

Memo

To: VLMPO Committees, Interested Parties, General Public
From: Corey Hull, Transportation and Environment Department
CC:
Date: 9/5/2019
Re: Travel Delay Cost Analysis in Lowndes County

This report is a study of traffic delay cost on the local level and is used to inform readers about the cost of road congestion in Lowndes County on certain days. Using the National Performance Management Research Data Set, the data measures observed travel times on the National Highway System. This data is available from the Federal Highway Administration for performance measure purposes but also is able to inform communities about other issues like congestion and travel delay costs. Delay Cost Analysis combines vehicle probe (GPS in phones, commercial truck GPS, etc.) speed data with volume data to estimate the cost of delay experienced by drivers as a result of congestion.

Congestion and reliable travel time is an essential factor that individuals and local officials often consider when making decisions. Whether it is which way to drive to work or the grocery store or prioritizing transportation improvements, congestion reduction and reliable travel times are essential to a well-functioning transportation system. This report shows the impact of congestion and travel time delay in monetary terms. Congestion causes increased fuel consumption and production loss by individuals delayed by congestion.

The SGRC has this and other data available for local officials to consider and look at how congestion impacts our community. Please contact Corey Hull at 229-333-5277 if you have any questions.

Definitions

Costs

User Delay Cost Reports are based on the price per hour for passenger and commercial vehicles, updated annually.

Calculating Cost with Vehicle Miles Traveled (VMT)

Delay per user can be calculated with VMT metrics by multiplying a per user VMT rate by the delay per VMT metric.

Delay Cost/Cost of Congestion:

The cost associated with traffic with the lack of a mechanism to efficiently manage the use of capacity. The delay cost is found by multiplying the delay for the hour by the value of a person's time by the vehicle occupancy.

Vehicle Miles Traveled:

The units of transportation measurement describing the unit of measurement used to measure the quantity and traffic

Holidays and Special Weekdays:

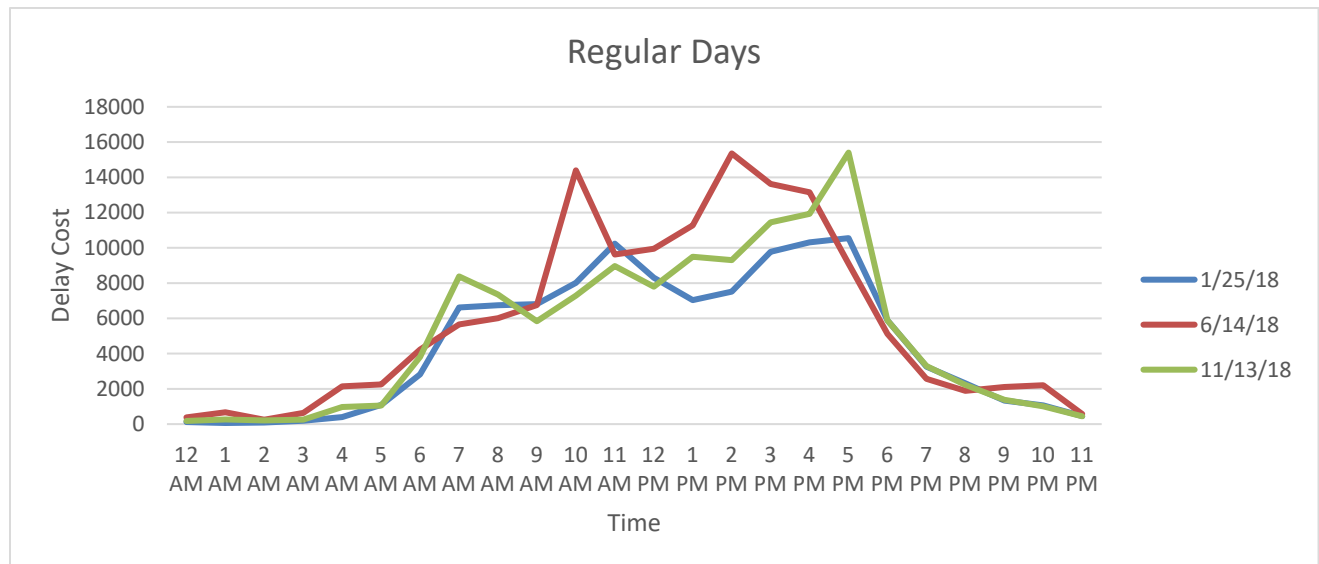
Generally, any recognized government holiday, as well as Mondays, Fridays, weekends, or another day when regular traffic flow is anticipated to be abnormal. A special weekday is any non-holiday, weekday where traffic is expected to be abnormal (ex: local Spring Break). The holidays and special weekdays that were chosen were the following

