

Wisconsin Department of Transportation

**October 2014**

# **MAPSS**

## **Performance Improvement Report**

**Mobility**  
**Accountability**  
**Preservation**  
**Safety**  
**Service**



### **Mission**

Provide leadership in the development and operation of a safe and efficient transportation system

# Welcome to the **MAPSS Performance Improvement Report**

The Wisconsin Department of Transportation's (WisDOT) Performance Improvement program focuses on the core goal areas of Mobility, Accountability, Preservation, Safety and Service (MAPSS). The Scorecard measures in this report have been deemed of highest importance to our customers to show the current state of Wisconsin's transportation system. The progress of these measures is reported on the two-page Scorecard and in the body of this report. The department also has interactive web pages within each core goal area for customers who are interested in "drilling down" into the data.

Some measures are important in demonstrating transparency and accountability, but do not rise to the level of the Scorecard. The progress of these measures is reported in the appendix of this report and on interactive web pages under the category of "additional measures."

In addition to the measures we report externally, we also track measures that are important for the smooth internal operations of the department or support other important performance outcomes; these are reported internally to department managers and staff. For example, we track several internal Division of Motor Vehicles (DMV) measures that support our Scorecard measures for this important service area.

The maturation and progress within this program is a continual process. I am pleased to share that many of the critical Scorecard measures have seen significant improvements and we continue to steadily approach our performance goals.

The latest MAPSS Quarterly Report and the interactive WisDOT web pages provide details of each performance metric. This information is located at: [www.mapss.wi.gov](http://www.mapss.wi.gov)

**Mark Gottlieb, P.E.**

Secretary

Wisconsin Department of Transportation

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October 2014

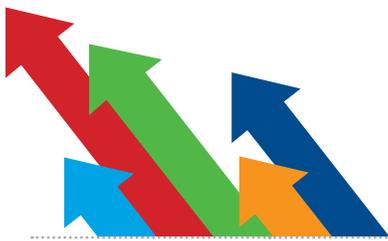
# Wisconsin Department of Transportation MAPSS Performance Scorecard

 Goal has been met
  Performance is trending in a favorable direction
  Trend is holding
  Performance is trending in an unfavorable direction

Performance measure	How we measure it	Current report period	Goal	Goal met	Trend	Comments
<b>Mobility: Delivering transportation choices that result in efficient trips and no unexpected delays.</b>						
<a href="#">Delay (hours of vehicle delay)</a> Seasonal quarter Summer 2014	Number of hours spent in interstate traffic below posted speed	<b>2,069,912 hrs.</b>	Reduced hours of delay			Vehicle delay hours decreased compared to the summer quarter of 2013 (a lower number is better). WisDOT continues to deploy traffic management strategies to reduce delay.
<a href="#">Reliability (planning time index)</a> Seasonal quarter Summer 2014	Index based on extreme travel time in a period	<b>1.14</b>	More on time arrival			The number of corridors with reliable travel time decreased compared to last season quarter. Managing delays and congestion helps to keep the trip times more reliable (a lower value is better).
<a href="#">Transit availability</a> Calendar year 2013	Percent of population served by transit	<b>54.0</b>	75.0			Economic factors affecting this measure include rate of inflation in relation to funding.
<a href="#">Bicycle accommodation</a> Calendar year 2013	Percent of state highway miles with safe bicycle accommodation	<b>67.2</b>	100 percent, except where prohibited			State highway traffic volumes increased which resulted in a net loss of safe bicycle accommodations.
<a href="#">Incident response</a> Calendar year 2013	Average time to clear full closures on the interstate	<b>4 hrs. 22 min.</b>	Decrease response time by 5 percent compared to the prior year.			Severe weather events with multi-car incidents are the largest factor impacting this measure. The department continues to partner with first responders and public safety officials to identify ways to improve.
<a href="#">Winter response</a> State fiscal year 2014	Percent to bare-wet within a specific time period after a storm	<b>59 for 18-hr roads; 66 for 24-hr roads</b>	70.0 within specified time			The winter severity index was extremely high. Numerous storms and long periods of cold temperatures made salt much less effective.
<b>Accountability: The continuous effort to use public dollars in the most efficient and cost-effective way.</b>						
<a href="#">Transportation Economic Assistance Grants</a> Calendar year-to-date 2014	Capital dollars leveraged per grant dollar provided	<b>\$60.09</b>	\$50.00			In the third quarter of 2014, the department leveraged over \$60 in capital investments for every \$1 in grant funds due to private capital investments that resulted in significant job creation and retention.
<a href="#">Timely scheduling of contracts</a> State fiscal year 2014	Percent of highway program funding scheduled during the first six months of each fiscal year	<b>64.5</b>	60.0			DOT has made improvements to ensure our processes allow sufficient time for effective resource planning and competitive bidding. A new goal of 54 percent will be established in SFY 2015.
<a href="#">On-time performance</a> Calendar year 2013	Percent of highway projects completed on-time	<b>96.1</b>	100.0			Construction administration staff has stepped up efforts with project communication to head off problems and keep and keep projects on-time.
<a href="#">On-budget performance</a> State fiscal year 2013	Final highway project cost as percent of original contract amount	<b>102.7</b>	100.0			Costs are impacted by quality and completeness of project designs, field conditions, weather and contract oversight (a lower number is better).
<a href="#">Surplus property management</a> State fiscal year-to-date 2015	Dollar value of surplus land sold	<b>\$1.72 mil.</b>	\$2.75 mil.			The surplus land sales measure is on track to meet the FY 2015 sales goal. Fifteen parcels were sold in the 1st quarter.

The Wisconsin Department of Transportation MAPSS Performance Scorecard reviews five key goals and over-arching performance measures that guide us in achieving our mission “to provide leadership in the development and operation of a safe and efficient transportation system.” Establishing goals and measuring results is essential to running a successful organization and meeting public expectations.

For more information on MAPSS, visit [www.mapss.wi.gov](http://www.mapss.wi.gov)



Goal has been met



Performance is trending in a favorable direction



Trend is holding



Performance is trending in an unfavorable direction

Performance measure	How we measure it	Current report period	Goal	Goal met	Trend	Comments
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**Preservation:** Protecting, maintaining and operating Wisconsin's transportation system efficiently by making sound investments that preserve and extend the life of our infrastructure, while protecting our natural environment.

<b>State highway pavement condition</b> Calendar year 2013	Percent of state highway pavement rated fair or above	<b>87.2</b>	90.0			Pavement condition data provides a barometer of system condition trends.
<b>State bridge condition</b> Calendar year 2013	Percent of state bridges rated fair or above	<b>96.8</b>	95.0			State bridge conditions are holding steady and exceeding the goal.
<b>State-owned rail line condition</b> Calendar year 2013	Percent of state-owned rail line meeting FRA Class 2 Standard (>10 MPH)	<b>56.2</b>	100.0			The department has a number of projects that started in 2013 but will not be completed in 2014.
<b>Airport pavement condition</b> Calendar year 2013	Percent of airport pavement rated fair or above	<b>88.0</b>	90.0			There was a 2 percent decrease compared to last year as a result of a change in calculation methodology.
<b>State highway maintenance</b> Calendar year 2013	Grade point average for the maintenance condition of state highways	<b>2.57</b>	3.0			Conditions improved slightly in 2013, with routine maintenance agreements and improvement projects funding highway maintenance needs.
<b>Material recycling</b> State fiscal year 2013	Tons of recycled materials used in projects	<b>1.89 mil.</b>	2.0 mil.			The department is committed to the recycling effort and continues to research materials and methods to expand the recycling program.

**Safety:** Moving toward minimizing the number of deaths, injuries and crashes on our roadways.

<b>Traffic fatalities</b> Calendar year-to-date 2014 (Preliminary)	Number of traffic fatalities	<b>369</b>	Third quarter target is 400 Annual target is 531			As of September 30th, there have been 369 fatalities in 2014. Our long-term goal is zero preventable deaths (a lower number is better).
<b>Traffic injuries</b> Calendar year-to-date 2014 (Preliminary)	Number of traffic injuries	<b>26,775</b>	Third quarter target is 28,476 Annual target is 38,354			This statistic was changed from a rate to a number because of the delay in receiving the vehicle miles traveled for the measurement period (a lower number is better).
<b>Traffic crashes</b> Calendar year-to-date 2014 (Preliminary)	Number of traffic crashes	<b>77,219</b>	Third quarter target is 73,510 Annual target is 106,201			This statistic was changed from a rate to a number because of the delay in receiving the vehicle miles traveled for the measurement period (a lower number is better).
<b>Seat belt use</b> Calendar year 2014	Percent of vehicle occupants wearing a seat belt	<b>84.7</b>	86.0 by 2016			While Wisconsin's seat belt usage reached an all-time high in 2014, we lag behind neighboring states like Illinois and Michigan, with use rates of more than 90 percent.

**Service:** High quality and accurate products and services delivered in a timely fashion by a professional and proactive workforce.

<b>DMV wait times</b> Calendar year-to-date 2014	Percent of DMV service center customers served within 20 minutes	<b>84.0</b>	80.0			The DMV has begun piloting self-service kiosks and Saturday hours to continue improving this measure.
<b>DMV electronic services</b> Calendar year 2013	Number of DMV electronic service transactions	<b>4.77 mil.</b>	Annual target is 3.96 mil.			There was a 22.7 percent increase in electronic services between 2012 and 2013.
<b>DMV driver license road test scheduling</b> Calendar year-to-date 2014	Available tests as a percent of estimated demand	<b>98</b>	90.0			The DMV has continued to meet its target for this measure and has taken steps to improve the forecasting formula for 2015.
<b>DMV phone service</b> Calendar year-to-date 2014	Percent of DMV phone calls answered within two minutes	<b>72.4</b>	80.0			While this measure remained constant during the busier summer months, the DMV anticipates improvement as performance typically improves during the final quarter.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Mobility: Delay (hours of vehicle delay)

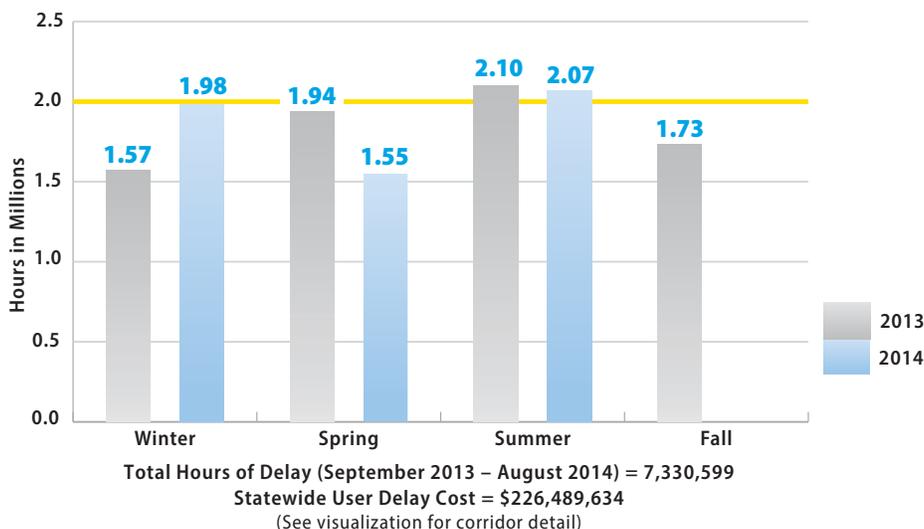
**Report Date:** October 2014    **Data Frequency:** Quarterly (Seasonal Quarters)    **Division:** Transportation System Development

**Why is it important?** Reducing the annual total hours of vehicle delay and its resulting user delay cost on a corridor supports regional economic productivity and development.

Highway congestion occurs when traffic demand exceeds the available capacity of the highway system, this can be measured as vehicle delay. Congestion results in slower speeds, longer trip times, higher levels of harmful emissions and increased costs for auto, bus and freight movements. Congestion is broken into two categories: recurring (regular high volumes, traffic jams) and unexpected (crashes, bad weather).

**Performance measure target:** The Wisconsin Department of Transportation (WisDOT) began reporting this Mobility measure in Winter 2014. The department's quarterly seasonal goal is to reduce vehicle delay and user delay cost from the same quarter of the previous year.

**Figure:** Hours of Vehicle Delay Statewide



**How do we measure it?** Delay is defined as the extra time spent driving in congested road conditions, as compared to free flowing travel conditions. Delay is reported on the state's nine Interstate corridors. Hours of delay is calculated by measuring the number of vehicles on a corridor and then comparing actual travel times for segments of a route to the amount of time it would take to travel that same corridor at the posted speed limit. User delay cost is determined by multiplying user cost, vehicle delay and vehicle occupancy rates. User delay cost data is split into two categories: passenger cars and freight vehicles. Data for this measure is acquired from WisDOT-owned vehicle sensors and an FHWA-sponsored national data set. User cost information is provided by the Division of Transportation Investment Management.

**How are we doing?** This is a new performance measure for WisDOT and the initial reporting of data for the summer quarter. Vehicle Delay and User Delay Cost is reported quarterly and is based upon data gathered from each specific corridor of the Wisconsin Interstate Highway System. Statewide hours of vehicle delay decreased by 27,346 hours during the 2014 summer quarter compared to the 2013 summer quarter. Despite an aggressive construction season, statewide user delay costs decreased by \$16,545 during the 2014 summer quarter compared to the 2013 summer quarter.

**What factors affect results?** Any interference (e.g., special events, peak period traffic, crashes, work zones, incidents) that greatly increases traffic or restricts free-flow conditions will adversely affect vehicle delay.

**What are we doing to improve?** Data on corridor congestion helps WisDOT formulate traffic management strategies and evaluate the impact of changes, such as deploying more advanced Intelligent Transportation System technologies, maximizing existing roadway space to match peak period demands, sharing information through electronic message boards and WisDOT's 511 traveler information services, clearing disabled vehicles more quickly, encouraging drivers to select alternate routes and expanding highway capacity through highway improvement projects. WisDOT has installed new vehicle detection and increased its system coverage to provide more real time travel information for drivers. The department places high importance on data quality and is actively working on quality assurance for new detection systems.

# Wisconsin Department of Transportation MAPSS Performance Improvement



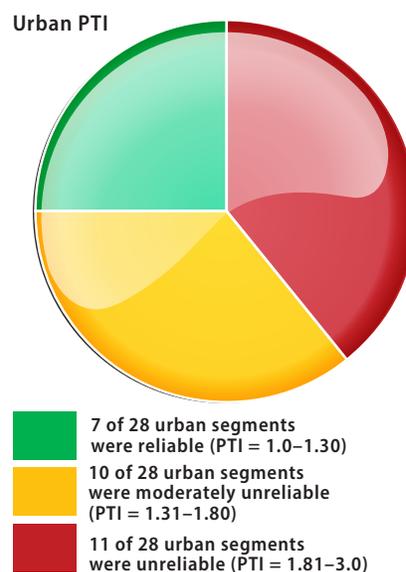
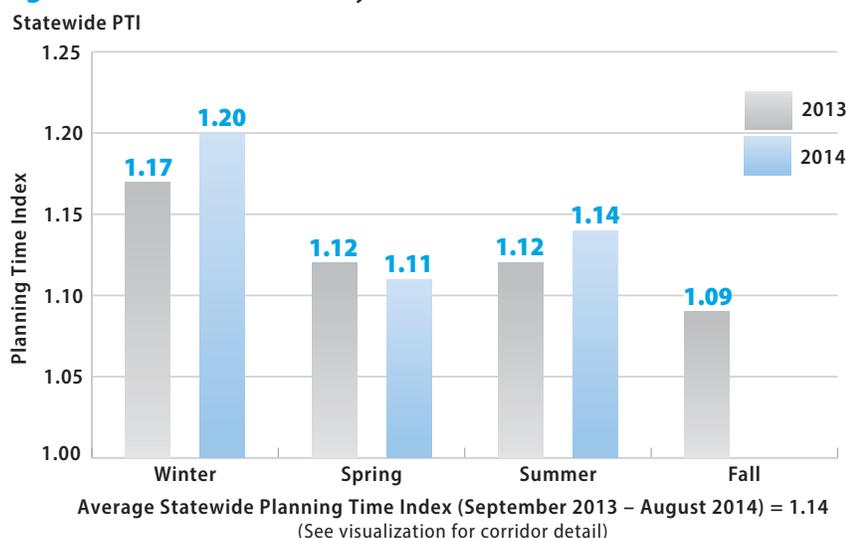
## Mobility: Reliability (planning time index)

**Report Date:** October 2014    **Data Frequency:** Quarterly (Seasonal Quarters)    **Division:** Transportation System Development

**Why is it important?** Travelers expect to arrive safely and on-time at their destination. Their confidence level and certainty of an on-time arrival are intuitive measures of transportation system reliability. The Planning Time Index (PTI) expresses that same value in a mathematical term that helps travelers more precisely budget travel time and helps transportation planners better measure system performance.

