Wisconsin Department of Transportation

January 2012

MAPSS
Performance Dashboard 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 Dashboard

The Wisconsin Department of Transportation's MAPSS Performance Dashboard shows the performance of the state's transportation system in five strategic goal areas: mobility, accountability, preservation, safety and service. It represents a data-driven analysis to show performance trends for 23 separate measures.

At a time when everyone's budget is tight, it's especially important for public agencies to practice wise stewardship of the taxpayer's money. The MAPSS Performance Dashboard provides transparency on how we're doing and gives the department an added tool to help guide us in meeting our goals and achieving our mission.

This January 2012 MAPSS Performance Dashboard Report is the very first compilation of detailed information on the MAPSS Performance Dashboard. Overall, it shows the transportation system is performing well, but we'll be working hard to make improvements to keep all of our performance measures trending in a favorable direction.

Mark Gottlieb, P.E.
Secretary
Wisconsin Department of Transportation

Table of Contents

Performance Dashboard 1–2

Mobility 3–7

Accountability 8–11

Preservation 12–17

Safety 18–21

Service 22–25

January 2012

Wisconsin Department of Transportation
MAPSS Performance Dashboard

Performance is trending in a favorable direction

Trend is holding

Performance is trending in a unfavorable direction

Policy goal	What we measure	How we measure it	Last report	Performance trend
Mobility				
Goal: Mobility is delivering transportation choices that result in efficient trips and no unexpected delays.	Urban freeway congestion	Percent of urban freeway with serious congestion	15.2	↓
	Transit availability	Percent of population served by transit	55.0	↔
	Bicycle accommodation	Percentage of state highways with bicycle accommodation	64.8	↑
	Incident response	Average time to clear major highway incident	4:37	↔
	Winter response	Average time to bare/wet pavement after snow/ice event	1:49	↑
Accountability				
Goal: Accountability is the continuous effort to use public dollars in the most efficient and cost-effective way.	On-time performance	Percent of highway projects completed on-time	94.0	↔
	On-budget performance	Final highway project cost as percent of original contract amount	103.0	↑
	Surplus property management	Dollar value of surplus land sold	1.9 mil.	↓
	DMV efficiency	Number of DMV products issued per employee hour worked	9.1	↑
Preservation				
Goal: Preservation is 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.	State highway condition	Percent of state highway pavement rated fair or above	86.0	↔
	State bridge condition	Percent of state bridge deck area rated fair or above	96.4	↔
	State rail line condition	Percent of state-owned rail line with operating speeds >10 mph	54.0	↔
	Airport pavement condition	Percent of airport pavement rated fair or above	92.0	↔
	State highway maintenance	Grade point for the maintenance condition of state highways	2.79	↔
	Material recycling	Tons of recycled materials used in projects	3.17 mil.	↔

Performance is trending in a favorable direction

Trend is holding

Performance is trending in a unfavorable direction

Policy goal	What we measure	How we measure it	Last report	Performance trend
Safety				
Goal: Safety is moving toward minimizing the number of deaths, injuries and crashes on our roadways.	Traffic fatalities	Number of traffic fatalities	570	↔
	Traffic injuries	Injury rate per 100 million vehicle miles traveled	68.81	↑
	Traffic crashes	Crash rate per 100 million vehicle miles traveled	183.16	↑
	Seat belt use	Percent of vehicle occupants wearing a seat belt	79.0	↔
Service				
Goal: Service is high quality and accurate products and services delivered in a timely fashion by a professional and proactive workforce.	DMV wait times	Percent of DMV service center customers served within 20 minutes	69.0	↑
	DMV electronic services	Number of DMV electronic service transactions	3.18 mil.	↑
	On-road traffic information	Number of electronic message signs	74	↑
	Phone/web traffic information	Number of 511 calls and 511 web hits	954,155	↑

The Wisconsin Department of Transportation MAPSS Performance Dashboard 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

