

WISDOT Projections vs Reality: An Analysis of Traffic Trends

Background

Wisconsin is undergoing a marked shift in how people in the state are choosing to travel. Data show that the number of miles driven in the state has fallen, or has levelled off in the last ten years.¹ This is in sharp contrast to previous decades, when people drove more each year, since the creation of the Interstate System in the 1960's.¹

Each decade since the 70's saw an average yearly increase of 2 to 3 percent in vehicle miles traveled (VMT) – with VMT going from 25,795 million 1970, to a peak of 60,398 million in 2004.¹ However, since then the number of miles driven both in total and per-capita in the state has tumbled – with the latest decade registering no growth at all. Wisconsin drove fewer total miles in 2013 than we did in 2003.¹ The drop in VMT per capita is even greater – the average Wisconsinite drives 500 fewer miles today than he or she did in 2004.

Decade	Total Growth in Vehicle Miles Traveled
1970-1980	28%
1981-1991	35%
1992-2002	24%
2003-2013	0%

If earlier trends had continued, Wisconsinites would currently drive an average of 11,300 miles annually instead of the current average of 9,400.² If from 2003-2013 the state had continued to increase the number of miles driven at the rate it had previously we would have driven 16 billion more miles than we did in 2013. Relative to the previous trend, there has been a 27% decline in miles driven over the last decade.

Several studies, surveys and reports provide compelling evidence that we are unlikely to return to the former rates of growth.^{3,4,5} These changes are unprecedented and important to incorporate into land-

¹ *Road Mileage and Annual VMT in Wisconsin*, Wisconsin Department of Transportation, 2012.

<http://www.dot.wisconsin.gov/travel/counts/docs/vmt-historical.pdf>, accessed September 2013.

² *Wisconsin's Future Population, Projections for the State, Its Counties and Municipalities, 2010 – 2040, 2013*

http://www.doa.state.wi.us/Documents/DIR/Demographic%20Services%20Center/Projections/FinalProjs2040_Publication.pdf, accessed September 2013

³ *Transportation in Transition*, USPIRG and Frontier Group, December 2013

⁴ *Update Percentage of Young Persons with a Driver's License Continues to Drop*, Sivak, et.al, in *Traffic Injury Prevention*, Vol 13, no. 4 (2012), p.341

use and transportation planning. It is imperative that Wisconsin Department of Transportation (WISDOT) closely monitors and analyzes these trends in order to make careful and informed planning decisions.

However, the agency appears to be using outdated data to make traffic projections and continues to advocate for increased highway capacity as a way forward for Wisconsin's transportation system.

Study and Methodology

The purpose of this study was to evaluate how the trends of the last decade stack up against projections used by the Wisconsin Department of Transportation (WISDOT) that are being used to justify increased highway capacity expansion.

1000 Friends analyzed 11 highway projects that have been slated for capacity expansion, at a cost of over 3 billion dollars, and compared actual traffic trends with those projected into the future by WISDOT.

An initial screening of all highway studies in the five WisDOT designated regions in the state was carried out. We selected studies that mentioned a variation of "increasing traffic levels", "future traffic levels" or "congestion" under their Purpose/Need documentation. Some studies that mentioned these terms did not have associated environmental documentation and were therefore omitted from the study. Next, traffic counts, or Annual Average Daily Traffic (AADT) records for each selected study were compiled using data from WISDOT historic traffic counts. AADT data varied based on availability, as some years of data were not either not calculated, or were not available publically. We generated scatterplots of AADT numbers and projected a linear trend into the study's design year. Time scales for developing the trend data from scatterplots ranged from eight to fourteen years. Only one traffic count point was selected for each study. Preference was given to points containing the most years of data. If all points had equal years of data, the one with higher traffic volumes was used. Traffic projections - as found in each study's environmental documentation were then added to the traffic count spreadsheets. We then developed a trend line from WISDOT projections of AADT in the design year.