**Performance measure target:** The Wisconsin Department of Transportation (WisDOT) began reporting this Mobility measure in Winter 2014. The department's goal is to report the reliability for each Interstate corridor and 28 urban freeway and highway segments. WisDOT's initial seasonal quarterly goal is to reduce the PTI value from the same period of the prior year.

### Figures: Statewide Reliability Index for Wisconsin Interstate Corridors



**What it means:** PTI of 1.5 means that for a **20 minute** trip, you will complete your trip in 30 minutes ( $20 \times 1.5 = 30$ ) the majority of the time.

**How do we measure it?** Reliability is reported on nine interstate corridors and 28 urban freeway and highway segments. The planning time index is calculated from two basic measures: travel time at the posted speed limits and 95th percentile travel time. The 95th percentile travel time marks the most extreme travel delay in a period (the worst of 20 trips). The ratio of these two measures constitutes the index. This measure is represented by direction and by weekday, non-holiday peak periods. Travel time information for this measure was acquired from an FHWA-sponsored national data set. Recent improvements to the data contributing to the Urban Segment Reliability MAPSS measure have refined the results.

**How are we doing?** Reliability is reported quarterly and is based on data gathered from each reported corridor and urban segment. The statewide PTI increased in the summer quarter of 2014, resulting in a decrease in travel time reliability as compared to summer 2013. Fewer urban segments were reliable during this quarter than were reliable during the summer quarter of 2013.

**What factors affect results?** Travel reliability measures variability of congestion. A wide variation in the recorded travel time indicates low reliability and a high planning time index. Traffic incidents, weather conditions, special events, holiday travel, sporadic demands and work zones are all dynamic components of traffic congestion that may adversely affect travel time reliability. Reducing or mitigating the impact of these factors serves to improve travel time reliability.

**What are we doing to improve?** WisDOT's Traffic Operations Performance Management System uses the travel time data to develop strategies that will reduce traffic congestion and improve travel time reliability. These include improved management of work zones, traffic signal systems, ramp meters and new vehicle detection to provide travel times for Wisconsin drivers. The Department places high importance on data quality and is actively working on quality assurance for new detection systems. Drivers may choose to avoid congested routes after accessing [real time traffic information through 511](#).

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Mobility: Transit availability

**Report Date:** October 2014

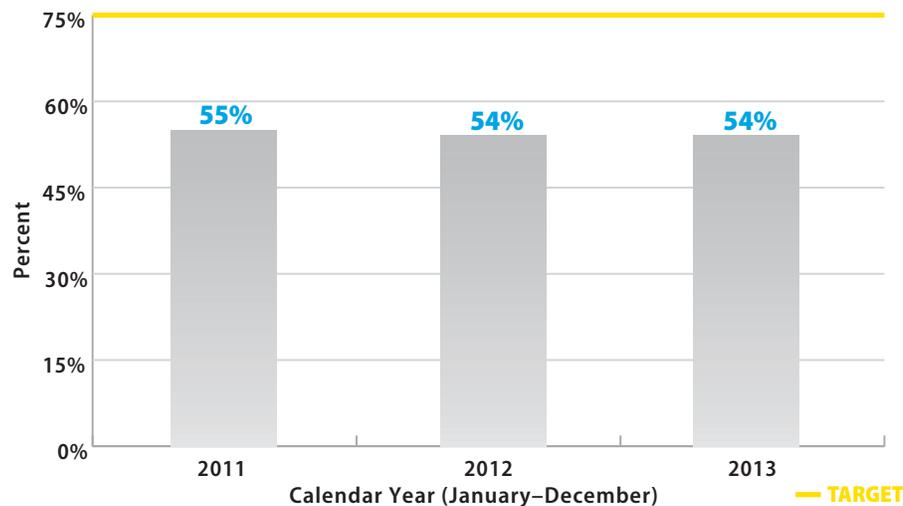
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation Investment Management

**Why is it important?** Transit provides a mobility choice to those who cannot or choose not to drive, and require a transportation option to obtain medical care, make shopping trips, get to school or work and meet other basic needs. Approximately 48 percent of Wisconsin transit riders are headed to work, 23 percent to school, 18 percent to retail, tourism or recreational destinations, and 10 percent to health care services. Greater transit availability means greater mobility for Wisconsin citizens. Transit service is a key component of a comprehensive, multimodal transportation system and contributes to an enhanced quality of life in Wisconsin communities.

**Performance measure target:** The department's goal is to increase the population with access to transit service to 75 percent.

**Figure:** Percent of Population Served By Transit



**How do we measure it?** The total population with access to transit is calculated by adding together the population that resides within one-quarter mile walking distance from a fixed bus route for Wisconsin's urban bus systems and the population within the service area for shared-ride taxi and other public transit systems (i.e. not fixed route). The total population with access is then divided by Wisconsin's total population to determine a percent of Wisconsin's population with access to public transit each calendar year. Only transit services that are supported with public resources are considered in this calculation.

**How are we doing?** Approximately 54 percent of the State's population has access to public transit. This represents no change from 2012 to 2013.

**What factors affect results?** The degree of investment in transit from federal, state and local sources is a major factor affecting this performance measure. For example, transit routes and service areas may differ year-to-year in response to budget levels. Efforts by communities to encourage commercial and residential land use decisions that increase population density in areas having transit access also have an effect. Transit service operated on a regional, as opposed to a community-by-community basis, also tends to increase the percent of the regional population with access to transit.

**What are we doing to improve?** The department actively provides technical assistance to local transit providers in the areas of planning and budgeting, and frequently sponsors transit development plans and feasibility studies to ensure that transit investments are well informed, sustainable and promote effective service. Department staff review transit system budgets and service profiles annually to make sure transit operations are consistent with state and federal regulations, as well as department goals and best practices. The department also conducts comprehensive performance analyses of urban bus systems every five years as a means of assessing how well each transit system serves its community. For urban and rural transit systems, the department compiles an annual cost efficiency report. If the service provided by any system consistently falls outside of efficiency norms, a management performance review is performed, recommendations are made to improve performance and the managers of the transit system are charged with implementing the recommendations.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Mobility: Bicycle accommodation

**Report Date:** October 2014

**Data Frequency:** Annual (Calendar Year)

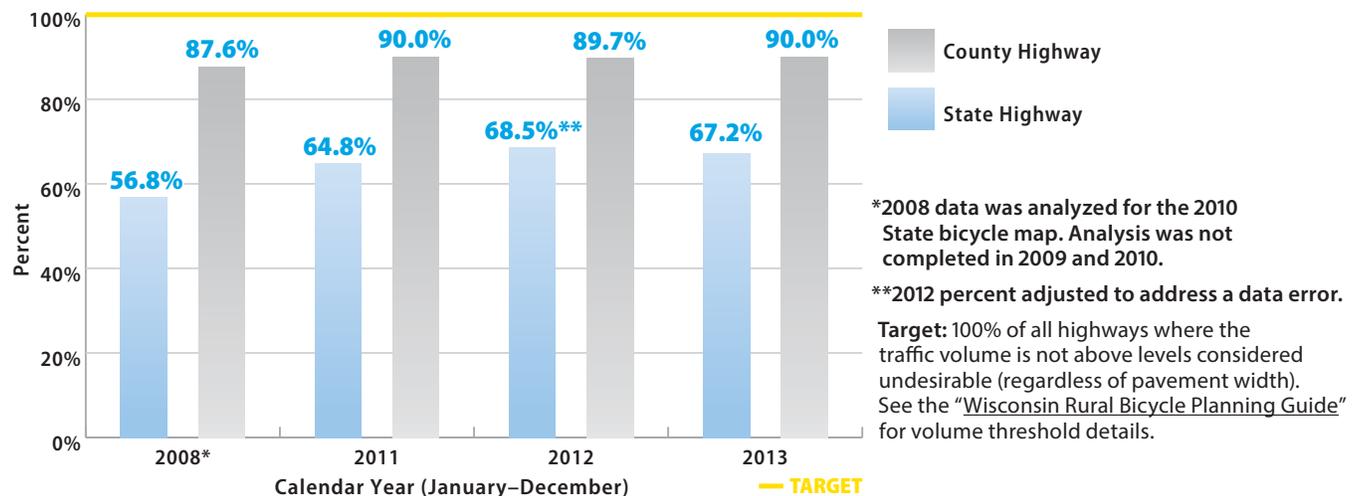
**Division:** Transportation Investment Management

**Why is it important?** Providing for bicycle travel is an important component of any multimodal transportation system. Legislation and regulations exist that ensure bikeways are established in all new highway construction and reconstruction projects funded by state or federal funds unless there is an approved exception. Providing the option to travel by bicycle is necessary for people too young to drive, people who cannot drive or those who choose not to drive. Generally, when roadway conditions improve for bicyclists, there are overall safety and operational benefits for all roadway users.

Continuous improvement is achieved by monitoring rural highway conditions for bicycling because it helps planners and designers identify potential facility improvements. This is especially important in areas that are currently less suitable for bicycle travel and are experiencing growth or increased auto congestion. Facilities such as paved shoulders, wide outside travel lanes, bike lanes or adjacent shared-use paths may improve bicycling conditions.

**Performance measure target:** The department's goal is for county and state highways to accommodate bicycles on all highway projects where bicycles are allowed. Rural highways with very-low to low volumes will provide the best conditions for bicycling.

**Figure:** Percent of Rural County/State Highways Rated in Best/Moderate Condition for Bicycling



**How do we measure it?** The total rural miles of state and county highways with the best or moderate conditions for bicycling are divided by the total number of non-freeway miles of state and county highway in Wisconsin each calendar year. The Department measures bicycling conditions on rural highways by taking into consideration traffic volume, pavement width, truck percentage and percent solid yellow line (an indicator of hills and curves). In general, a rural highway with lower daily traffic volumes may be ranked best or moderate for bicycling. Higher volume two-lane rural highways are considered less desirable for bicycling.

**How are we doing?** Wisconsin continues to improve bicycling conditions on county and state highways. In 2013, the percentage of state highways with a moderate or good condition slightly dropped to 67.2 percent due to traffic volume increases. However, the percentage of county highways increased slightly to 90.0 percent, partly due to the addition of paved shoulders on 53 miles that were rated poor for bicycling in 2012. In addition to our state and county highway system, local roads enhance and complement our bicycle transportation network.

**What factors affect results?** Vehicles per day, travel lane width and the presence or absence of paved shoulders are the primary determinants of rural bicycling conditions. The vast majority of our rural county highways have very low to low traffic and a fair amount of rural state highways that are low volume. The percent of highways that can provide the best conditions for bicycles declines as traffic volumes increase.

**What are we doing to improve?** The improvement in the conditions for bicycling on rural highways is mostly due to the paving of shoulders. The Department recently updated its rural highway paved shoulder policy on pavement replacement, reconstruction, and new construction projects to a standard paved width of 5 feet for asphalt roadways on the state highway system. The Department is also working with the County Highway Association on a shoulder paving policy for county highways. These policies will allow the Department to implement a systematic approach in providing safety and operational improvements and benefits for all roadway users.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Mobility: Incident response

**Report Date:** October 2014

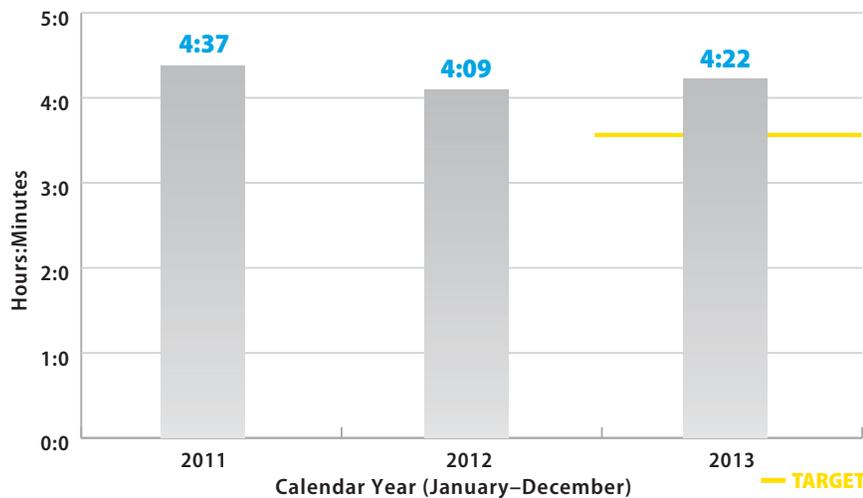
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation System Development

**Why is it important?** Incidents happen on the interstate system every day from minor fender benders to serious traffic crashes. Restoring the interstate to full operation as quickly as possible helps to reduce secondary incidents, minimize delay for people and freight and lessen the associated economic impacts of traffic delays.

**Performance measure target:** The department's goal is to reduce the length of time traffic flow is disrupted by incidents on the interstate. Setting quantitative targets for this measure is very difficult due to challenges related to the reporting mechanism. However, the target is to improve response times by five percent each year.

**Figure:** Average Time to Clear Interstate Highway Incident



**How do we measure it?** This measure focuses on extended duration incidents which are defined as events closing one direction of the interstate for two hours or more, or closing both directions for 30 minutes or more. The clearance time for an incident is defined as the time from when an agency with responsibility to respond first becomes aware of the incident and the time when the last person responding leaves the scene. This performance measure represents the average clearance time over all extended duration incidents for the year.

**How are we doing?** The department was on track toward a historic low year prior to a December storm that resulted in 10 separate multi-car incidents. The department ultimately fell short of the 2013 target and the final average time achieved in 2012.

**What factors affect results?** The specific location, time of day, weather condition, incident complexity, and the number of simultaneous incidents all affect the amount of time required to clear the highway.

**What are we doing to improve?** The Department monitors and records all Extended Duration Incidents (EDI) and then conducts an After Action Review (AAR) to help identify strengths, weaknesses, opportunities and threats associated with clearance activities. The department then compiles and shares these lessons learned with first responder and public safety agencies at regularly scheduled Traffic Incident Management Enhancement (TIME) meetings. This information is used to identify training needs and future initiatives designed to improve performance and reduce incident duration.

