

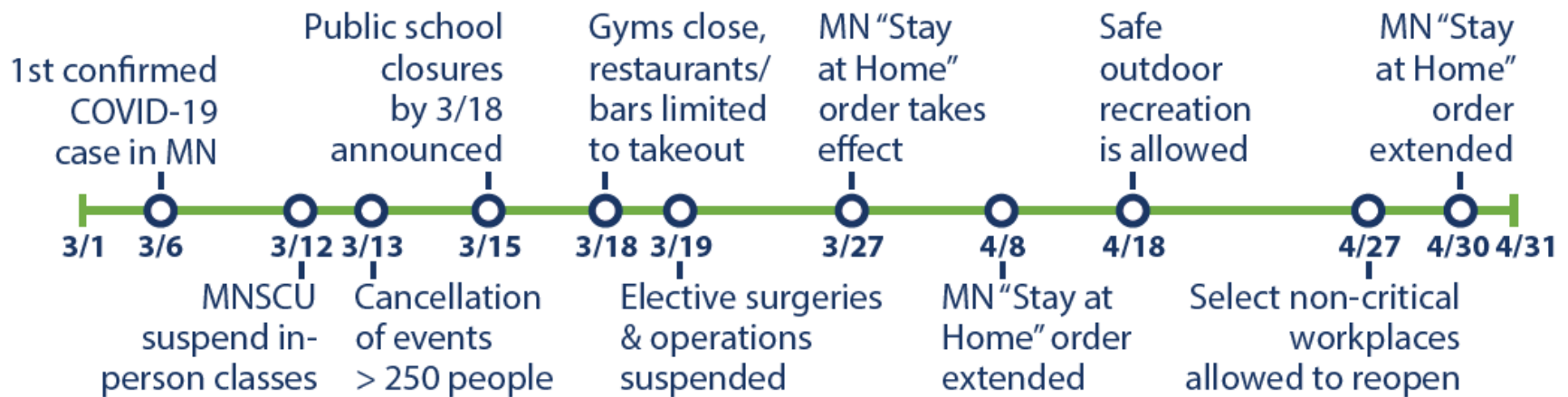
# COVID-19 IMPACTS TO MINNESOTA TRAVEL PATTERNS

Ben Timerson

06/22/2020

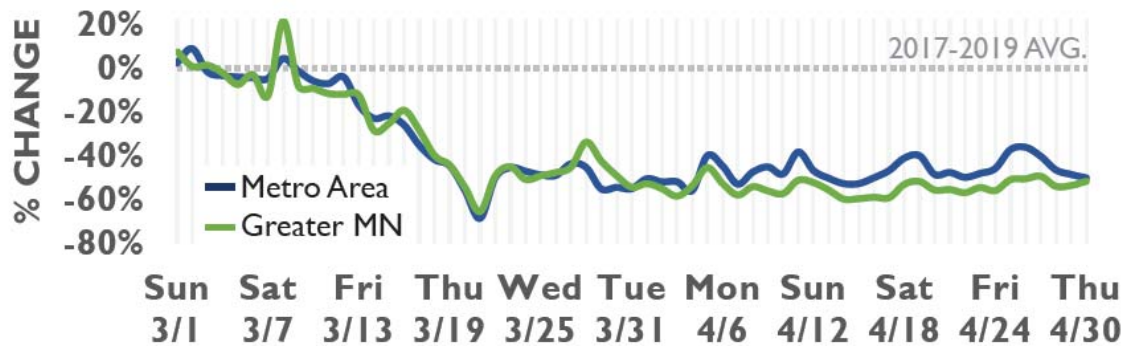
# Timeline of COVID-19 Events in Minnesota