- January 1, 2018 (New Year's Day)
- April 5, 2018 (Spring Break Day)
- September 3, 2018 (Labor Day)
- November 22, 2018 (Thanksgiving)
- December 25, 2018 (Christmas)

Normal Weekday:

Any Tuesday, Wednesday or Thursday, when traffic is expected to be 'normal.' For this report, the regular days that we chose were the following:

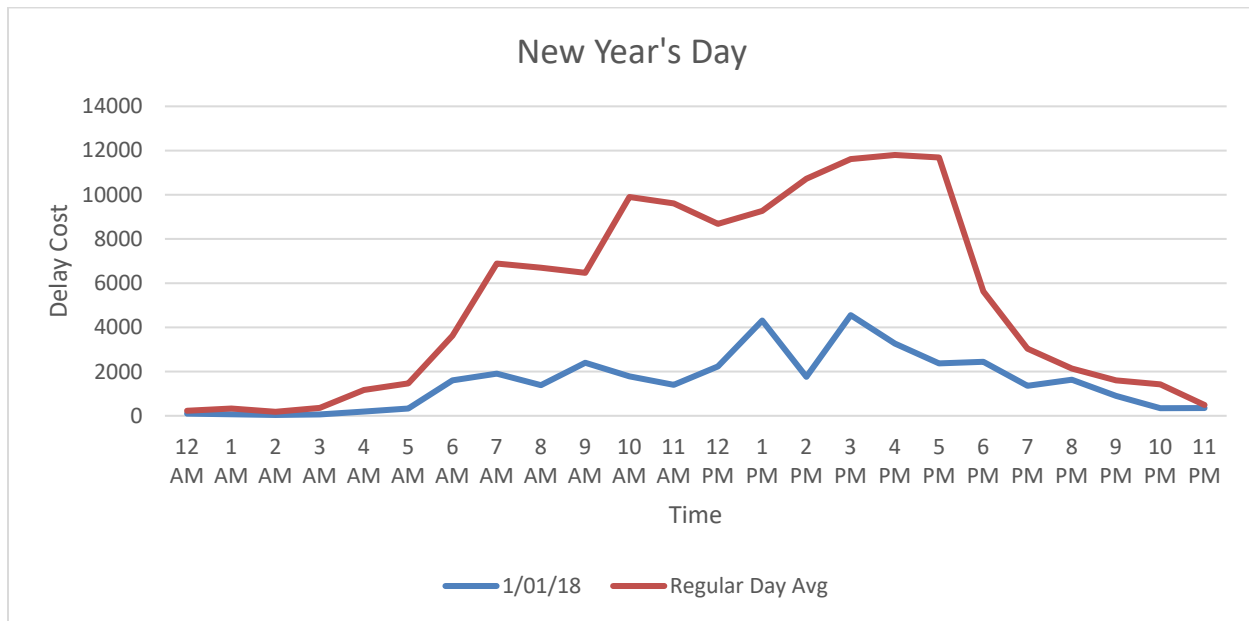
- January 25, 2018
- June 14, 2018
- November 13, 2018



