



Transportation System Performance Evaluation

Transportation Advisory Board
Information Item



July 20, 2023

Liz Roten, Jonathan Ehrlich

metro council.org

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

Search

Transportation System Performance Evaluation

Q

[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 >

Organized by goal

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

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.

Table of contents

- 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

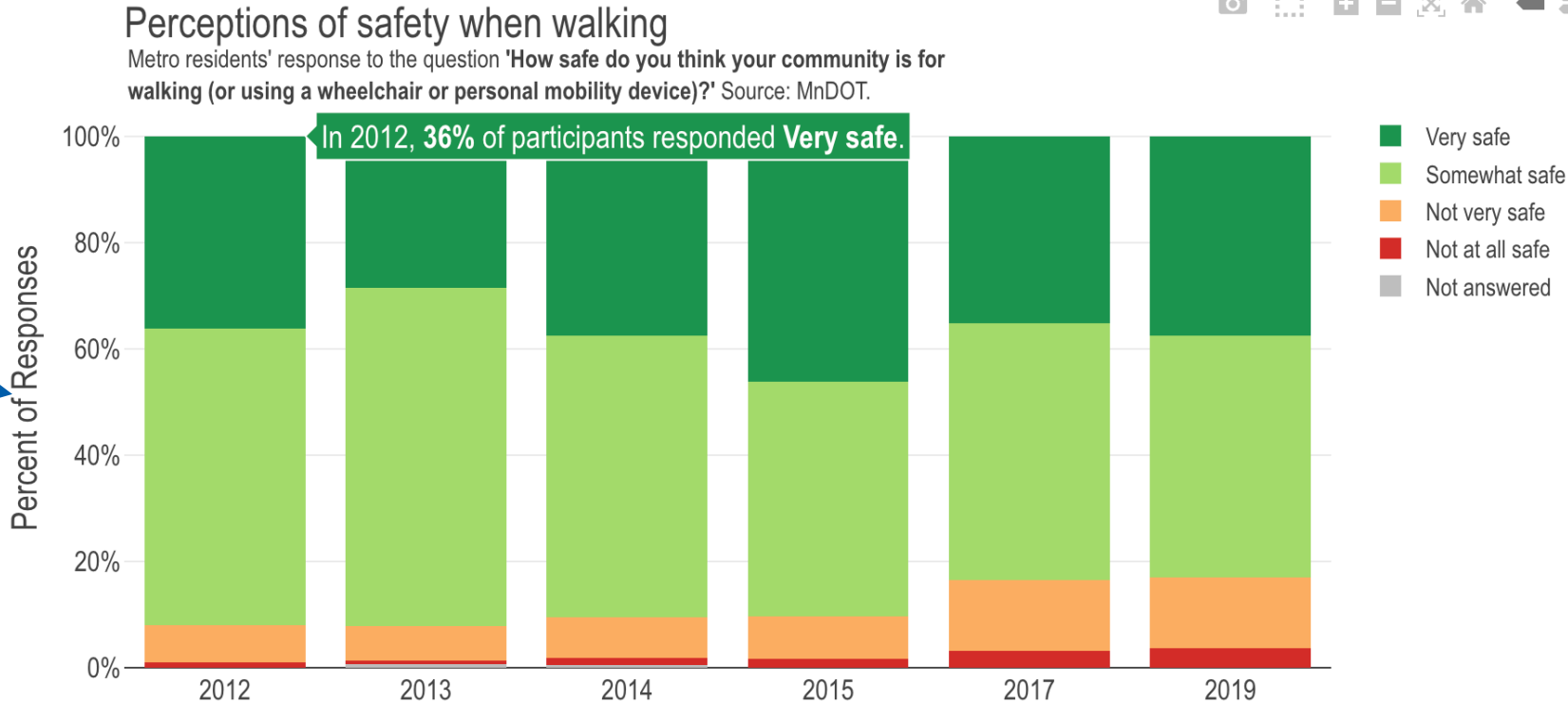


Figure 4.1: Perceptions of safety when walking

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

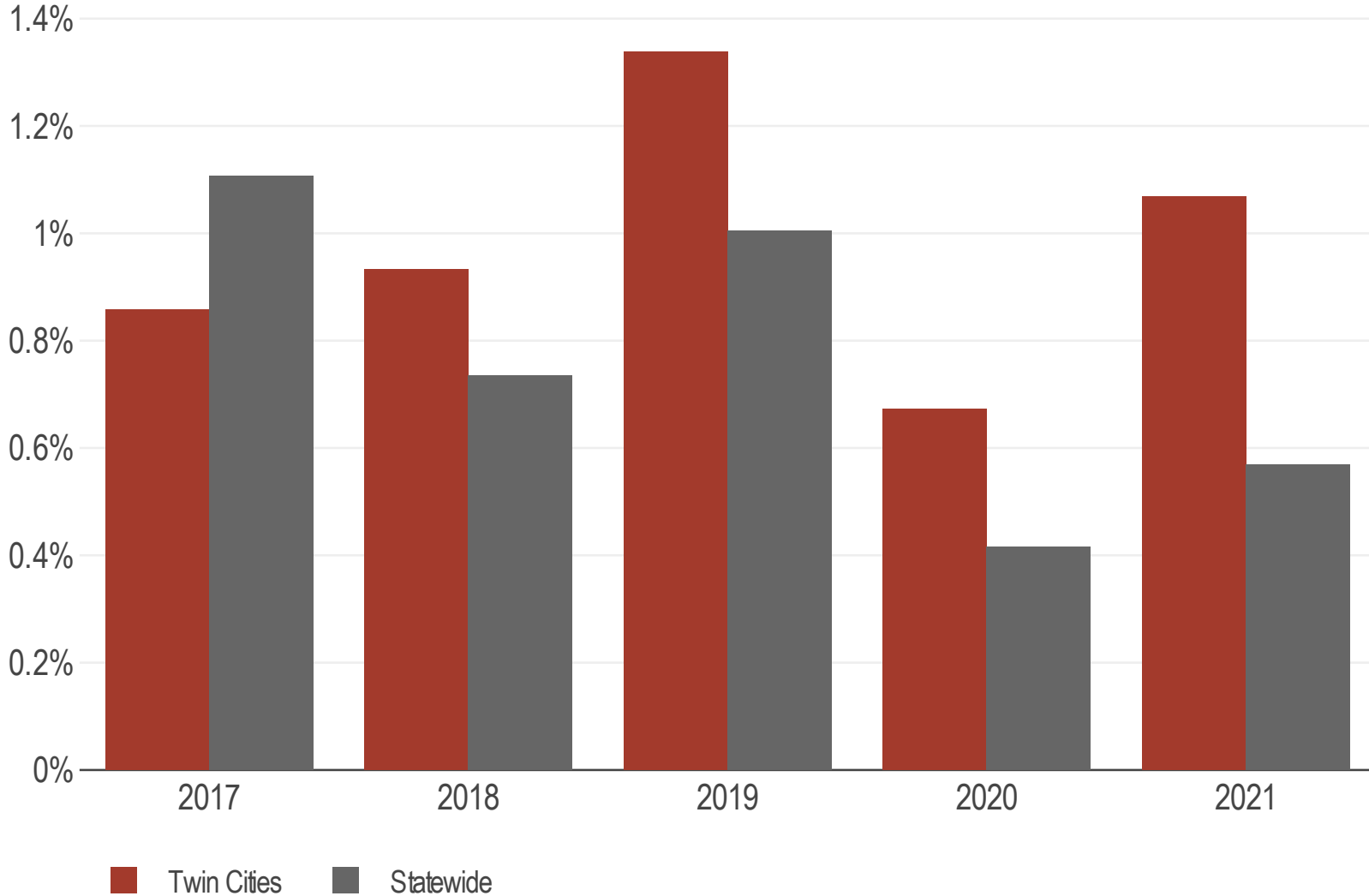
Efficiently preserves and maintain the regional transportation system in a state of good repair

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

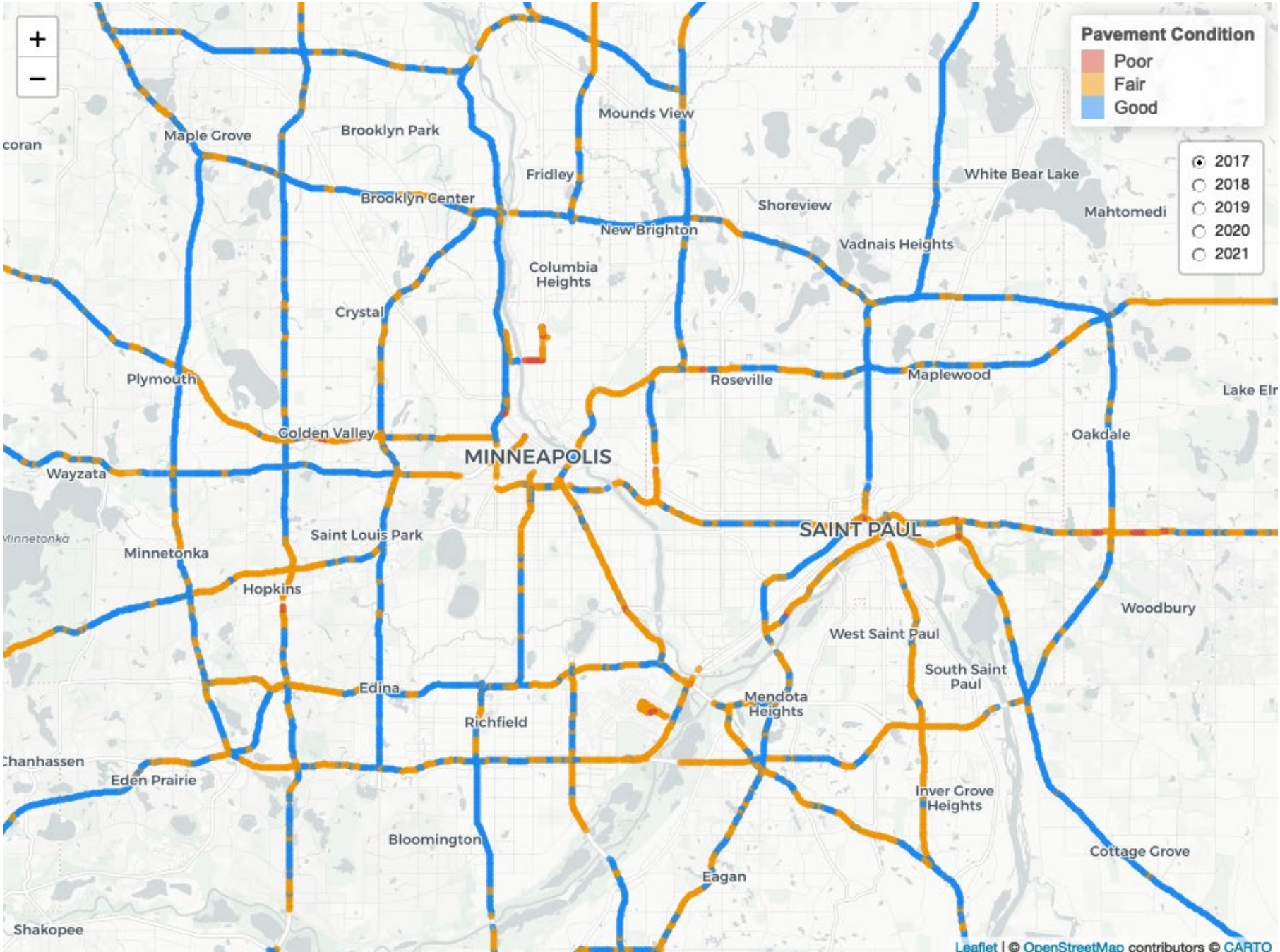
Pavement Condition

Pavement in 'Poor' Category (Interstate and NHS)

