Minnesota Traffic Volume Project

Analyzing Traffic Trends to support Infrastructure Decisions

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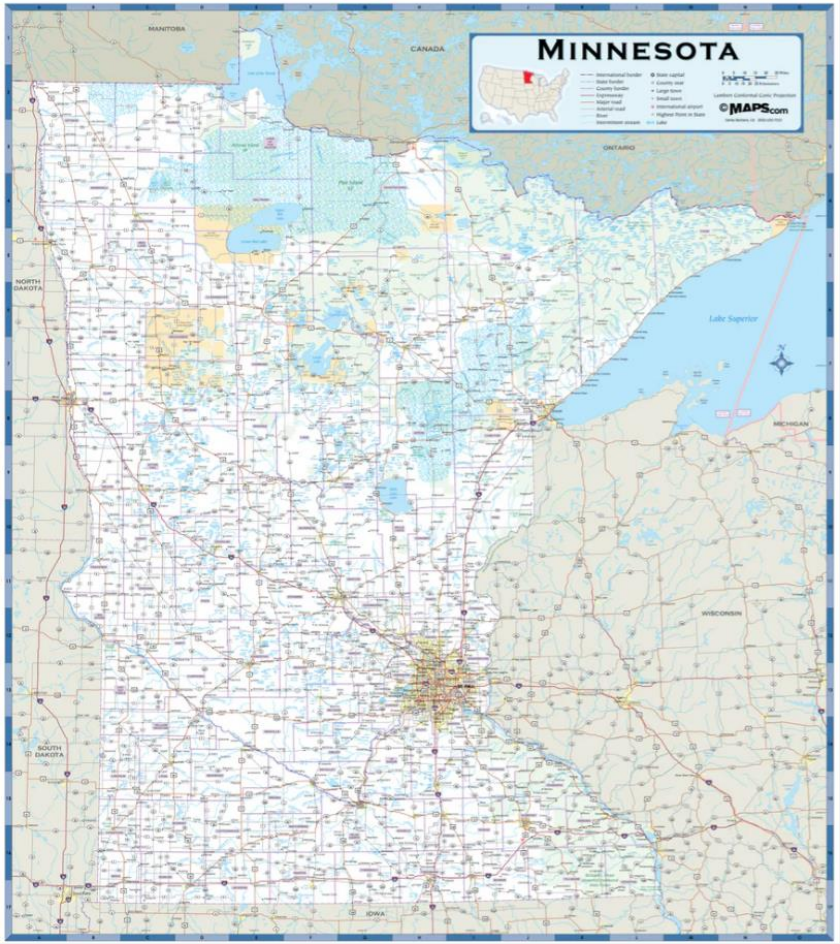
Understanding Traffic Patterns to Improve Transportation Planning

MnDOT need an interactive dashboard to:

- Spot traffic peaks
- Analyze weather impact
- Highlight holiday trends
- Help stakeholders explore data easily