WISCONSIN DEPARTMENT OF TRANSPORTATION

Wisconsin Department of Transportation

MAPSS Performance Dashboard

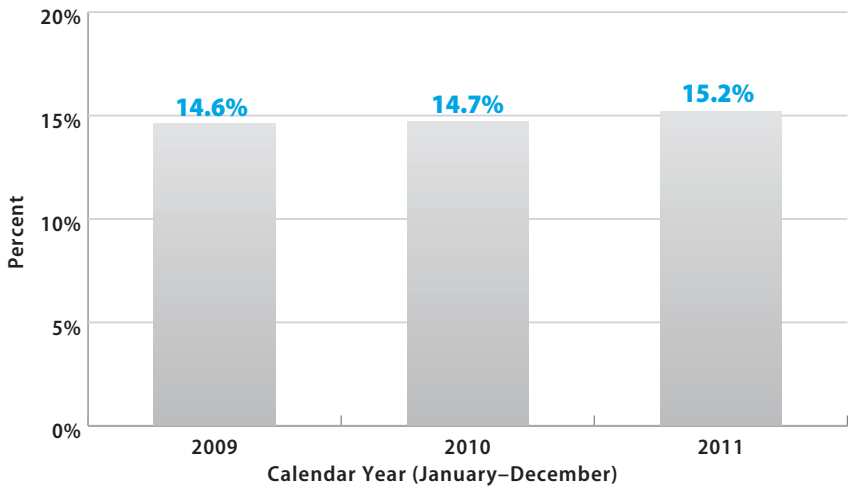
Mobility: Urban freeway congestion

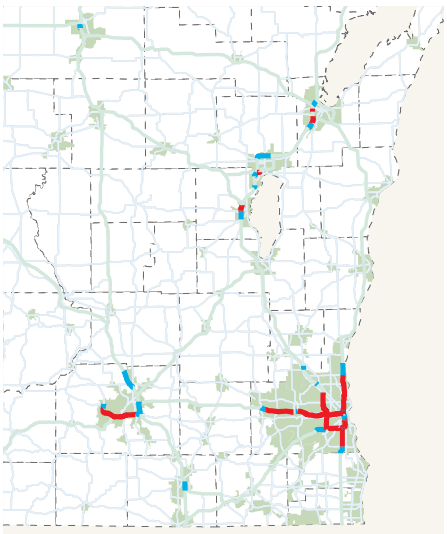
Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** Transportation Investment Management

Why is it important? When traffic congestion reaches serious levels, it can have detrimental effects on the economy because of increased travel times and the increased costs for auto and freight movements. Traffic flow in times of serious congestion tends to be unreliable, especially in cases where a traffic incident or construction activity restricts the use of one or more lanes of the roadway. Traffic congestion can also lead to serious safety issues. In the long-term, serious freeway congestion can impact the growth potential of an urban area.

Performance Measure target: The department's goal is to reduce the percent of urban freeway miles that have serious congestion.

Figure: Urban Freeways with Serious Congestion





Serious Congestion (LOS Mid D or Worse)

Moderate Congestion (LOS Low D)

How do we measure it? The measure uses calculations for basic freeway segments published by the Transportation Research Board. Each year, a "level of service," or LOS, is calculated for each freeway segment based on hourly traffic volume, roadway geometric conditions and road capacity. The hourly traffic volumes are for the 30th highest hour of the year, as recommended by the American Association of State Highway and Transportation Officials. The measure is based on the percent of urban freeway miles at a mid-level of service (LOS D) or worse.

How we are doing? Currently 15.2 percent of the 540 miles of urban freeway in Wisconsin have serious congestion levels. The percent of urban freeway miles with serious congestion has remained fairly steady over the last several years, increasing by 0.6 percent since 2009, or just over three miles.

What factors affect results? As traffic volumes grow, urban freeways will become more and more congested. The congestion can be addressed through operational improvements made possible by implementing Intelligent Transportation System technologies or by expanding highway capacity through an increase in the number of travel lanes.

What are we doing to improve? The department is implementing improvements on two urban freeway segments in southeast Wisconsin and was recently given approval by the Transportation Projects Commission to begin studying three additional urban freeway segments for potential construction as major highway projects. Completion of these projects will not occur for some time, but when complete, they will significantly reduce the number of urban freeway miles with serious congestion in Wisconsin.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

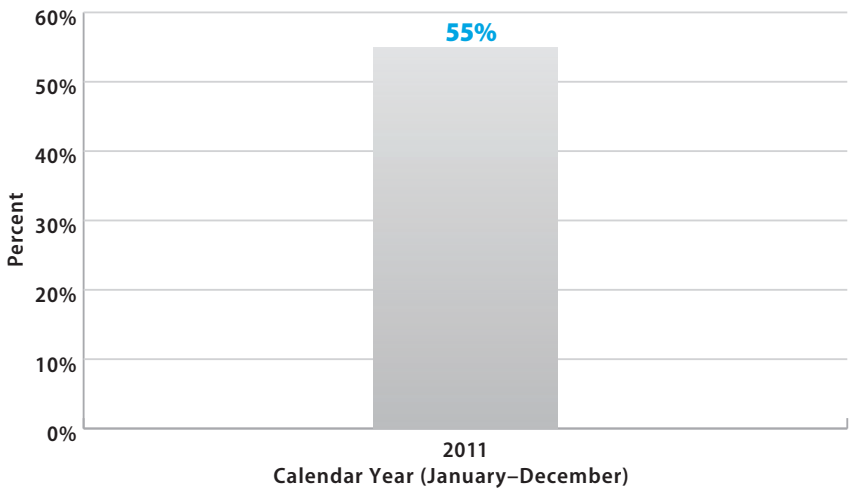
Mobility: Transit availability

Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** Transportation Investment Management

Why is it important? Transit provides a lifeline to those who depend on it to obtain medical care, make shopping trips, get to school or work and meet other basic needs. Without transit service, over 15 million trips per year could not be made, 58 percent of which are job-related. 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 percent of population with access to transit service.

