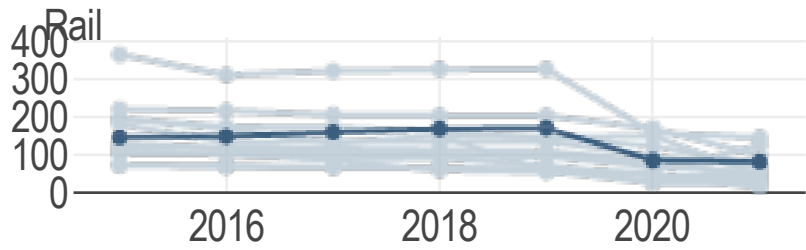
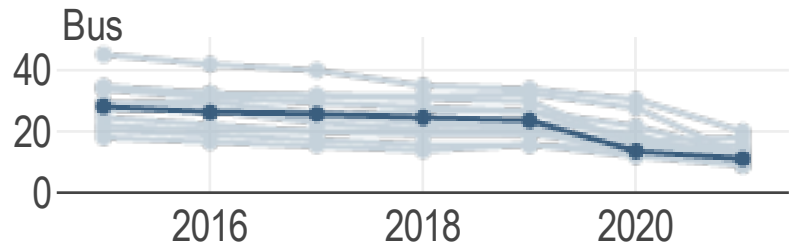
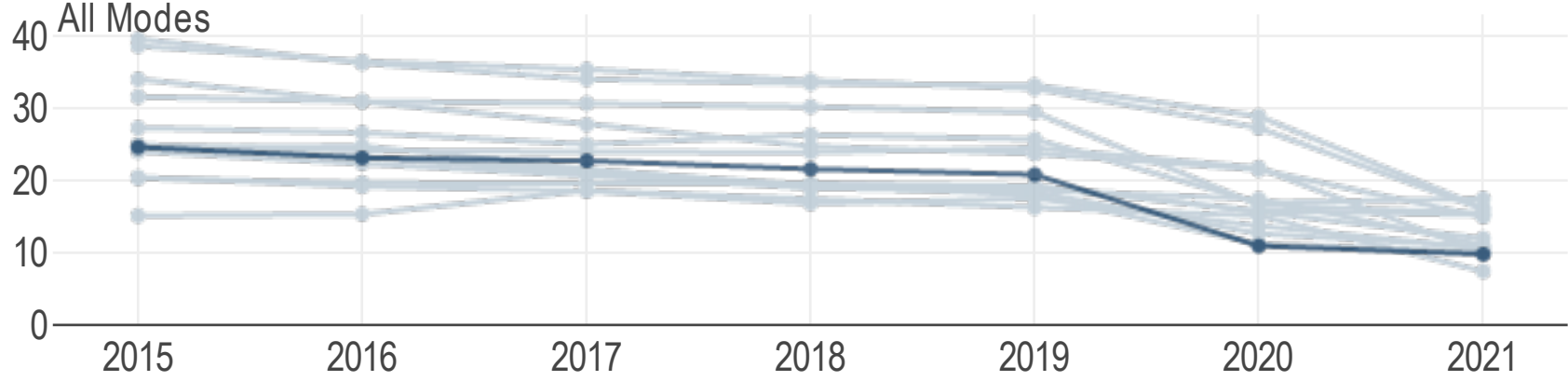




# Public Transit

## Unlinked trips per revenue hour

Source: National Transit Database



—●— Twin Cities —●— Peer regions

# Safety and Security

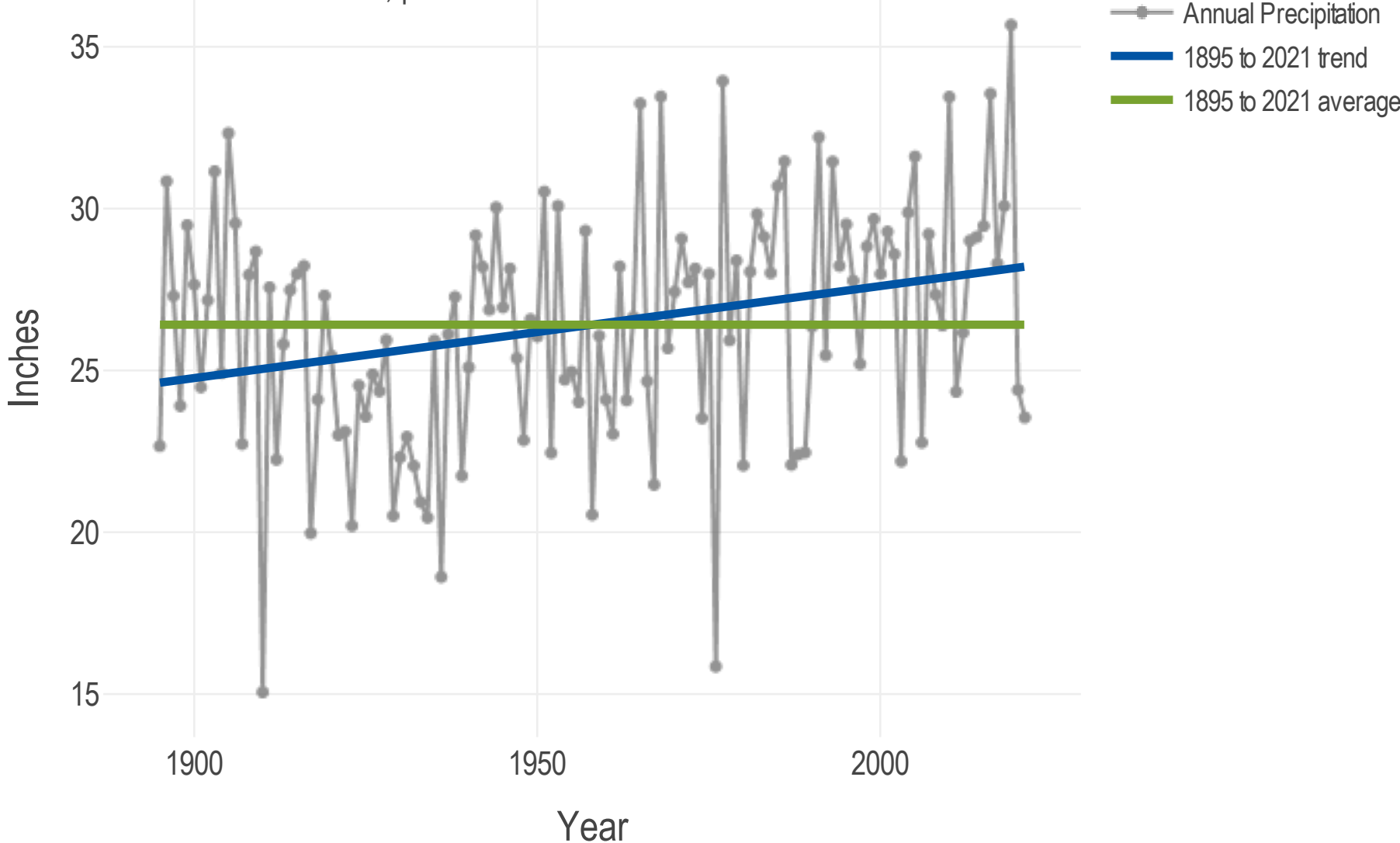
Reduce the transportation system's vulnerability to natural and human-caused incidents and threats, including climate change and terrorism.

Reduce fatal and serious injury crashes and improve safety and security for all modes of passenger travel and freight transport.

# Climate Change

## Annual Precipitation in Minnesota

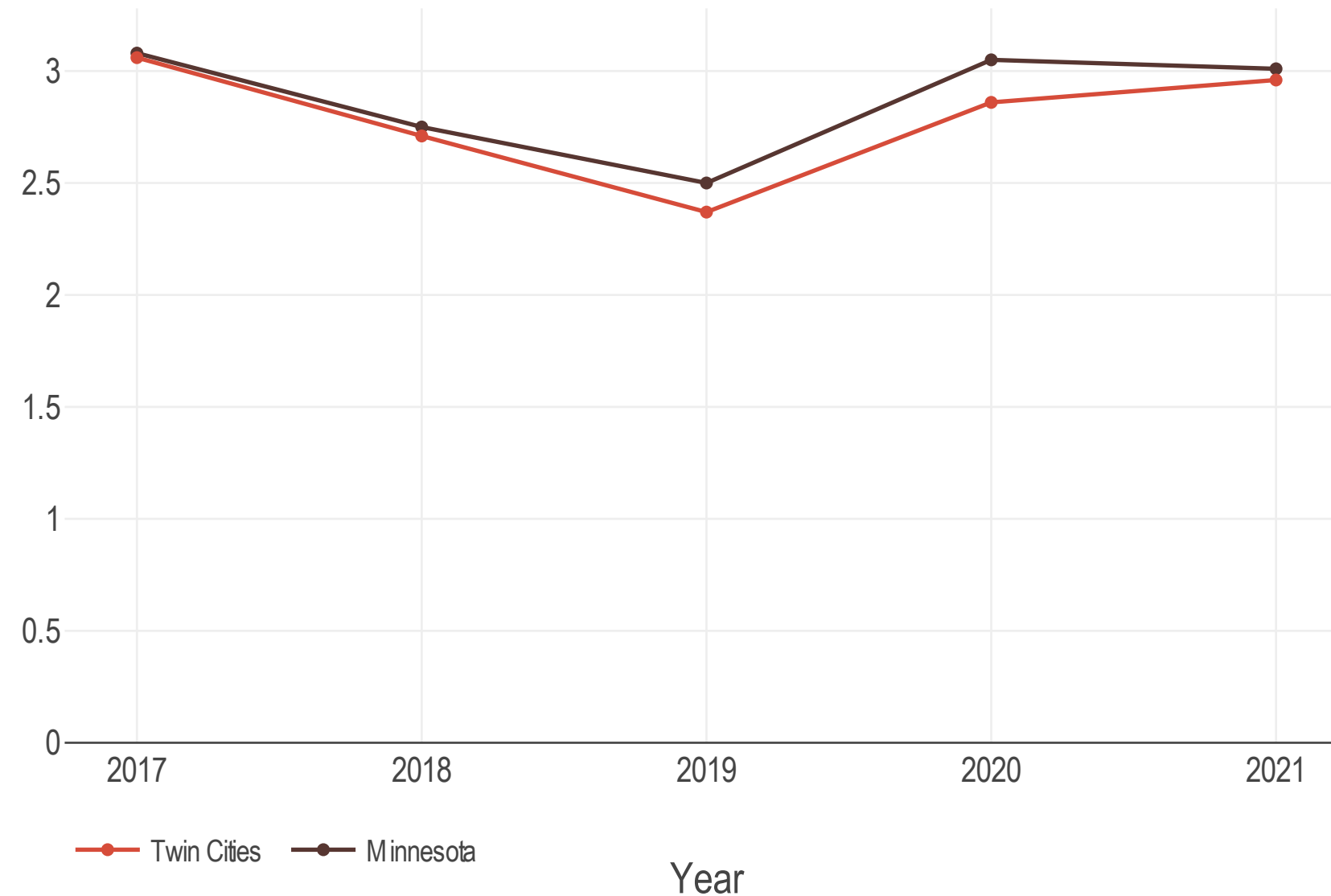
NOAA National Centers for Environmental information, Climate at a Glance: Statewide Time Series, published December 2022