Twin Cities and Minnesota. Source: MnDOT



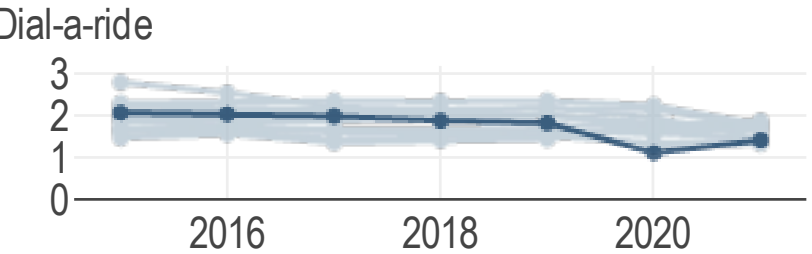
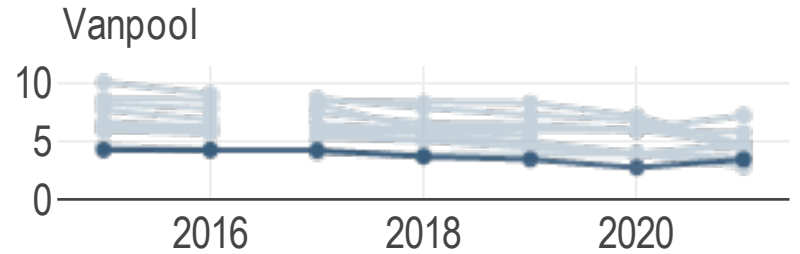
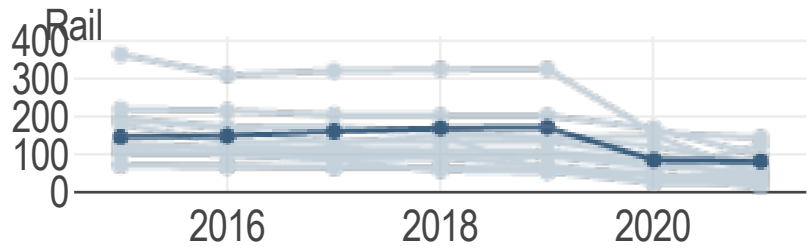
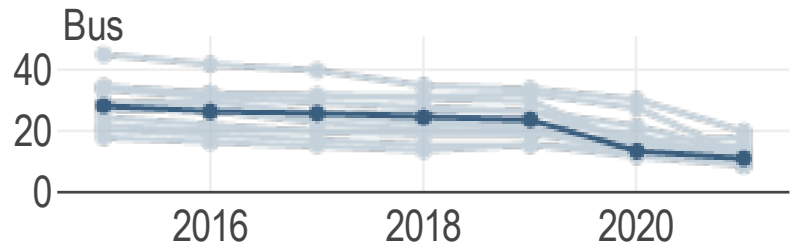
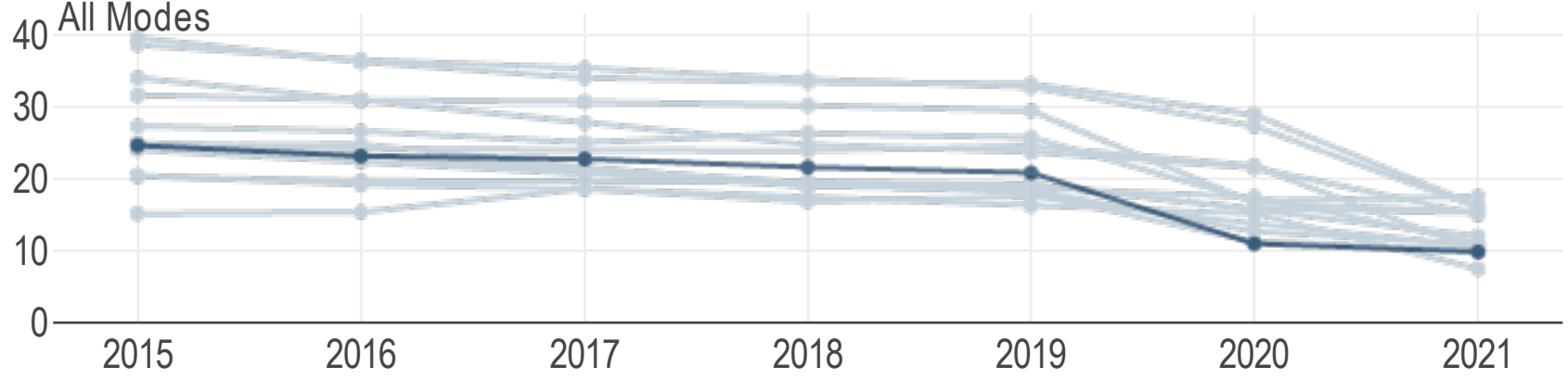
Pavement Condition Map



Public Transit

Unlinked trips per revenue hour

Source: National Transit Database



—●— Twin Cities —●— Peer regions

Safety and Security

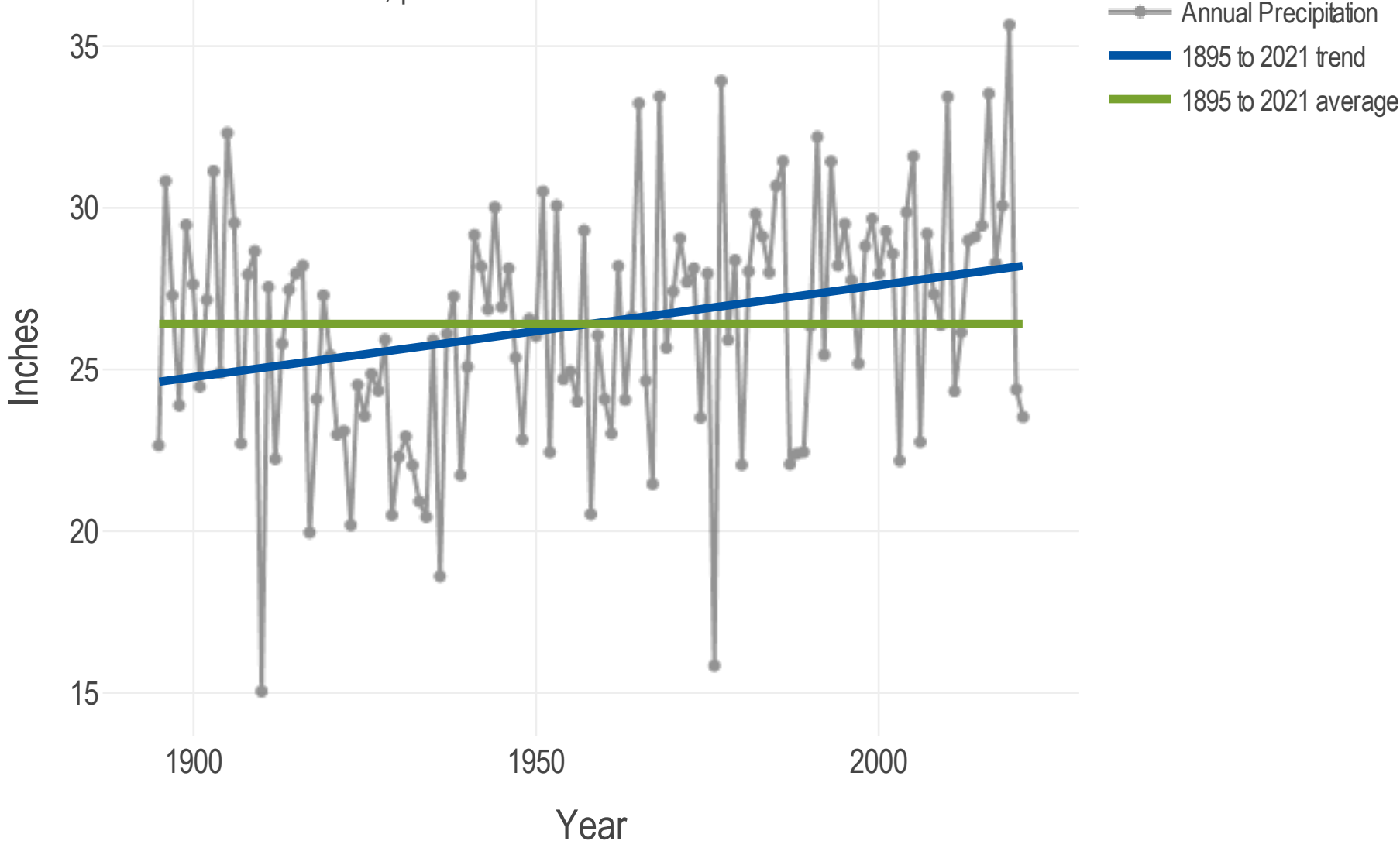
Reduce the transportation system's vulnerability to natural and human - caused incidents and threats, including climate change and terrorism.