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 lies 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.

How are we doing? This is a new measure in the department so historic trends are not available.

What factors affect results? The degree of investment in transit from federal, state and local sources is a major factor affecting this performance measure. Efforts by communities to encourage 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 shared-ride taxi 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 Dashboard

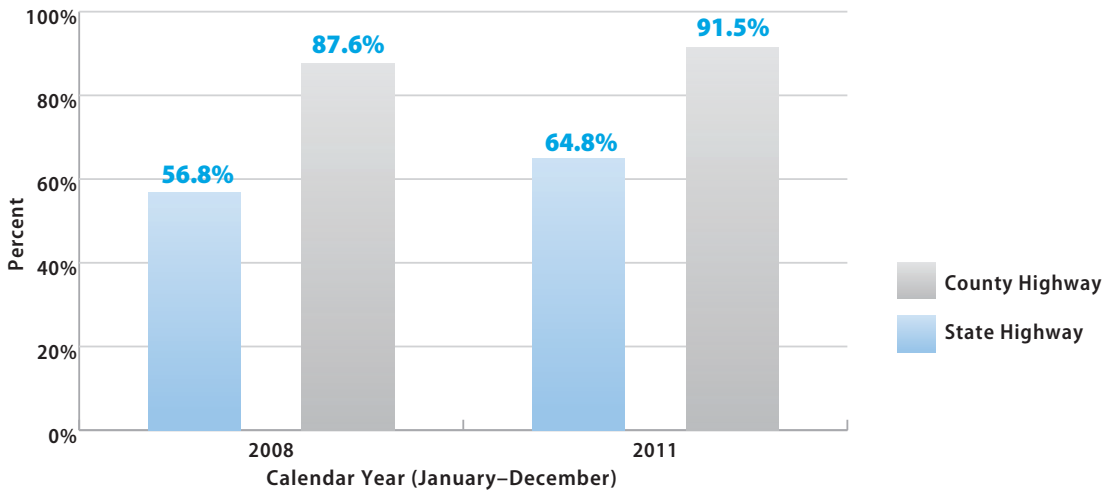
Mobility: Bicycle accommodation

Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** Transportation Investment Management

Why is it important? Wisconsin's "Complete Streets" law requires that bikeways are considered in all new highway construction and reconstruction projects funded in whole or part by state or federal funds. 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.

Performance Measure target: The department's goal is for county and state highways to safely accommodate bicycles whenever possible. Not all highways will be able to accommodate bicycles, particularly in areas with a constrained urban environment.

Figure: Percent of County/State Highways with Bicycle Accommodation



How do we measure it? The total miles of state and county highway with bicycle accommodations are divided by the total number of non-freeway miles of state and county highway in Wisconsin each calendar year. The department measures accommodations for bicycles 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 a daily traffic volume under 750 accommodates bicycles. If the daily traffic volume of a two-lane rural highway is greater than 5,000, an extra wide lane or shoulder, or an adjacent bike trail/path is necessary to provide the accommodation. For all traffic volumes in between those two thresholds, the pavement width is analyzed along with the other transportation data variables to determine if the facility safely accommodates bicycles. For expressways, segments with a daily traffic volume under 12,000 will accommodate bikes if the outer lane and paved shoulder width combination is at least 21 feet. Bicycles are prohibited on freeways in Wisconsin.

How are we doing? Wisconsin continues to make progress in safely accommodating bicycles on county and state highways. In 2008, 87.6 percent of county highways and 56.8 percent of state highways provided accommodation. In 2011, these figures increased to 91.5 percent and 64.8 percent.

What factors affect results? Vehicles per day, roadway width and the presence or absence of paved shoulders are the primary determinants of whether a highway safely accommodates bicycles. Providing 100 percent accommodation on state highways is not possible because of high traffic volume corridors where adjacent bike trails are not an option. The percent of highways that can safely accommodate bicycles can decline as traffic volumes increase. Conversely, decreasing traffic volumes may, in some cases, create additional accommodation even without physical improvements to the roadway. Another factor impacting the rate-of-change is the scheduling of improvement projects on roadways that do not adequately accommodate bicycles. Accommodations on roadways lacking sufficient roadway width or paved shoulders will not be addressed until the pavement is in need of improvement.