# Serious injury crash rate

Serious injury crash rate on Minnesota roads, 2017-2021

Source: MnDOT Office of Traffic Engineering



# Access to Destinations

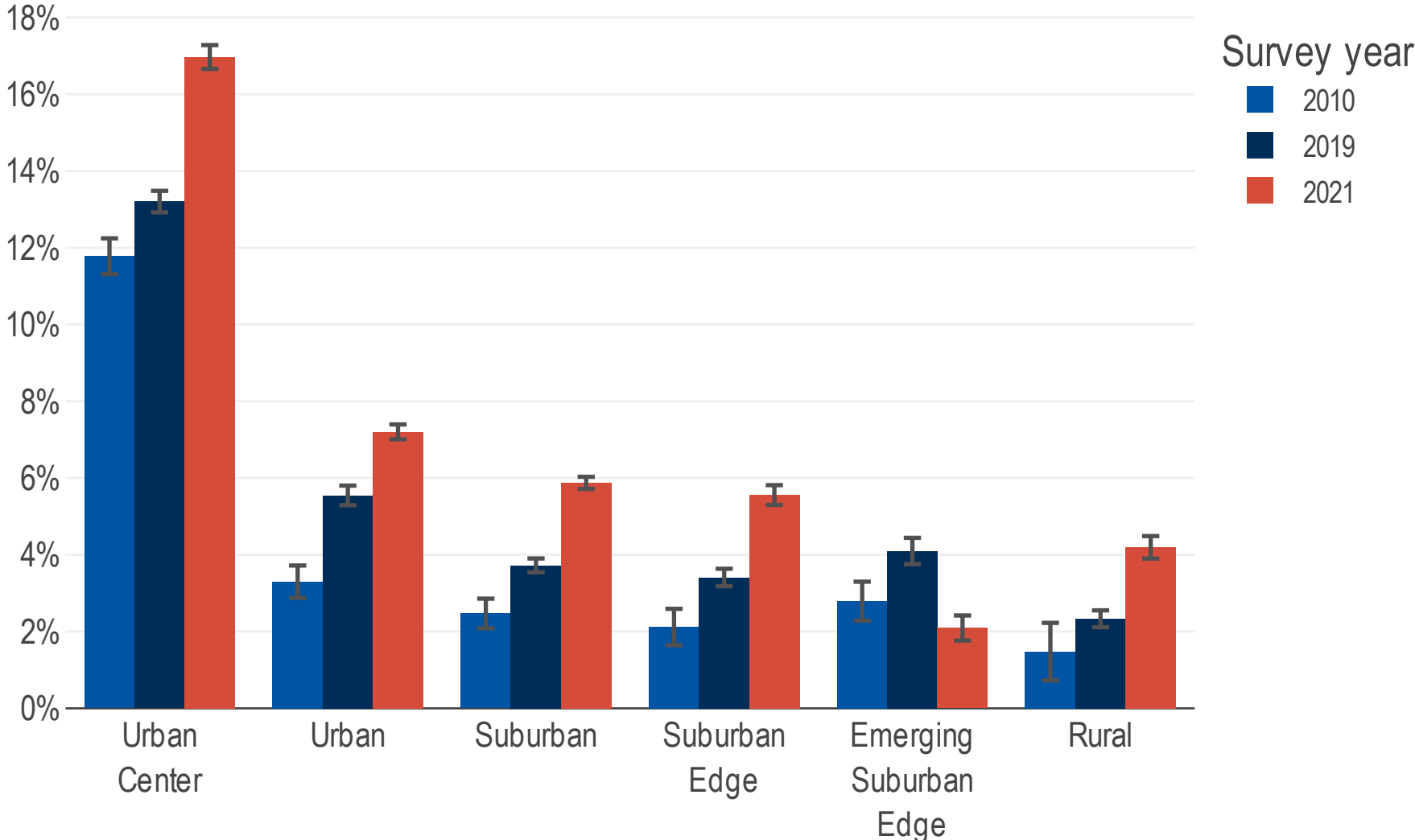
Increase the number and share of trips taken using carpools, transit, bicycling, and walking.

Improve the availability and quality of multimodal travel

# Mode share by Thrive - walking

Percent of trips made by walking: 2010, 2019 and 2021

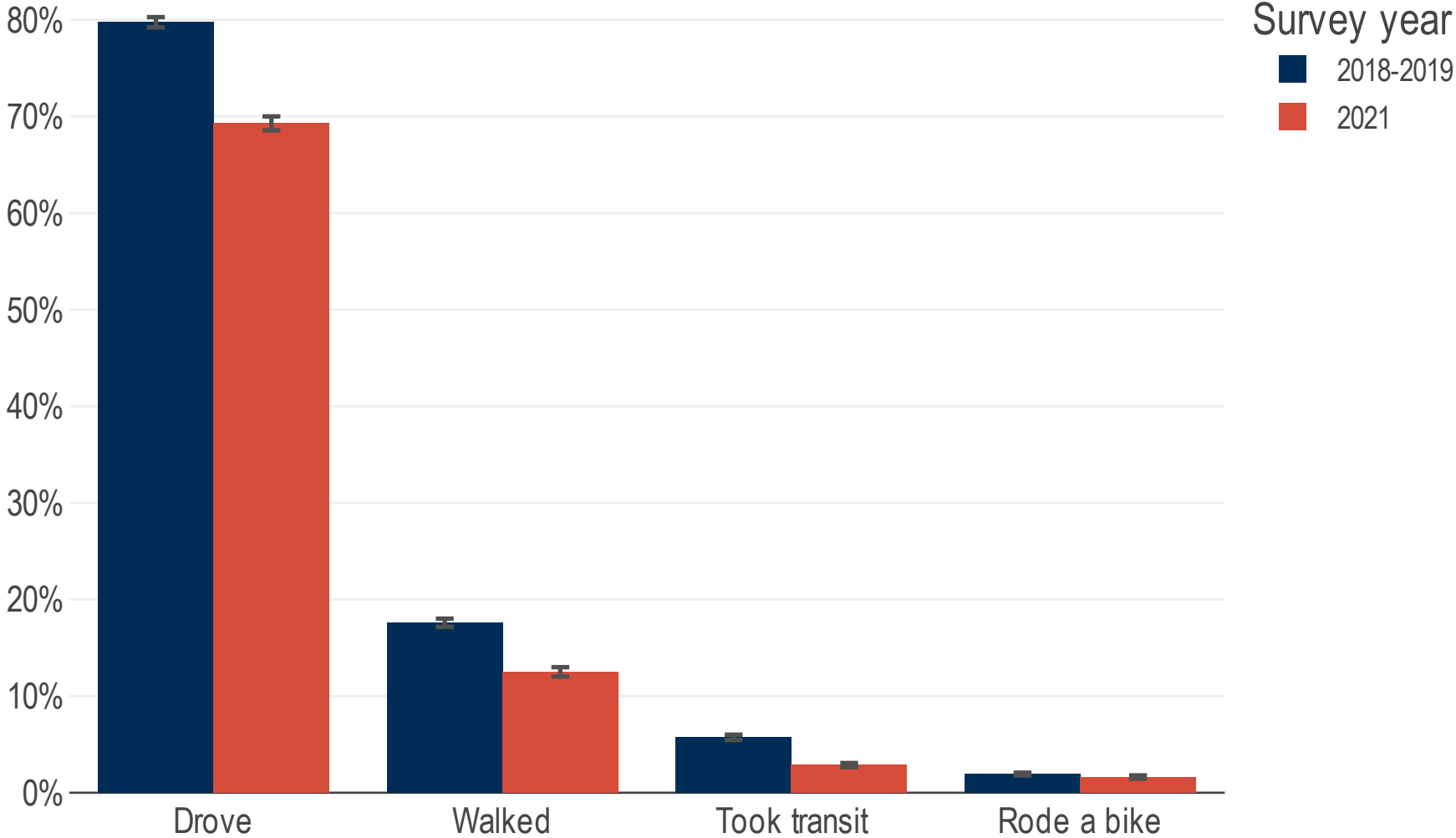
Source: Travel Behavior Inventory. Includes trips that started or ended within the MPO.