## MARCH-APRIL 2020 TIMELINE OF EVENTS



# Hospital Traffic Volumes

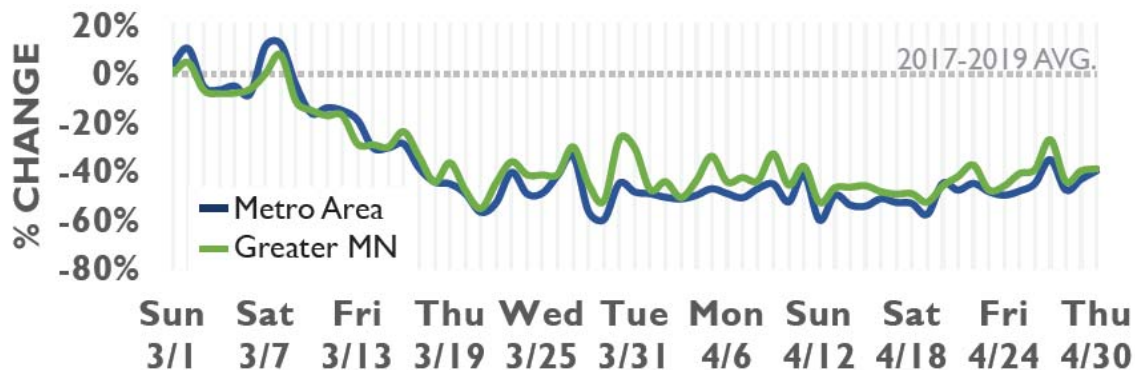
GREATER THAN  
**50%**  
DECREASE



Traffic volumes to hospitals decreased beginning around March 11th, and started to fall drastically around March 13th after the first executive action eliminating gatherings of >250 people was announced.

# Nursing and Boarding Care Home Traffic Volumes

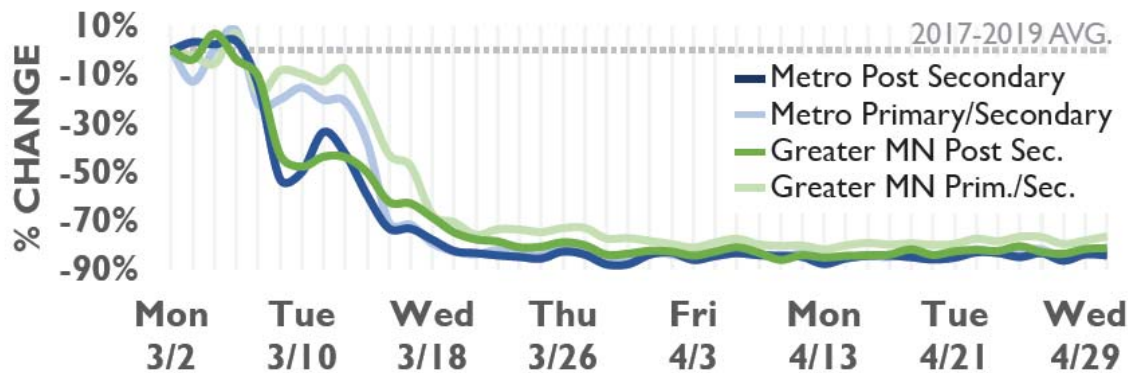
ALMOST  
**40%**  
DECREASE



Traffic volumes to nursing and boarding care homes started to decrease around March 8th. The second half of the month shows a leveling out of traffic volumes. April traffic volumes in greater Minnesota are almost at a 40% decrease in Greater MN and the Metro.

# School Traffic Volumes

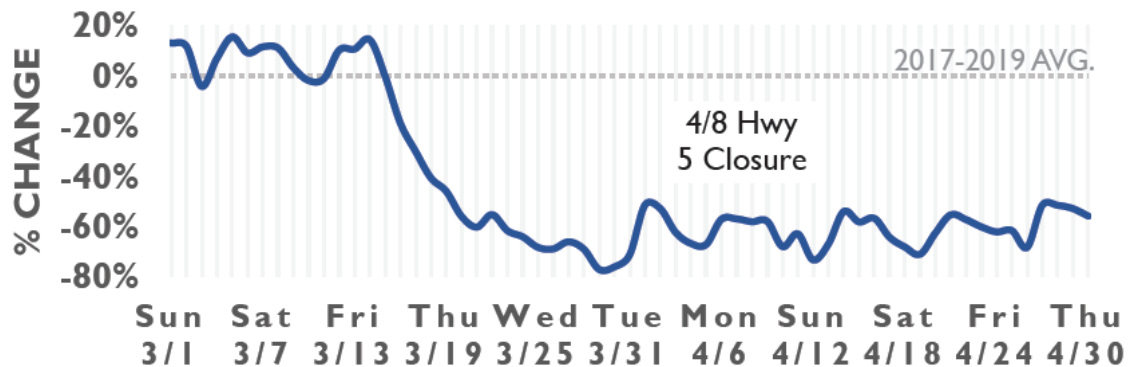
APPROXIMATELY  
**80%**  
DECREASE



Traffic volumes at post-secondary schools decreased during the second week of March. After Governor Walz authorized a temporary closure of K-12 public schools on March 15th, traffic volume at primary and secondary schools quickly decreased.