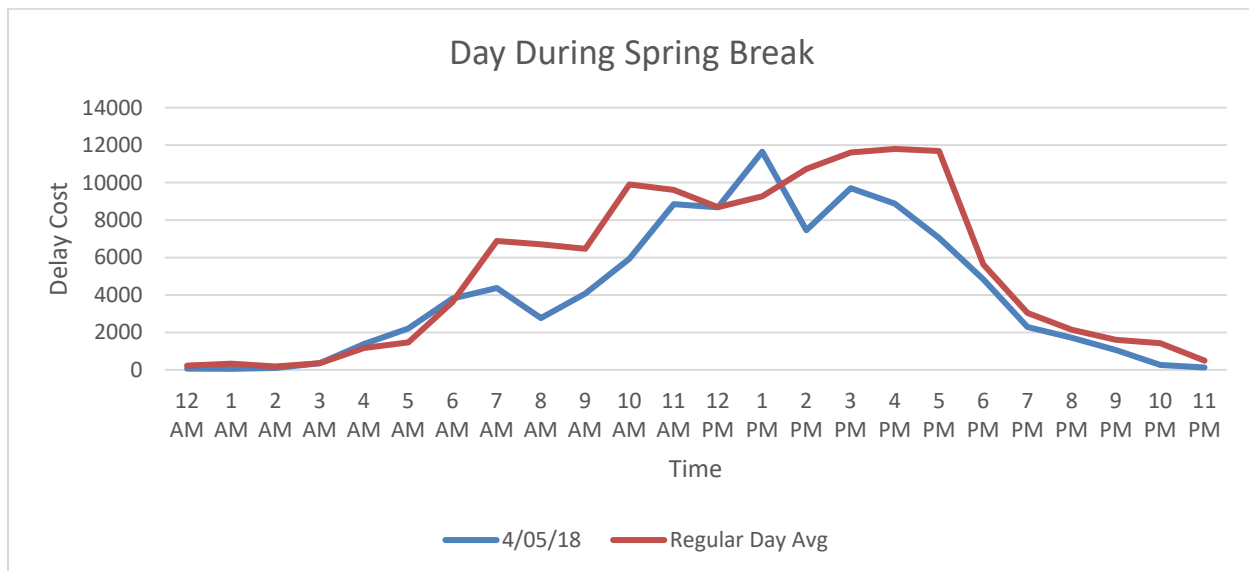
Total travel delay cost for the three regular days was the following:

- The total travel delay cost on January 25, 2018, was \$110,989 or \$0.05 per VMT. Costs were the highest at 5 pm, totaling to \$10,551, which came to be \$0.06 per VMT.