Ongoing development of protocols, policies and procedures and open channels of communication all provide opportunities to improve performance. Three new initiatives recently established include delaying recovery of disabled vehicles until after off peak hours, accelerating reconstruction activities with the use of digital cameras as well as advanced planning of alternative routes.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Mobility: Winter response

**Report Date:** October 2014

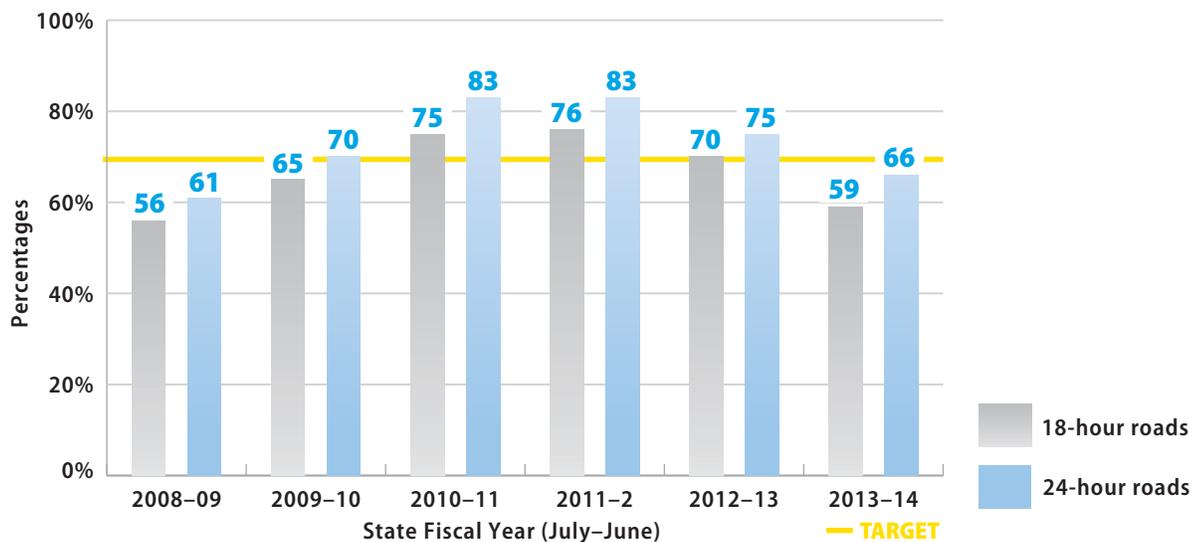
**Data Frequency:** Annual (State Fiscal Year)

**Division:** Transportation System Development

**Why is it important?** Returning roads to the condition they were in before a winter storm restores the capacity of the system to move traffic. This allows safe travel to work, school and other destinations. Clear roads also meet the needs for emergency travel and restore travel time reliability, which is important to the movement of freight.

**Performance measure target:** The department's goal is to clear the state highway system of snow and ice 70 percent of the time within six hours of the end of a winter weather event on roadways that are maintained 18 hours a day and within four hours on roadways that are maintained 24 hours a day.

**Figure:** Percent that Bare-Wet Conditions are Met After Winter Storm Events



**How do we measure it?** Each county provides weekly reports covering each storm event. They record the time at two points: when each storm event ends and when roads were restored to bare/wet pavement. For each storm event, the time to bare/wet pavement is calculated as the elapsed time between these two points. The performance measure is the average percent for all storm events that bare/wet pavement conditions are met for 18-hour roads (within six hours) and on 24-hour roads (within four hours). Data is compiled for each state fiscal year (July-June). Winter severity is calculated each year based on a set of weather factors including the number of snow and freezing rain events, total duration of all storms and total snow accumulation. The index is the gauge by which the department measures the impact of winter on our roads.

**How are we doing?** This last winter fell below the 70 percent goal and is likely attributable to the long, extreme winter with numerous storms and extended periods of polar like temperatures. Salt is much less effective when temperatures are well below 15 degrees Fahrenheit. The winter severity index was the highest ever since the index was created in the early 1990s with a value of 43.1. An average winter has an index of approximately 30.

**What factors affect results?** Controllable factors include the timing of the response, availability of resources, and the quality of the response when accounting for workforce and in-storm decision-making. Performance is also affected by winter weather. The department also calculates a Winter Severity Index that provides a way to compare weather from year to year.

**What are we doing to improve?** The department is implementing best practices using a Maintenance Decision Support System and prioritizing adequate resources for this function. We are also working to ensure the right materials are available and used for the conditions before, during and after each storm event.

# Wisconsin Department of Transportation MAPSS Performance Improvement



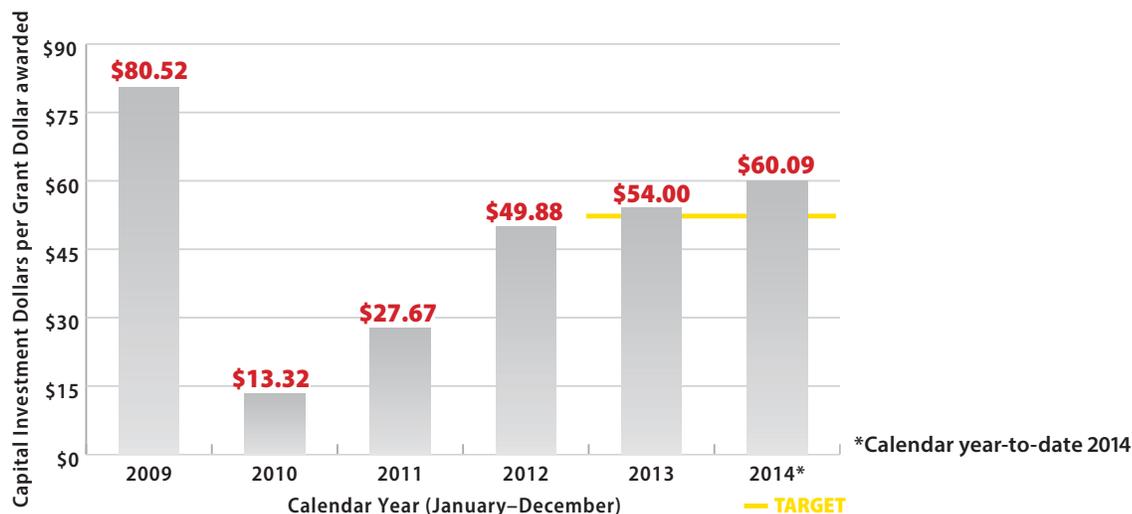
## Accountability: Transportation Economic Assistance Grants

**Report Date:** October 2014    **Data Frequency:** Quarterly (Calendar Year)    **Division:** Transportation Investment Management

**Why is this important?** The Transportation Economic Assistance (TEA) program provides state matching grants of up to 50 percent or \$5,000 maximum per job to governing bodies, private businesses, and consortiums for road, rail, harbor and airport projects that help attract employers to Wisconsin, or encourage business and industry to remain and expand within Wisconsin. The program strives to increase the number of jobs statewide by rapidly responding to the transportation needs of an economic development project when that project is contingent on a transportation facility improvement. The goal is to attract and retain business in Wisconsin that increases the number of local job opportunities, improves the local tax base and boosts spending in the local economy.

**Performance measure target:** Leverage \$50 of capital investments for every \$1 of grant funds provided (measured quarterly).

**Figure:** Transportation Economic Assistance Grants (amount of additional capital investment dollars per grant dollar)



**How do we measure it?** The ratio is calculated by taking the total capital investment and dividing it by the total grant dollars awarded. The amount of the TEA grant is determined by evaluating and approving the cost estimates for the transportation improvement project. This is measured quarterly. A higher number is better.

**How are we doing?** The department is leveraging over \$60 of capital investment for each dollar of grant funds provided, which is above the 2014 target. The private capital investment over grant dollars awarded is above the target value at the mid-point of 2014 due to private capital investments that have resulted in significant job creation and job retention. While grant dollars focus on a transportation related improvement, the capital investment is an outcome of the improvement. For example, TEA grant dollars could be used to extend a roadway. The extension of that roadway would allow a business to erect a large distribution center. The private capital investment is the money used to erect the building(s), install utilities, and purchase processing equipment for the distribution center. The distribution center is then filled with employees, creating jobs and stimulating the economy.

**What factors affect results?** A large factor that affects this measure is the condition of the state and/or local economy. Strong economies tend to enable businesses to invest heavily in capital projects. During economic downturns, businesses tend to make smaller and or more conservative capital investments. The TEA program is linked to national and global economic conditions such as state and federal monetary and fiscal policies, unemployment levels, productivity, exchange rates, inflation and consumer spending. Consumer and business confidence are also indicators of personal and business capital investments.

**What are we doing to improve?** The department works with businesses to make sure the transportation improvement allows the greatest capital investment to maximize job creation. The department attempts to leverage other DOT programs to enhance the transportation infrastructure for the development site. It is also looking at ways to streamline and automate the application process.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Accountability: Timely scheduling of contracts

**Report Date:** October 2014

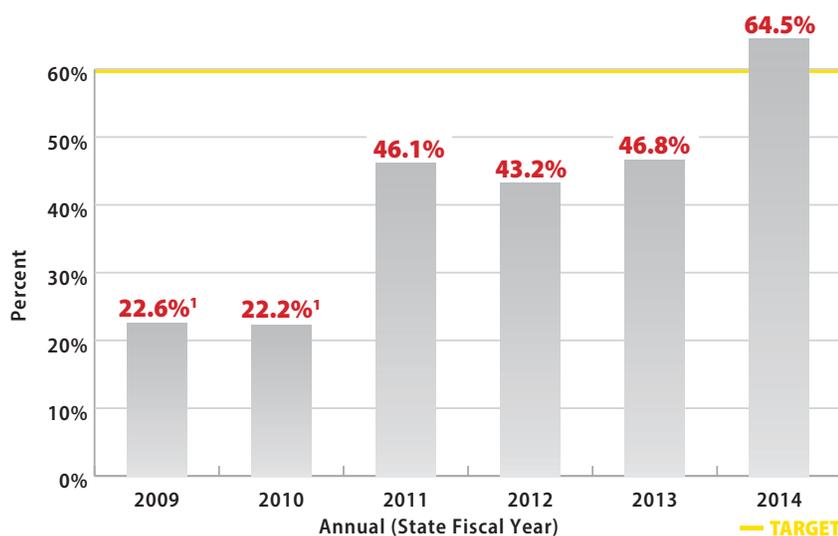
**Data Frequency:** Annual (State Fiscal Year)

**Division:** Transportation System Development

**Why is this important?** The process for timely scheduling of contracts is critical because it distributes improvement projects into monthly bid lettings over the course of the state fiscal year. This enhances program delivery by balancing the workload for the department and the road building industry. The department's ultimate objective is to maximize competitive bids, provide the department flexibility in adjusting lettings in the last half of the fiscal year for let contract savings or overages, and allow the department to spend additional federal funds if they are received late in the year.

**Performance measure target:** Contract for 60 percent of the improvement program funding in the first half of the state fiscal year between the months of July and December.

**Figure:** Percent of Annual Road Construction Contract Funds Scheduled for Bid Letting During First Six Months of Fiscal Year



<sup>1</sup> In 2009 and 2010, the department received significant ARRA funding late in the year. Timing of the ARRA funded projects and the increased total value had a negative effect on the department's ability to meet this performance measure target.

**How do we measure it?** Monthly snapshots allow the department the ability to compare the actual funding amounts programmed with predefined monthly targets.

**How are we doing?** The department initially believed that having a predefined plan with a greater percentage of work being let prior to January 1st each year would allow the road building industry to efficiently plan and schedule work forces and equipment for the upcoming construction season. The goal was initially (2008) set at 50 percent and increased to 60 percent in 2009. With input from the road building industry, the department has set a new goal of 54 percent in state fiscal year 2015 to more evenly distribute the lets, which will result in better resource planning and more competitive bids.

**What factors affect results?** Several large projects in one year present scheduling challenges. These projects create large spikes in the let distribution flow.

**What are we doing to improve?** The department's planning, project development, contract proposal management and Bureau of State Highway Programs meet regularly to discuss and look for opportunities to better manage this process. This measure is monitored monthly and reported out at the Planning Chief Meetings. WisDOT is meeting with industry representatives annually, to get feedback and to ensure our work processes are synced to get the best results.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Accountability: On time performance

**Report Date:** October 2014

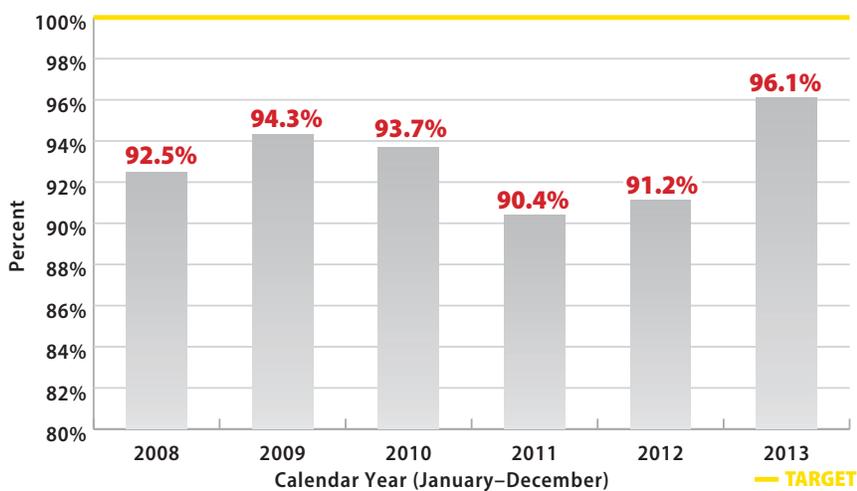
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation System Development

**Why is this important?** This measure indicates the department's ability to estimate and manage the amount of time it will take to complete a highway construction project. The better the department is at determining project time, the better able we are to schedule future projects to effectively utilize contractor resources. The general public and businesses are impacted by construction projects. When the department adheres to a schedule, the better everyone can plan for the impacts.

**Performance measure target:** The department's goal is to meet the project time frame specified in the construction contract 100 percent of the time.

**Figure:** Percent of Highway Projects Completed On Time



**How do we measure it?** This measure reports the percent of construction projects that were completed within the original project time frame specified. The numbers are calculated by identifying construction projects that had work completed during the calendar year and then comparing the actual date/days the project took to complete with the date/days that were specified in the contract.

**How are we doing?** The number of construction projects completed on time increased more than five percent from 2012 to 2013. Construction administration staff has improved project communication to minimize contract problems and keep the contract on-time.

**What factors affect results?** Factors affecting this measure include adverse weather, plan changes during construction, material delays or shortages, utility work delays and contractor scheduling. The on time performance is also impacted by the quality and completeness of project designs.

**What are we doing to improve?** The department is focusing on three areas to improve this measure:

- Let larger and more complex construction contracts out for bid in the fall or early winter to ensure that contractors have adequate time to schedule the resources and staffing needed to complete the project on time
- Use historic project data to develop more accurate project schedules
- Work with the utility industry to prevent delays by obtaining better facility location information on plans

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Accountability: On budget performance

**Report Date:** October 2014

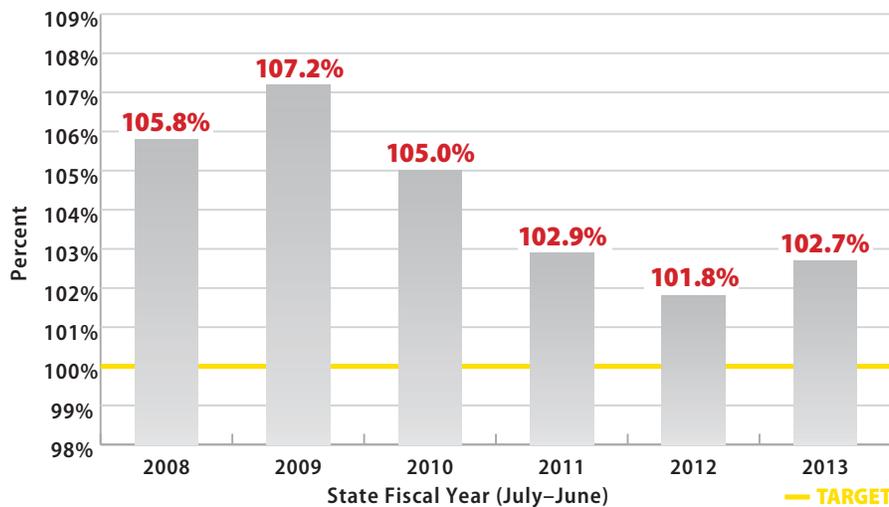
**Data Frequency:** Annual (State Fiscal Year)

**Division:** Transportation System Development

**Why is it important?** The department aims to have the final project cost as close as possible to the amount that was originally contracted when the project was let out for bid. Minimizing project cost overruns allows the department to better plan where to spend the limited dollars that are available. It also provides a measure of quality for the original project design and construction management.

**Performance measure target:** The department's goal is to have the actual project costs equal the original contract amount, or a value of 100 percent.

**Figure:** Final Highway Project Cost as a Percent of the Original Contract Amount



**How do we measure it?** This measure focuses only on projects in the State Highway Rehabilitation and Major Highway programs where construction is at least 95 percent complete. The measure compares the actual construction costs (excluding engineering and project oversight) with the original contract amount within a state fiscal year (July–June) and computes it as a percentage.