The following data were then calculated:

- Percent change in AADT over time
- Actual total percentage change in AADT
- Average annual growth rate in AADT over that time period
- WISDOT projected percentage change in AADT
- WISDOT projected annual average growth rate in AADT
- Percentage difference in projected AADT trends (actual vs. WISDOT projections)

⁵ *Changing Transportation Trends and Misplaced Priorities, Anandanarayanan,*
<http://www.1kfriends.org/transportation/changing-transportation-trends-misplaced-priorities/>

The following projects were part of the analysis.

Study	Cost (millions)	Difference in projected trends
Wisconsin 23, Fond du Lac County	\$128.20	30%
Interstate 94, St. Croix County	\$161	66%
Interstate 94, Milwaukee County	\$1,200	56%
US 14/61, Vernon County	*	93%
Wisconsin 50, Kenosha County	\$56.60	67%
US 63/Wisconsin 64, St. Croix County	\$50	70%
US14/61/Wisconsin 35, LaCrosse County	\$9.40	148%
US 8, Polk and Barron Counties	\$216	317%
Wisconsin 45/100, Milwaukee County	\$25.10	86%
Interstate 43 NS, Milwaukee and Ozaukee Counties	\$452	255%
US 51, Dane County	\$875	57%
Wisconsin 20/83, Racine County	*	55%
Wisconsin 241, Milwaukee County	\$55.20	1328%

* Data unavailable.

Conclusions

Our analysis indicated that in every single case, WISDOT based the need and purpose of the highway expansion project on projected trends that were much higher than that of the last decade. The average difference in projected trends, after removing outliers was 73%. In most cases WISDOT projected annual growth rates of over 2%, while most corridors in the study saw either negative or no growth.

Study	Yearly change in traffic	WISDOT projected yearly change in traffic
Wisconsin 23, Fond du Lac County	0.28%	2.6%
Interstate 94, St. Croix County	0.97%	3.1%
Interstate 94, Milwaukee County	-0.88%	0.75%
US 14/61, Vernon County	-0.4%	4.8%
Wisconsin 50, Kenosha County	1.44%	5.4%
US 63/Wisconsin 64, St. Croix County	-0.85%	4.7%
US14/61/Wisconsin 35, LaCrosse County	-1.7%	3.5%
US 8, Polk and Barron Counties	-1%	3.4%
Wisconsin 45/100, Milwaukee County	-1.4%	2.5%
Interstate 43 NS, Milwaukee and Ozaukee Counties	-1.5%	1.4%
US 51, Dane County	-1%	2.3%

Wisconsin 20/83, Racine County	-0.6%	1.1%
Wisconsin 241, Milwaukee County	-4.6%	12%

We found that, after removing for outliers, WISDOT projected an average growth rate of 2.96% annually, while in reality, traffic declined, on average 0.55% annually. In the case of Wisconsin 241 in Milwaukee, WISDOT projects a bizarre 12% annual rate of growth – leading to a 1328% difference in projected trends.

Study	WISDOT Total Predicted growth by design year
Wisconsin 23, Fond du Lac County	54.5%
Interstate 94, St. Croix County	78.6
Interstate 94, Milwaukee County	23.3
US 14/61, Vernon County	57
Wisconsin 50, Kenosha County	102.95
US 63/Wisconsin 64, St. Croix County	89.58
US14/61/Wisconsin 35, LaCrosse County	56.44
US 8, Polk and Barron Counties	94.52
Wisconsin 45/100, Milwaukee County	71.83
Interstate 43 NS, Milwaukee and Ozaukee Counties	42.9
US 51, Dane County	57.4
Wisconsin 20/83, Racine County	30.2
Wisconsin 241, Milwaukee County	252.9

On average, after removing for outliers, WISDOT predicted that by 2040, or the closest design year there would be an average of 63% growth in traffic.

It also appears that in many cases highway capacity expansion is added to projects making them far more expensive, when reconstruction or rehabilitation would have sufficed.

The findings of the study point to flaws in WISDOT methodology and raises questions about how the state is choosing to spend its scarce transportation resources. Continuing to expand highways that are likely to be underused at the expense of other transportation modes will leave the state with an inadequate transportation system that does not serve the needs of all users.