

Minnesota Interstate Traffic Volume

An analysis of traffic patterns to inform future upgrades and construction



Analysis by Jennifer Taylor

Traffic continues to grow

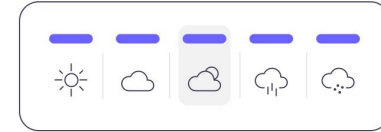


Minnesota DOT wants a dashboard to examine:

Traffic volume on interstate highways by year, month, day, hour

Effect weather has on interstate highway traffic volume

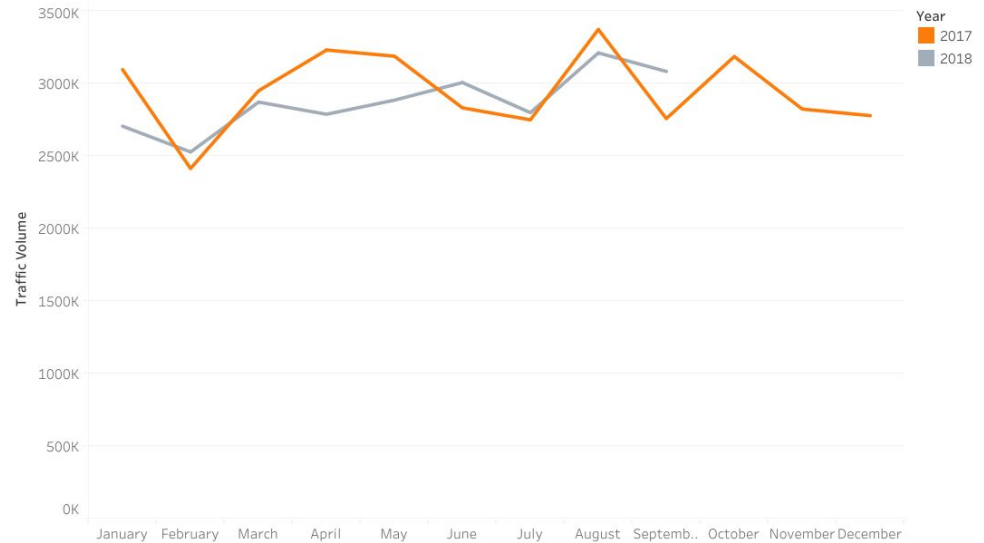
Holiday Traffic Volume: Roads may see increased traffic on some holidays



Traffic Each Year by Month

- August highest volume - end of summer possibly
- February lowest traffic volume by far - best for construction
- Late spring (Apr. & May) 2018 saw big drop over 2017
- Relatively consistent patterns

Traffic Volumes: Month per Year

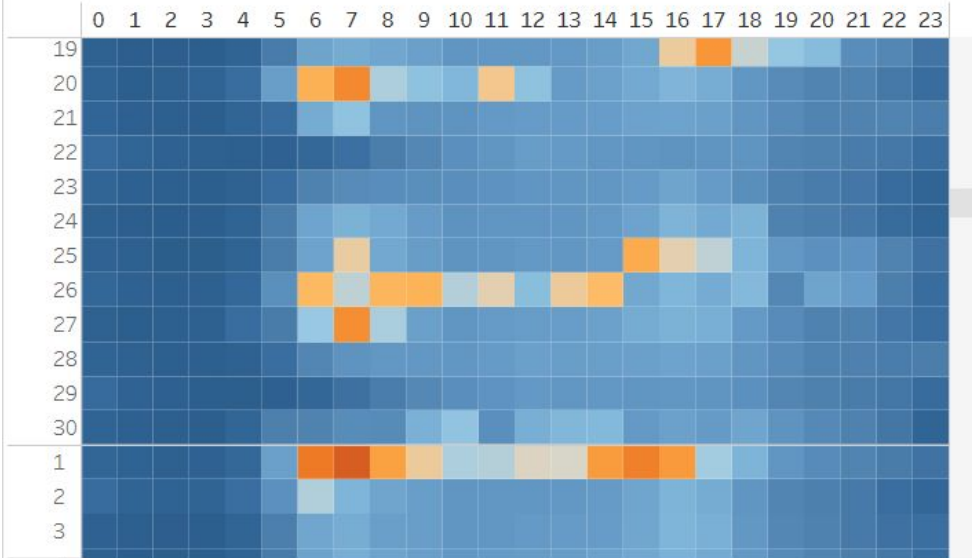


Line chart showing trend of traffic, shown by month with separately colored lines for each year shown.