# MSP Airport Traffic Volumes

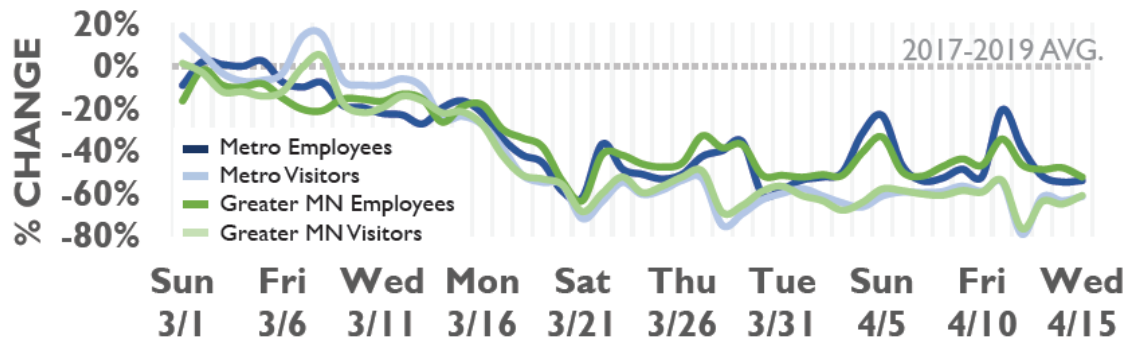
GREATER THAN  
**55%**  
DECREASE



There was a significant decrease in vehicle traffic volume beginning on March 14th, as people realized the risks of COVID-19 and the severity of the spread. The vehicle traffic volume continued to decrease until March 30th, but then increased slightly and leveled off in April.

# Commercial Center Traffic Volumes

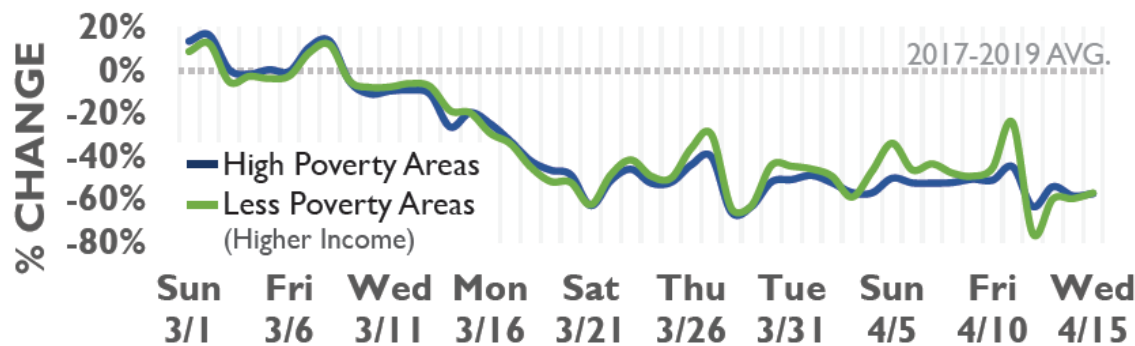
GREATER THAN  
**50%**  
 DECREASE



Greater Minnesota shows a very similar trend to the metro. After March 15th, both visitors and employees greatly reduced their trips. Over the next month, visits were even more reduced than work trips, suggesting that people are following social distancing guidelines.

# Traffic Volumes by Income

GREATER THAN  
**50%**  
DECREASE

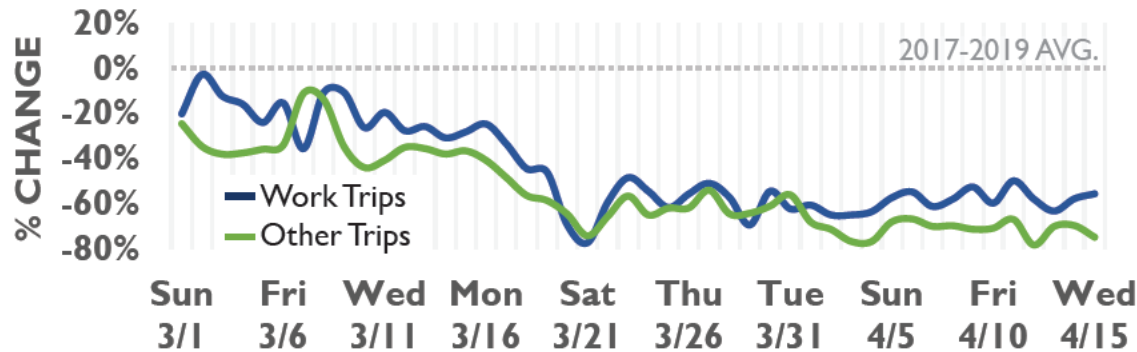


Both the less poverty and high poverty tracts showed similar patterns over time. However, by the end of March, residents of less poverty tracts were traveling slightly more, with a decline of around 40% as compared with 50% in the higher poverty tracts.