**How are we doing?** The department's average over a six-year reporting period of under six percent in cost overruns is considered good by industry standards. Despite a slight uptick over last year, the overall trend for the six-year reporting period is still heading toward the goal of 100%.

**What factors affect results?** Actual costs are impacted by the quality and completeness of project designs, changes in field conditions, weather and contract oversight. Active change management procedures, changes in customer expectations and changes in how projects are scoped and managed can also influence results.

**What are we doing to improve?** The department is using a variety of techniques to improve performance reporting and overall project management. These include enhanced risk management and project oversight for large contracts, organization changes to provide critical reporting services and process improvements related to contract change management.

Over the last year the department has been analyzing individual 2012 projects that exceeded 108 percent related to construction change orders and overruns to identify trends and isolate best practices. This year, a similar analysis will be done on 2013 projects to verify results and a plan will be developed to address issues.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Accountability: Surplus property management

**Report Date:** October 2014

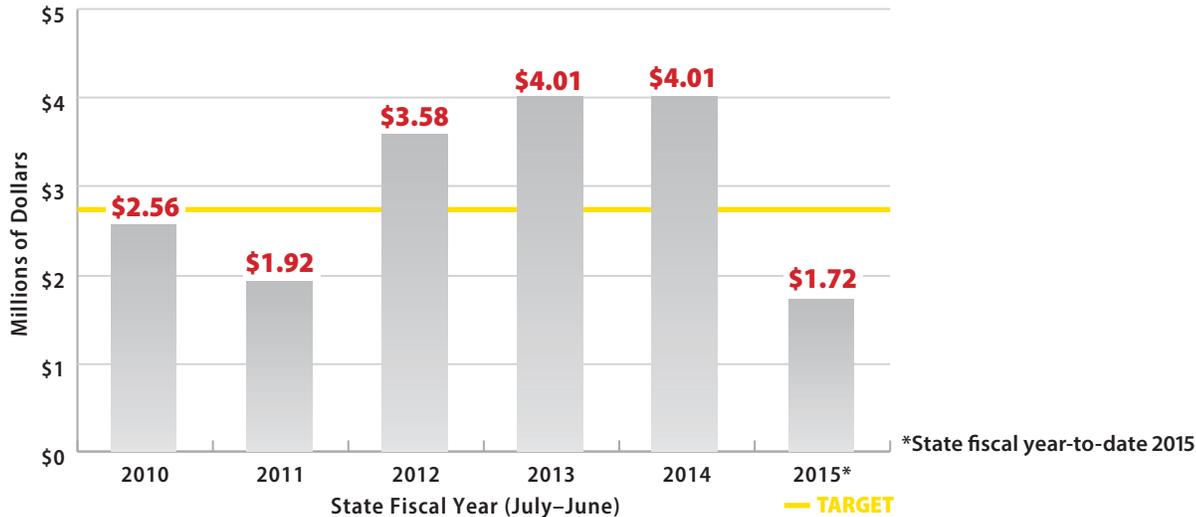
**Data Frequency:** Quarterly (State Fiscal Year)

**Division:** Transportation System Development

**Why is it important?** The department purchases property for transportation improvement projects. Once the project design and construction is complete, some of the land is no longer needed by the state and can be made available for private development. The revenue generated by surplus land sales is deposited into the Transportation Fund to be available for other transportation improvements. Surplus land that is sold spurs local economic development since the parcels often have good access and visibility. When land is returned to the tax rolls, local governments benefit because they can generate new property tax revenue from the property.

**Performance measure target:** The department's goal is to generate \$2.75 million in revenue each state fiscal year through the sale or lease of surplus property in accordance with Wisconsin State Statute 85.15(2) and to return as much land as possible to the local tax rolls.

**Figure:** Value of Surplus Land Sold



**How do we measure it?** The department's regional offices enter sale and lease data into a central system. This data is then broken down into four categories—sale of land, sale of buildings and personal property, rental income, and lease income. The total revenue from surplus land sales is compiled for each region, all regions are combined for the total state revenue in the 2015 fiscal year.

**How are we doing?** Sales values are trending toward achieving the FY 2015 goal. At the end of the 1st quarter, the department had met 62.5 percent of its annual goal. The department sold 15 parcels in the 1st quarter with a goal of 111 for fiscal 2015.

**What factors affect results?** The national economy affects the interest developers have in surplus land for economic development. With increased job growth, easier lending policies and stronger buyer confidence, there is an increase in surplus land purchases both in public and private sales.

**What are we doing to improve?** The department will continue with some of the FY2014 initiatives to improve our rate of surplus land sales in FY 2015:

- Engage student interns to focus on the sale of low value parcels and maximize lease revenue and rental income
- Focus on the sale of surplus land parcels with high maintenance costs
- Continue to streamline and standardize forms and procedures across all regions to improve efficiency

In addition, the use of the real estate inventory management system program has allowed the department to separate land not intended for immediate sale into a hold category. The hold category is intended for future use parcels and single abutter parcels not wanted by the abutting property owner at this time.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Preservation: State highway pavement condition

**Report Date:** October 2014

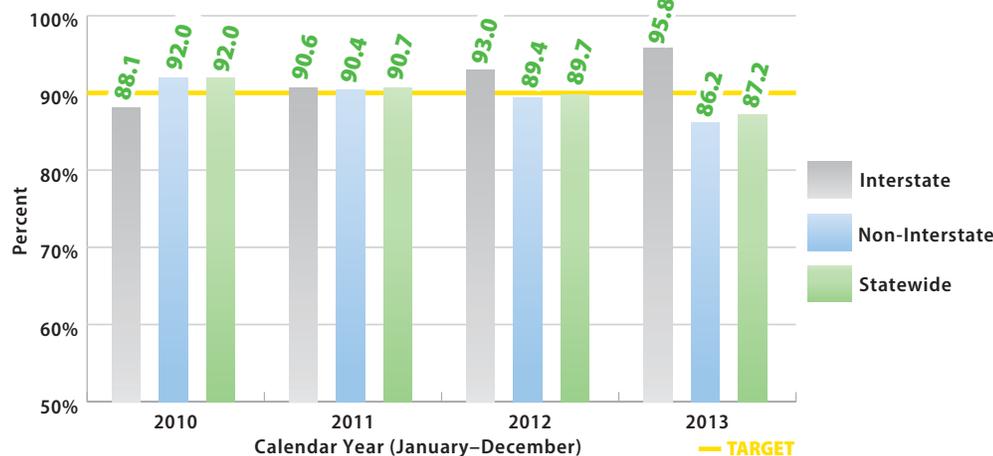
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation Investment Management

**Why is it important?** The nearly 12,000 miles of state highway in Wisconsin support 60 percent of vehicle miles traveled. When pavement is in good condition, it promotes safe and efficient movement of people and products throughout the state. Comprehensive pavement condition data is necessary to determine the most cost-effective maintenance and improvement strategies that extend the life and serviceability of the state highway system.

**Performance measure target:** The department's goal is to have 90 percent of state highway pavements rated fair or above using the most cost effective pavement improvement methods available.

**Figure:** Percent of State Highway Pavement Rated Fair or Above



**How do we measure it?** The Pavement Condition Index (PCI) method is used for rating pavement condition based on visual signs of pavement distress, such as cracks, ruts and potholes. The PCI is a numerical rating that ranges from 0 to 100, with 100 being pavement in excellent condition. Several enhancements were made to the PCI calculation, where data is now being collected and analyzed in both the cardinal and non-cardinal direction on non-divided highways. Improved methodology for measuring rutting on asphalt pavements was adopted, enabling the identification of rutting quantities that would have previously gone undetected.

**How are we doing?** The 2013 data shows 87.2 percent of the system in fair or above condition. Please note that the annual percent of Interstate highways rated fair or above has typically been higher than non-Interstate highways. This trend is expected to continue as Interstate pavement needs are prioritized given their importance to overall system function. Interstate highways represent only 6 percent of state highway miles, yet Wisconsin's Interstate system, including USH-41, carries 30 percent of the traffic and approximately 70 percent of the freight tonnage and freight value traversing Wisconsin's state highways. Without significantly increased investments, Wisconsin's pavement will continue to deteriorate as more costly improvements associated with an aging system consume financial resources and disproportionately delay other needed rehabilitation projects.

**What factors affect results?** In 2013, some of the decrease in fair and above pavements is attributable to increased inspection density as well as increased rutting detection. More samples of the roadway were evaluated with an increased ability to identify pavement distress. The degree of investment in improvement programs from federal and state sources is a major factor affecting this performance measure. Pavement condition is also impacted by material quality, adequacy of pavement design, environmental factors such as temperature and moisture, traffic loading, improvement and maintenance history, and pavement age. The department considers all of these factors when using asset management tools and strategies to determine investment levels and fully utilize the state highway improvement funding provided through the state budget.

**What are we doing to improve?** The department continues to research, develop, and implement pavement rehabilitation and maintenance processes that maximize the long-term health of the highway system. This includes researching and testing new materials while enhancing asset management strategies with improved data, data analysis tools, and prioritization to make sound investment decisions. Increasing inspection density and improved rutting measurement procedures in 2013 will enhance the effectiveness of the Pavement Management Decision Support System (PMDSS). PMDSS uses pavement data to assist engineers, planners, and program analysts in determining which segments of roadway will be included in the 6-year improvement program.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Preservation: State bridge condition

**Report Date:** October 2014

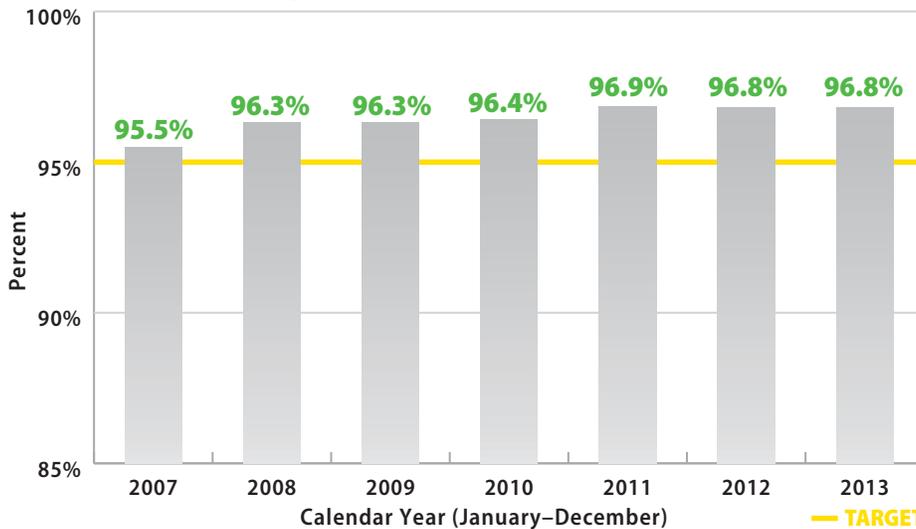
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation System Development

**Why is it important?** Wisconsin bridges are critical infrastructure assets of the highway transportation network. Ensuring safety for the traveling public is a top priority for the department. Inspecting and evaluating bridges is a key component of meeting this objective. Bridges with a condition rating of poor are considered deficient and may need corrective action to ensure current and future operation of the transportation system. An accurate understanding of the condition of the inventory of bridges allows for planning and prioritizing limited resources to address operational needs.

**Performance measure target:** The department's goal is to have 95 percent of Wisconsin's state-owned or maintained bridges rated fair or above.

**Figure:** Percent of Bridges Rated Fair or Above



**How do we measure it?** The department performs bi-yearly safety inspections and condition assessments of bridges. This is the designated frequency in National Bridge Inspection Standards (NBIS). Through these inspections, condition rating data is collected for the deck, superstructure and substructure and an overall rating of good, fair or poor condition is assigned each calendar year.

**How are we doing?** The department works to allocate the resources it has available to meet the safety and mobility needs of the state. Currently 96.8 percent of Wisconsin's 5,217 state owned or maintained bridges have a good rating or fair rating, while 3.2 percent of the state bridges have a poor condition rating. There are 57 state owned bridges with weight restrictions. The above yearly data shows that Wisconsin has been consistently maintaining its good/fair bridge percentage over the past five years. When including Wisconsin's 8,833 local bridges, the good/fair bridge condition rating drops to 89.3 percent, which is consistent with the national average of approximately 89.5 percent. The state highway system network accounts for 10 percent of the total mileage in Wisconsin, yet handles 60 percent of the total vehicle miles traveled.

**What factors affect results?** Wisconsin puts a high emphasis on maintaining and improving its bridges through its rehabilitation and replacement improvement programming. Bridges receive the highest priority in the project selection process. Wisconsin spends additional state money above the federal dollars it receives from the bridge program to maintain its bridges. In addition, the department has a highly successful bridge inspection and bridge management program that ensures safe and efficient bridges.

**What are we doing to improve?** The department is continually looking to improve the condition of its bridges by new technology, bridge innovations, constant inspection monitoring, improved management processes and rigorous quality assurance of the bridge program.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Preservation: State-owned rail line condition

**Report Date:** October 2014

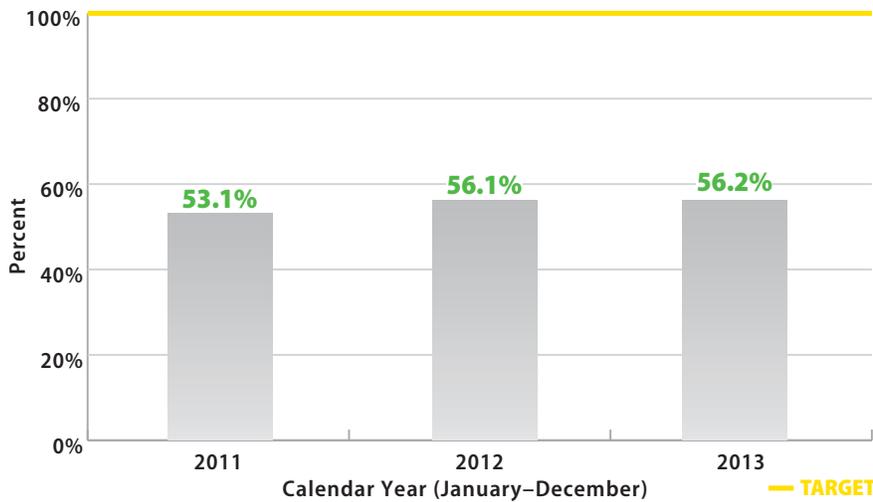
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation Investment Management

**Why is it important?** The efficient movement of freight throughout the state enhances Wisconsin's economic productivity and competitiveness. It is critical to maintain train operating speeds as high as possible to optimize the daily movement of freight in the state.

**Performance measure target:** The department's goal is to have 100 percent of state-owned rail line miles capable of operating at the Federal Rail Administration (FRA) Class 2 operating speed standard. Based on current funding availability, the goal is to improve approximately 10 miles of track per year.

**Figure:** Percent of Miles of State-Owned Rail Line Meeting FRA Class 2 Standard (>10 mph)



**How do we measure it?** The track is evaluated on the number of miles operating at speeds allowed by the FRA's Class II Track Safety Standards. The objective is to have all tracks capable of being operated at speeds over 10 mph with loaded 286,000 pound rail cars on state-owned rail lines. This operational speed allows railroads to serve most customers with a daily round trip.

**How are we doing?** There are approximately 698 miles of rail line owned by WisDOT. This includes approximately 70 miles of track from Madison to Cottage Grove and Reedsburg, which is planned to be acquired in 2014. In 2013, a total of 392 of the 698 miles of track (56 percent of state-owned rail lines) met the desired standard of being able to accommodate operating speeds over 10 mph. There was no year to year change from 2012 to 2013 in the number of miles that meet the standard.

**What factors affect results?** There are several reasons for the fact that no measurable change occurred. One is that few projects were completed during 2013. Projects on approximately 42 miles of track began in 2013 and will be completed in 2014. Project funds were spent on bridge projects that do not affect the miles of track meeting the standard. Also, several projects were delayed or deferred because Freight Railroad Preservation Program (FRPP) funds are being held for the Madison to Cottage Grove/Reedsburg acquisition. Temporary decreases in FRPP funding levels were also a factor. Another general factor affecting results include the economy, which has an impact on the volume of goods moved by railroads, the revenue they earn, and the reinvestment in their track and structures.