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

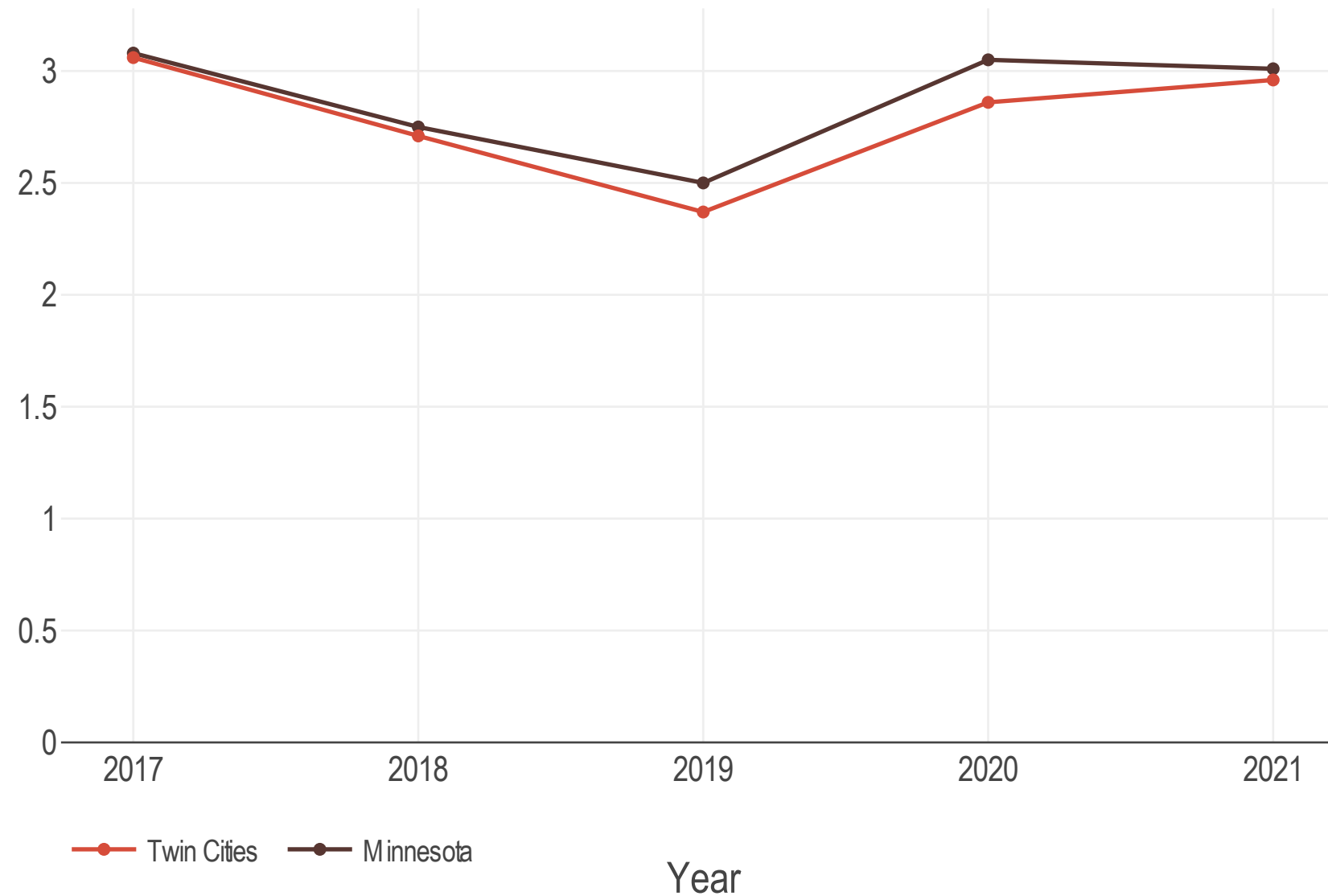
NOAA National Centers for Environmental information, Climate at a Glance: Statewide Time Series, published December 2022



Serious injury crash rate

Serious injury crash rate on Minnesota roads, 2017-2021

Source: MnDOT Office of Traffic Engineering



Access to Destinations

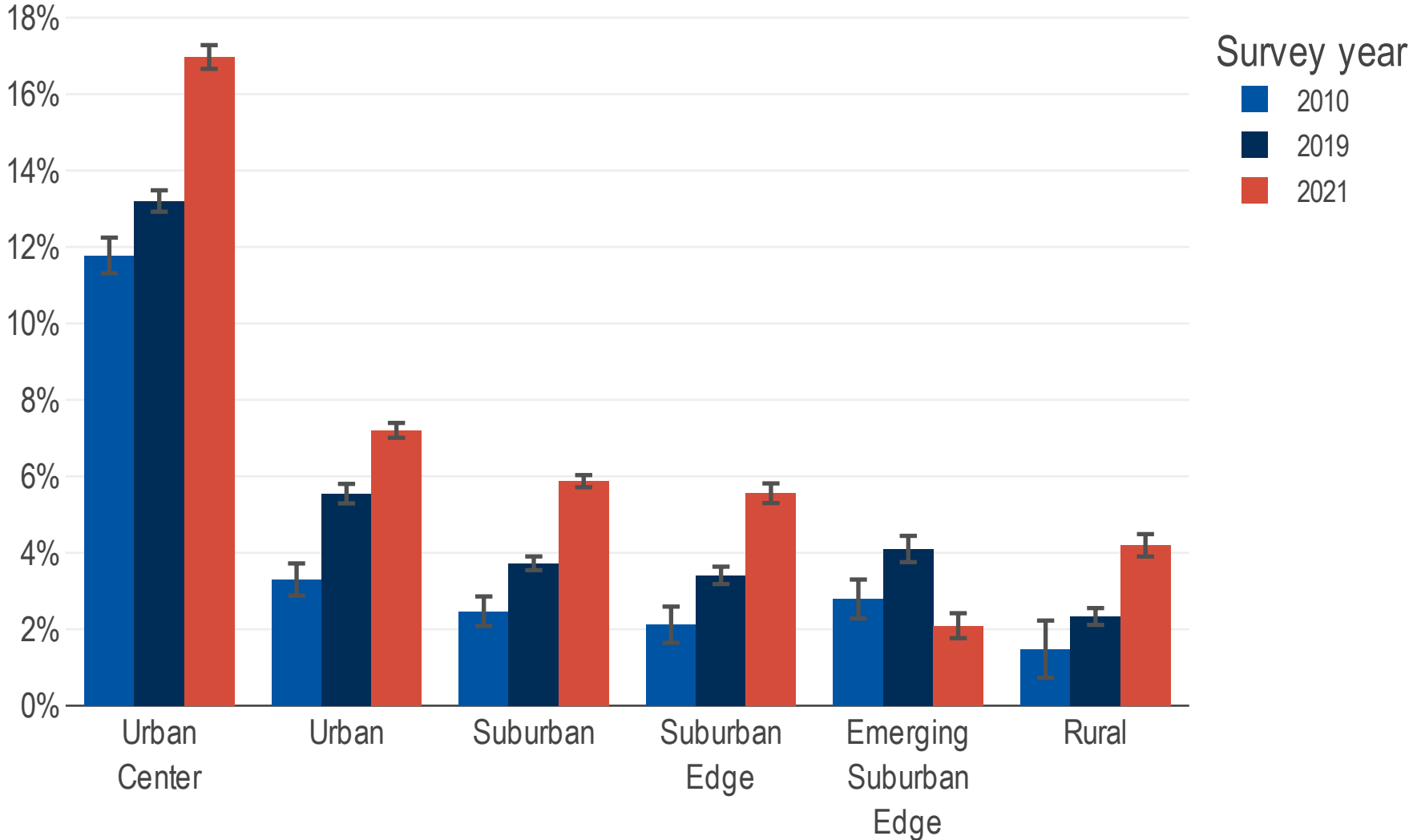
Increase the number and share of trips taken using carpools, transit, bicycling, and walking.

Improve the availability and quality of multimodal travel

Mode share by Thrive - walking

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

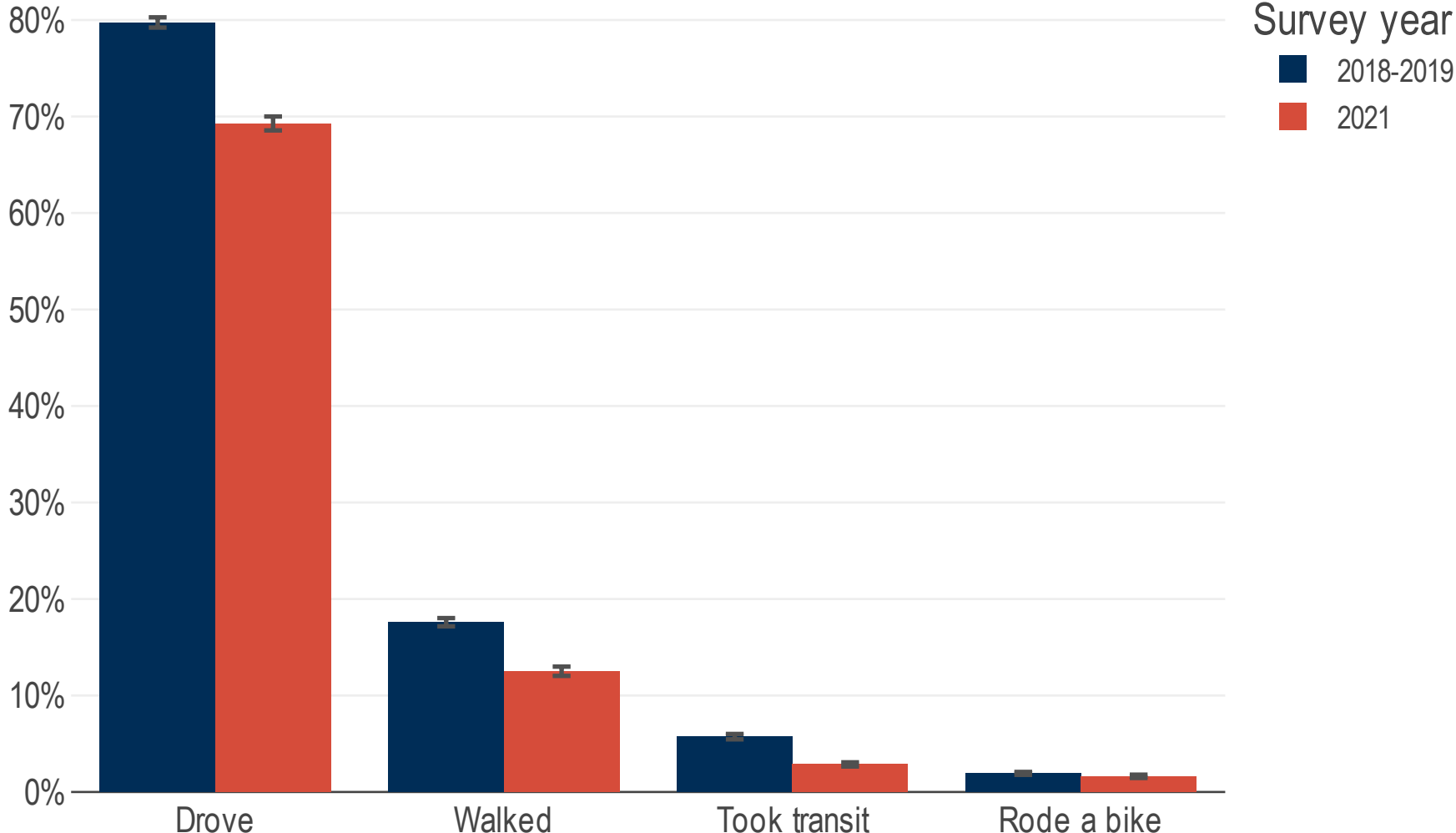
Source: Travel Behavior Inventory. Includes trips that started or ended within the MPO.