# Tribal Nations Traffic Volumes

APPROXIMATELY  
**70%**  
DECREASE

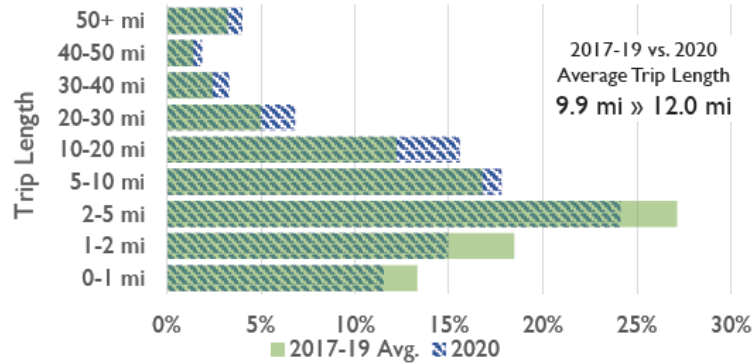


The decline in trips accelerated across the third week of March, with trips reduced by 80% on the 21st. Then, trips showed a small rebound, with overall travel reduced around 60% at the end of March. By mid-April non-work trips declined 70 to 80%.

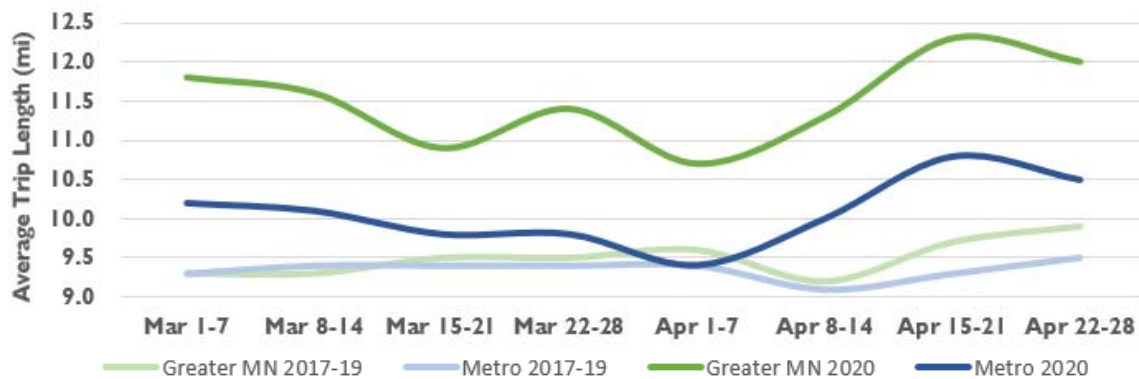
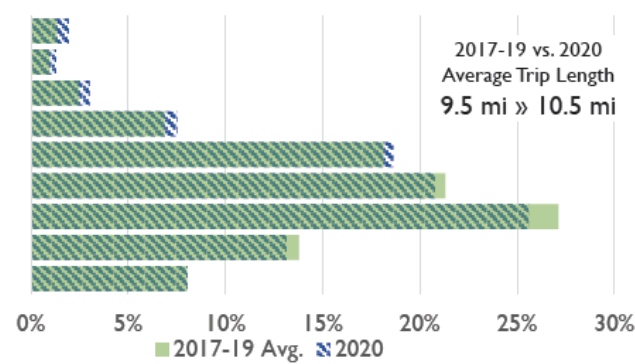
# Trip Distribution and Average Trip Length (2020 vs. 2017-2019)