**What are we doing to improve?** The department reviews the annual maintenance plans of companies operating on state-owned railroad track and discusses opportunities to upgrade rail track and structure conditions. In 2012 and 2013, the department funded a comprehensive inventory of state-owned rail bridges to develop a better understanding of load carrying capacities and improvement needs. This study is expected to be completed in 2014. The projects initiated in 2013 will be completed in 2014 and once the Madison to Cottage/Reedsburg line acquisition is complete, additional projects will be awarded with remaining FRPP FY 2014 funds. Finally, with the SFY 2013–15 FRPP budget increase to \$52 million, additional projects can be funded.

# Wisconsin Department of Transportation MAPSS Performance Improvement



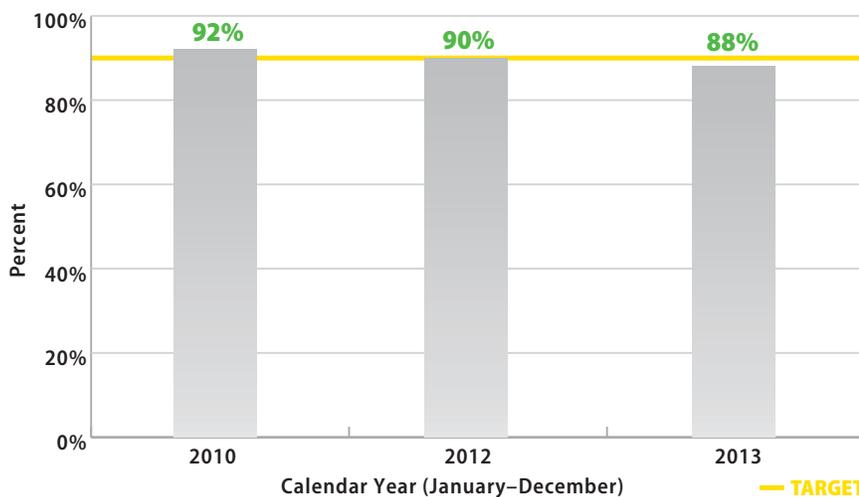
## Preservation: Airport pavement condition

**Report Date:** October 2014    **Data Frequency:** Annual (Calendar Year)    **Division:** Transportation Investment Management

**Why is it important?** Pavement condition ratings are a primary indicator of the long-term structural health of the state’s airport system. The department evaluates pavement conditions at the 98 publicly-owned airports. This includes airports of all sizes including the state’s largest, General Mitchell International Airport.

**Performance measure target:** The department’s goal is to have 90 percent of airport pavement rated fair or above.

**Figure:** Percent of Airport Pavement Rated Fair or Above



**How do we measure it?** The Pavement Condition Index (PCI) method is used for rating pavement condition based on visual signs of pavement distress, such as cracks, ruts and potholes. The PCI is a numerical rating that ranges from 0 to 100, with 100 being a pavement in excellent condition. The average compiled for each calendar year includes an assessment of all runways, taxiways and aprons at the 98 publicly-owned airports.

**How are we doing?** In 2010, 92 percent of Wisconsin’s airport pavements, including all runways, taxiways and aprons, rated at fair or better. Department measurements were previously done on a rotating schedule, meaning a one-to-one comparison to historical data does not exist. However, the pavement condition data is similar to previous years. Data was not collected in 2011. In 2012, 90 percent of Wisconsin’s airport pavements, including all runways, taxiways and aprons, rated at fair or better. Although there was a slight decrease in condition, we were still meeting the goal. In 2012 and 2013, American Society for Testing and Materials (ASTM) made changes to the methodology used to calculate PCI; this resulted in an artificial drop in the average PCI number to 88.

**What factors affect results?** Airports are locally-owned and decision making regarding improvements is handled at the local level. Challenges are presented when pavement is in need of maintenance and rehabilitation but the airport owner has prioritized other projects. This has been especially apparent with the recent high priority safety projects at the state’s larger commercial service airports. In addition, temporary reduction of pavement rehabilitation projects at large airports is significant enough to impact the system average.

**What are we doing to improve?** The department has developed critical PCI values that provide a threshold PCI value for pavements according to pavement use and airport classification. This allows the department to prioritize projects according to their importance and provides a “trigger” value to begin planning and budgeting for future pavement projects. The goal is to keep these pavements at or above their trigger values. Pavement maintenance, rehabilitation or reconstruction must be addressed and the airport must have pavements above the critical PCI value before airports can receive federal or state aid for other projects.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Preservation: State highway maintenance

**Report Date:** October 2014

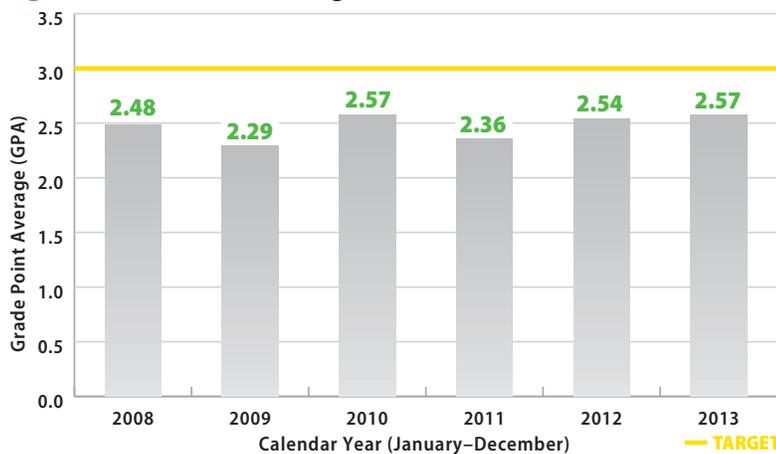
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation System Development

**Why is this important?** The department strives to keep our highway system safe and fully functional. This supports Wisconsin’s vision of a transportation system that maximizes the safe and efficient movement of people and products, enhances economic productivity and minimizes the impacts to the natural environment.

**Performance measure target:** The department’s goal is to maintain a 3.0 out of 4.0 grade point average (GPA) of 28 features evaluated including roadway shoulders, drainage features, roadside elements, and traffic control and safety devices.

**Figure:** Grade Point Average for the Maintenance Condition of State Highways



**How do we measure it?** Condition data is collected each fall as part of a field review process. Rating teams composed of region maintenance coordinators and county patrol superintendents rate a random sample of 1,200 one-tenth mile segments around the state. Critical safety, safety/mobility, stewardship, ride/comfort, stewardship and aesthetic features are assessed and documented. Grading curves are established to help identify areas for improvement, such as reducing shoulder drop-off, removing hazardous debris from shoulders, maintaining visible center line and edge line markings and providing more visible, longer-lasting traffic signs. Beginning in 2012, these grading curves were amended to better reflect department maintenance policies by prioritizing safety and asset management. The 2008–11 scores have been adjusted to this new grading curve and result in an average drop of .25 per year.

**How are we doing?** Overall conditions varied little between 2012 and 2013. Minor backlog reductions of one to four percentage points pushed four features into a higher grade level (protective barriers, routine replacement of regulatory/warning signs, routine replacement of “other” signs, and drains). Based on minor backlog reductions of two to four percentage points, grades declined for three features (centerlines, edgelines, and drop-off on paved shoulders). The overall grade point average increased 0.03 in 2013.

**What factors affect results?** The annual GPA is impacted by baseline conditions, maintenance budget levels, maintenance policies, winter maintenance costs and the improvement program. Conditions declined in 2009 as winter maintenance activities used more of the available maintenance highway funding. Conditions improved in 2010, based largely on the accelerated improvement program funded by American Recovery and Reinvestment Act (ARRA). Maintenance conditions declined slightly in 2011 as funding levels fell back to historic levels. Conditions improved slightly in 2012 as a result of the mildest winter in the last six years. This allowed efforts to focus on non-winter maintenance needs. Conditions generally stayed the same in 2013, with routine maintenance agreements and improvement projects funding highway maintenance needs.

**What are we doing to improve?** Management strategies include leveraging the improvement program, focusing on cost efficient delivery of winter maintenance services, communicating statewide maintenance targets to regions, and linking targets to county routine maintenance agreement activities. To address the shortfall in needs and funding the department has prioritized maintenance targets and work priorities and provided this to regions and counties as priorities in programming Routine Maintenance Agreement (RMA) dollars. The 2013-15 maintenance appropriation increased \$50 million to fund variable winter maintenance costs and to restore some deferred maintenance services. Funding is available beginning in July 2014 to help reduce maintenance backlogs. Additional funding beyond this level will be necessary to meet the 3.0 target GPA. A \$9 million performance-based maintenance pilot will fund 146 gravel shouldering, pavement crack sealing, and bridge deck sealing projects later this year. Broader-based delivery options are also being pursued to supplement the county-based maintenance model in calendar year 2015.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Preservation: Material recycling

**Report Date:** October 2014

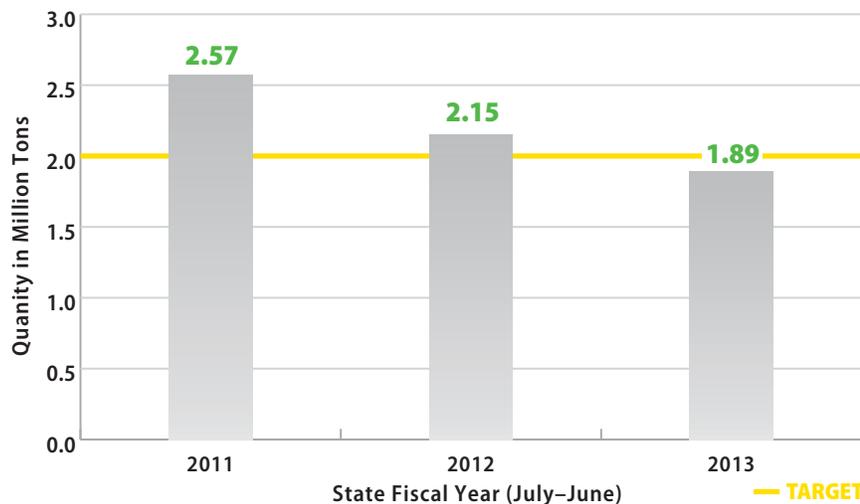
**Data Frequency:** Annual (State Fiscal Year)

**Division:** Transportation System Development

**Why is it important?** The department strives to incorporate environmental sustainability or green initiatives in its vision for providing a safe and efficient transportation system. This includes incorporating the use of recycled materials in improvement projects to lessen the impact on Wisconsin's environment and to preserve resources for future generations.

**Performance measure target:** The department's goal is to incorporate 2.0 million tons of recycled materials into projects and to continually strive to improve by increasing the tonnage and finding new materials to recycle.

**Figure:** Million Tons of Recycled Materials Used in Projects



**How do we measure it?** Recycled material quantities are calculated based on summation of total quantities for the year for bid items for which recycled material is typically used, multiplied by frequency of use and unit quantity estimates for each recycled material. The total of the estimates is added up for each state fiscal year.

**How are we doing?** The department demonstrates ongoing leadership in conserving resources, minimizing waste, keeping materials out of landfills, and avoiding Greenhouse Gas emissions. Each year the size and types of projects in the Improvement Program dictate the amounts of recycled materials eligible to be used in projects. In 2011, the department achieved an unusually high level of recycled materials use due to the number and type projects that year. Almost all projects incorporate recycled materials, the largest type being recycled concrete (1.2 million tons) followed by reclaimed asphaltic pavement in hot mix asphalt and in base course. For every ton of fly ash that has been used to replace a ton of Portland cement, the department saves 1 ton of CO<sub>2</sub> and 1 million BTUs of energy. The amount of recycled asphalt pavement (RAP) the department uses annually would pave a two-lane highway two inches thick from Kenosha to Superior.

**What factors affect results?** The department wants to encourage the use of recycled materials and has written project specifications to allow recycled materials. Ultimately, the contractor makes the decision on the materials to use based on market conditions. The economy, fuel costs and landfill tipping fees impact the cost effectiveness and attractiveness of recycling.

**What are we doing to improve?** The department continues to work with other states at a National level to develop new technologies and methods to incorporate not only greater amounts of recycled material but also new recycled materials. On a state level we are investigating new fly ash sources, greater amounts of RAP and new materials such as bottom ash, slag and others. These efforts have yielded significant results in the past in the form of new materials being recycled and greater amounts of the material currently being used.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Safety: Traffic fatalities

**Report Date:** October 2014

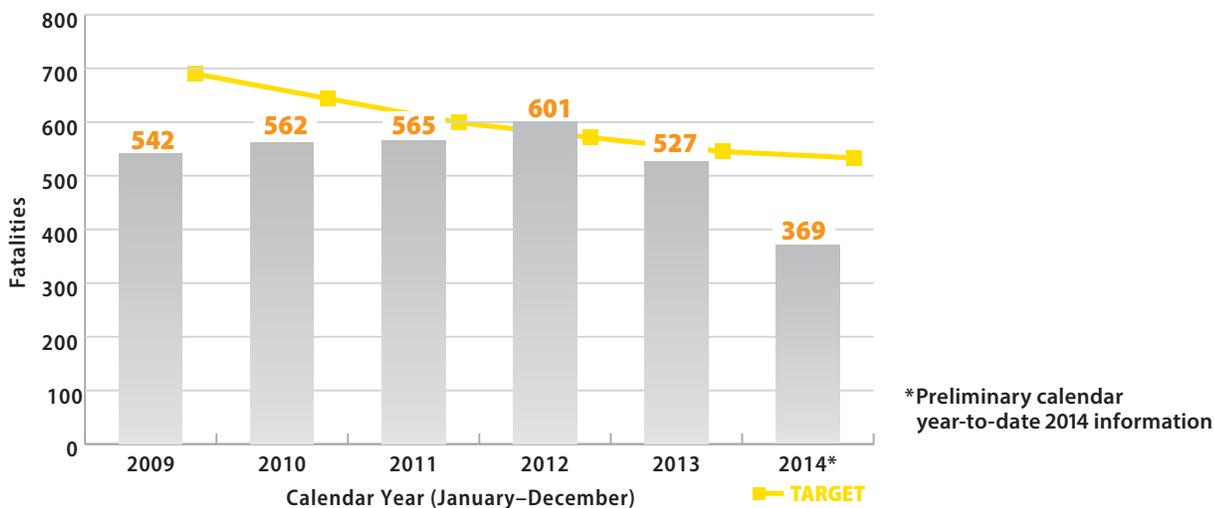
**Data Frequency:** Quarterly (Calendar Year)

**Division:** State Patrol

**Why is this important?** Any preventable traffic death on Wisconsin's roadways is one too many. Each fatality is a tragedy—a person who will not be returning home.

**Performance measure target:** For each calendar year, the department seeks to reduce traffic fatalities by five percent from the prior five-year rolling average. This supports the department's over-arching safety goal of zero deaths on Wisconsin roads (Zero in Wisconsin).

**Figure:** Number of Traffic Fatalities



**How do we measure it?** The measure uses traffic fatality data collected through the national Fatality Analysis Reporting System (FARS). The information is not considered final until approximately June of the following year as data is reported late or needs verification.

**How are we doing?** Wisconsin has experienced a dramatic reduction in traffic fatalities on its roads in recent years. In 2013, there were 527 traffic fatalities in Wisconsin, which is the lowest annual fatality total since 1944. As of September 30, 2014, Wisconsin has had 369 fatalities, which is 6.1 percent fewer than last year at this time. Even though Wisconsin has had 92 fatality-free days in 2014 (the five-year annual average is 99), there are still far too many needless and preventable deaths on our roadways. In many instances, drivers and passengers have been ejected from the vehicle because they were not wearing seat belts. Wearing a seat belt is the single most effective way to prevent ejection or being violently thrown around inside the vehicle during a crash. Wisconsin's fatality rate for 2013 was 0.89 per 100 million vehicle miles traveled (VMT), which is the lowest recorded.

**What factors affect results?** Traffic crashes are avoidable events caused by such factors as human behavior, vehicle condition and environmental surroundings. Weather can also have a seasonal impact, especially on motorcycle or bicycle-related fatalities. The largest factor and most difficult to change is the risk-taking behavior of drivers and tolerance of the public toward risky behavior.