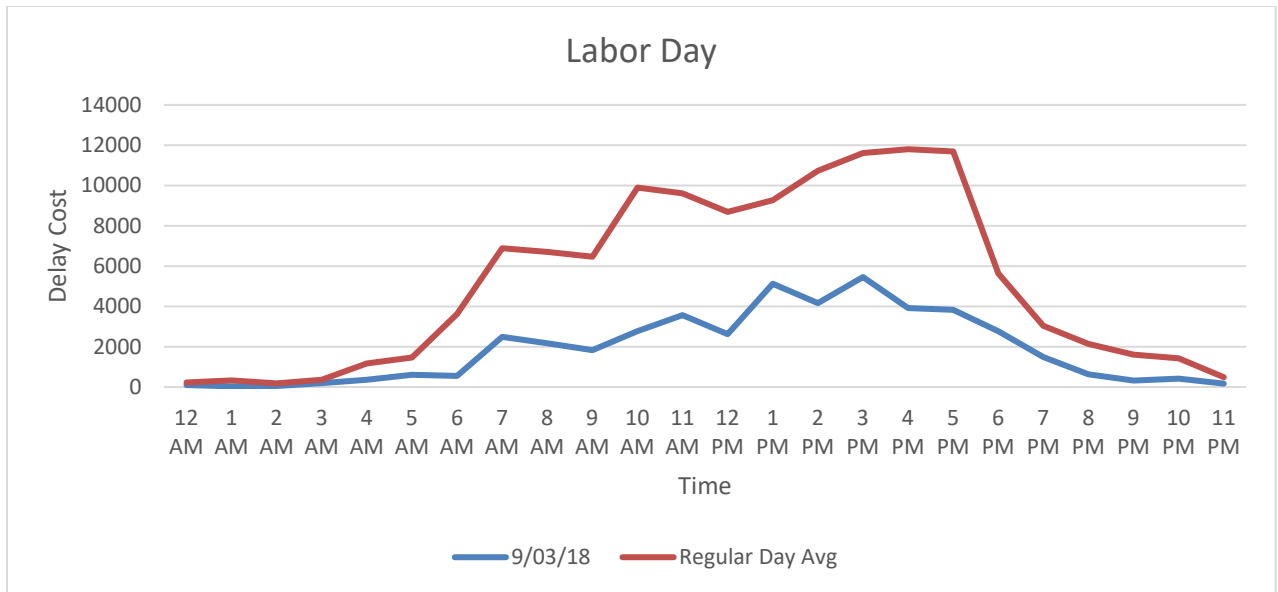
- The total travel delay cost on June 14, 2018, was \$139,918 or \$0.04 per VMT. Costs were the highest at 5 pm, totaling to \$15,357, which came to be \$0.08 per VMT.
- The total travel delay cost on November 13, 2018, was \$124,171 or \$0.04 per VMT. Costs were the highest at 5 pm, totaling to \$15,404, which came to be \$0.08 per VMT.



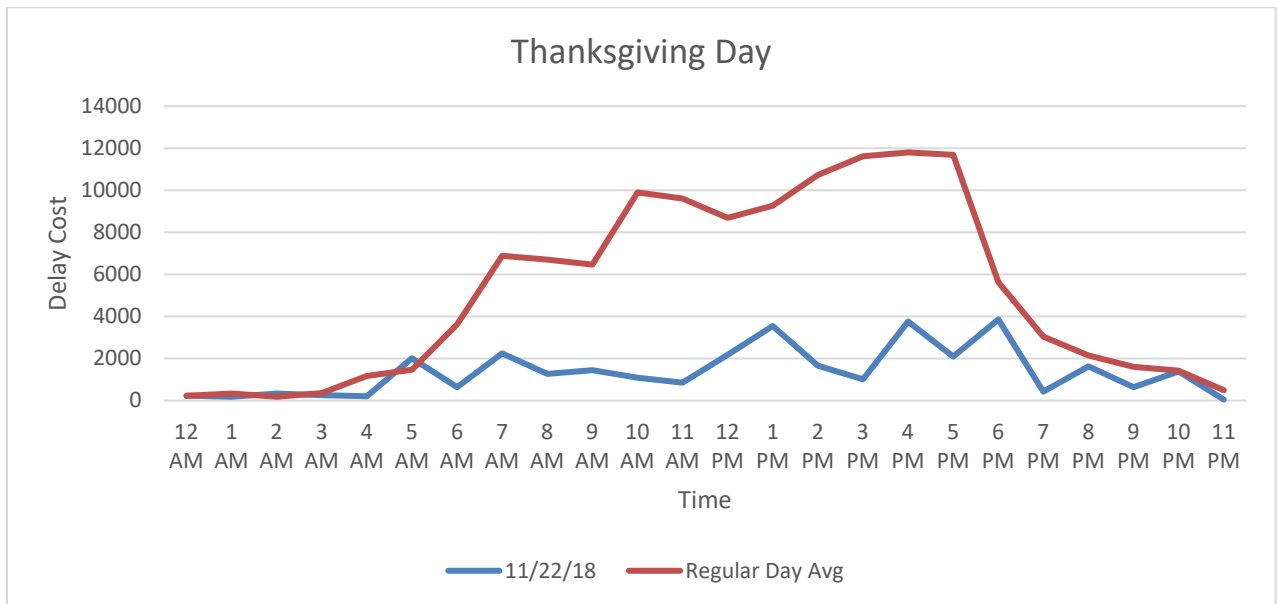
Total travel delay cost for January 1, 2018 (New Year’s Day) is \$36,803 or \$0.02 per VMT. Costs were the highest at 3 pm, totaling to \$4,553, which came to be \$0.03 per VMT.