# Mode participation rate

Mode participation rate, adults, 2019 vs. 2021

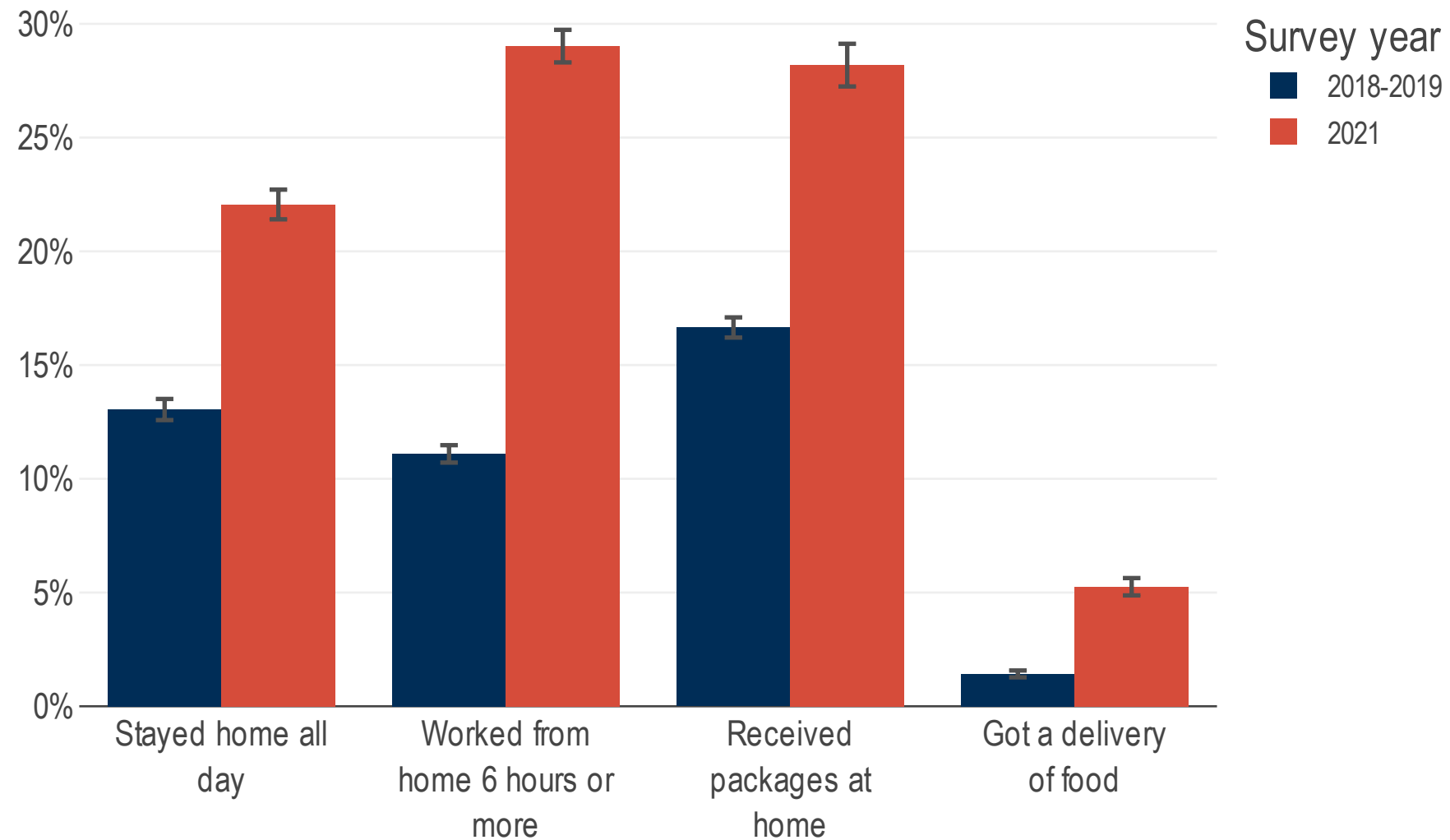
Source: Travel Behavior Inventory. Includes only adults who live in the MPO.



# Trip replacement behavior

Percent of adults who \_ on a typical weekday, 2019 vs. 2021

Source: Travel Behavior Inventory. Includes only adults who live in the MPO.