**What are we doing to improve?** The department uses a combined strategy of engineering, education, enforcement and emergency response to prevent traffic fatalities, including designing safer roads and maintaining the highway infrastructure. The department has expanded the use of multi-jurisdictional High Visibility Enforcement task forces around the state to address impaired driving and seat belt use. Speed and aggressive driving are targeted through increased use of aerial enforcement in partnership with agencies across the state. Over the past year, a record number of law enforcement agencies pledged to participate in seat belt and alcohol enforcement mobilizations. The department provides ongoing educational outreach to high school students to promote safe driving, use of seat belts and eliminating driving distractions. It also plans to continue its efforts to install centerline and shoulder rumble strips and other roadway improvements in corridors with safety concerns.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Safety: Traffic injuries

**Report Date:** October 2014

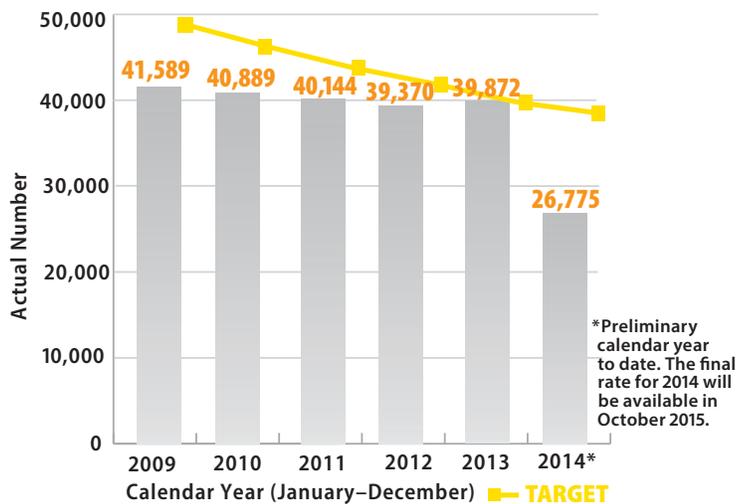
**Data Frequency:** Annual (Calendar Year)

**Division:** State Patrol

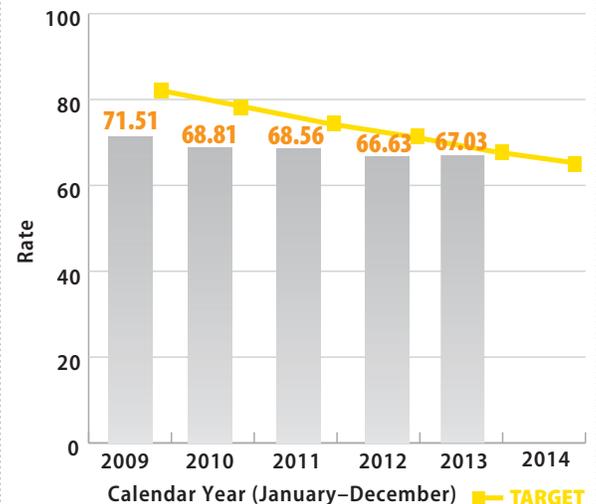
**Why is this important?** Each traffic crash creates the possibility of loss of life, debilitating injuries or lost income and productivity for crash victims. Any preventable traffic death or incapacitating injury is one too many.

**Performance measure target:** The goal of this measure is to reduce the number of personal injuries from traffic crashes by five percent from the prior five-year rolling average.

**Figure 1:** Total Number of Injuries



**Figure 2:** Injury Rate Per 100 Million Vehicle Miles Traveled



**How do we measure it?** The measure uses traffic injury data collected from the WisDOT crash database to calculate the personal injury rate. Injuries related to vehicle crashes are calculated against vehicle miles traveled each calendar year to generate an injury rate per 100 million vehicle miles traveled. Prior year volume data used to calculate this rate is available by September of the subsequent year.

**How are we doing?** The number of traffic injuries so far in 2014 is 26,775, 8.1 percent below last year at this time and 10.7 percent below the five-year average. When calculated against vehicle miles traveled, the personal injury rate in Wisconsin in 2013 was 67.03 personal injuries per 100 million vehicle miles traveled. This is six percent below the prior five-year rolling average of 71.34. Serious injury crashes (those that result in incapacitating injuries) have declined from 3,990 in 2007 to 3,309 in 2013. There have been 1,706 serious injury crashes on Wisconsin roads as of September 2014 (preliminary).

**What factors affect results?** Traffic crashes are avoidable events caused by such factors as human behavior, vehicle condition and environmental surroundings. Weather can also have a seasonal impact, especially on motorcycle or bicycle-related crashes. For motorcyclists and bicyclists, the use of proper safety gear can reduce severity of personal injuries. Wearing a seat belt while in a car or truck is the single most effective way to reduce or eliminate injury in a crash. Safety and road design improvements and tougher laws can have a positive impact on crash frequency. In addition, the severity of injuries in crashes can be lessened through rapid and high-quality emergency medical response.

**What are we doing to improve?** The department uses a combined strategy of engineering, education, enforcement and emergency response to prevent traffic crashes and injuries, including designing safer roads and maintaining the highway infrastructure. In addition, the department has expanded the number of multi-jurisdictional High Visibility Enforcement task forces to address impaired driving and seat belt use. The department is targeting speed and aggressive driving through increased use of aerial enforcement, and in partnership with agencies across the state during the summer months on the "Summer Heat" program. Over the past year, a record number of law enforcement agencies pledged to participate in the national seat belt and alcohol enforcement mobilizations. The department provides ongoing educational outreach to high school students to promote safe driving, use of seat belts and eliminating driving distractions, such as texting. The department also plans to continue its efforts to install center line and shoulder rumble strips and other roadway improvements in corridors with safety concerns.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Safety: Traffic crashes

**Report Date:** October 2014

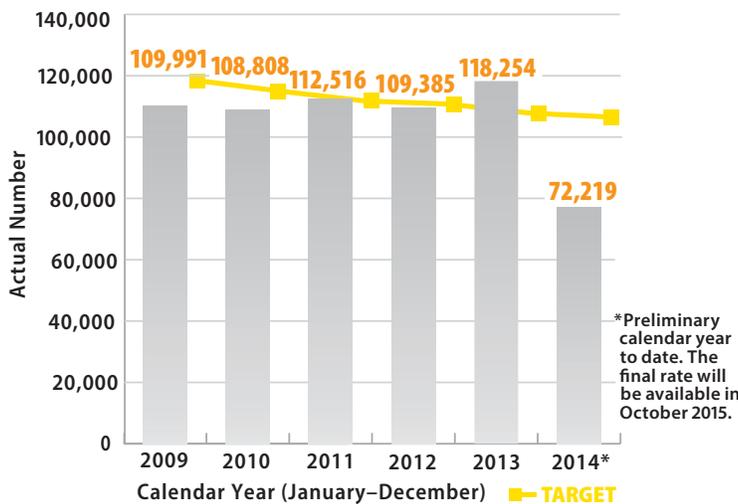
**Data Frequency:** Annual (Calendar Year)

**Division:** State Patrol

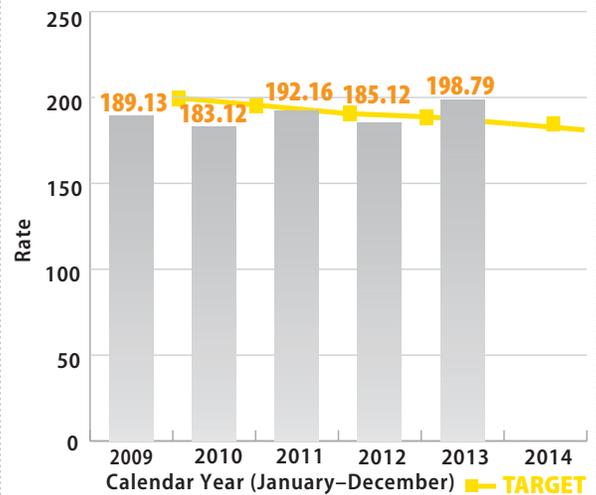
**Why is this important?** Each crash creates the possibility of loss of life, debilitating injuries or lost income and productivity for crash victims. Crashes on the road system also impact traffic flow and the timely movement of goods and people to their destinations.

**Performance measure target:** The goal of this measure is to reduce traffic crashes on Wisconsin roads by five percent from the prior five-year rolling average.

**Figure 1:** Total Number of Crashes



**Figure 2:** Crash Rate Per 100 Million Vehicle Miles Traveled



**How do we measure it?** The measure uses traffic crash data collected from the WisDOT crash system. In order to calculate the annual crash rate, the total number of crashes is divided by the number of vehicle miles traveled (in hundreds of millions). Prior year volume data used to calculate this rate is available by September of the subsequent year.

**How are we doing?** As of September 30th, the number of traffic crashes on Wisconsin roads was 77,219. This is 4.5 percent below last year and 0.2 percent below the five-year average. The crash rate in 2013 increased from the rate in 2012. The crash rate of 183.12 in 2010 was the lowest rate recorded since 1944. In calendar year 2013, there were 118,254 total crashes (fatal crashes, injury crashes and property damage crashes) on Wisconsin roads. When calculated against vehicle miles traveled in 2013, the crash rate was 198.79 crashes per 100 million vehicle miles traveled. This is 2.8 percent above the prior five-year rolling average of 193.45.

**What factors affect results?** Traffic crashes are avoidable events caused by such factors as human behavior, vehicle condition and environmental surroundings. Weather can also have a seasonal impact, especially on motorcycle or bicycle-related crashes.

**What are we doing to improve?** The department uses a combined strategy of engineering, education, enforcement and emergency response to prevent traffic crashes and injuries. This includes designing safer roads, maintaining the highway infrastructure, educational efforts targeted on prevention, and expanding enforcement campaigns in partnership with law enforcement agencies across the state. The department works to encourage drivers to stay within the speed limit, drive sober, buckle their seat belts and eliminate driving distractions.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Safety: Seat belt use

**Report Date:** October 2014

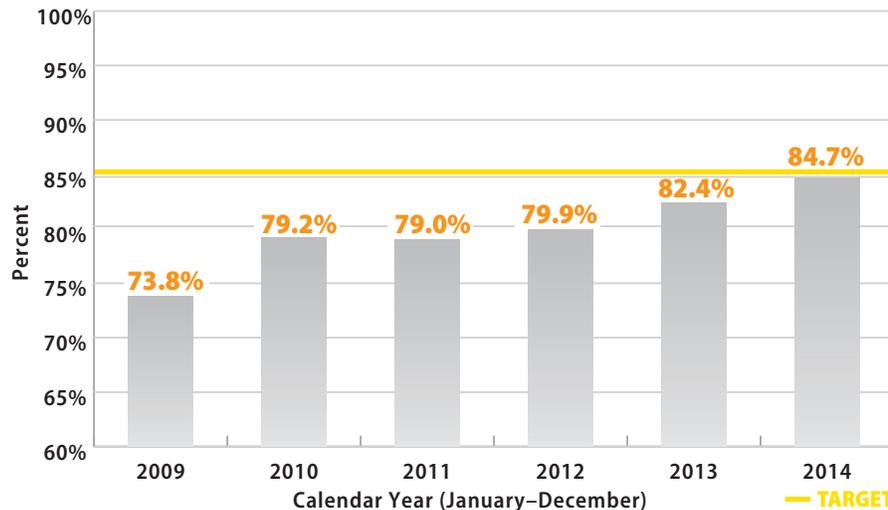
**Data Frequency:** Annual (Calendar Year)

**Division:** State Patrol

**Why is this important?** Wearing seat belts saves lives. Buckling a seat belt every time, on every trip, decreases the risk of being ejected or thrown about the vehicle in the event of a crash. In Wisconsin, a 10 percent increase in safety belt use would save about 44 lives and prevent 650 injuries each year. More than 50 percent of all passenger vehicle occupant fatalities in Wisconsin are unbelted. Motorists who do not use safety equipment are 12.3 times more likely to be killed than someone wearing a shoulder and lap belt at the time of a crash. The likelihood of surviving a crash, and possibly avoiding debilitating injuries, can be increased by the simple task of buckling a seat belt.

**Performance measure target:** The goal of this measure is to increase seat belt use to 86 percent for all passenger vehicle occupants by 2016.

**Figure:** Percent of Vehicle Occupants Wearing a Seat Belt



**How do we measure it?** Using guidelines developed by the National Highway Traffic Safety Administration (NHTSA), the department conducts an annual seat belt use survey in conjunction with the annual Click It or Ticket seat belt enforcement mobilization conducted each spring. The survey data presents a statistically representative sample of the percentage of seat belt use in Wisconsin.

**How are we doing?** Seat belt use reached 84.7 percent in 2014, an all time high for seat belt usage in Wisconsin. That means that approximately one in six motorists is still not buckling up—putting themselves and others at risk of serious injury or death in the event of a crash. Wisconsin is approaching the 86 percent national average for safety belt use but still lags behind the seat belt use of neighboring states like Illinois and Michigan, which estimate safety belt use rates of more than 90 percent.

**What factors affect results?** Human behavior is the most important factor that affects seat belt use results. Consistent seat belt use saves lives and motorists need to be proactive in buckling their seat belts every time, on every trip, to promote their safety and the safety of others. Seat belt use is a law in the state of Wisconsin. Since 2009, it is a primary enforcement law, which means law enforcement officers can pull over and cite a motorist for not wearing a seat belt.

**What are we doing to improve?** Increased seat belt use is a major component of Wisconsin's Zero in Wisconsin message. The department promotes seat belt use through education and enforcement. The nationwide Click It or Ticket effort, in conjunction with NHTSA, utilizes paid advertising and enforcement to promote public awareness. Much of the educational efforts are targeted at younger drivers whose seat belt use is much lower than other age groups. The department also supports car seat fitting stations to ensure that parents and providers are instructed on how to properly install child car seats and booster seats to keep small children safe in vehicles. By buckling their seat belt every time they get in a vehicle, motorists ensure their own personal safety, as well as the safety of passengers.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Service: DMV wait times

**Report Date:** October 2014

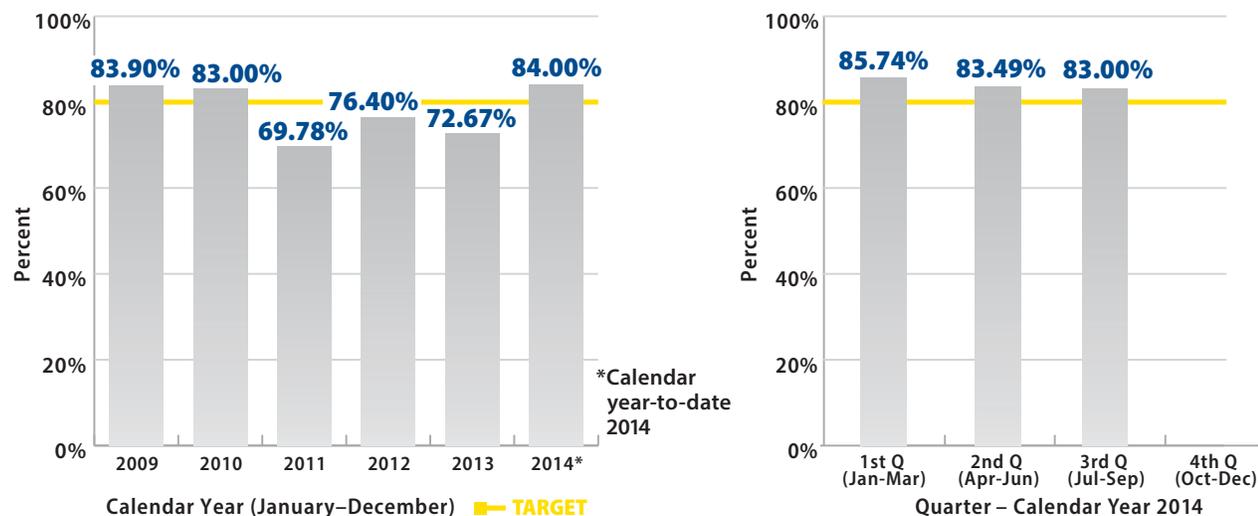
**Data Frequency:** Quarterly (Calendar Year)

**Division:** Motor Vehicles

**Why is it important?** For many customers, their primary contact with the department is through the Division of Motor Vehicles (DMV). While most DMV services do not require an in-person visit to a customer service center, the DMV service centers still experience large volumes of customers (more than two million transactions occur at offices each year). The DMV's goal is that customers receive quality service within a reasonable amount of time.