Mode participation rate

Mode participation rate, adults, 2019 vs. 2021

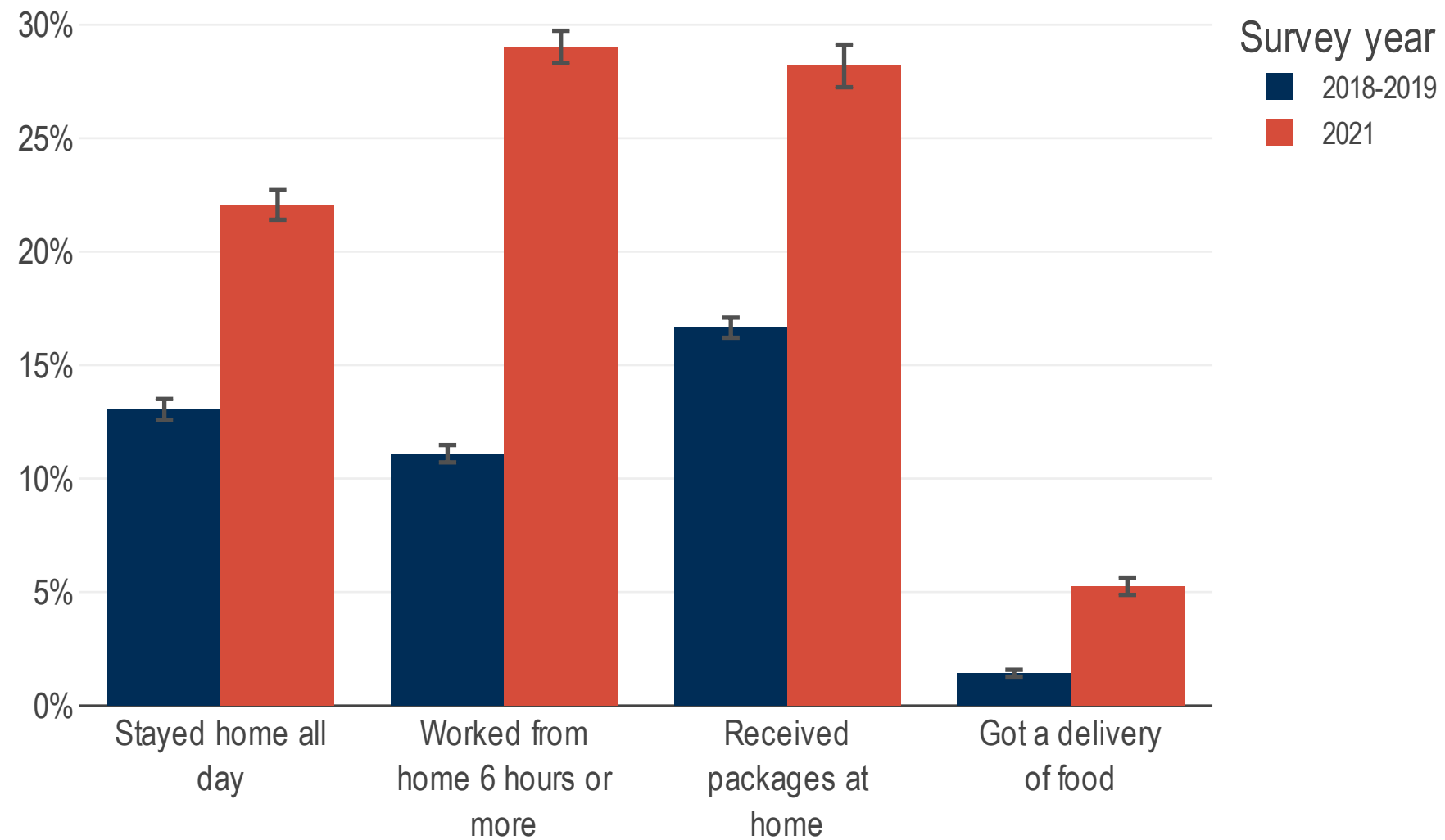
Source: Travel Behavior Inventory. Includes only adults who live in the MPO.



Trip replacement behavior

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

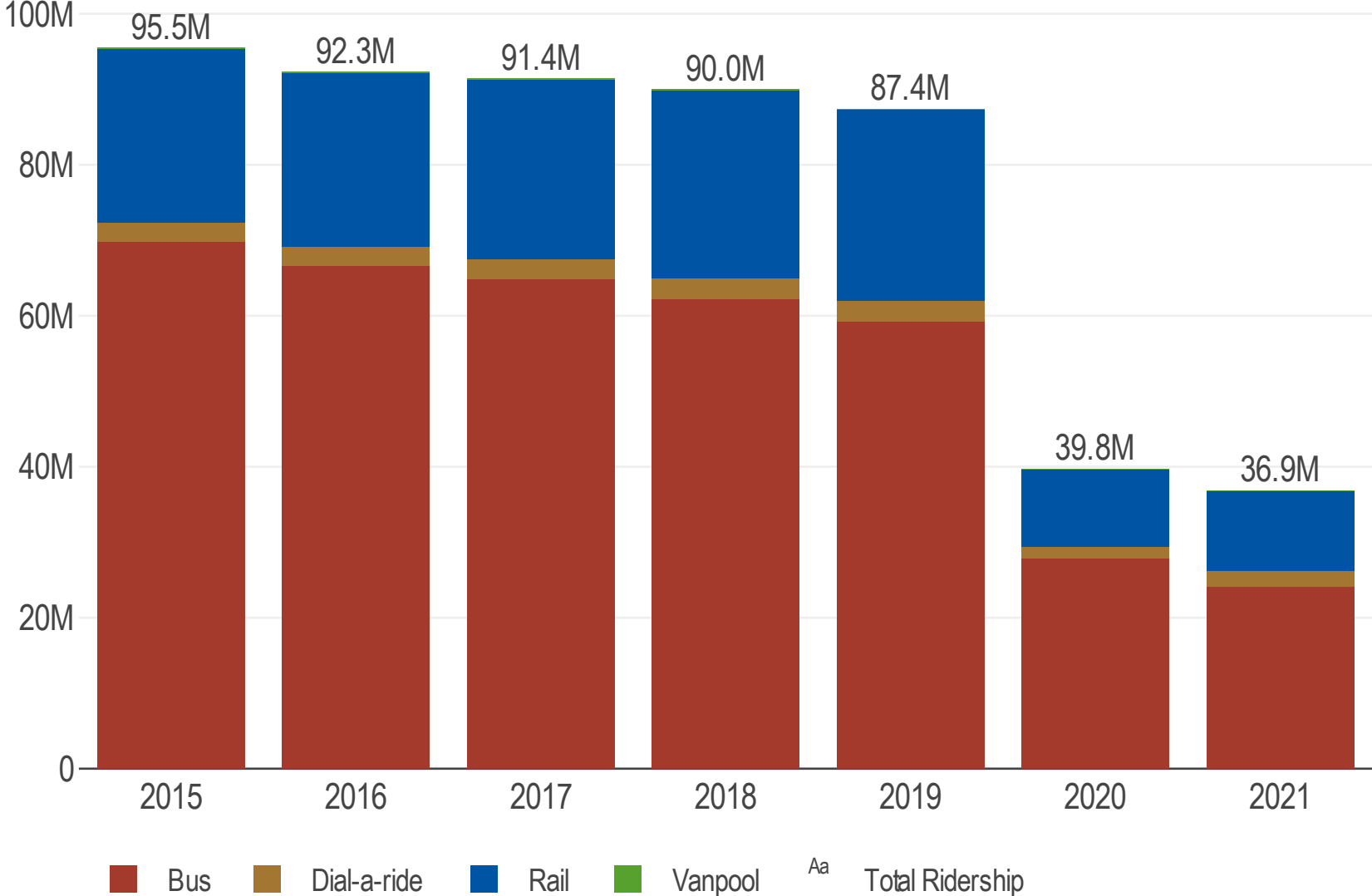
Source: Travel Behavior Inventory. Includes only adults who live in the MPO.