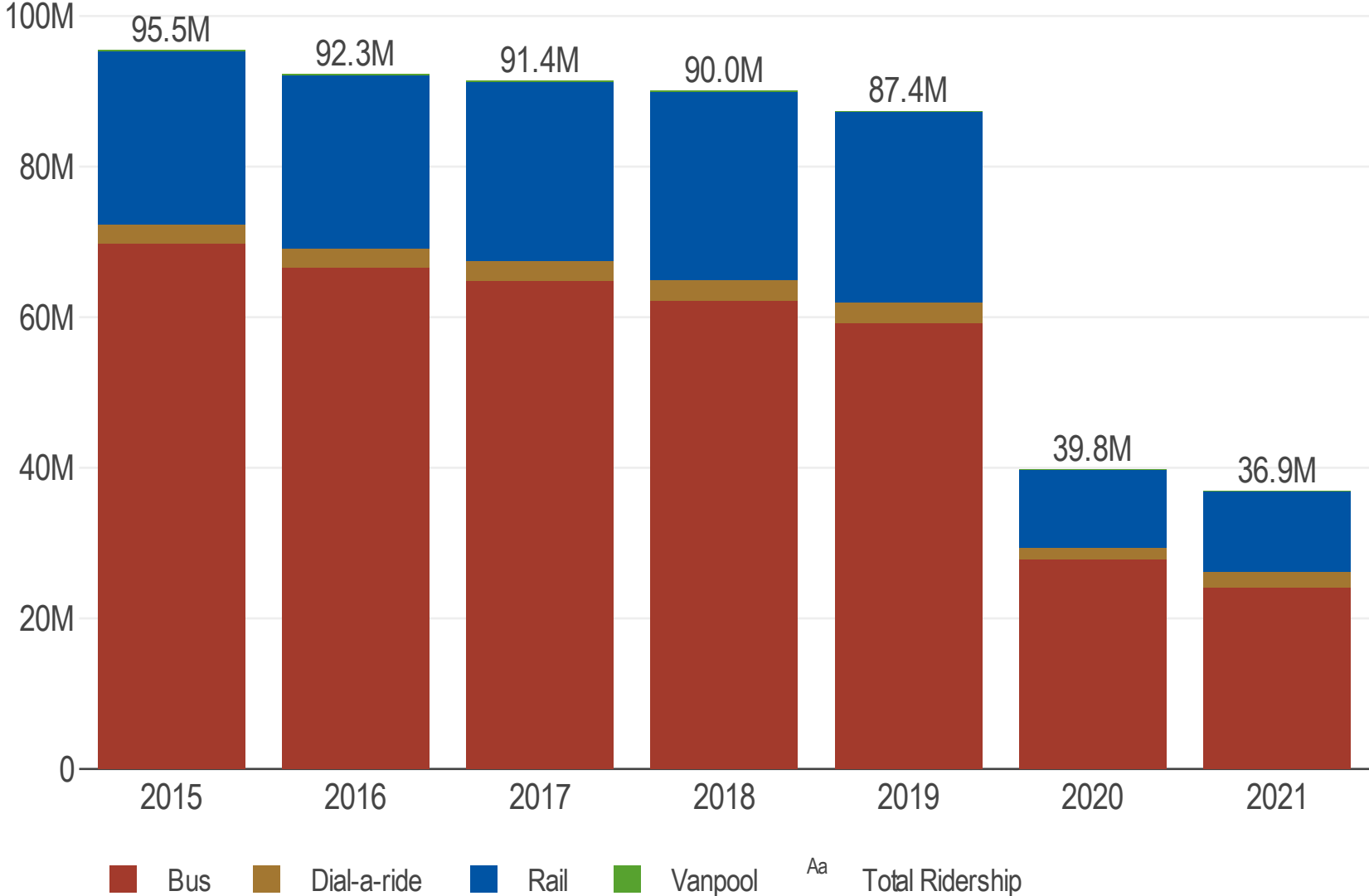




# Transit Ridership

## Twin Cities Ridership by mode

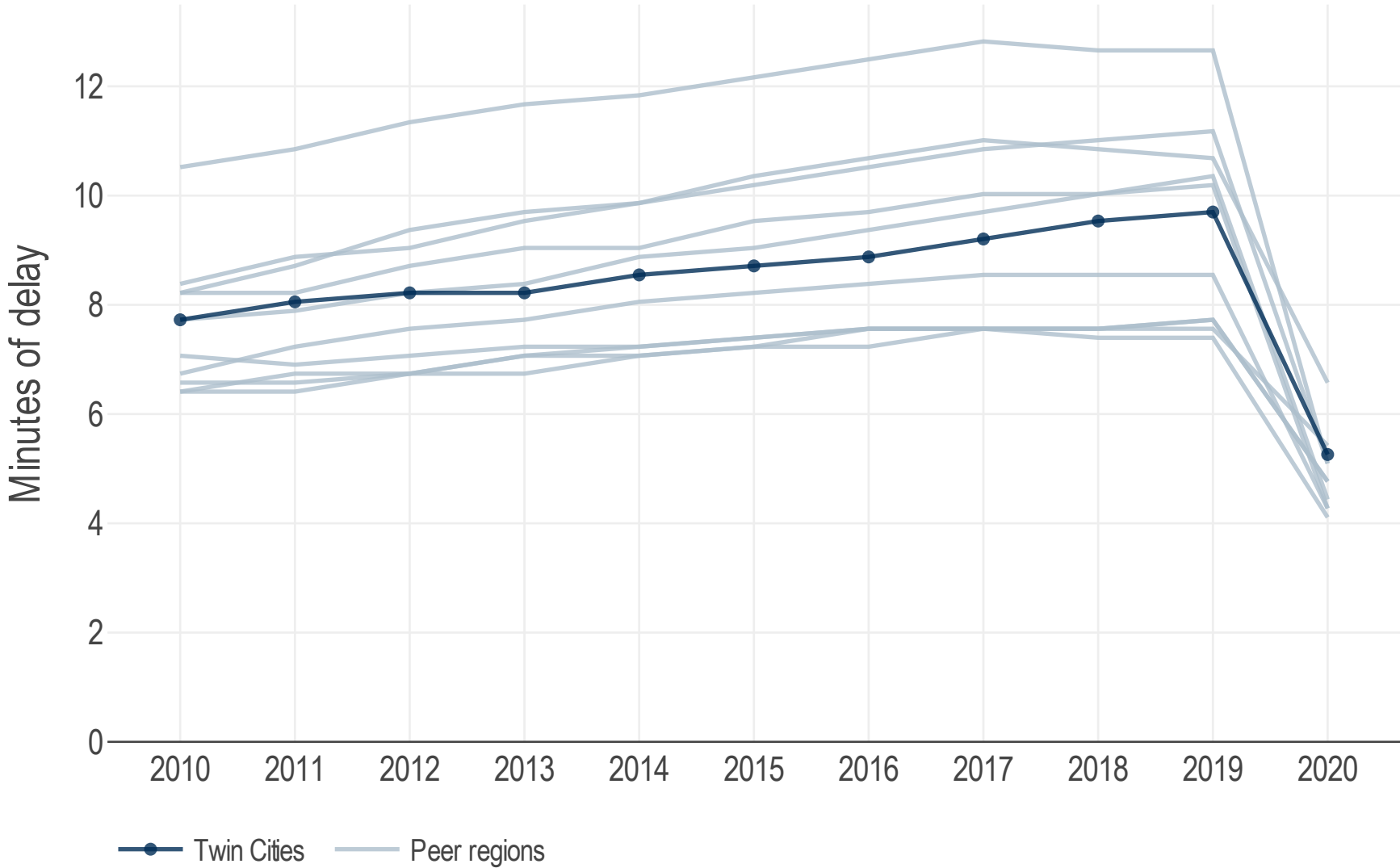
Source: National Transit Database



# Daily delay per commuter

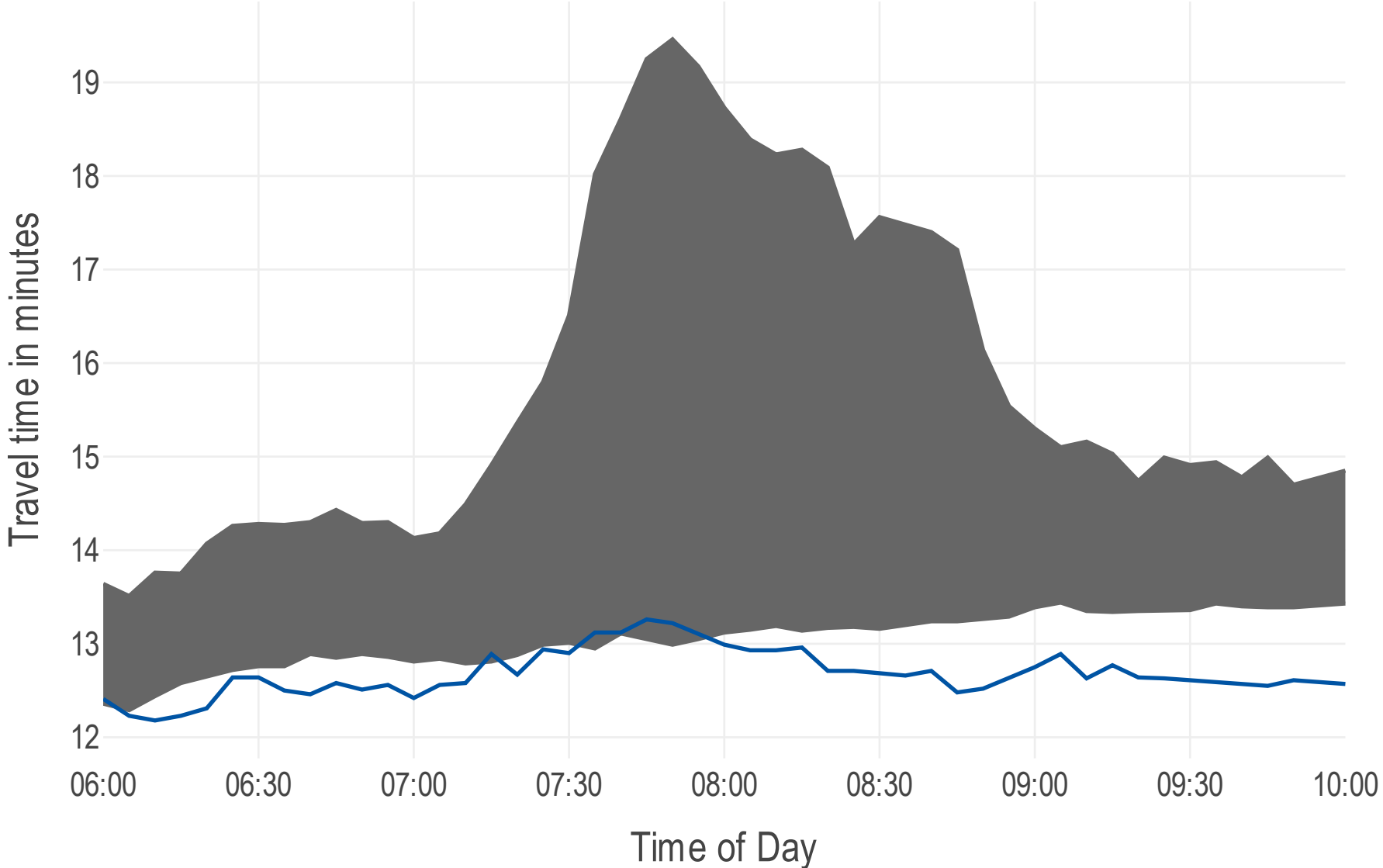
Peak-hour auto commuter delay, minutes per person per day

Source: TTI Urban Mobility Report



# E-ZPass Travel Time

Travel Time Reliability  
I-35W Northbound, 2021 Weekdays



# Competitive Economy

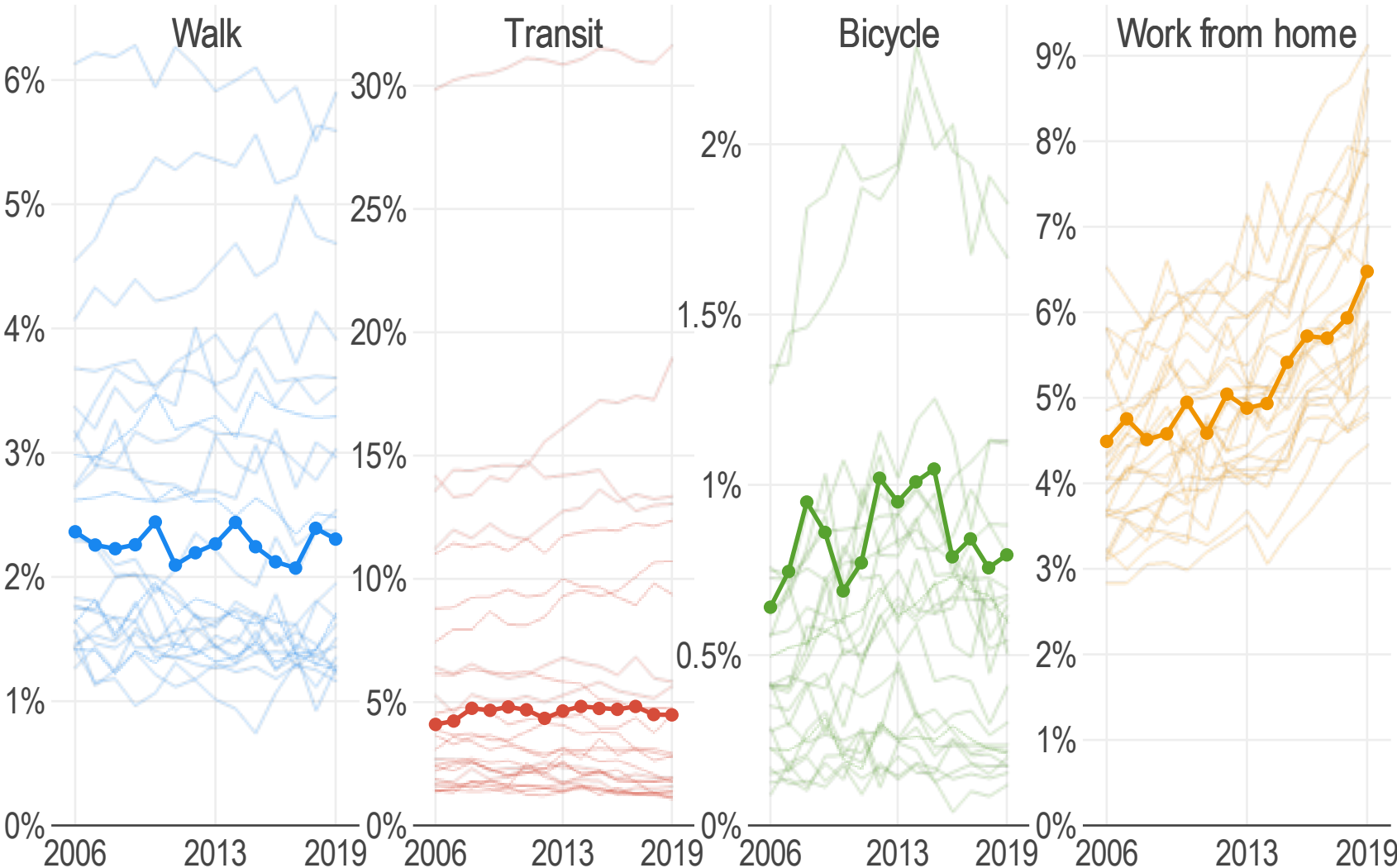
Invest in a multimodal  
transportation system