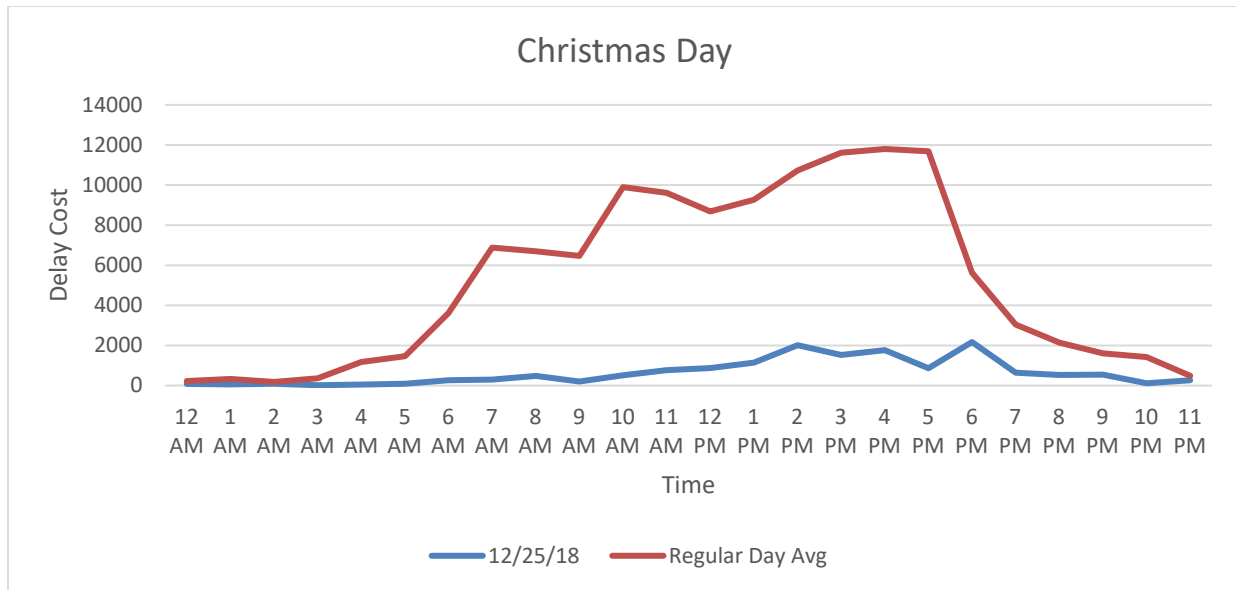
Total travel delay cost for April 5, 2018 (local Spring Break) is \$136,868 or \$0.05 per VMT. Costs were the highest at 7 pm, totaling to \$28,776, which came to be \$0.29 per VMT. Anecdotally, residents of Valdosta and Lowndes County comment on how much traffic delays is reduced when schools is not in session. This can be seen in the above chart especially during the morning and evening peak periods.



Total travel delay cost for September 3, 2018 (Labor Day) is \$46,633 or \$0.02 per VMT. Costs were the highest at 3 pm, totaling to \$5,457, which came to be \$0.03 per VMT.



Total travel delay cost for November 22, 2018 (Thanksgiving Day) is \$45,633 or \$0.02 per VMT. The cost was the highest at 3 pm totaling to \$5,457 which came to be \$0.03 per VMT



Total travel delay cost for December 25, 2018 (Christmas Day) is \$15,362 or \$0.01 per VMT. The cost was the highest at 6 pm totaling to \$2,171 which came to be \$0.02 per VMT