What are we doing to improve? The increase in bicycle accommodation is mostly due to the paving of shoulders. Accommodations can be provided by a paved shoulder, a wide outer travel lane, a bike lane or an adjacent trail/path.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

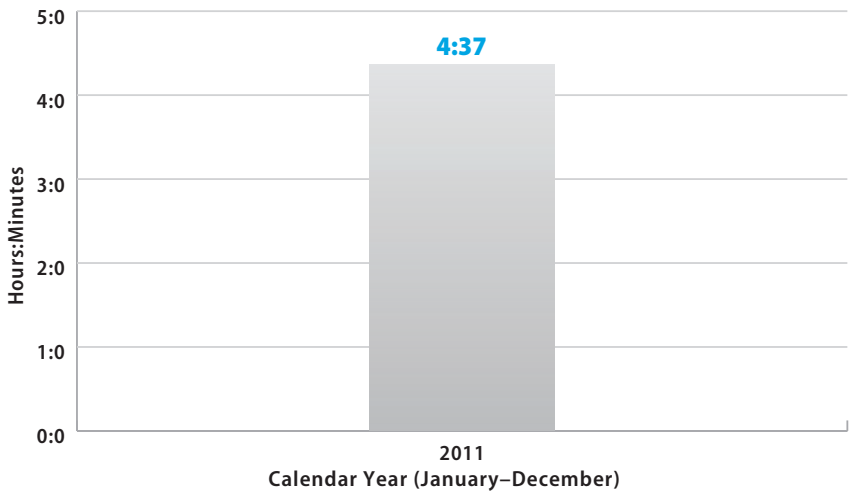
Mobility: Incident response

Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** Transportation System Development

Why is it important? Incidents happen on the highway system every day. An incident can be a minor fender bender or a serious traffic crash. Restoring a highway to full operation as quickly as possible after a major traffic incident helps to reduce the occurrence of 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 state highways.

Figure: Average Time to Clear Major Highway Incident



How do we measure it? This measure focuses on extended duration incidents which are defined as events closing one direction of a highway 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 to the incident first becomes aware of the incident and the time when the last person responding to the incident leaves the scene. The department is compiling data on an annual basis. This performance measure represents the average clearance time over all extended duration incidents.

How are we doing? The department is in the early stages of tracking clearance times for extended duration incidents in hours/minutes and developing benchmarks to evaluate performance. It was previously measured in another way so historic data is not available.

What factors affect results? The location and seriousness of an incident will affect the time it takes to clear the incident, as will the amount of traffic on the highway at the time.

What are we doing to improve? For every extended duration incident, the department is conducting an after-action review with the agencies involved in the incident response. The department then compiles and shares the lessons learned, ideas for improvement and best practices with all public safety agencies. This information will also be used to identify future initiatives and training needs.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

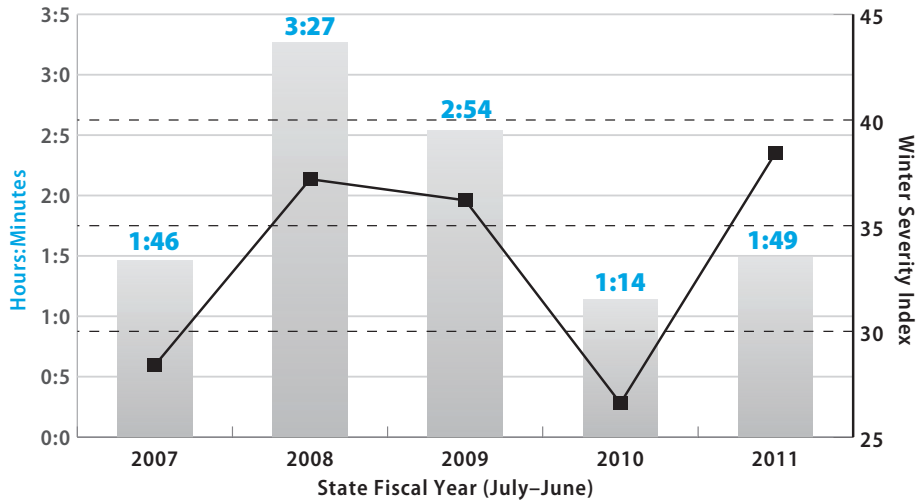
Mobility: Winter response

Report Date: January 2012 | **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 have the state highway system clear of snow and ice two hours or less after the end of a winter weather event.

Figure: Average Time to Bare/Wet Pavement After Snow/Ice



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 time to bare/wet pavement taken over all storm events. Data is compiled for each state fiscal year (July–June).

How are we doing? Results are reasonably close to department expectations for meeting this goal.

What factors affect results? Controllable factors include the timing of the response, availability of resources and the quality of the response taking into account the workforce and in-storm decision-making. Performance is also affected by the type, duration and severity of the winter event; temperature and wind conditions following a storm; labor; equipment; materials applied; accuracy of forecasts; effectiveness of event planning; trained workforce and storm management.

With this performance measure, it is possible to have a negative time value. During some storm events on higher volume roads, pavements sometimes reach a bare/wet condition prior to the end of the storm and create a negative value. The department also calculates a Winter Severity Index that provides a way to compare weather from year to year. With weather being such a large factor in this performance measure, the Winter Severity Index is another useful measurement tool and can be related to average time to bare/wet pavement.