Improve multimodal access to  
regional jobs

# Non-auto commute modes

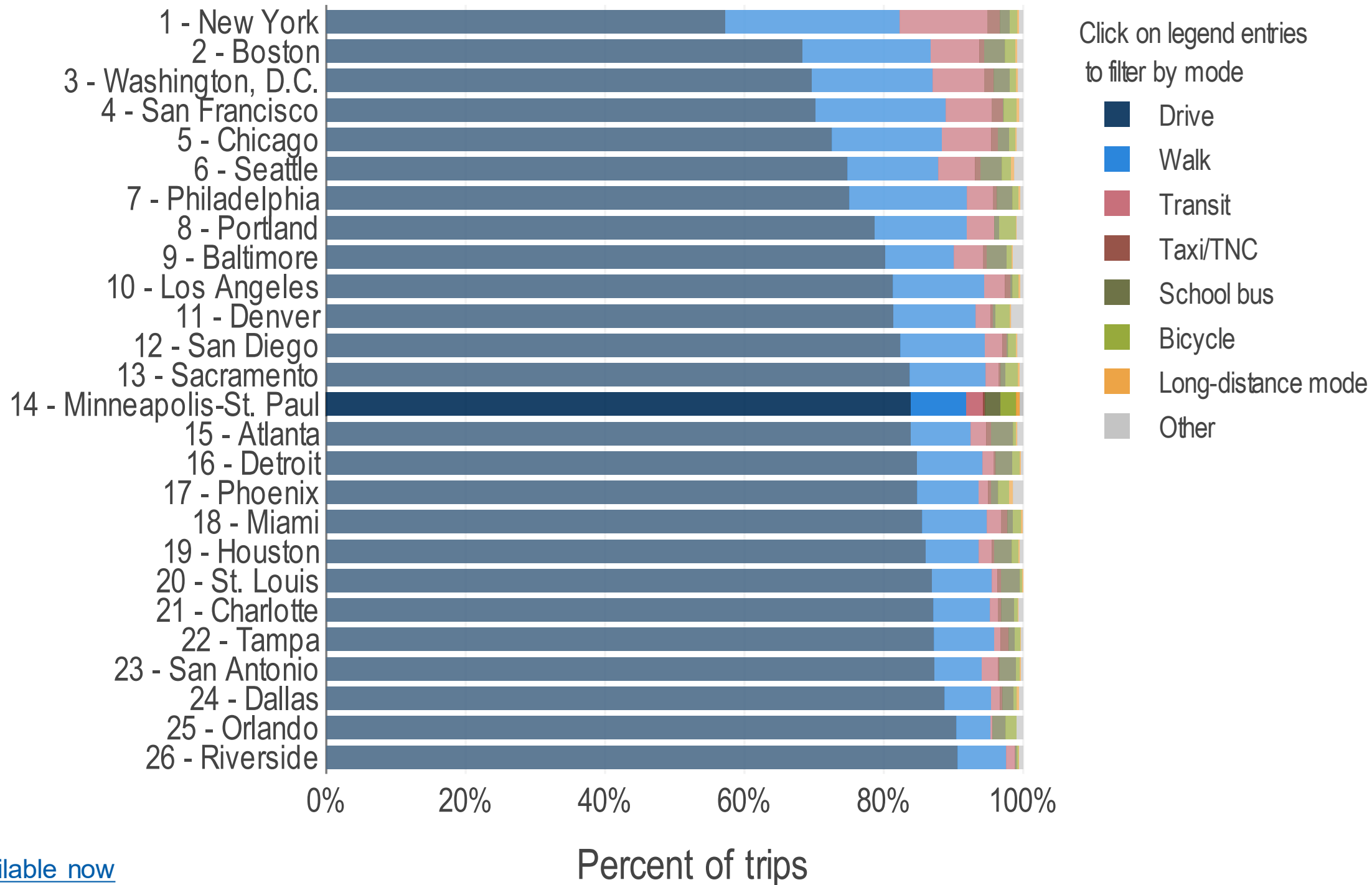
Share of commuters who use non-auto modes, top 25 U.S. metro areas

Source: ACS 1-year estimates by Metropolitan Statistical Area. **Bold** line is Twin Cities MSA.



# How people travel in the 26 most populous U.S. metro areas

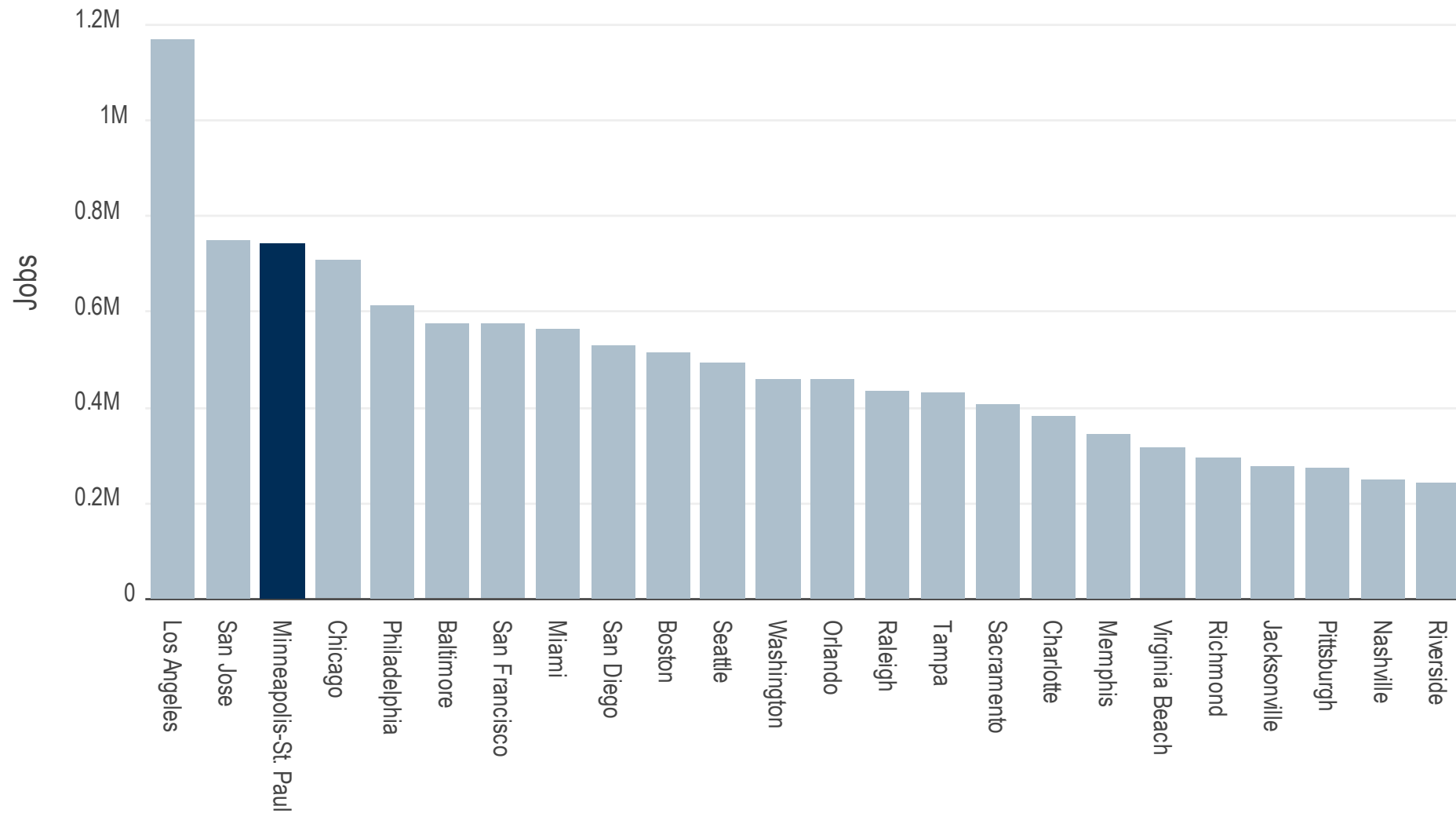
Source: 2017 National Household Travel Survey.