**Performance measure target:** The goal of this measure is to serve 80 percent of customers within 20 minutes of their arrival at a DMV customer service center.

**Figure:** Percent of DMV Service Center Customers Served Within 20 Minutes



**How do we measure it?** The measure counts all recorded wait times at the 92 Customer Service Centers and calculates the percent of customers who waited 20 minutes or less. This includes all customers who visit the 30 five-day stations and any customer seeking a product that requires a photo at the remaining 62 locations. The DMV's 30 five-day offices serve approximately 90 percent of customers.

**How are we doing?** The DMV has been able to proactively plan for seasonal spikes and responded to the increase in customers during the summer months that have historically caused a drop in customer service by identifying weeks that historically experience an influx of customers, such as those at the end of a month or quarter.

**What factors affect results?** Factors affecting this measure are staff vacancies and absences, computer system reliability and the day of the week/month (because demand for services varies). The availability of self-service options (phone and on-line) also affect the demand for counter service.

**What are we doing to improve?** The DMV has started a best practices team to facilitate the sharing of ideas among supervisors. The team's efforts focus on tools and methods that have worked to help supervisors in meeting customer service expectations. The DMV recently began piloting self-service kiosks for vehicle registration renewals in Madison and will continue to expand this option to other locations. This will allow customers seeking a registration renewal to receive their product with a minimal waiting, while also increasing the availability of our agents to help other customers. In addition to the self-service kiosks, the DMV also began piloting Saturday hours at two Milwaukee locations. Expanding our service hour options for our customers should improve this measure by spreading customer demand over the additional hours and reducing peak demand.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Service: DMV electronic services

**Report Date:** October 2014

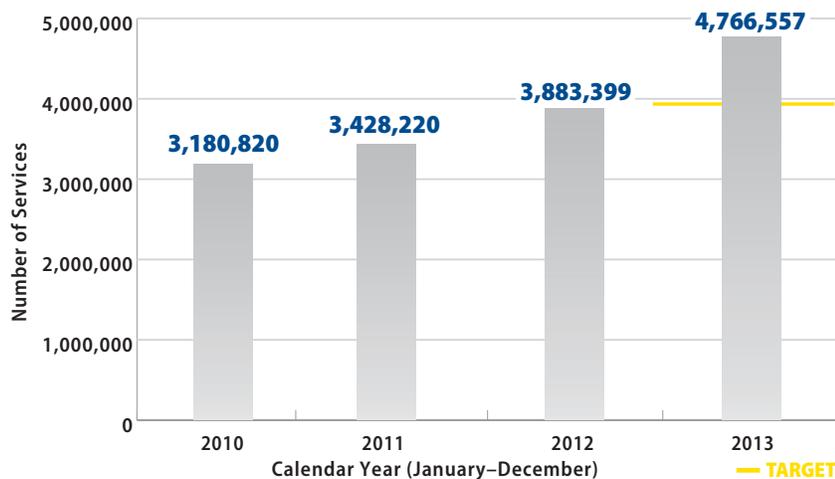
**Data Frequency:** Annual (Calendar Year)

**Division:** Motor Vehicles

**Why is it important?** The goal of this measure is to increase the number of customer performed electronic transactions by two percent each calendar year. This will further DMV's efforts of shifting from manual work by DMV staff to providing customer self-service options through automation. Using technology to improve the quality and decrease the cost of services has and will continue to be a priority for DMV.

**Performance measure target:** The goal of this measure is to increase the number of services that are provided electronically by two percent each calendar year (3.96 million target in 2013). Our goal is also to represent a shift from manual work by DMV staff to self-serve through automation.

**Figure:** Total Electronic Services Performed by Customers



**How do we measure it?** The measure is a count of all electronic customer transactions performed annually.

**How are we doing?** In 2013, the department exceeded its two percent goal. There was a 22.7 percent increase in electronic service transactions performed by customers between 2012 and 2013.

**What factors affect results?** The total number of DMV interactions with customers varies from year to year for a variety of reasons: changes to the economy, the length of specific products (e.g., some registrations are biennial rather than annual), and changes in laws that can alter demand for particular services. Typically, DMV responds to more than 6.5 million requests for service in-person and electronically annually.

**What are we doing to improve?** The department continues to create new electronic services and encourages users to complete transactions online. Public awareness campaigns and expanded use of social media have helped to publicize the availability of DMV's electronic service options.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Service: DMV driver license road test scheduling

**Report Date:** October 2014

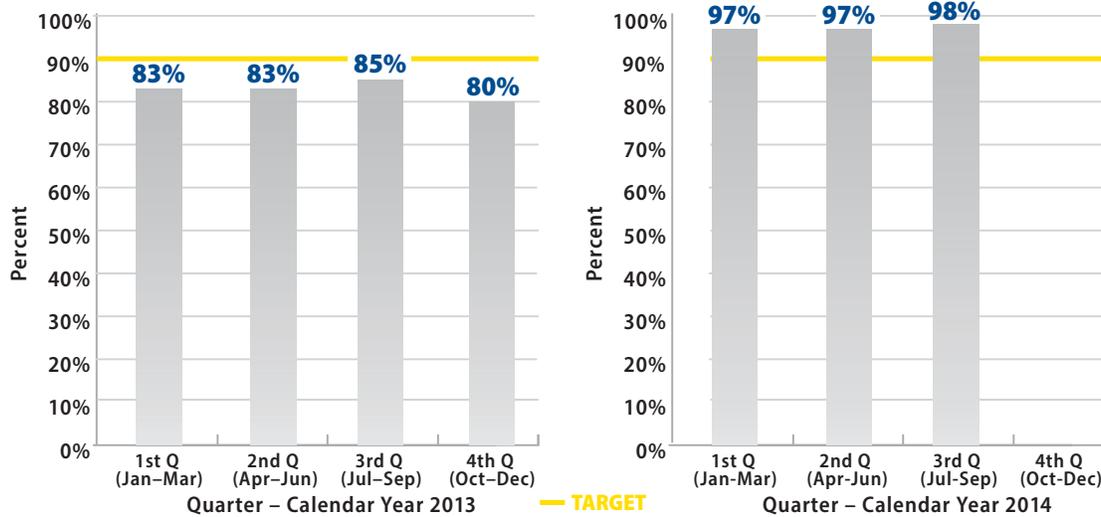
**Data Frequency:** Quarterly (Calendar Year)

**Division:** Motor Vehicles

**Why is it important?** Customers who are eligible to schedule a Class D skills test should be able to find adequate appointment slots available at the same location the instruction permit was processed. A lack of local availability upon eligibility creates an inconvenience for customers who must travel great distances to take a road test or delay scheduling.

**Performance measure target:** To have enough class D skills tests available to meet 90 percent of the estimated demand four weeks before the customer's eligibility date.

**Figure:** Percent of DMV Road Test Demand Met Four Weeks in Advance



**How do we measure it?** Applicants under the age of 18 must hold their Instruction Permit for six months before they are eligible to take a road skills test. By looking at the number of class D Instruction Permits issued to customers under the age of 18 each week at each DMV office, and applying a multiplier to account for adult permits as well as a statewide fail rate, the DMV is able to estimate the demand for road skills tests needed at each office six months into the future. Four weeks before the actual testing week, the DMV compares the number of scheduled and available tests to the estimated demand, and calculates the demand that is not served at each DMV office and the total statewide demand not being met. The weekly data is then combined for the monthly report. If a DMV office offers more tests than the estimated demand, this is not counted toward meeting another office's demand.

**How are we doing?** The DMV has continued to exceed the performance target, and as the DMV evaluates the impact of Saturday hours on customer flow the division should be able to continue to exceed the target.

**What factors affect results?** While there are pre-requisites for scheduling a Class D skills test, it is ultimately up to the customer to schedule their test at the location and date that best meet their needs. Some customers hold a permit beyond the minimum requirement, and some customers feel more comfortable taking a test in one location over another. These personal preference factors cannot be accounted for in the established goals.

**What are we doing to improve?** Used as a leading indicator to allocate staff resources, the DMV continues to explore ways to use this measure to make informed resourcing decisions. With projections available 6 months in advance, DMV ties this information to the availability of time off and adjusts resources as needed (temporarily or permanently) to respond to the weekly fluctuations in estimated demand levels. Management follows up with offices not meeting the goals to ensure the estimated demand levels are understood and to identify circumstances that influence performance. The DMV began estimating customer demand for 2015 and several improvements were made to the formula to better capture seasonal fluctuations in adults seeking skills test.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Service: DMV phone service

**Report Date:** October 2014

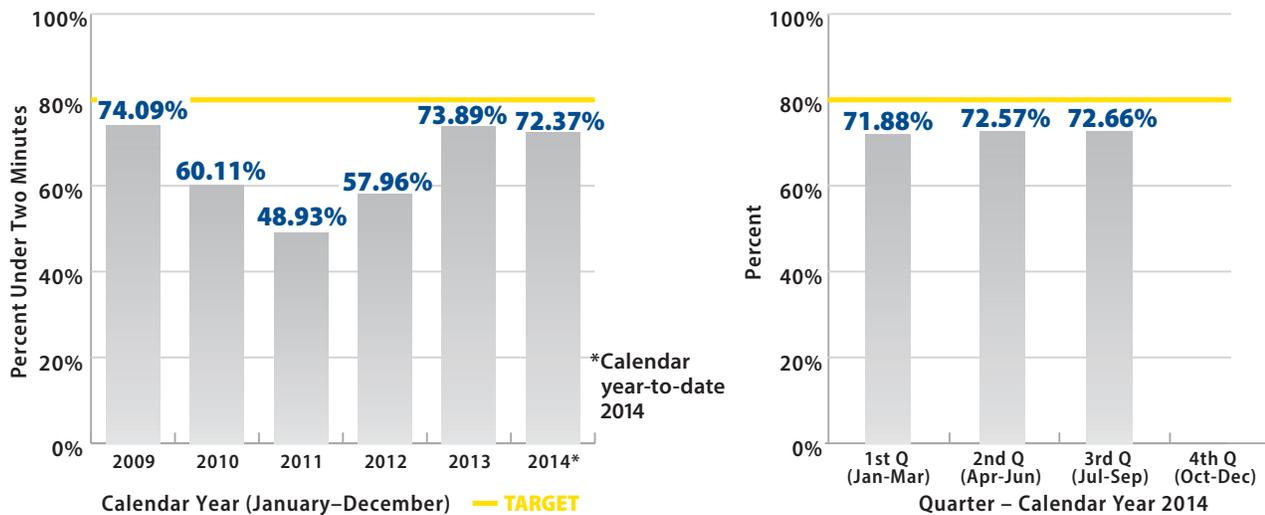
**Data Frequency:** Quarterly (Calendar Year)

**Division:** Motor Vehicles

**Why is it important?** In addition to approximately two million customers served in person each year at our service centers, the department's Division of Motor Vehicles (DMV) also receives an average of 1.11 million phone calls each year from individuals, business partners and other governmental entities. These calls range in complexity from a simple request for a service center location to questions about Commercial Driver License (CDL) eligibility requirements. Although phone customers are not physically waiting in line, they deserve timely service.

**Performance measure target:** The DMV's performance target is to answer 80 percent of all the calls offered within two minutes wait time.

**Figure:** Percent of DMV Phone Wait Times within Two Minutes



**How do we measure it?** Each week, the DMV counts the total number of calls offered to representatives and calculate the percent that waited two minutes or less before speaking with a representative. Calls abandoned or blocked due to a busy signal are considered to have waited longer than two minutes.

**How are we doing?** The service level remained constant from the second to third quarter. A decrease in the number of calls offered was offset by vacancies in the phone units.

**What factors affect results?** These include: the number of representatives answering phones; the number of calls; the length of time a representative is on the phone with a customer, which is a product of the complexity of the call; and the representative's knowledge and skills.

**What are we doing to improve?** By expanding online services and improving the information available on the department's website, the DMV can reduce the number of calls. The DMV is also evaluating the process for hiring new staff to phone units to reduce the time needed to fill vacancies.



Wisconsin Department of Transportation  
**MAPSS Performance Improvement**

**Appendix A:**  
Additional performance measures

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# Wisconsin Department of Transportation MAPSS Performance Improvement



## Accountability: Design quality

**Report Date:** October 2014

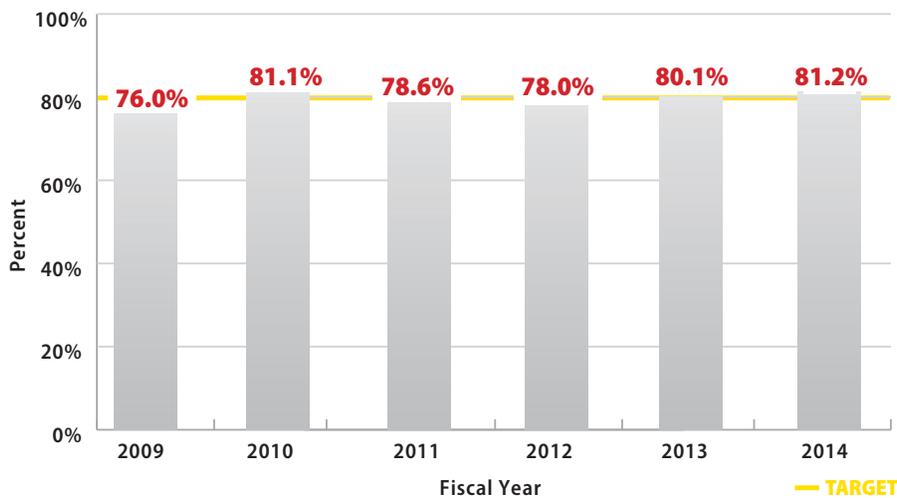
**Data Frequency:** Annual (State Fiscal Year)

**Division:** Transportation System Development

**Why is it important?** Design quality determines how ready the project, as designed, is to be constructed by both the contractor and the construction project leader. This measure is important because it provides feedback to improve future designs and increase the likelihood that the project has been well scoped and well designed to get accurate bids that will result in projects that are built to meet the needs of our customers. The results help improve design processes and guidance, and it should ultimately reduce project costs.

**Performance measure target:** The current goal is 80 percent.

**Figure:** Percent of Project Design Readiness



**How do we measure it?** The measure is an index based on fifteen design elements (20 elements if also rating structures), on scale of 1-lowest to 7-highest. Scores are converted to a 100 percent scale. At or near project completion, the construction engineer and prime contractor meet to fill out the Design Quality Index (DQI) form.

**How are we doing?** The 2014 DQI has exceeded the department goal of 80 percent. The department will continue to implement strategies that will assist in meeting and exceeding the current goal. The business area is also working closely with construction staff to make sure that every project is evaluated at project completion phase rather than waiting until the end of the fiscal year. We will evaluate whether analyzing the performance of the individual elements would better indicate which design elements need improvement.

**What factors affect results?** The level of quality control and constructability reviews during the design process can greatly affect this measure.