What are we doing to improve? The department is implementing best practices using a Maintenance Decision Support System, prioritizing adequate resources for this basic yet essential 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 Dashboard

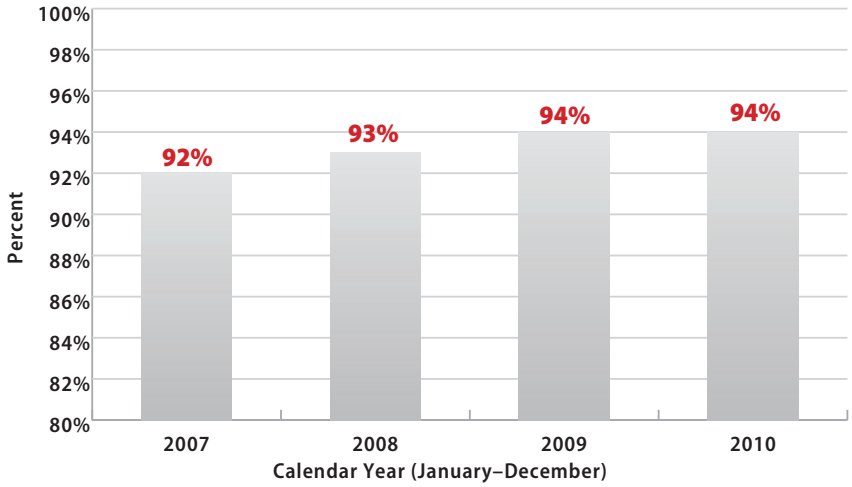
Accountability: On time performance

Report Date: January 2012 | **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



2011 data available in summer 2012

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 has remained steady for the past two calendar years after improving from a low of 92 percent in 2007.

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

What are we doing to improve? The department lets larger and more complex construction contracts out for bid in the fall or early winter prior to the anticipated construction year. This is to ensure the contractors have adequate time to schedule the resources and staffing needed to complete the project in the desired time frame.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

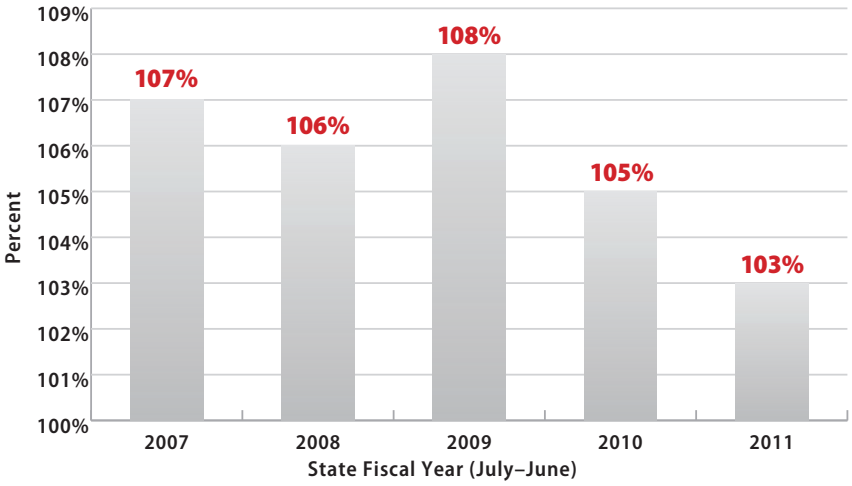
Accountability: On budget performance

Report Date: January 2012 | **Data Frequency:** Annual (State Fiscal Year) | **Division:** Transportation System Development

Why is it important? The department works to have the final project cost as close as possible to the amount that was originally contracted for when the project was let out for bid. This allows the department to schedule projects more effectively. It also provides a measure of quality for the original project design and the construction management. While the department sets aside a certain percent of its budget to anticipate some added costs, keeping project cost overruns to a minimum allows the department to better plan where to spend the limited dollars that are available.

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 adds up all the actual costs (excluding engineering and project oversight) within a state fiscal year (July–June). It then compares those actual costs with the original contract amount. The difference between the actual costs and the original contract amount shows the percent of increased costs for construction.

How are we doing? The department's average over a five-year reporting period of under six percent in cost overruns is considered good by industry standards. Continued efforts will help minimize spikes and achieve the target of having final costs equal the original project amount.

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.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

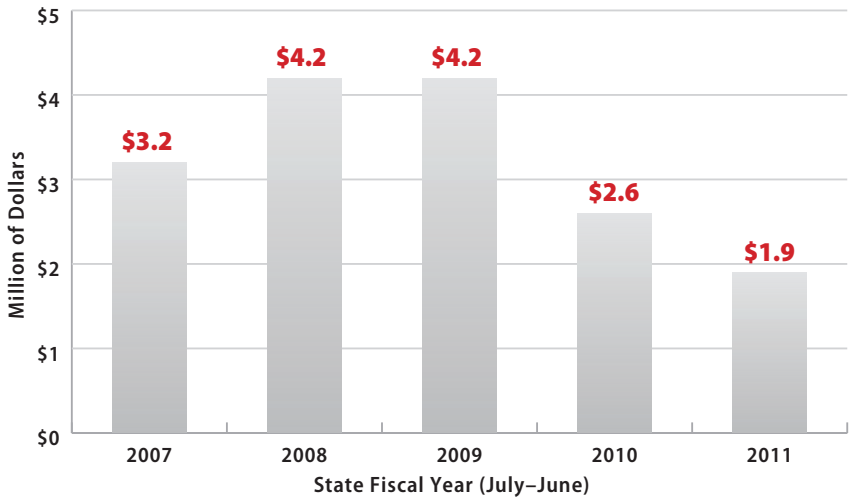
Accountability: Surplus property management

Report Date: January 2012 | **Data Frequency:** Annual (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: Dollar 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 state fiscal year.