# Job availability by mode

Jobs available within 30 minutes by car

Source: UMN Accessibility Observatory. Access Across America: Auto 2019



# Healthy and Equitable Communities

Reduce transportation-related air emissions

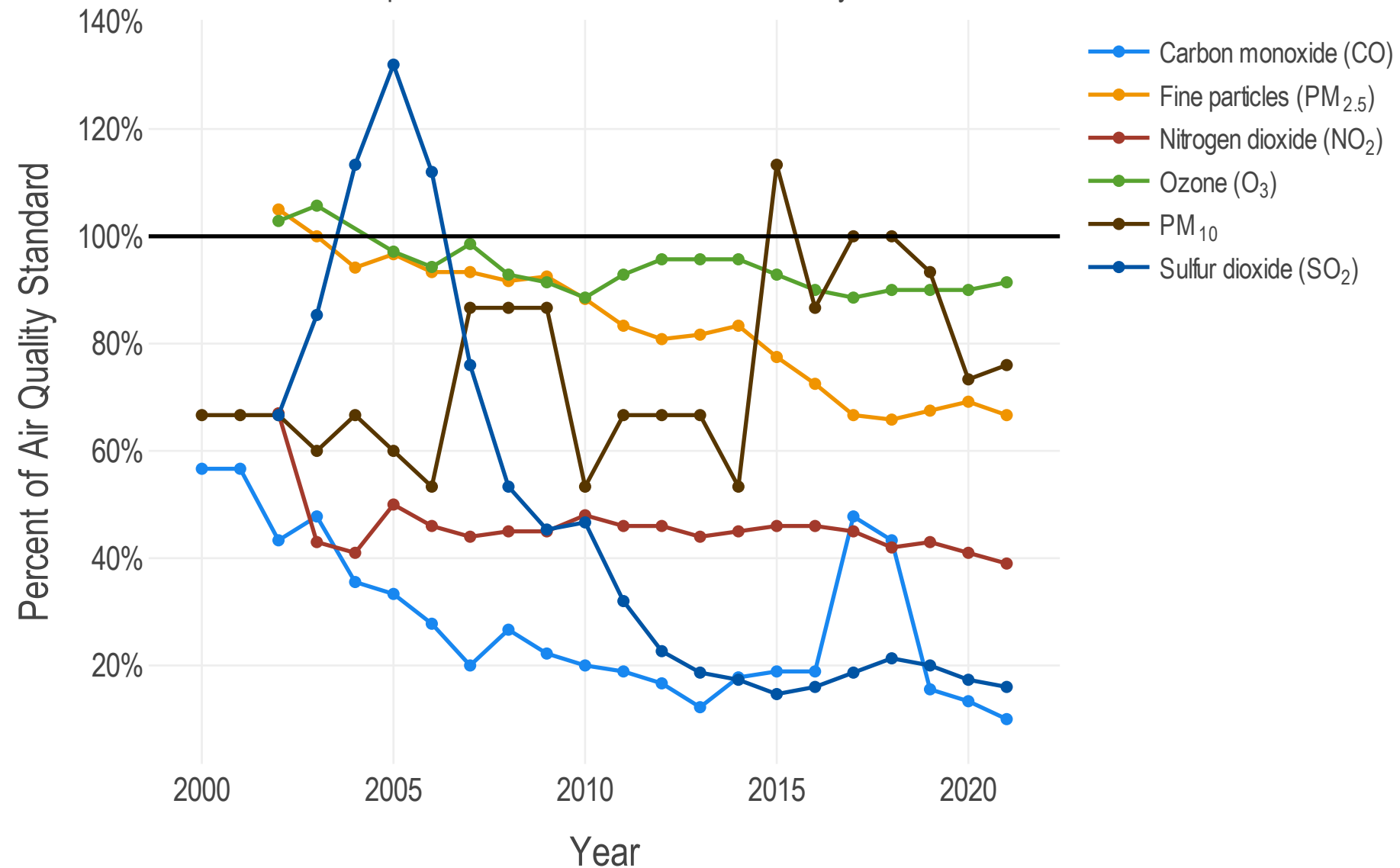
Increase the availability and attractiveness of transit, bicycling, and walking



# Air quality

## Air quality in the Twin Cities

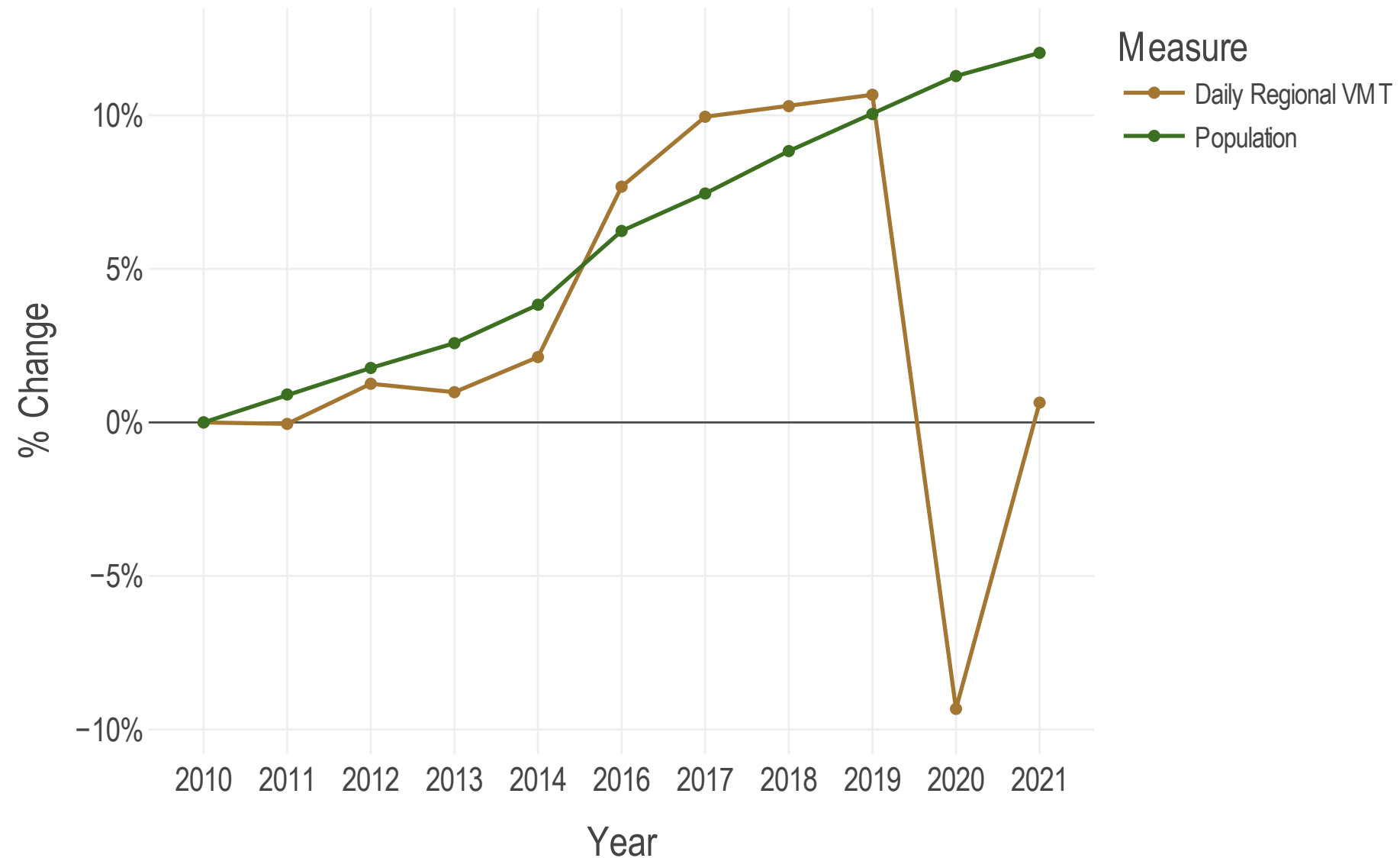
Maximum value as percent of National Ambient Air Quality Standards. Source: MPCA, 2022