Transit Ridership

Twin Cities Ridership by mode

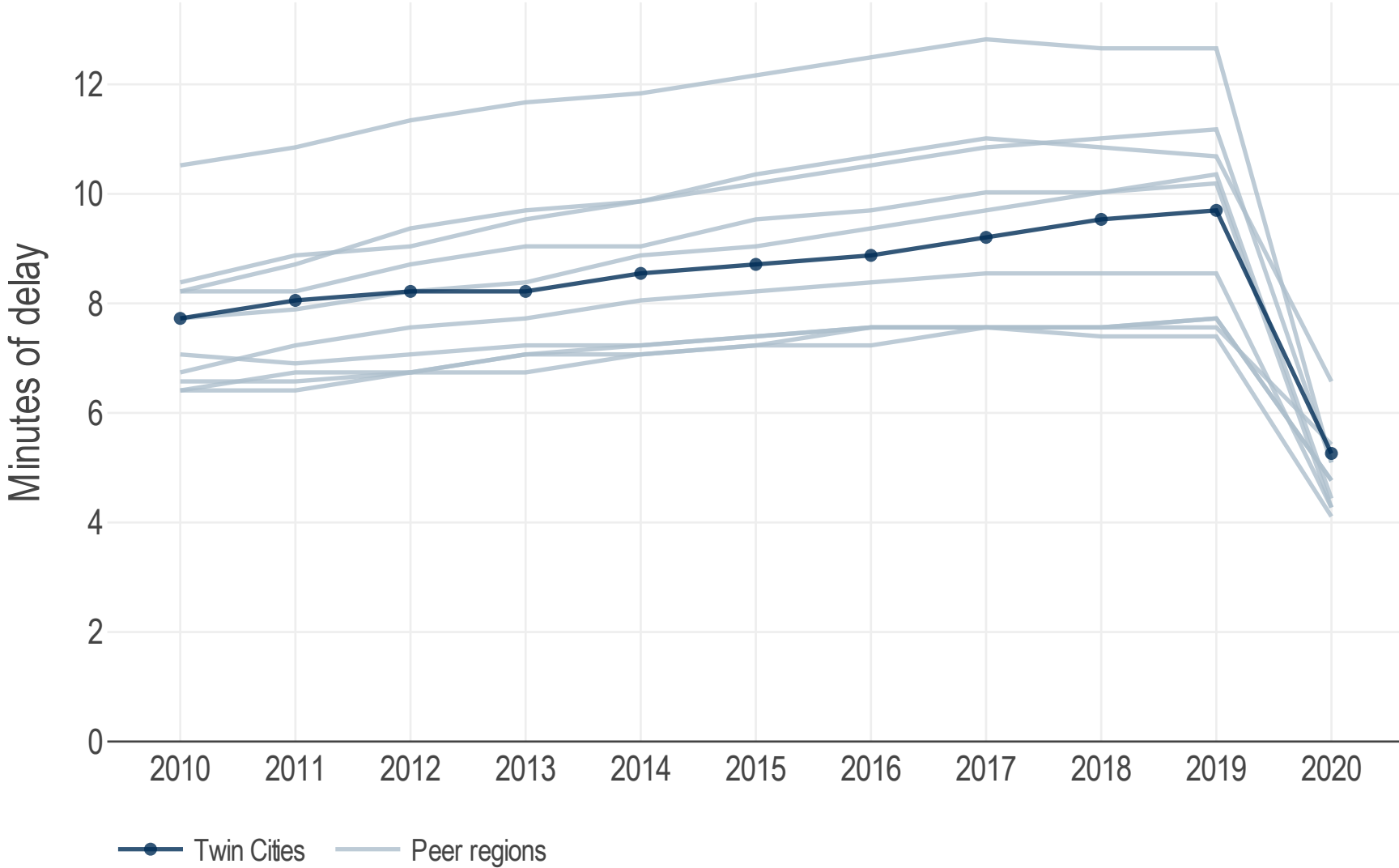
Source: National Transit Database



Daily delay per commuter

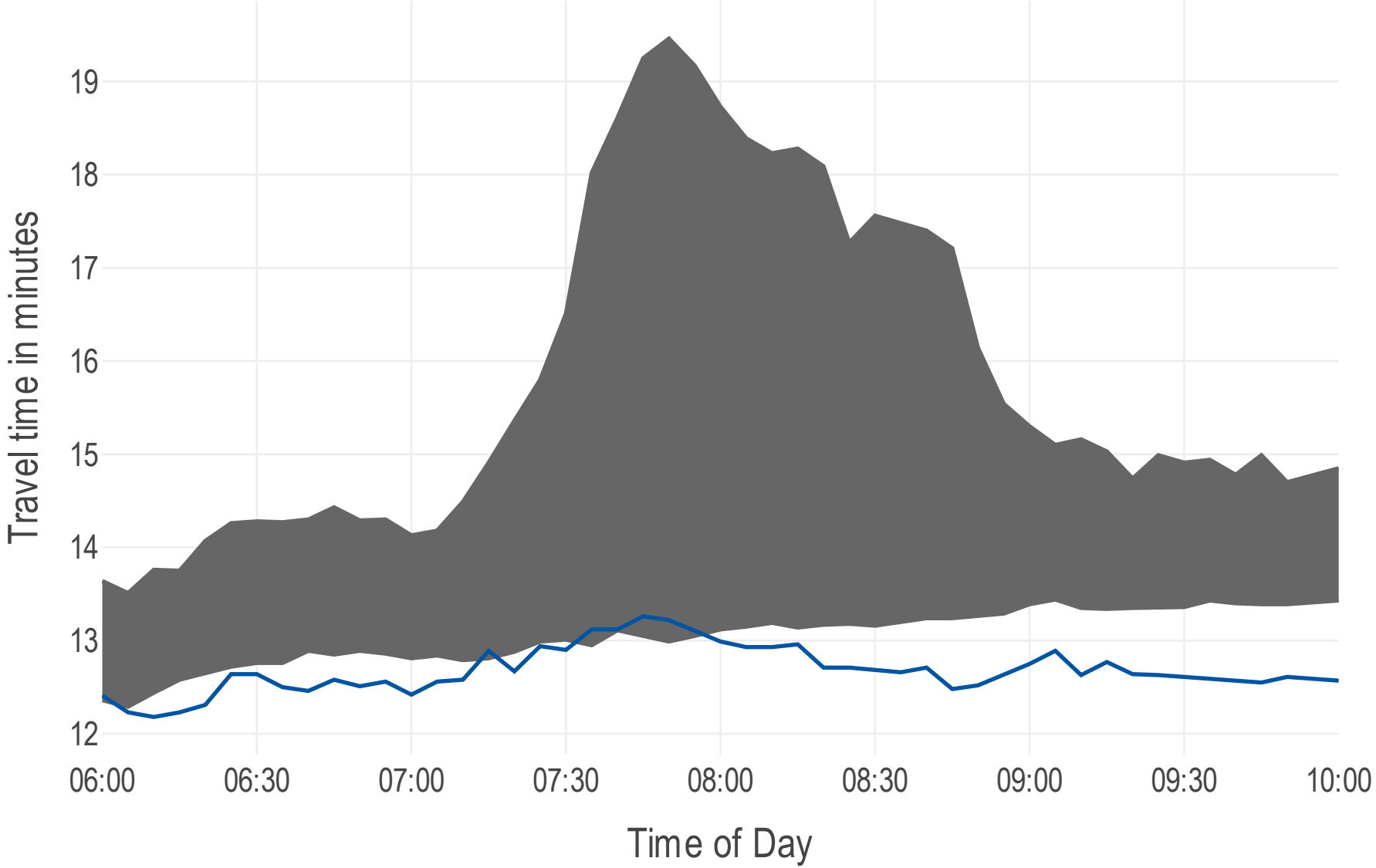
Peak-hour auto commuter delay, minutes per person per day

Source: TTI Urban Mobility Report



E-ZPass Travel Time

Travel Time Reliability
I-35W Northbound, 2021 Weekdays



Competitive Economy

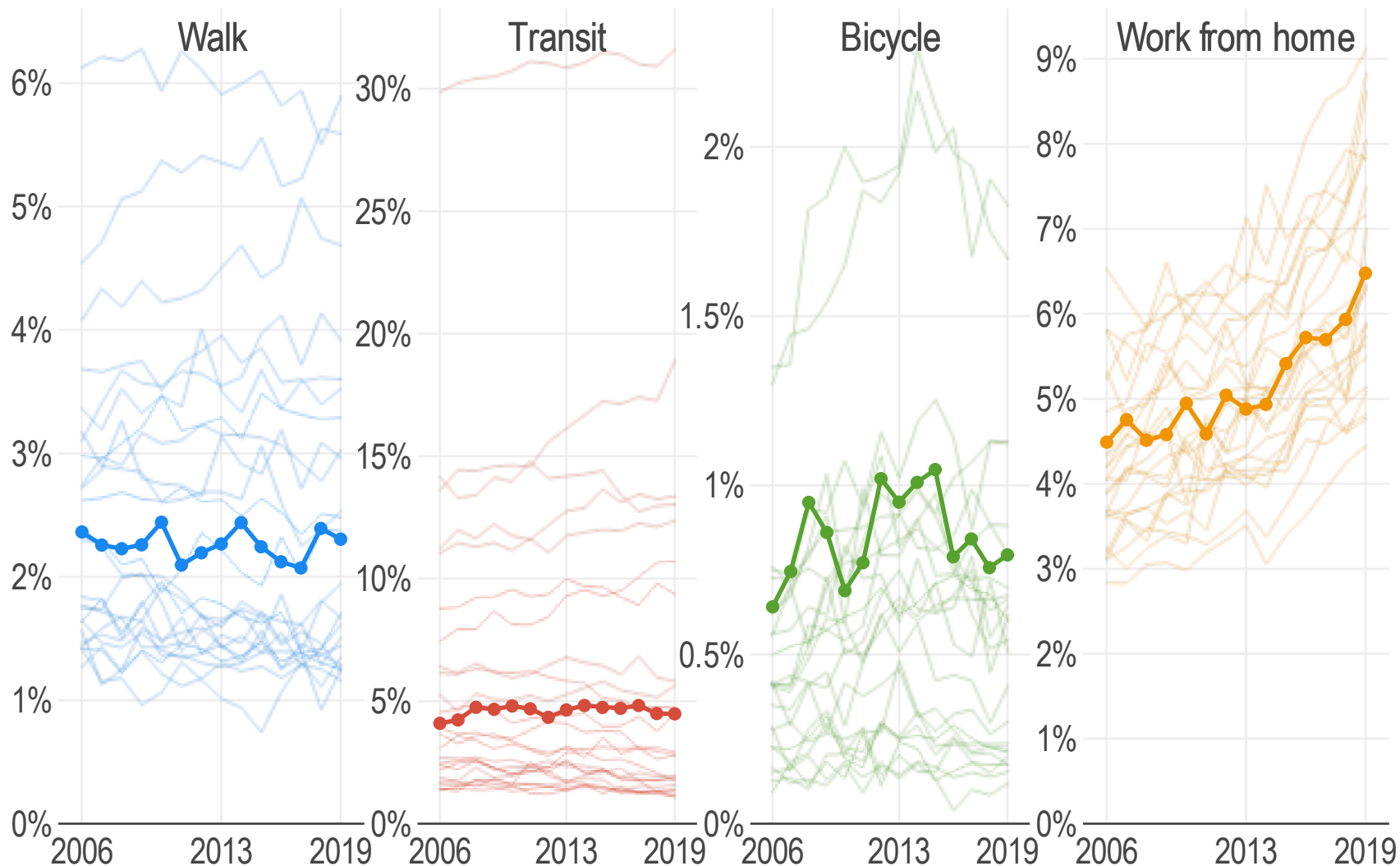
Invest in a multimodal
transportation system

Improve multimodal access to
regional jobs

Non-auto commute modes

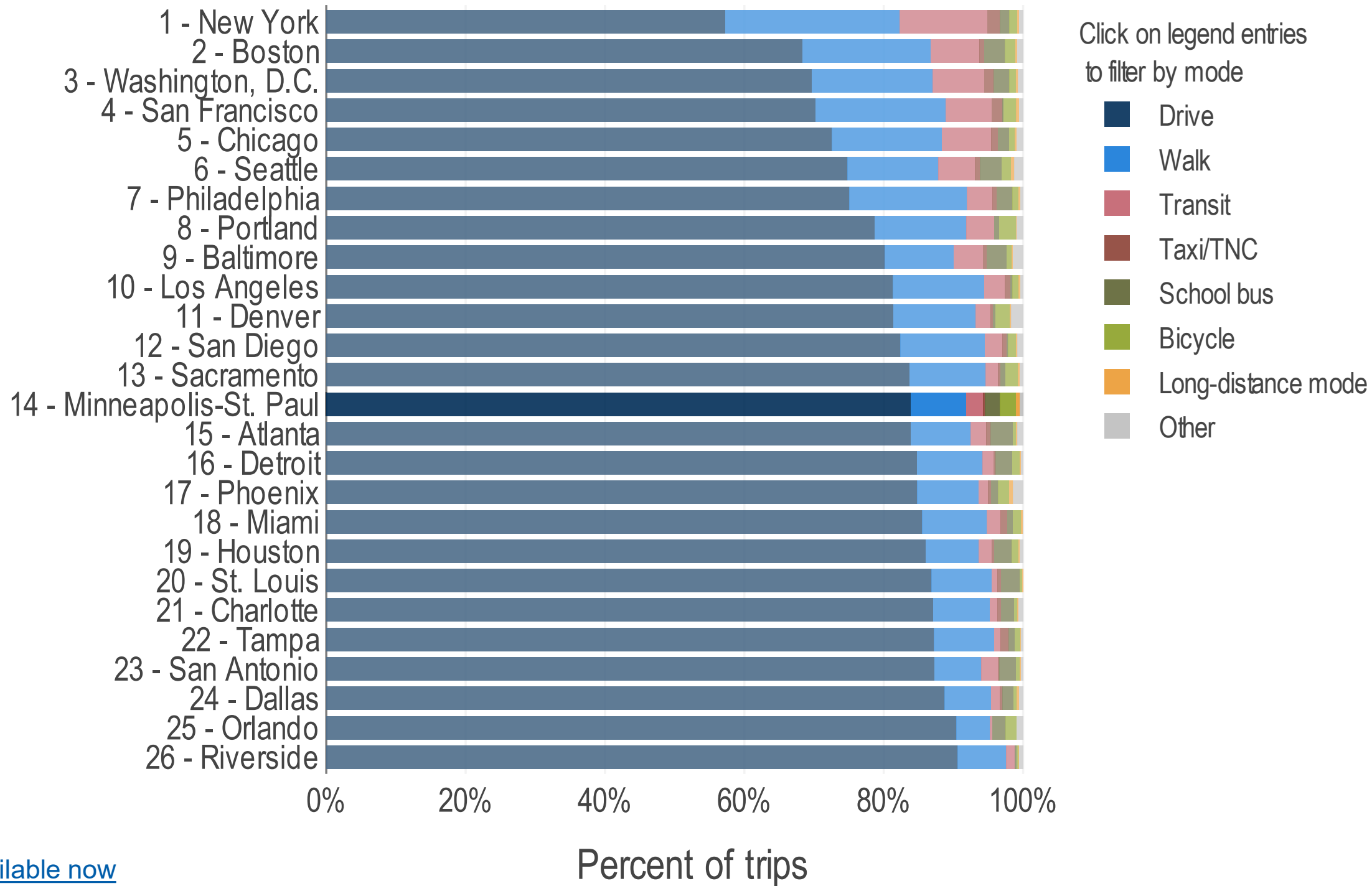
Share of commuters who use non-auto modes, top 25 U.S. metro areas