How are we doing? In state fiscal year 2011, the department generated $1.87 million in revenue from the sale and lease of surplus property. In the last few years, there has been a decrease in activity largely due to the national downturn in the real estate market.

What factors affect results? The national economy affects the interest developers have in surplus land for economic development. With increased job growth and easier lending policies, there is an increase in surplus land purchases. Without those factors, the interest in buying surplus land declines.

What are we doing to improve? The department is exploring the use of consultants to help manage the demand for excess land sales and other property management functions such as the sale of personal property, lease revenue and rental income. With this option we don't have to increase the overall size of state government by adding positions, but can utilize partners in the private sector for their expertise and efficiencies.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

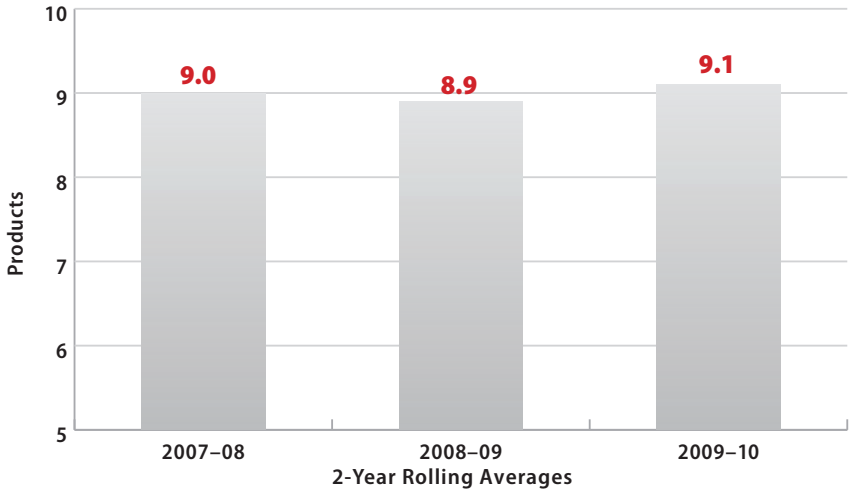
Accountability: DMV efficiency

Report Date: January 2012	**Data Frequency:** Biennial	**Division:** Motor Vehicles

Why is it important? The Division of Motor Vehicles (DMV) issues many types of products such as driver licenses, identification cards, vehicle plates, titles and registration renewal stickers. Customer service is a top priority throughout the department and the number of DMV products issued per hour is a measure of the efficiency and effectiveness of the department's customer service.

Performance measure target: The department's goal for this measure is to maintain or improve the number of products issued per hour on a two-year rolling average.

Figure: Number of DMV Products Per Employee Hour Worked



2010–11 data available in February 2012

How do we measure it? The number of products per hour has been predictably higher in even-numbered years because of biennial registrations. For this reason, the measure is a rolling two-year average. The calculation for the two year period is the number of products issued divided by the number of DMV employee work hours.

How are we doing? Since 2008, the number of products per hour in each two-year period has increased with the 2009–10 number being 9.1. This shows a high level of productivity. Data for 2011 will be available in February 2012.

What factors affect results? This measure is sensitive to changes in population (number of products applied for), staffing (total hours worked) and automation (total time it takes to issue a product). It trades off against wait times for service. Absent significant new automation, with fewer staff, products per hour may increase but customers wait longer for their products. With automation, products per hour can be maintained or increased with fewer staff.

What are we doing to improve? The department is using a number of things to improve this measure. These include increasing self-service options for customers, making use of new technologies to shorten processing time and increasing partnerships with outside vendors.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