Data Processing & Visualization

Data source: **CSV** file

BI Platform used: **Tableau**

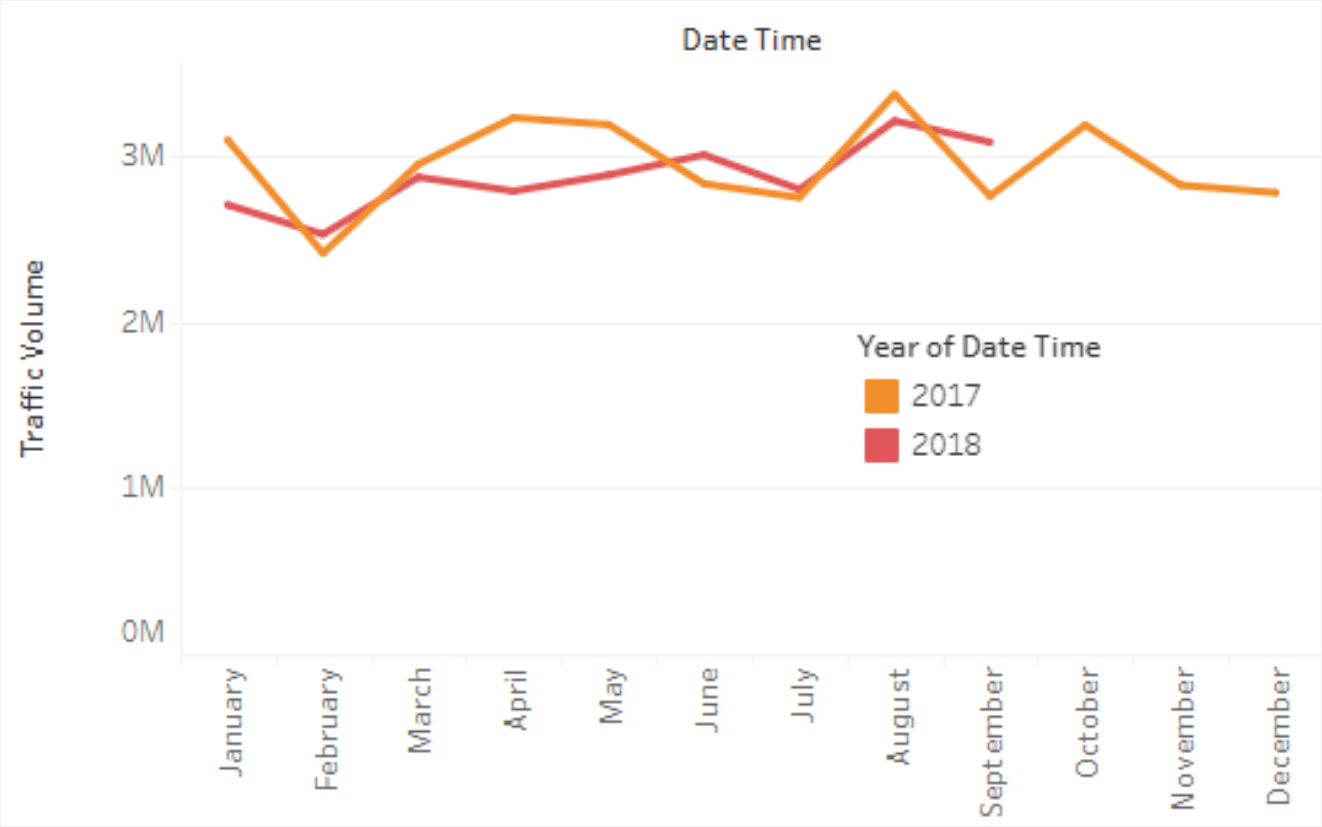
Key steps:

- ✓ Imported and cleaned the data
- ✓ Built a pipeline directly in Tableau
- ✓ Focused on time, weather, and holiday metrics

Visualizations included:

- **Year filter** for dynamic exploration
- **Line chart**: traffic volume per hour of the day
- **Line chart**: traffic volume per month and year
- **Bar chart**: traffic volume by weather condition
- **Bubble chart**: traffic volume per holiday