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

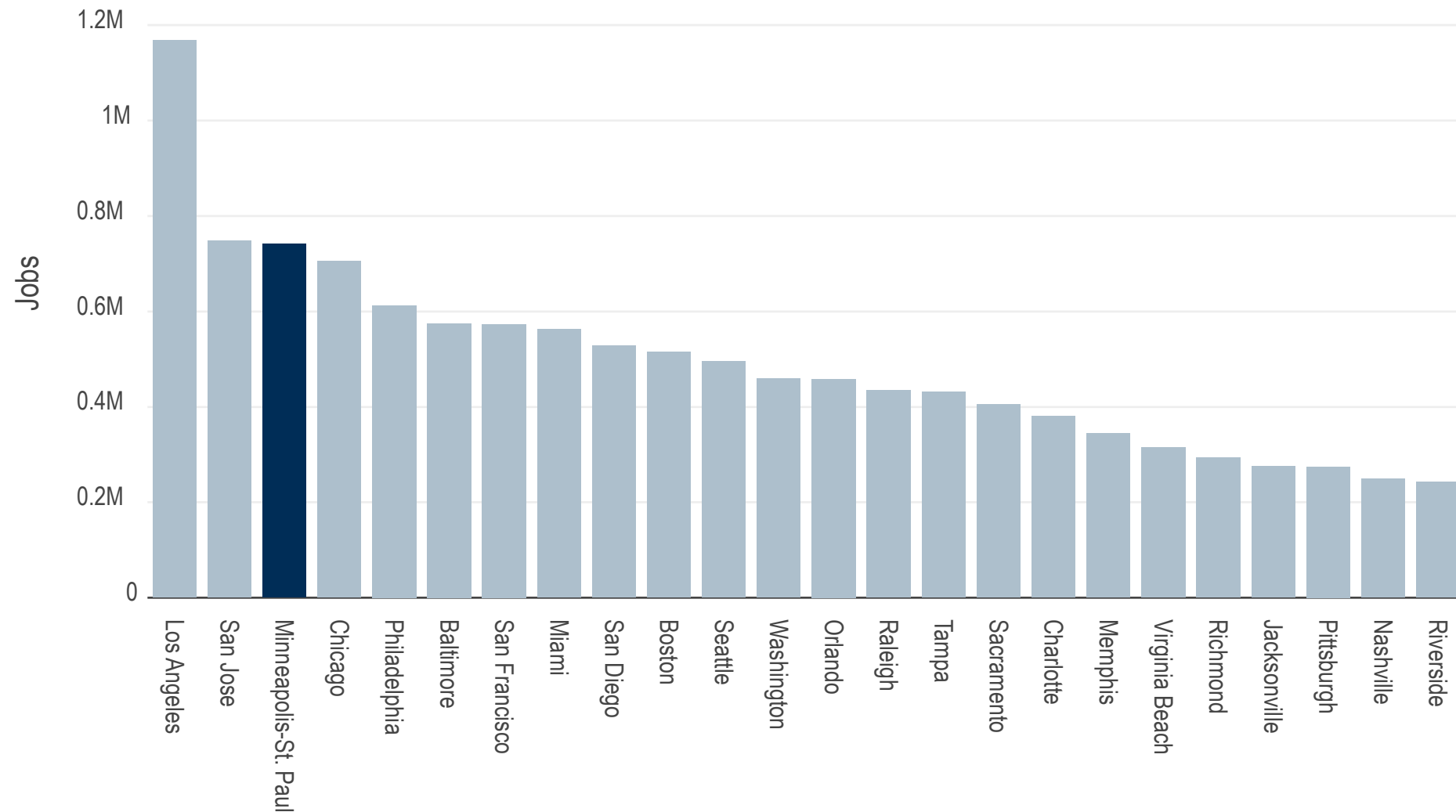
Source: 2017 National Household Travel Survey.



Job availability by mode

Jobs available within 30 minutes by car

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



Healthy and Equitable Communities

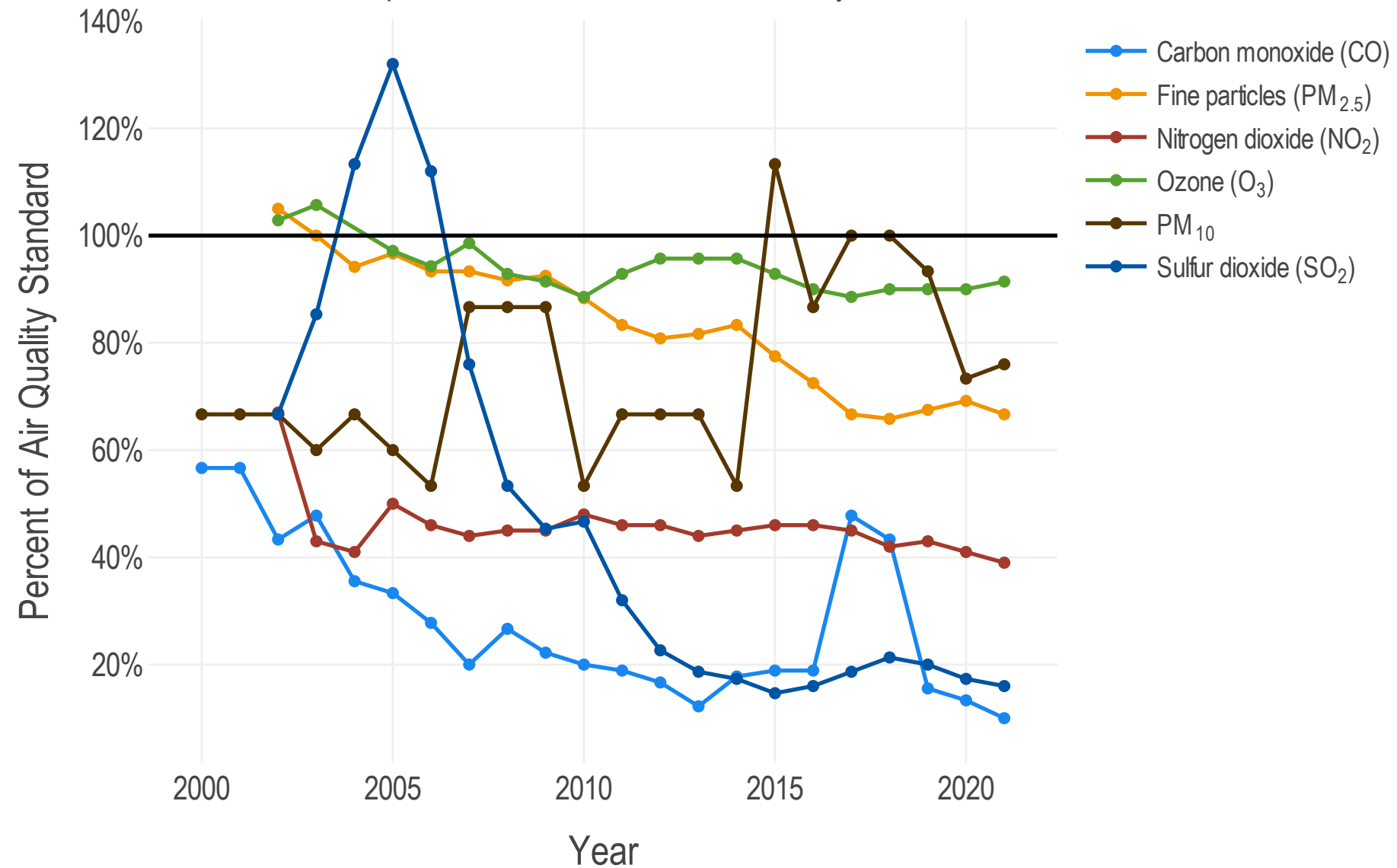
Reduce transportation-related air emissions