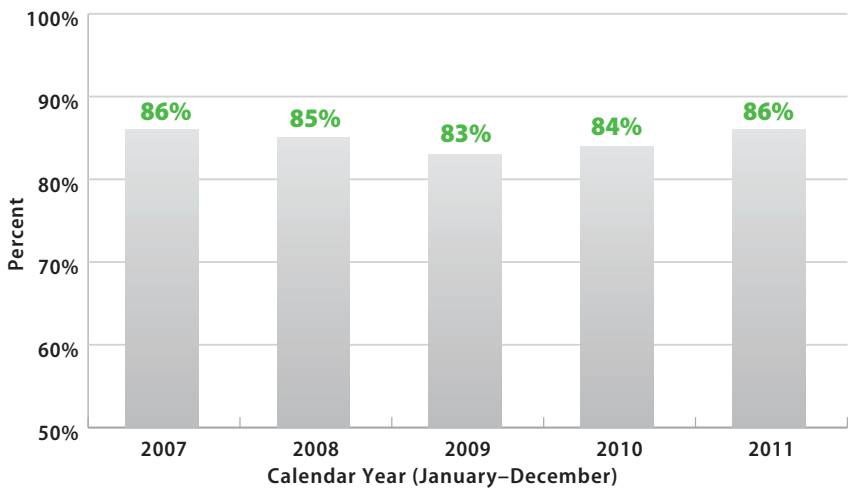
Preservation: State highway condition

Report Date: January 2012 | **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 the vehicle miles traveled. When pavement is in good condition, it allows for 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 state highway system. In order to get the best value for pavement investment dollars the department relies on data-driven decision-making processes that use pavement condition data for project planning and programming purposes.

Performance Measure target: The department's goal is to increase the percentage 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 a pavement in excellent condition.

How are we doing? The first year the department had complete statewide coverage using the Pavement Condition Index (PCI) rating method was 2011. Prior to 2011, the department assessed pavement condition using a different methodology known as the Pavement Distress Index (PDI). The 2011 data shows 86 percent of the system in fair or above condition. This is similar, but down slightly, from system conditions during the preceding four years as measured by PDI.

What factors affect 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. The department uses asset management tools and strategies to determine the level of investment 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. It also involves enhancing asset management strategies that include improved data, data analysis tools and prioritization to make sound investment decisions.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

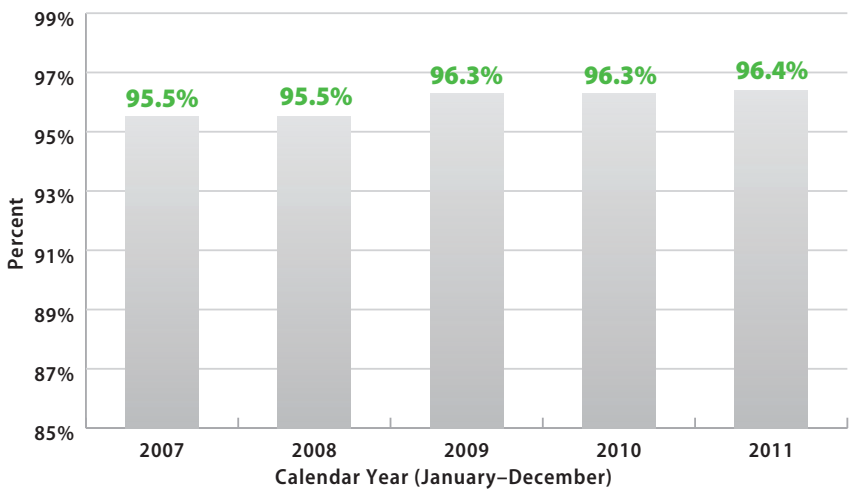
Preservation: State bridge condition

Report Date: January 2012 | **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 or more of Wisconsin's state-owned or maintained bridge deck area to be rated fair or above.

Figure: Percent of State Bridge Deck Area 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, super structure and sub 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 96.4 percent of Wisconsin's 5,140 state owned or maintained bridges have a good rating or fair rating, while 3.6 percent of the state bridges have a poor condition rating. The 3.6 percent of state bridges with a poor condition rating includes 66 bridges with weight restrictions. The above trend line shows that Wisconsin has been increasing its good and fair bridges over the past five years. When including Wisconsin's 8,811 local bridges, the bridge condition rating drops to 91.8 percent, however, this surpasses the national average of 88.5 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 Dashboard

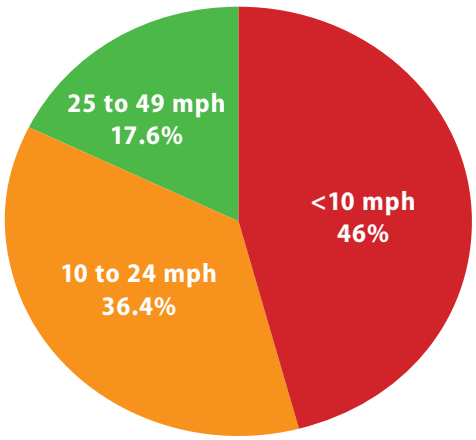
Preservation: State-owned rail line condition

Report Date: January 2012	**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 improve upon the current 54 percent of state-owned rail line miles capable of being 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 by Operating Speed



State Fiscal Year (July–June)

How do we measure it? The track is evaluated on the number of miles allowing operation at speeds allowed by the FRA's Track Safety Standards. The objective is to have all tracks capable of being operated at speeds of 10 mph or greater. This track would be in compliance with the FRA's Class 2 Track Safety Standards. The department strives to maximize the number of loaded 286,000 pound rail cars that can operate on state-owned rail lines that meet at least the FRA Class 2 track safety standard. This operational speed will allow railroads to serve most customers with a daily round trip.