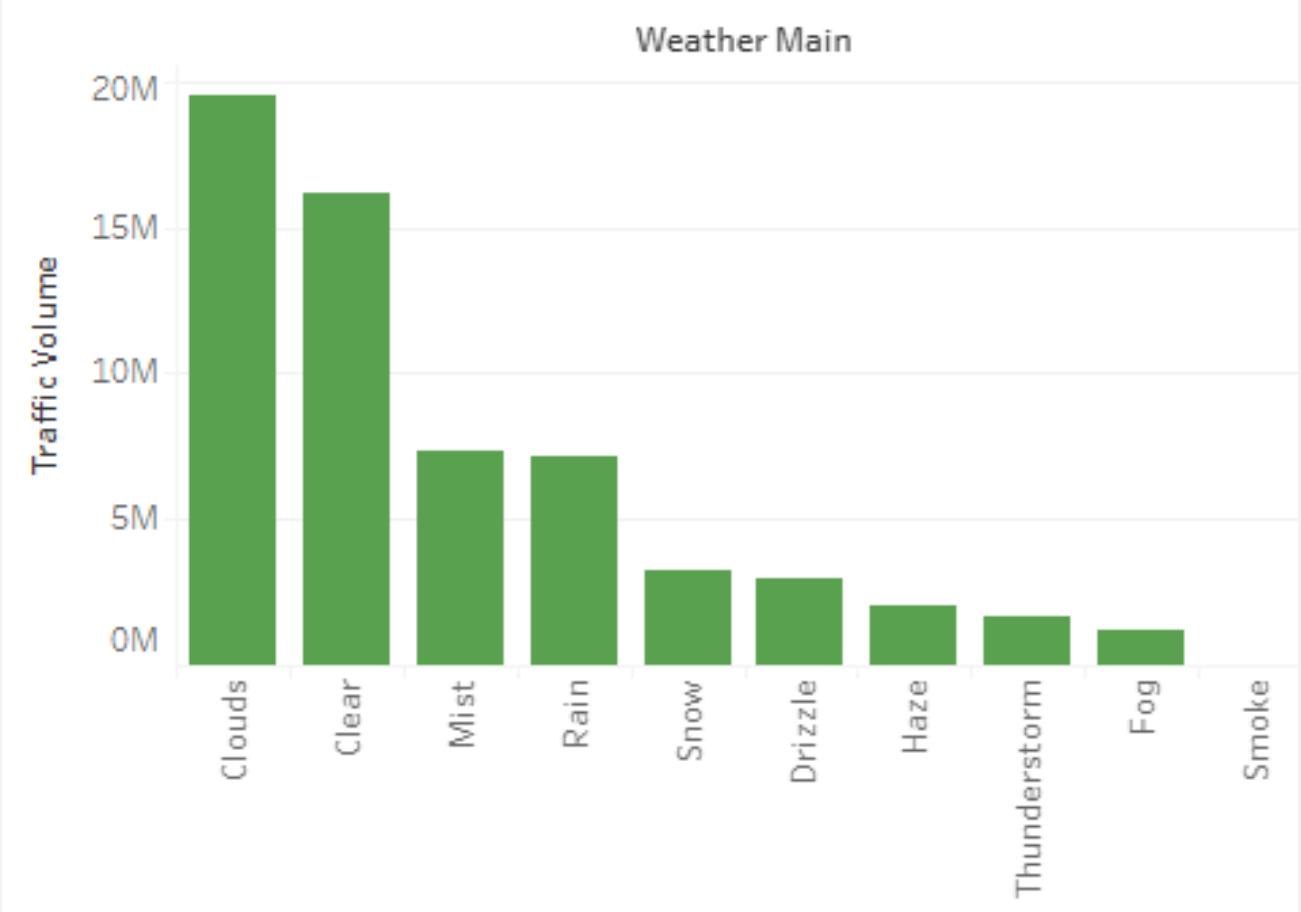
Monthly Traffic Volume per Year



- **August** has the **peak monthly traffic**, indicating seasonal travel trends.
- **February** has the **lowest volume,** ideal for maintenance work

How the Weatherman affects Traffic Volume

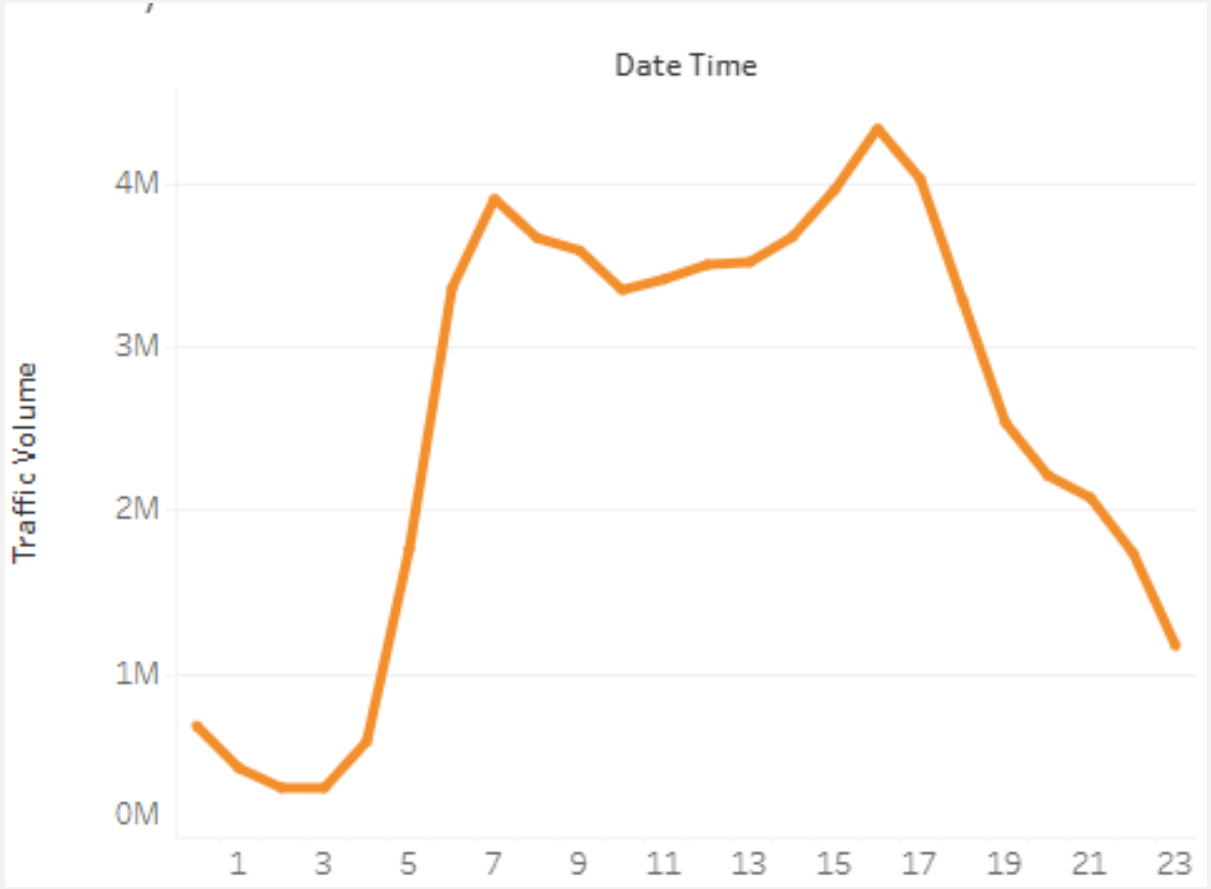
- **Clear and cloudy days** saw the **most traffic**
- **Low-visibility** conditions result in the **lowest traffic volume.**