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

Air quality

Air quality in the Twin Cities

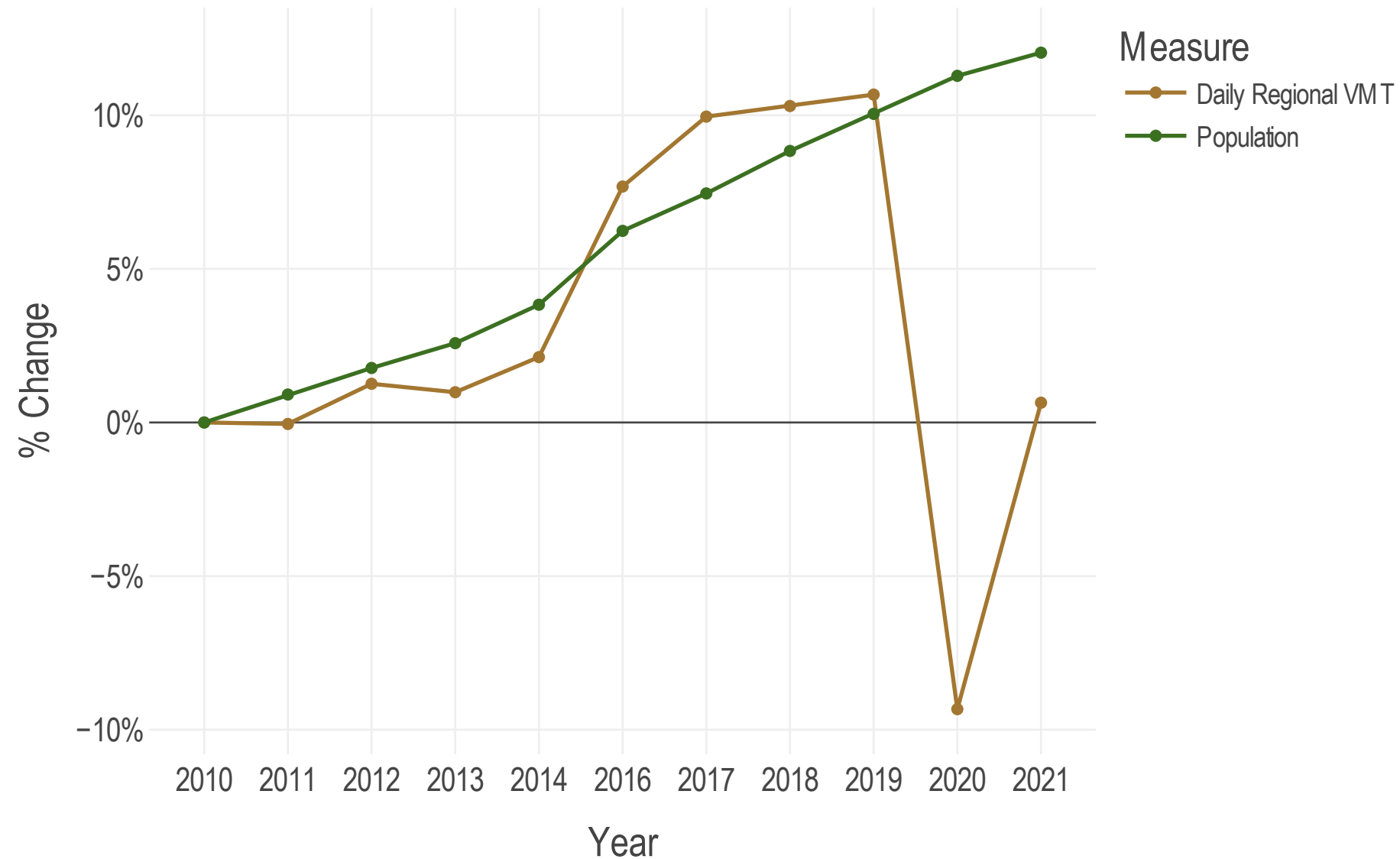
Maximum value as percent of National Ambient Air Quality Standards. Source: MPCA, 2022



VMT and population

Change in population and VMT since 2010

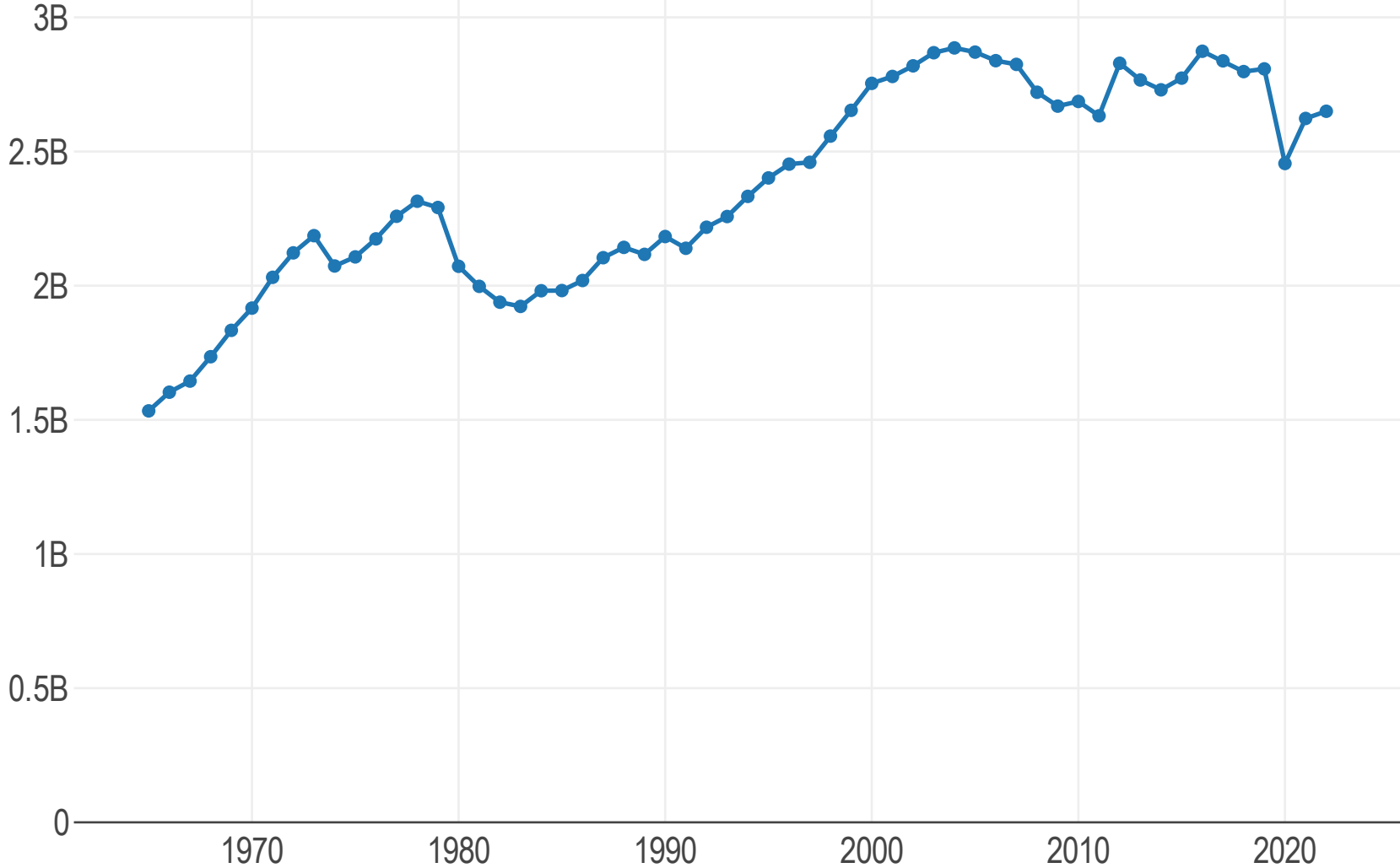
Source: Compiled Metropolitan Council, ACS, and Census population estimates and MnDOT VMT



Gasoline consumption

Statewide gasoline consumption

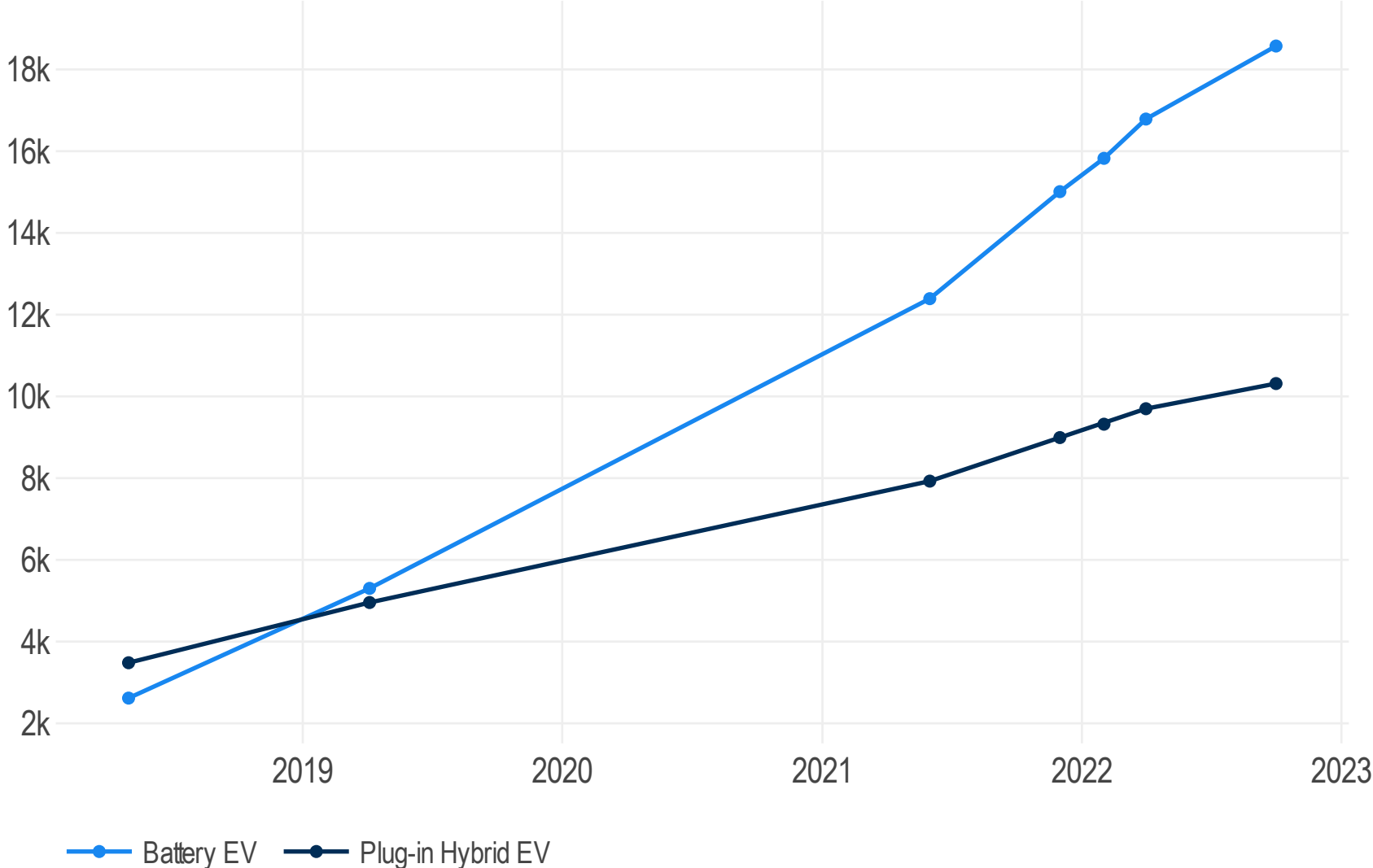
Source: MN Department of Revenue. Aviation and special fuel not included.