Traffic by Day and Hour

- Traffic patterns relatively consistent day-to-day
- Most traffic between 6am and 5pm - typical work hours
- Heaviest traffic at beginning and end of typical work day
- Evenings and overnight best time for any needed work

Traffic Volumes: Hour of the day
Day of the month with hourly traffic breakdown



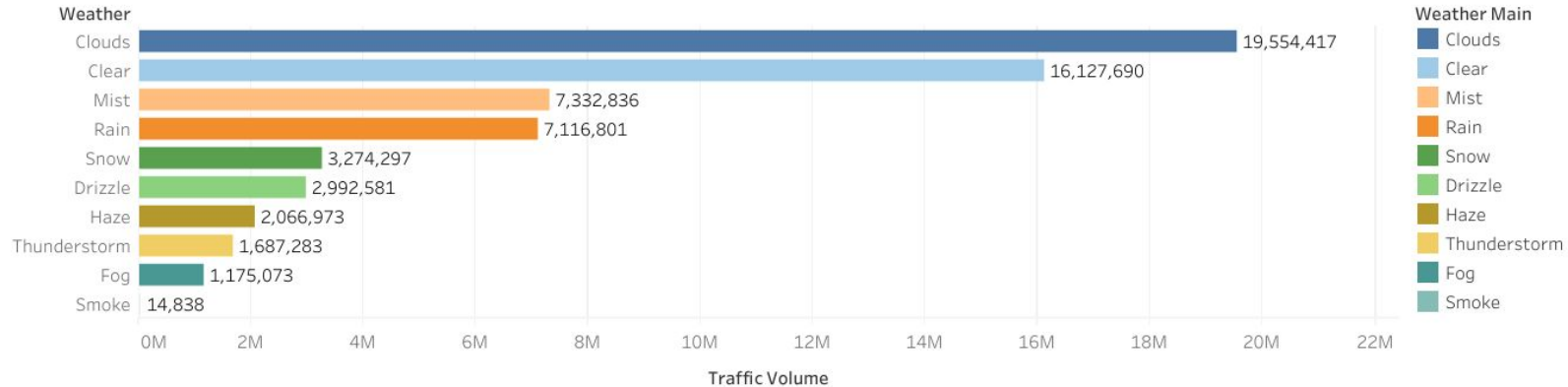
Heat map of traffic showing volume by day of month and hour of day.

Traffic by Weather Pattern

- Highest traffic on cloudy days - even more than clear days
- Mist and rain have an impact, but a large volume of traffic continues
- Low visibility (smoke, fog, haze) have a significant impact on traffic volume

Traffic Volumes:

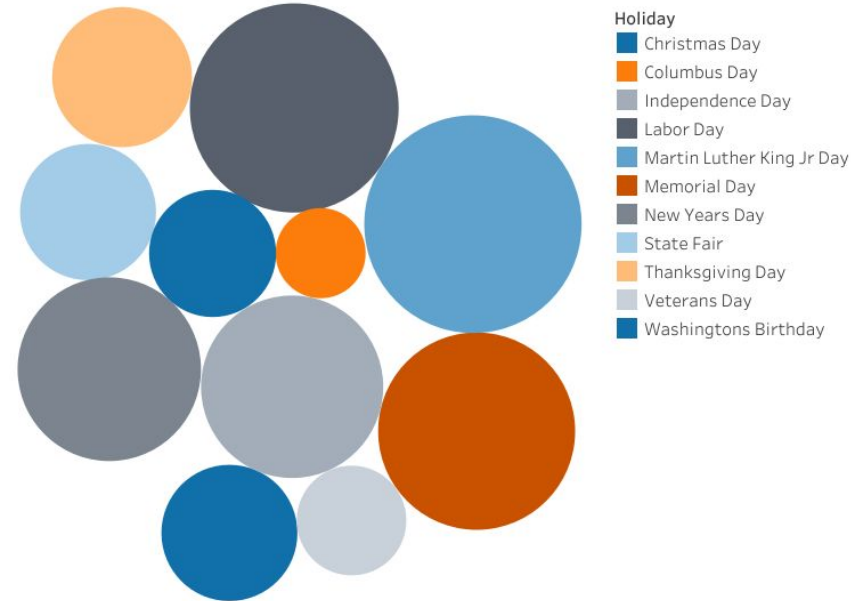
Weather Type



Traffic on Holidays

- Highest traffic on Martin Luther King Jr Day - More than Memorial Day and New Years Day
- Most holidays don't have significant traffic volume
- Martin Luther Kind Jr. Day and New Years Day are both in January, which may contribute to January having much higher traffic than December and February

Holiday Traffic on National Holidays in the United States



Bubble chart showing traffic volume per holiday, with bubble size representing volume.

Dashboard Controls

Timescale filter:

Allows a user to select a timeframe they would like to examine

Defaults to two years Minnesota DOT wanted to focus on

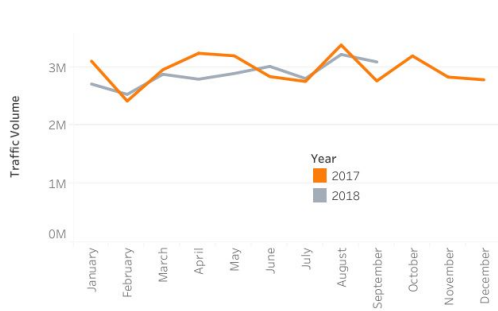
Download Buttons

Allows a PowerPoint or PDF visual of the dashboard to be easily downloaded by a user.

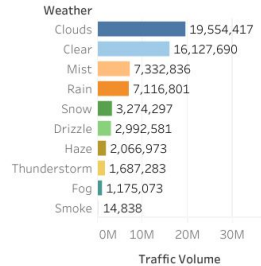
Additional Notes

Timescale
1/1/2017 12:00:00 AM to ..

Traffic Volumes: Month per Year



Traffic Volumes:
Weather Type

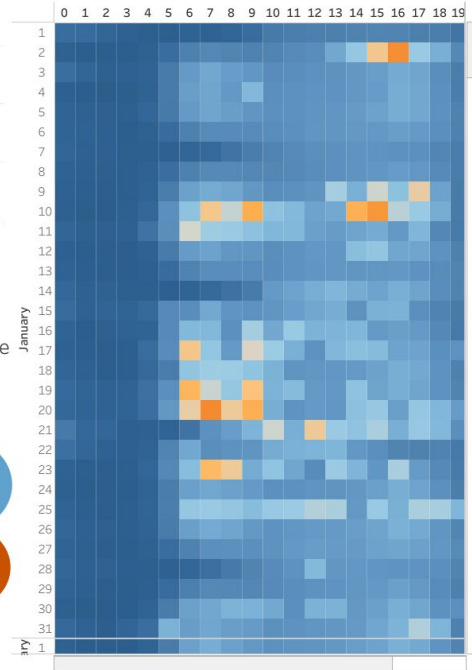


Holiday Traffic on
National Holidays in the
United States



Download: [PowerPoint](#) [PDF](#)

Traffic Volumes: Hour of the day
Day of the month with hourly traffic breakdown



I'm told they will continually update the source spreadsheet for this project so that continual insights can be gained over time.

This means data source refreshes will need to be scheduled. This can be automated by the administrator or performed manually on a set schedule.

Data refreshes are necessary to maintain consistent and accurate data for dashboard users.