Holiday Travel

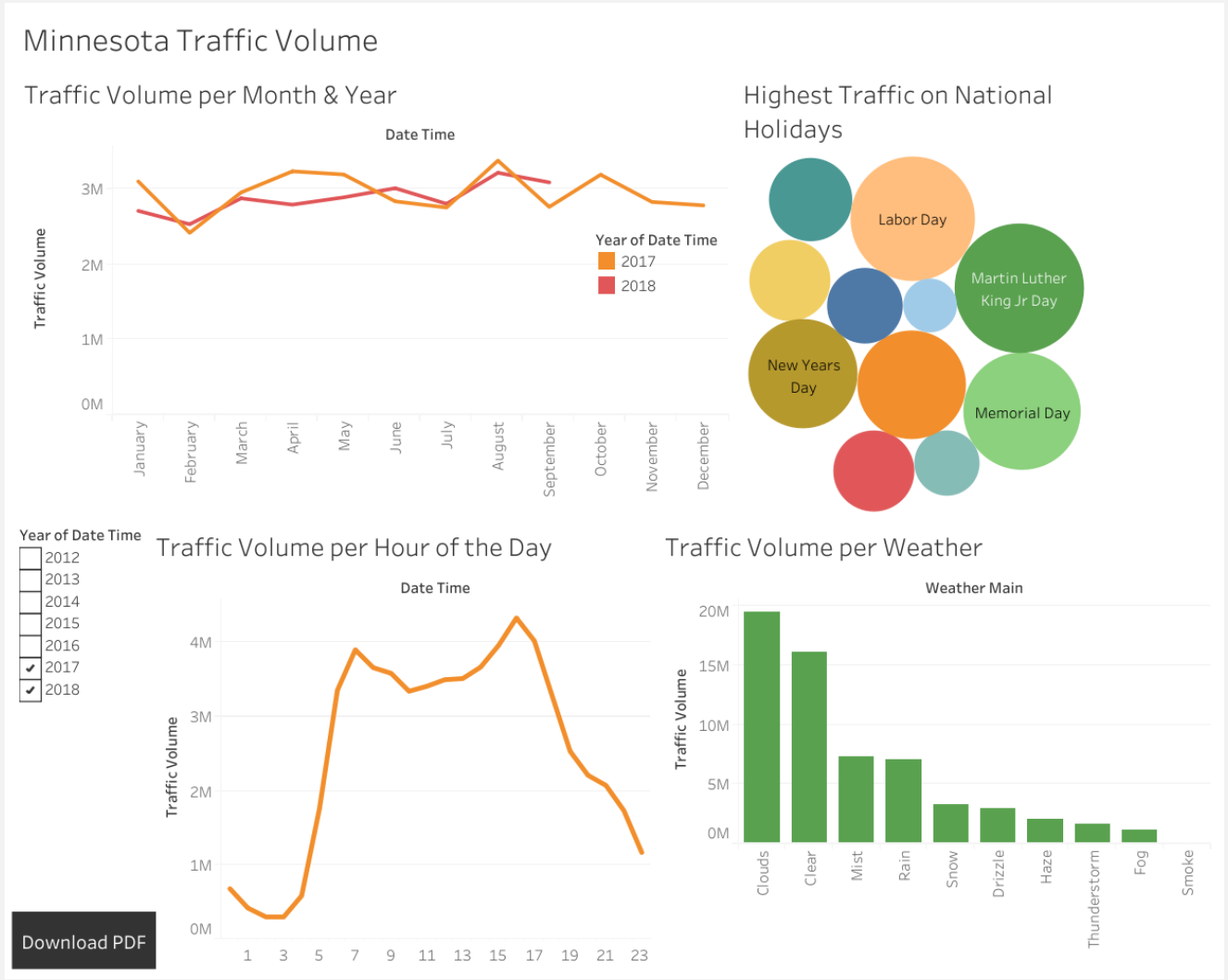
- **Labor Day** and **Martin Luther King Jr. Day** recorded the **highest holiday traffic volume**
- Most holidays have little impact on traffic volume.

Hourly Traffic



Rush hours (7–9 AM and 4–6 PM) have the **highest traffic volume.**

Dashboard Look



- Fully accessible to Stakeholders
- Live Monitoring
- Filters by Year
- Downloadable

Thank You!