## TRIP DISTRIBUTION APRIL 22<sup>TH</sup> - 28<sup>TH</sup> (2020 vs. 2017-2019)

### GREATER MN



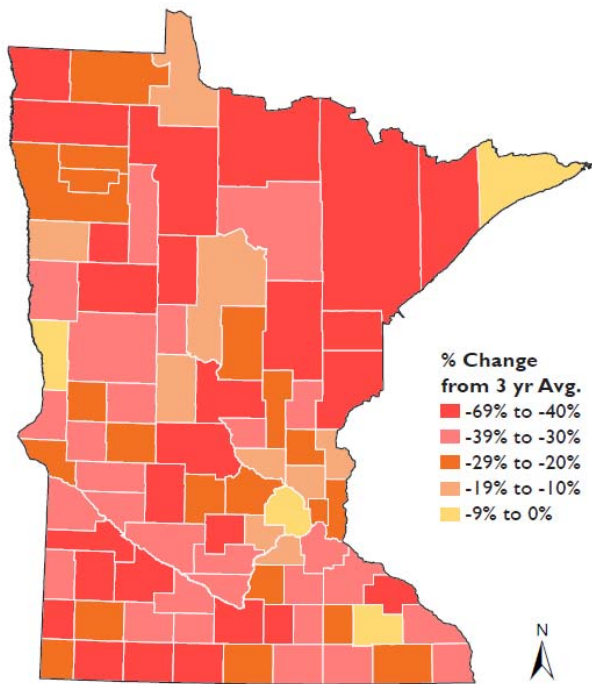
### METRO AREA



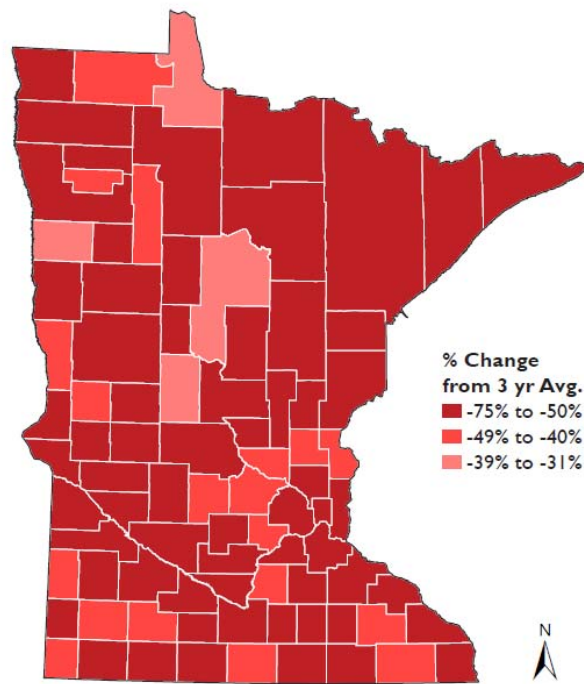
Average trip length in March and April 2020 was longer than in previous years for both greater Minnesota and metro counties. Overall, the trip distribution in March and April for the metro counties did not change as drastically as it has for Greater MN when compared to trip lengths of similar weeks in 2017-2019. For the Greater Minnesota counties, there was more of a change in the trip distribution (i.e., greater proportion of longer trips).

# Greater MN Change in Average Daily Trips in the 2<sup>nd</sup> and 4<sup>th</sup> Weeks of March and April 1-14<sup>th</sup> (2020 vs. 2017-2019)