Electric vehicles

Electric Vehicle Registrations

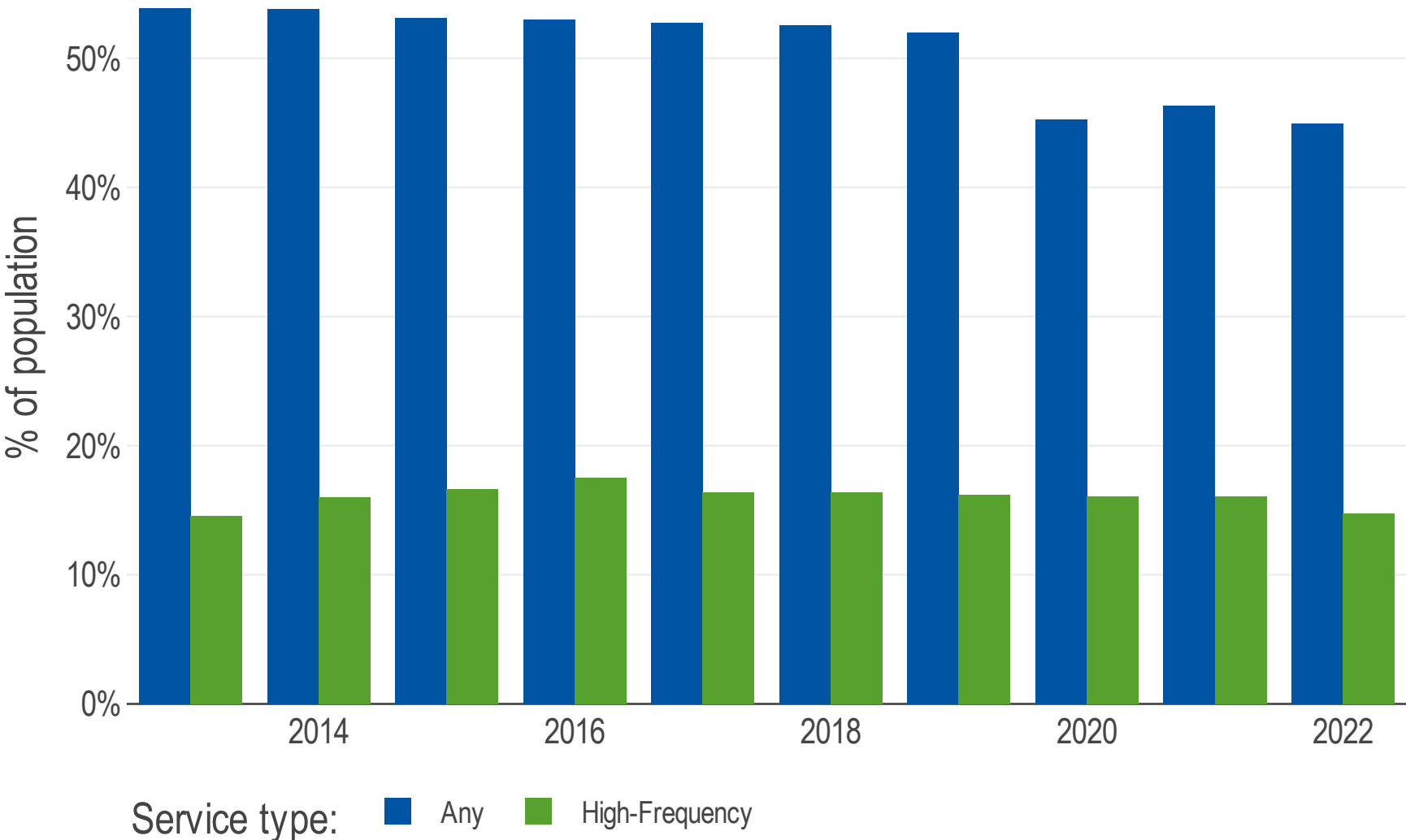
Combined original and renewal registrations. Source: MnDOT Electric Vehicle Dashboard



High-frequency transit

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

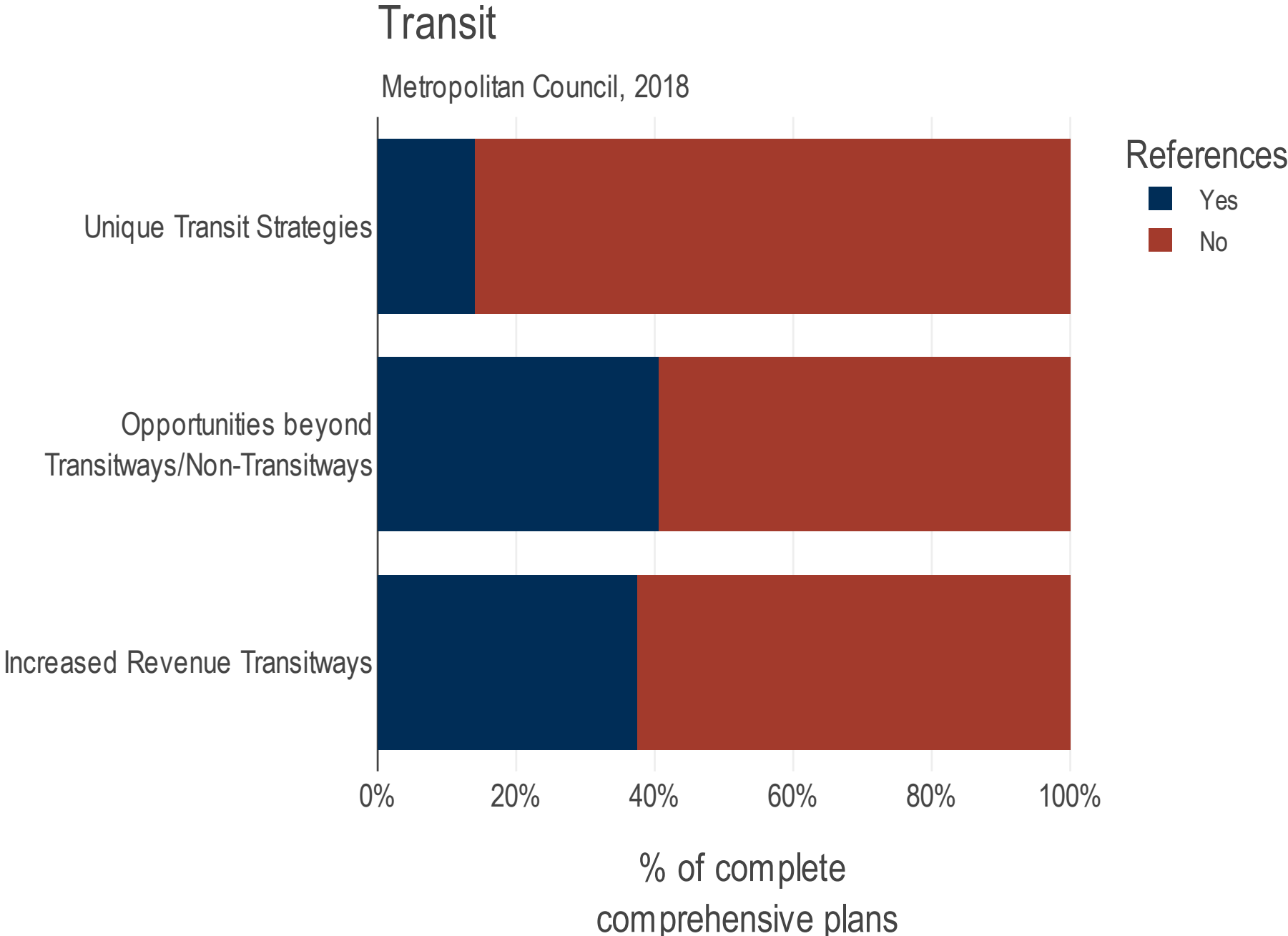
Source: Open Mobility Data (transit feeds), Census ACS (population estimates), and Metro Transit (walkshec



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

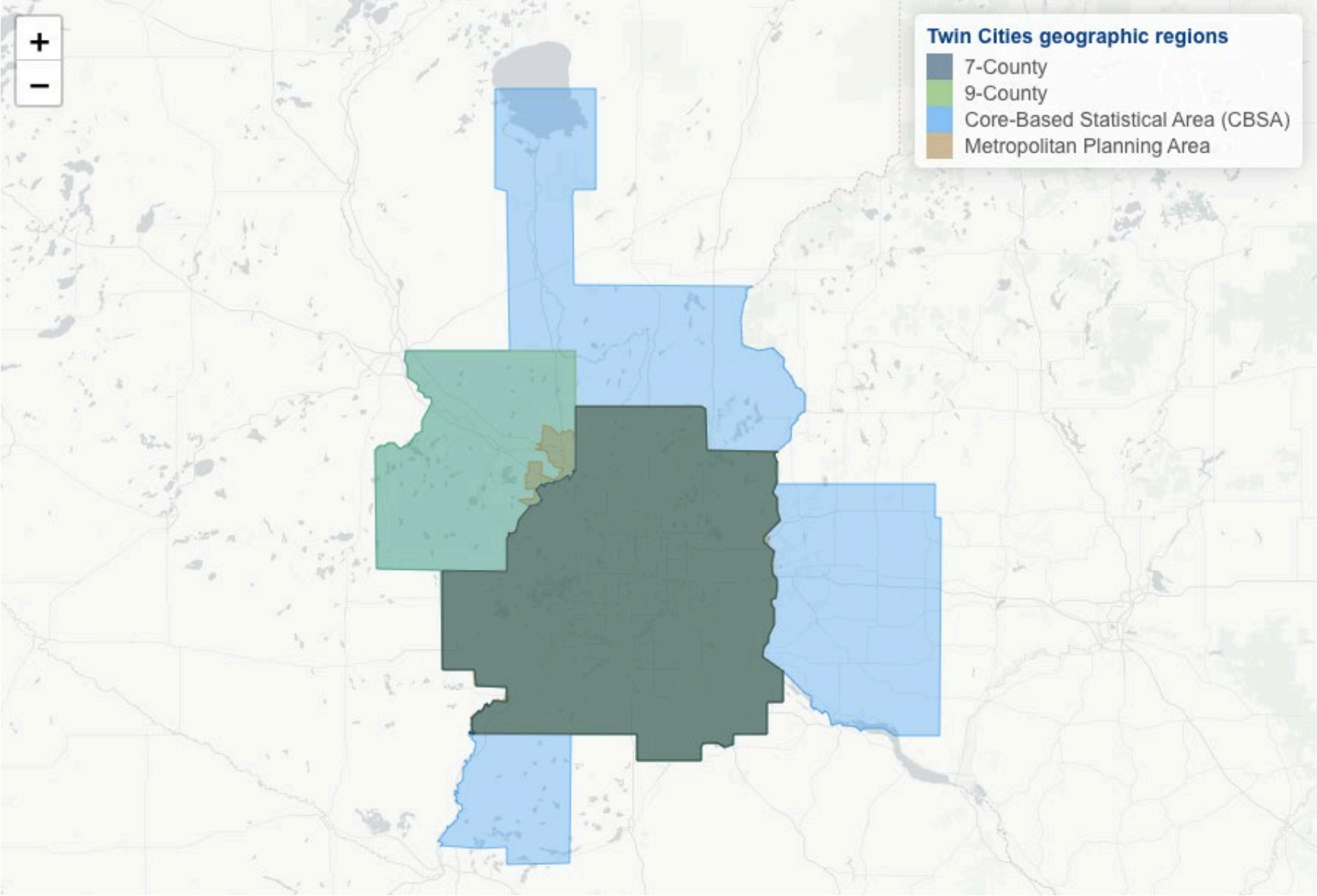
F List of Tables

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

Liz Roten, Jonathan Ehrlich

Liz.Roten@metc.state.mn.us

Jonathan.Ehrlich@metc.state.mn.us

July 2023

metro council.org