**What are we doing to improve?** The project development section reviews the completed DQI ratings for department and consultant projects and incorporates feedback into future design projects and guidelines for subsequent project plans. The department is also working on improving performance through plans review at the 60 percent and 90 percent plans completion milestones and will continue to work with construction staff to ensure that all projects are evaluated on a timely manner.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Accountability: Engineering estimate accuracy

**Report Date:** October 2014

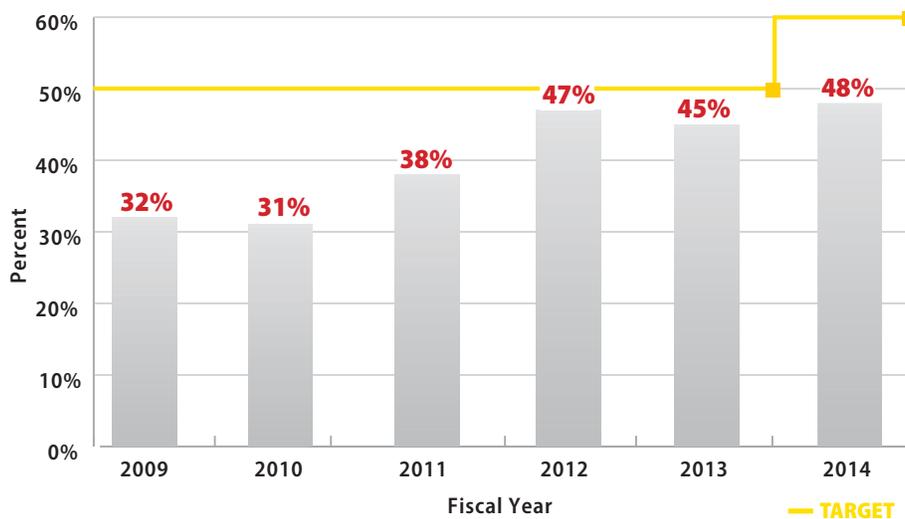
**Data Frequency:** Annual (State Fiscal Year)

**Division:** Transportation System Development

**Why is it important?** Accurate engineer's estimates provide the department and project stakeholders with a realistic cost for budgeting, reduce funding and scheduling uncertainty within the highway program, and provide a benchmark for comparing bid prices.

**Performance measure target:** At least 60 percent of engineering estimates should be within 10 percent of the low bid.

**Figure:** Percent of Contracts Within 10 Percent of Low Bid



**How do we measure it?** The department compares the engineer's estimate to the actual low bid price for each contract and calculates the percent of contracts that are within 10 percent of the construction cost estimate. The Federal Highway Administration and WisDOT Stewardship Agreement compliance measurement states that a minimum of 50 percent of estimates be within 10 percent of the low bid price. In an effort to strive for improvement in estimating, in 2014, the department set a new performance measure target of 60 percent.

**How are we doing?** The department attained its highest percentage in the last six years and the trend line is moving in a positive direction.

**What factors affect results?** Estimating accuracy is affected by the knowledge and skill of the estimator, how relative historical bid data is applied to the specific project, volatility in construction commodities pricing and the degree of competition during bidding. In the months of December through April the number of bids received within 10 percent range exceeded 60 percent. In the months from May through November the results were far below the goal.

**What are we doing to improve?** The department will perform additional analysis of bidding data to determine if factors such as time of the year, industry capacity, mobilization, trends in major bid items should be factored into the let estimate. Department staff will continue their efforts and to improve, including enhancing the estimate documentation and review process.

# Wisconsin Department of Transportation MAPSS Performance Improvement



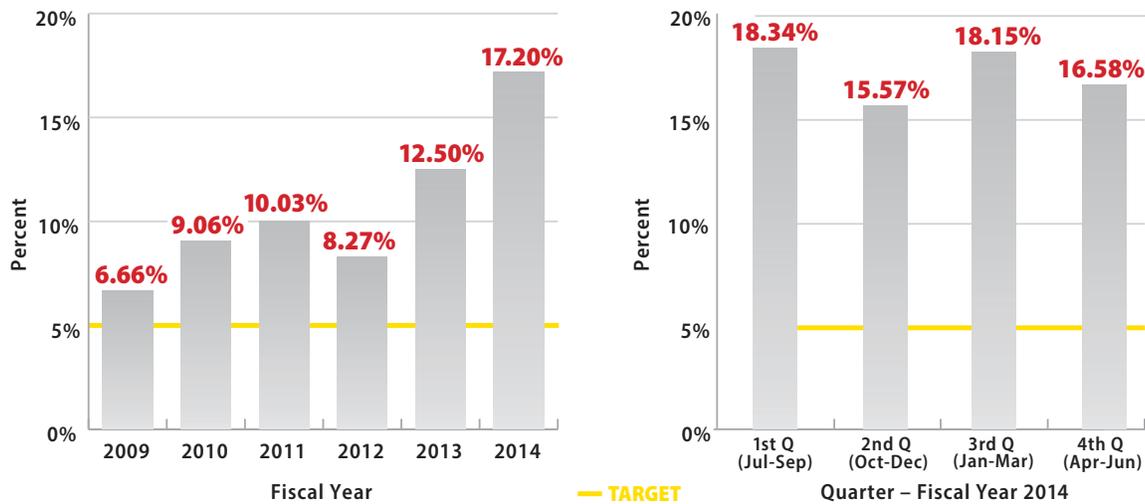
## Accountability: Statutory Chapter 16 minority business enterprise spending

**Report Date:** October 2014    **Data Frequency:** Quarterly (State Fiscal Year)    **Division:** Business Management

**Why is it important?** Chapter 16 of the Wisconsin statutes requires state agencies to attempt to ensure that at least five percent of the total amount spent in each fiscal year is paid to state certified Minority Business Enterprises (MBE). The overall department MBE percent spending and MBE percent spending by business areas provide information to the agency and the public that the department is meeting this goal. This measure does not include the Chapter 84 spending for highway projects.

**Performance measure target:** The department’s annual target is to meet the statutory goal of five percent spending under Chapter 16 with state certified MBEs.

**Figure:** Percent of WisDOT MBE Spending by Fiscal Year and Quarter



**How do we measure it?** The measure is calculated as the total state certified MBE spending divided by total agency spending. Total MBE spending is extracted from the department’s procurement system, purchasing card expenditure reports, and subcontracting spending data. The department monitors this data monthly and reports it to the Wisconsin Department of Administration.

**How are we doing?** The department has consistently exceeded the five percent annual goal. Most contract awards to MBE vendors have been made without using the five percent pricing preference.

**What factors affect results?** Actual results are affected by the number of firms certified as MBEs by the State of Wisconsin. More firms certified as MBEs means more opportunities for department spending with MBEs. Certified MBE vendors must be able to provide the desired goods and services and win competitive solicitations by submitting bids within five percent of the lowest bid. Budgetary constraints may reduce MBE spending since in tight financial environments, department program areas may be less able to utilize the five percent pricing preference.

**What are we doing to improve?** The department has a program coordinator dedicated to the success of the MBE program. The MBE Program Advisory Committee, with representatives from each division, collaborates with the MBE program coordinator in the development of strategies for increasing awareness of the MBE program within WisDOT and externally. External outreach efforts are designed to locate and encourage eligible vendors to obtain MBE certification and bid on opportunities to do business with the department.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Preservation: Local road pavement condition

**Report Date:** October 2014

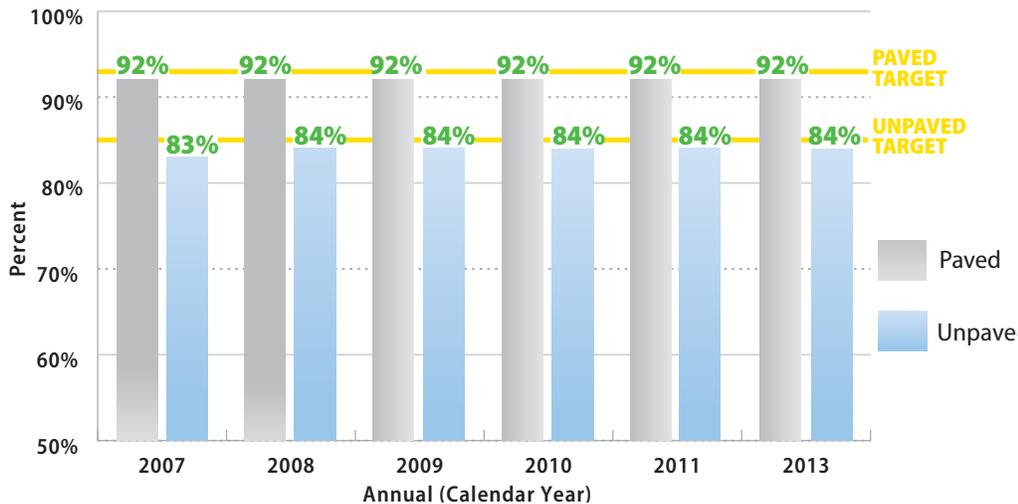
**Data Frequency:** Annual (Calendar Year)

**Division:** Transportation Investment Management

**Why is it important?** The nearly 103,000 miles of locally-owned roads in Wisconsin support roughly 40 percent of all vehicle miles traveled. Every two years, municipalities and counties are required to submit pavement ratings to the Wisconsin Department of Transportation that represent the physical condition of roadways under their jurisdiction. When pavement is in good condition, it promotes the safe and efficient movement of people and products throughout the state. Comprehensive pavement condition data is necessary to determine cost-effective maintenance and improvement strategies that extend the life and serviceability of the local road network.

**Performance measure target:** The department’s goal is to have 93 percent of all paved, and 85 percent of all unpaved, local pavements in fair or better condition.

**Figure:** Local road pavement condition – percent with rating of fair or better



**How do we measure it?** The rating scale ranges from 10 (excellent condition) to 1 (failed). In general, most pavements will deteriorate through the phases listed in the rating scale. However, it is common for pavements to skip several levels when major defects appear or when the pavement is repaired. The time it takes to go from an excellent (10) to a very poor condition (1) depends largely on the quality of the original construction and the amount of heavy traffic loading. Local units of government are required to report the pavement condition of roads under their jurisdiction to WisDOT. The department developed and maintains the Wisconsin Information System for Local Roads (WISLR) to serve as a receptacle for local road information, such as width, surface type, surface year, shoulder, curb, road category, functional classification, and pavement condition ratings.

**How are we doing?** Currently, 92 percent of Wisconsin’s paved local roads are rated fair and above, and 84 percent of the unpaved local roads are rated fair and above.

**What factors affect results?** The increasing age of roads, combined with funding availability on a federal, state and local level are significant factors affecting results. Pavement condition is impacted by material quality, adequacy of pavement design, environmental factors such as temperature and moisture, traffic loading, improvement and maintenance history, and pavement age. All of these factors must be considered when determining what rehabilitation strategies will provide cost-effective service life.

**What are we doing to improve?** Wisconsin makes funding available through a number of programs to help support the transportation infrastructure needs of local governments, including General Transportation Aids (GTA), the Local Roads Improvement Program (LRIP) and the Surface Transportation Program (STP). The department evaluates and compiles condition data to inform state and local decision makers. The department also publishes program guidelines, meets with various partners and provides training to help local units of government.

# Wisconsin Department of Transportation MAPSS Performance Improvement



## Safety: Air support unit deployments for traffic enforcement

**Report Date:** October 2014

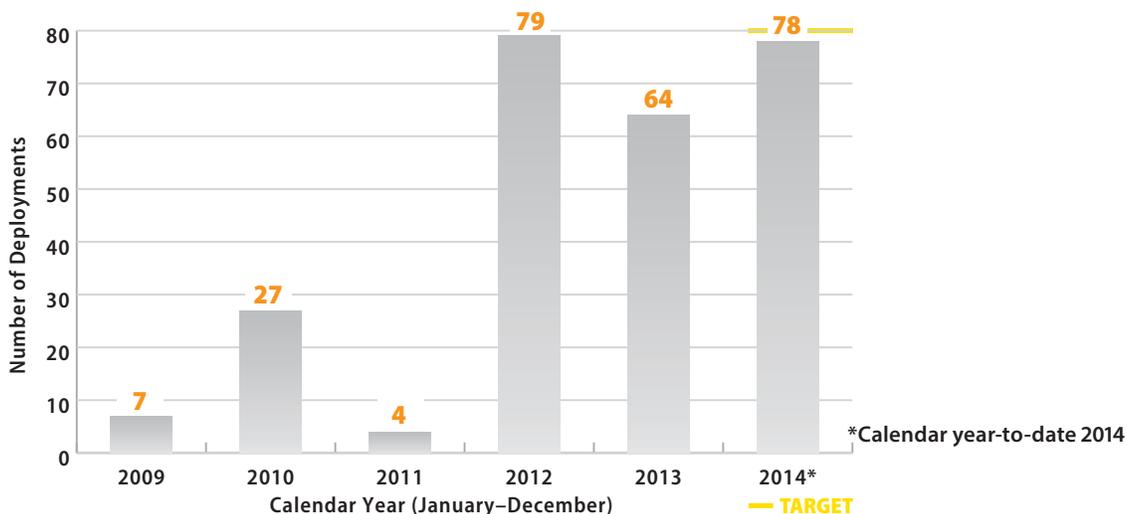
**Data Frequency:** Quarterly (Calendar Year)

**Division:** State Patrol

**Why is this important?** Speed continues to be a contributing factor in approximately 30 percent of traffic fatalities in Wisconsin. Using a consistent air enforcement presence through the Division of State Patrol's (DSP) Air Support Unit (ASU), along with dedicated law enforcement vehicles, is an effective method of enforcing speed and aggressive driving. Ensuring ASU is used periodically on traffic corridors helps law enforcement agencies conduct high visibility enforcement efforts and provides a deterrent effect even when air support is not present. In 2014, WisDOT will evaluate and report out on results of research into the impact of aerial speed enforcement on selected corridors.

**Performance measure target:** The goal of this measure is to increase the number of ASU traffic enforcement deployments to 80 in 2014. DSP anticipates the number of ASU deployments to eventually level off into maintenance of effort mode. Depending upon the number of law enforcement cars participating in deployments, DSP considers six to eight traffic stops per hour as optimal performance. Each traffic stop does not necessarily lead to a citation.

**Figure:** Air Enforcement Deployments for Traffic Enforcement



**How do we measure it?** The ASU will document the number of deployments to assist law enforcement agencies with enforcing speed and aggressive driving laws. As part of each deployment, law enforcement agencies will also report the number of contacts they have with motorists.

**How are we doing?** There are multiple uses for state planes that impact how often the planes are available for traffic enforcement, including: surveillance for criminal investigations, photo flights to document a scene for evidentiary purposes, search missions, construction work zone enforcement, and use by other agencies, including the Department of Natural Resources (DNR). With the previous limited use of the ASU, the state had lacked an important tool to enforce speed and aggressive driving laws while seeking to change driver behavior through consistent presence offered by the ASU with ground support. There have been 78 ASU deployments so far this year. In 2014, ASU deployments averaged 7.9 stops per hour.

**What factors affect results?** There are multiple mission options in WisDOT and DNR that may limit the number of flights made for traffic enforcement. Funding constraints may also limit the number of aerial enforcement deployments. Weather is an unpredictable factor that can scuttle deployments. Finally, the availability of a trained flight crew can be a limiting factor.

**What are we doing to improve?** Considering how effective aerial enforcement can be as a law enforcement tool, WisDOT has recommitted to planning and funding additional ASU deployments. The DSP has dedicated additional federal funds to deployments in cooperation with local law enforcement agencies on high-volume corridors. The DSP is looking for ways to attract trained pilots. Consistent deployment of the ASU, along with a highly visible law enforcement presence on the ground, will encourage drivers to stay within speed limits, curb aggressive driving, provide safer work zones, and prevent crashes.

## Mission

Provide leadership in the development and operation of a safe and efficient transportation system.

## Vision

Dedicated people creating transportation solutions through innovation and exceptional service.

# Wisconsin Department of Transportation



## Values

### Accountability

Being individually and collectively responsible for the impact of our actions on resources, the people we serve, and each other.

### Attitude

Being positive, supportive and proactive in our words and actions.

### Communication

Creating a culture in which people listen and information is shared openly, clearly, and timely—both internally and externally.

### Excellence

Providing quality products and services that exceed our customers' expectations by being professional and the best in all we do.

### Improvement

Finding innovative and visionary ways to provide better products and services and measure our success.

### Integrity

Building trust and confidence in all our relationships through honesty, commitment and the courage to do what is right.

### Respect

Creating a culture where we recognize and value the uniqueness of all our customers and each member of our diverse organization through tolerance, compassion, care and courtesy to all.

### Teamwork

Creating lasting partnerships and working together to achieve mutual goals.

**MAPSS**  
Performance  
Improvement



**Mobility**  
**Accountability**  
**Preservation**  
**Safety**  
**Service**



For more information on MAPSS, visit [www.mapss.wi.gov](http://www.mapss.wi.gov)