# VMT and population

## Change in population and VMT since 2010

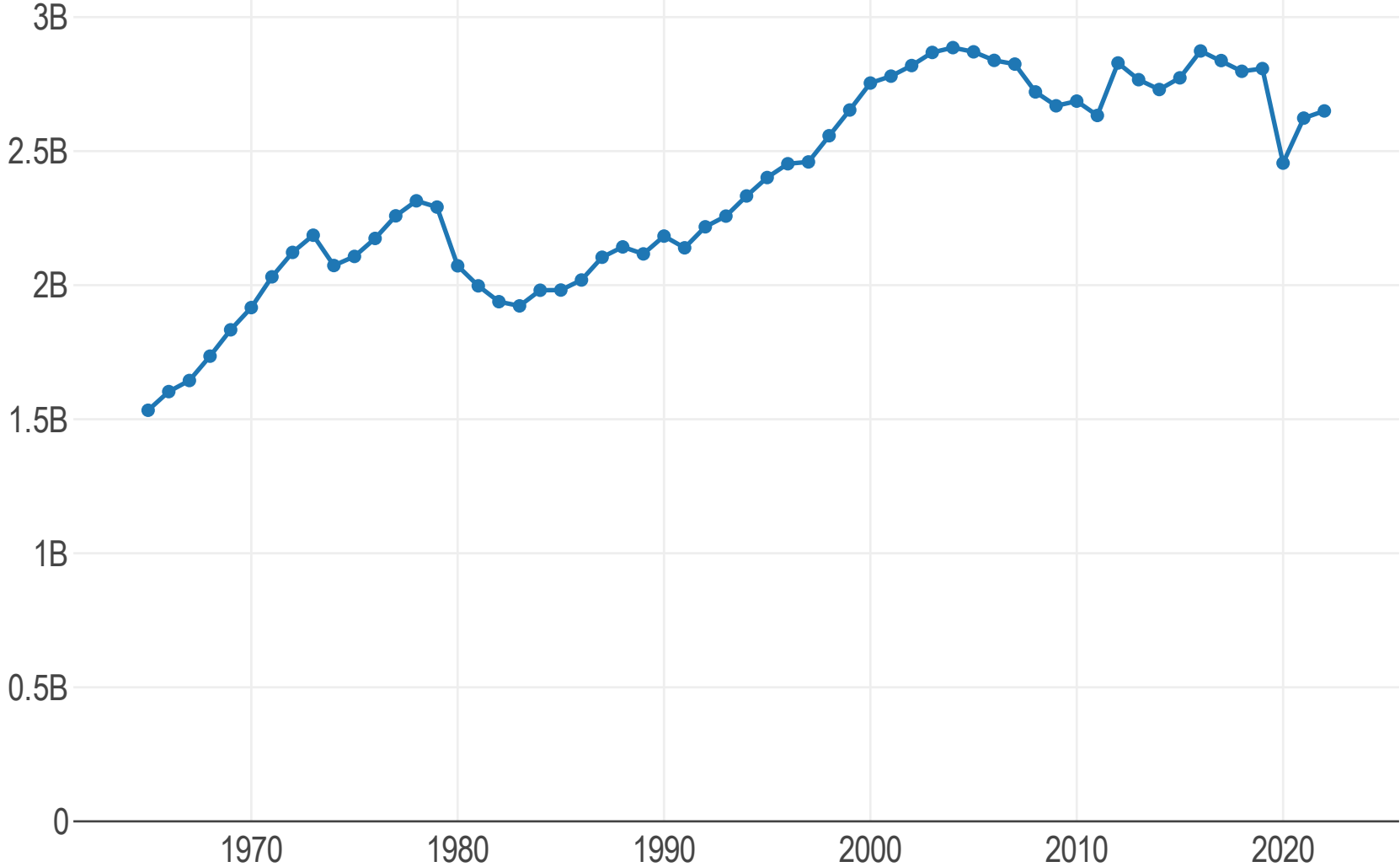
Source: Compiled Metropolitan Council, ACS, and Census population estimates and MnDOT VMT



# Gasoline consumption

Statewide gasoline consumption

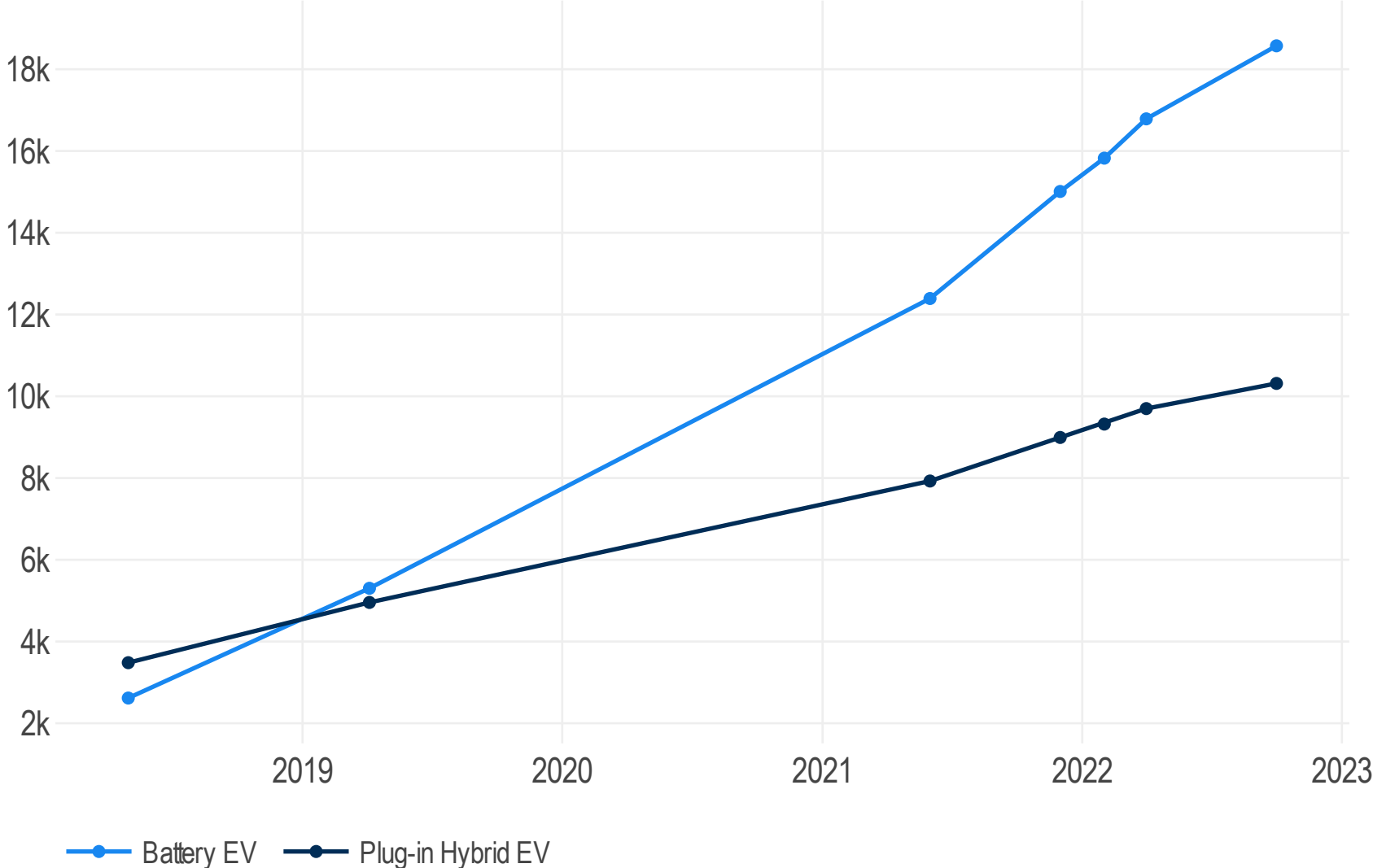
Source: MN Department of Revenue. Aviation and special fuel not included.



# Electric vehicles

## Electric Vehicle Registrations

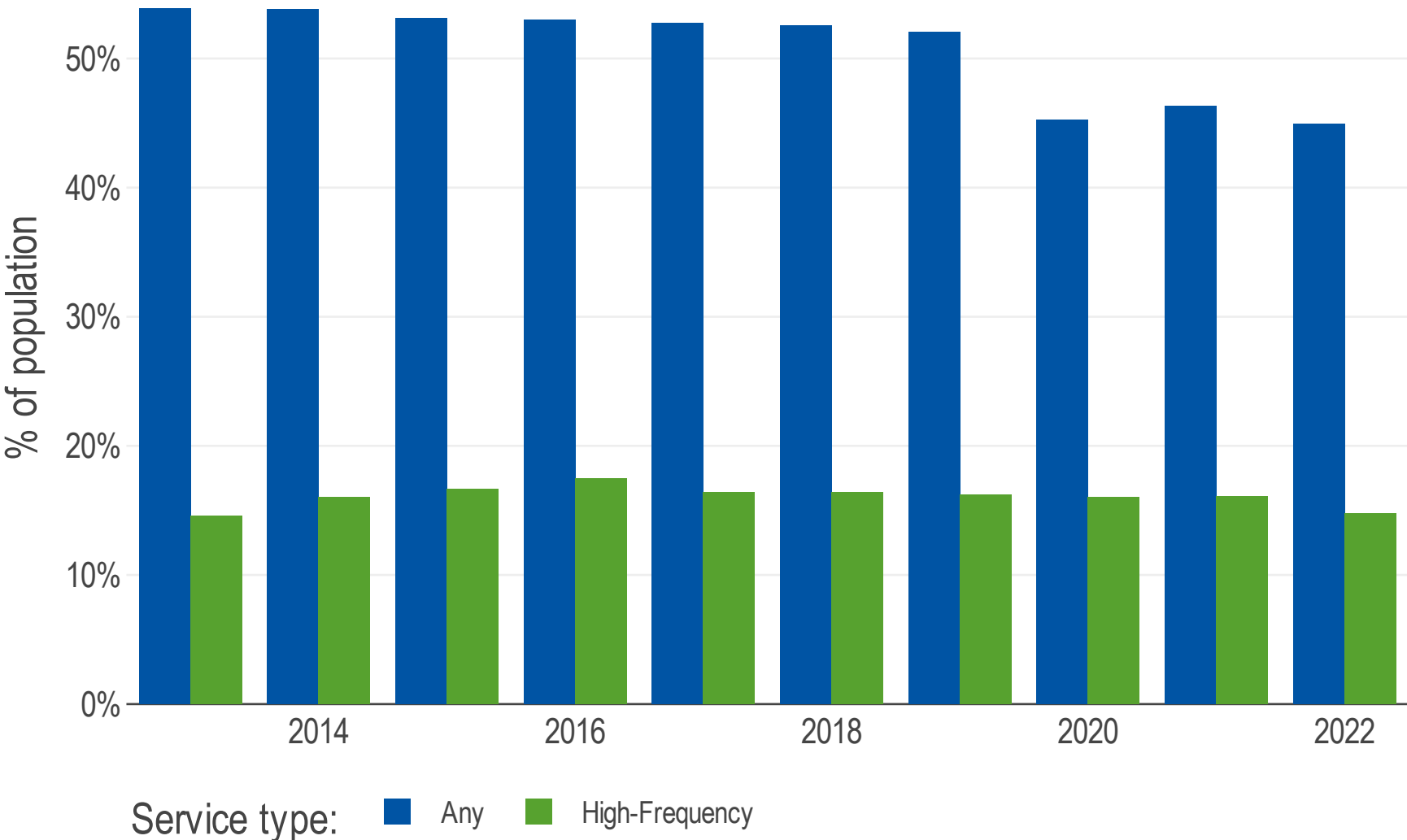
Combined original and renewal registrations. Source: MnDOT Electric Vehicle Dashboard



