

Motorization Trends in Minnesota: 1980–2021

TPEC researchers analyzed motorization trends in Minnesota between 1980 and 2021. The trends have implications for transportation revenues in Minnesota, particularly for roadway infrastructure planning and investment.

KEY FINDINGS

Registered Vehicles

- The number of registered vehicles has continually increased since 1980, although growth has slowed since the 2000s.
- The number of registered vehicles per capita and per county declined significantly in recent years.
- Vehicle registrations increased in 2020 as people sought to physically distance and reduce COVID-19 transmission risk.

Vehicle-Miles Traveled

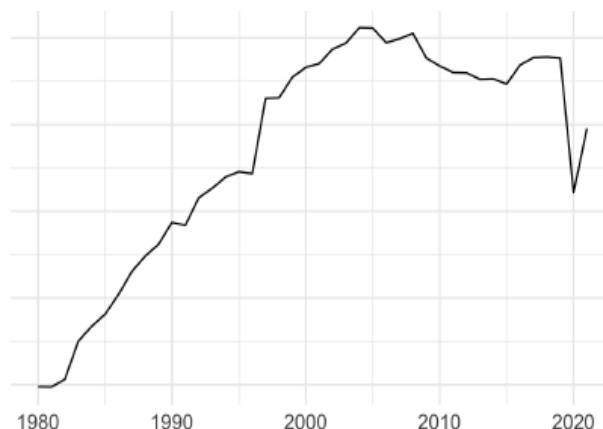
- Total VMT increased between 1980 and 2021 and peaked in 2019, but per capita measures have decreased.
- VMT declined sharply in 2020 with the onset of the pandemic and did not return to pre-pandemic levels as of 2021. It continued increasing in 2022 (USDOT, 2022) and may grow as more employees return to the office.

Fuel Consumption

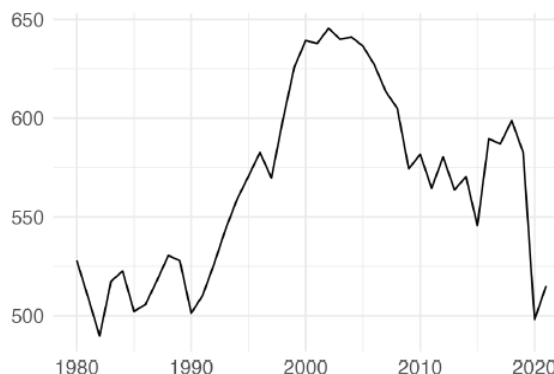
- Fuel consumption increased between 1980 and 2021 but decreased per capita.

Vehicle Crashes

- A downward crash trend began in 2004.
- In 2020, the overall number of vehicle crashes fell significantly because of the pandemic-related drop in travel. Property damage and injury crashes declined drastically. Fatal crashes, however, rose 10.8 percent because of speeding.
- In 2021, the number of crashes started increasing but it was still



VMT per capita

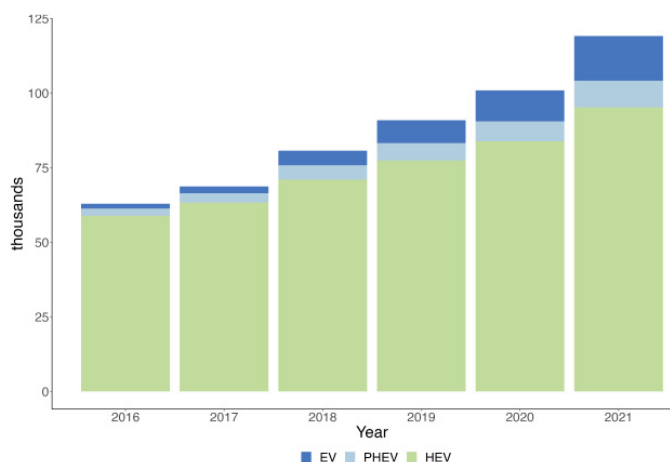


Gallons of fuel per capita

well below pre-pandemic levels. Fatal crashes, however, rose significantly: up 22.2 percent.

Alternative Fuel Vehicles

- The number of alternative fuel vehicles in Minnesota—particularly electric vehicles (EVs)—is increasing.
- Between 2020 and 2021, the growth rate was 44.2 percent for EVs.
- In 2016, alternative fuel vehicles represented 1.3 percent of total light-duty vehicle registrations; this share rose to 2.3 percent in 2021.



Alternative fuel vehicles in Minnesota

IMPACTS ON MINNESOTA ROADWAY REVENUES

So far, revenues from vehicle registrations and the vehicle sales tax have offset the lower share of dollars from federal and state fuel taxes. However, vehicle efficiency standards and the growth of EVs will continue to reduce fuel-tax revenues. In addition, the significant increase in remote work may have long-lasting implications on vehicle ownership and travel demand.

Overall, Minnesota's trends are consistent with national patterns. The persistence of these trends could cause state revenues to decline continuously unless the roadway funding structure is adjusted.

ABOUT THE STUDY

This study provides general motorization trends for the state as well as changes by county. Data come from the Minnesota Transportation Finance Database, which was created by TPEC researchers and is updated regularly.

For more information and additional analyses:

TPEC welcomes public engagement and encourages you to contact us with your questions, comments, and research needs.

Camila Fonseca-Sarmiento

Director of Fiscal Research
Institute for Urban and Regional Infrastructure Finance
Humphrey School of Public Affairs
612-301-1362, fonse024@umn.edu

Raihana Zeerak

Research Associate
Institute for Urban and Regional Infrastructure Finance
Humphrey School of Public Affairs
612-626-9934, zeera001@umn.edu

Zhirong "Jerry" Zhao

Founder and Advisor
Institute for Urban and Regional Infrastructure Finance
Humphrey School of Public Affairs
zrzha0@umn.edu, 612-625-7318

Definitions used:

- Registered vehicles: automobiles, buses, trucks, and motorcycles that are publicly or privately and commercially owned in the state
- Alternative fuel vehicles: electric vehicles, plug-in hybrid electric vehicles, and hybrid electric vehicles
- Total fuel consumption: gasoline and special fuels (mostly diesel)
- Vehicle crashes: fatal crashes, injury crashes, and property damage crashes

FURTHER READING

- *Motorization Trends in Minnesota* (June 2023), Camila Fonseca-Sarmiento, Raihana Zeerak, Adeel Lari, and Jerry Zhao