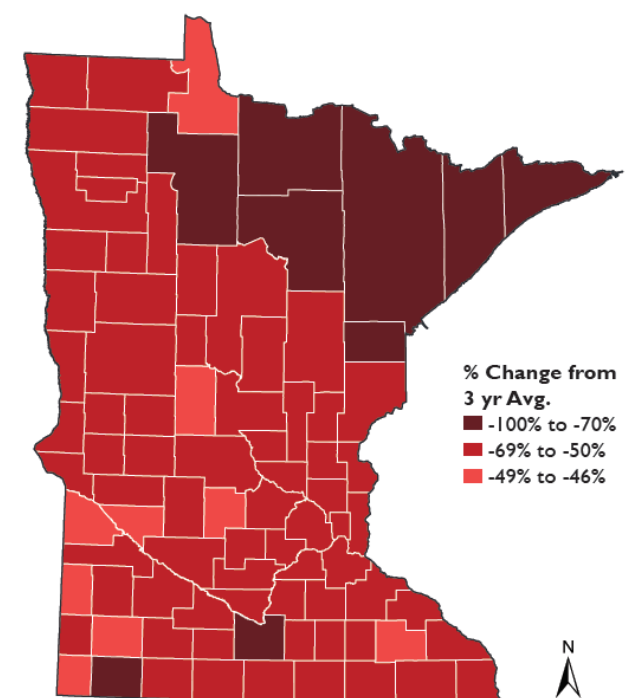
2<sup>nd</sup> Week of March



4<sup>th</sup> Week of March

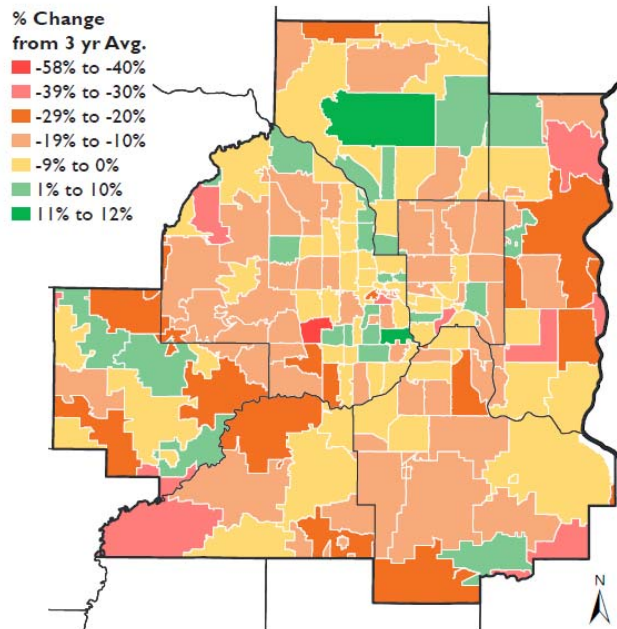


April 1<sup>st</sup> - 14<sup>th</sup>

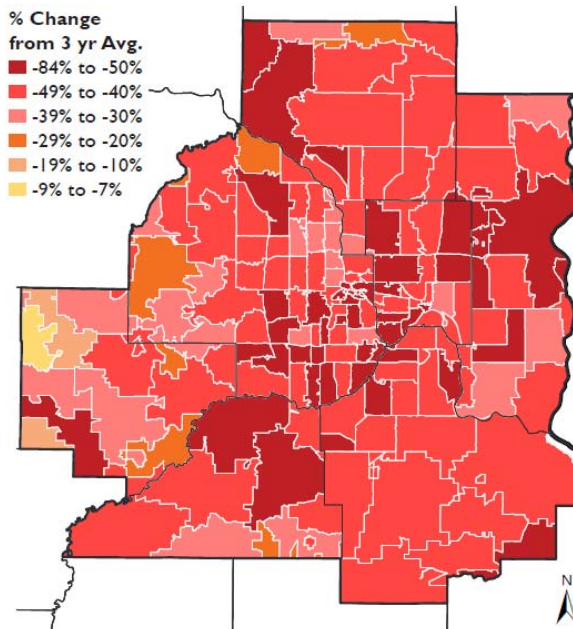


# Metro Area Change in Average Daily Trips in the 2<sup>nd</sup> and 4<sup>th</sup> Weeks of March and April 1<sup>st</sup> – 14<sup>th</sup> (2020 vs. 2017-2019)

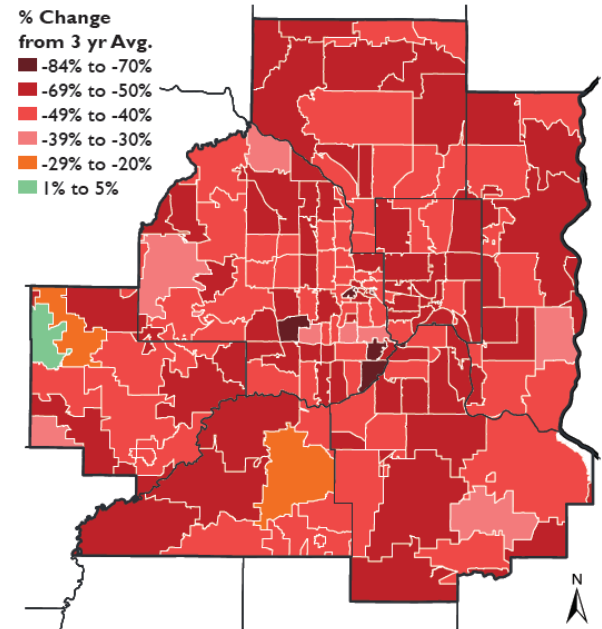
## 2<sup>nd</sup> Week of March



## 4<sup>th</sup> Week of March



## April 1<sup>st</sup> - 14<sup>th</sup>



# Thank you!

Ben Timerson

<http://www.dot.state.mn.us/tda/tardis.html>

<https://mndot.maps.arcgis.com/apps/opsdashboard/index.html#/f9077a4416a44dc3871f6ff052120780>