# High-frequency transit

Share of population within a 10 min. walk of transit, by service type

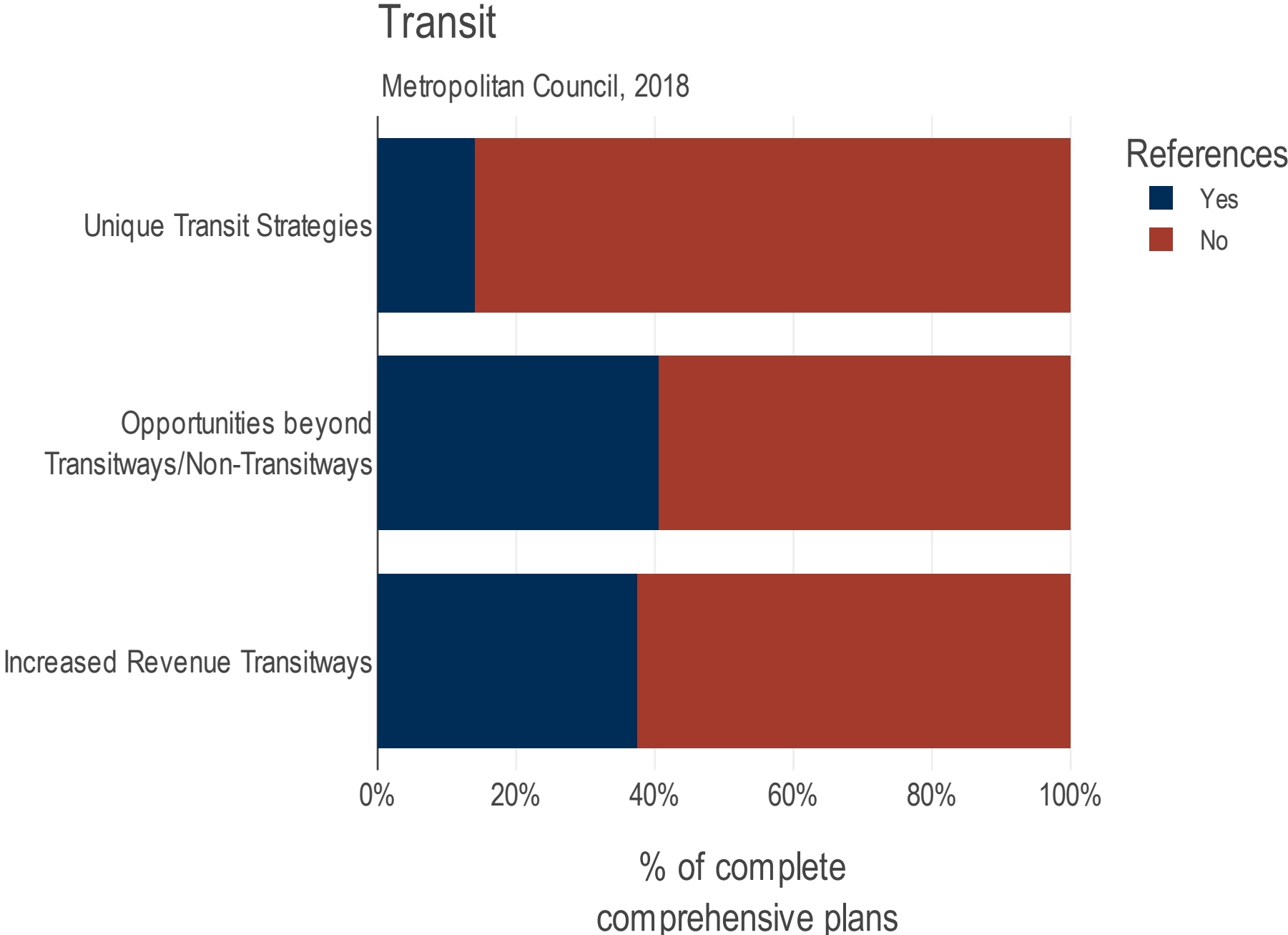
Source: Open Mobility Data (transit feeds), Census ACS (population estimates), and Metro Transit (walkshed)



# Guiding Land Use

Encourage land use design that integrates highways, streets, transit, walking, and bicycling.

# Comprehensive plans



# Digging deeper

Appendices >

**A Peak Hour  
Excessive Delay**

**B Acronyms and  
Glossary**

**C Supplementary  
Tables**

**D Supplementary  
Maps**

**E List of Figures**

**F List of Tables**

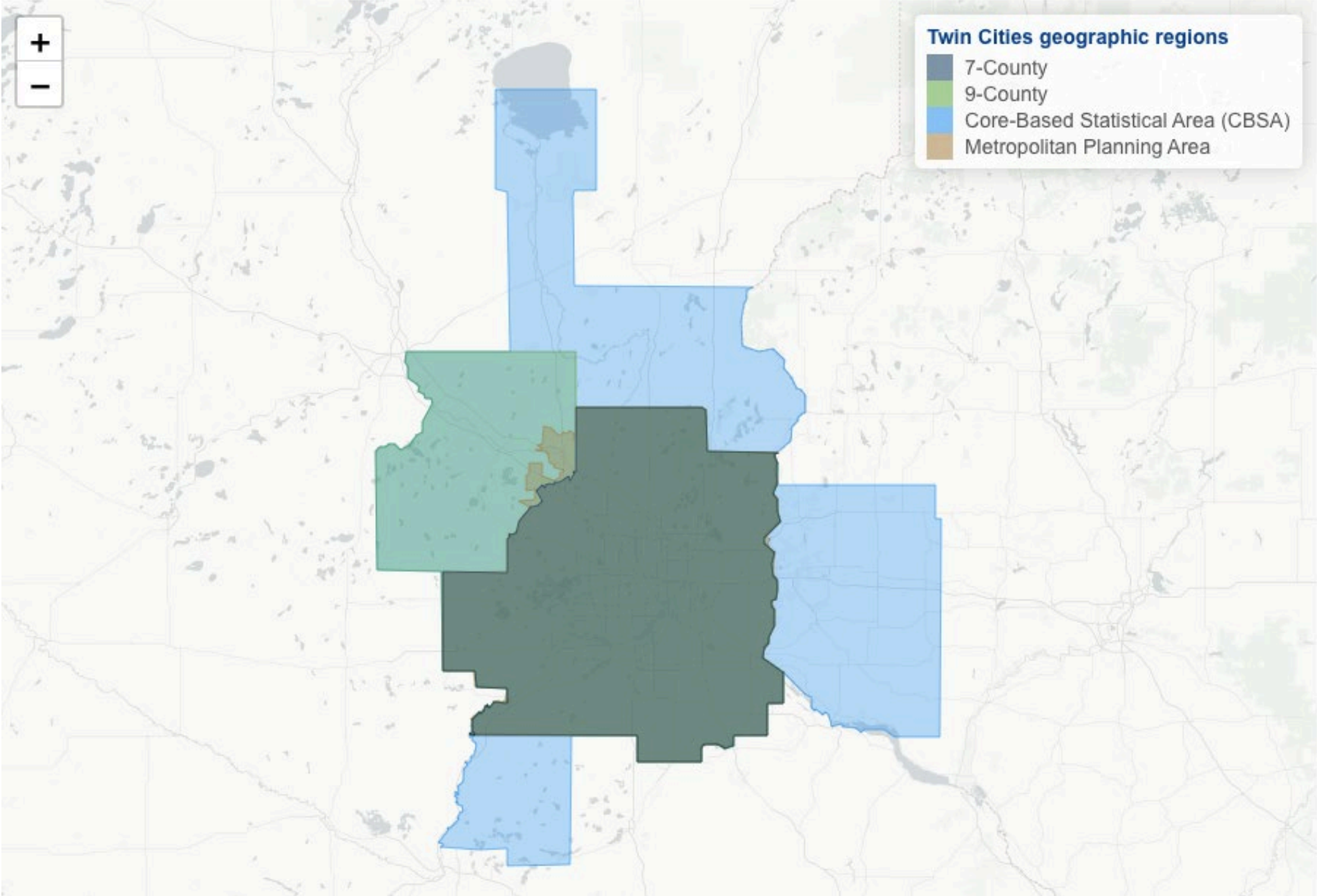
**G References**

## Comprehensive appendices

- 7 sections, including supplementary plots, tables, maps
- Links resources and agencies, like MnDOT, MPCA, and federal agencies
- Definitions and acronyms
- References, links to raw data sources



# Geographic boundaries



# Thank you

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