How are we doing? A total of 371 miles of the overall 687 miles of track, or 54 percent of state-owned rail lines can allow operating speeds of 10 mph or greater. In comparison, the privately-owned Class I railroads (Canadian Pacific Railway, Canadian National, Union Pacific, and BNSF) own 2,549 miles of track in Wisconsin and 2,412 miles, or 95 percent, meet the FRA Class 2 standard speed or higher.

What factors affect results? The economy has an impact on the volume of goods moved by railroads, the revenue they earn and the reinvestment in their track and structures. The funding provided in the current state budget dictates the level of funding for the freight rail grant program. The required cost share on individual projects is provided by rail transit commissions or the railroad. As the cost of raw materials and labor increase, the amount of track infrastructure improvements that can be accomplished become more limited.

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, the department is funding a comprehensive inventory state-owned rail bridge to get a better understanding of load carrying capacities and improvement needs.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

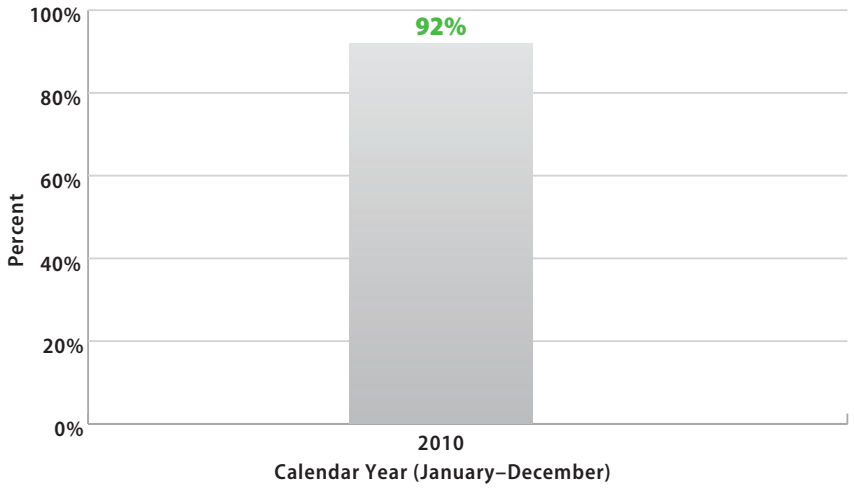
Preservation: Airport pavement condition

Report Date: January 2012 | **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, not only of our state highway system, but for our airport system as well. 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 or more of airport pavement be rated fair or above.

Figure: Percent of Airport Pavement Rated Good or Above



2012 data available in fall 2012

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 have previously been done on a rotating schedule so a one-to-one comparison to historical data doesn't exist; however, the pavement condition data is similar to previous years. Data was not collected in 2011. The next new data will be available in Fall 2012.

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.

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 Dashboard

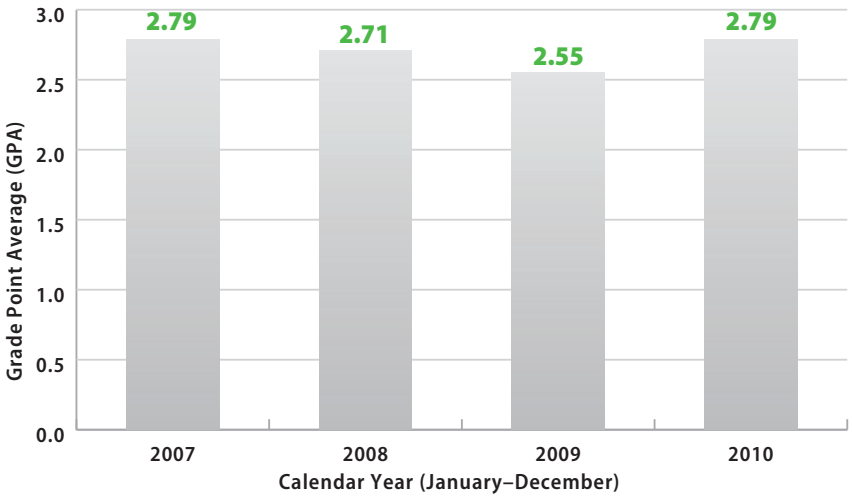
Preservation: State highway maintenance

Report Date: January 2012 | **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 29 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



2011 data available in July 2012

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. Features are assigned different grading curves. Maintenance assessments of critical safety, safety/mobility, ride/comfort, stewardship and aesthetic features are completed each calendar year. This data identifies areas to focus on improving such as reducing shoulder drop-off, removing hazardous debris from shoulders, maintaining visible centerline and edge line markings and providing more visible, longer-lasting traffic signs.

How are we doing? Overall conditions rebounded in 2010, reversing a two-year decline in highway conditions. The 2010 grade point average matched the six-year high of 2.79 that was reported in 2007.

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 2008 and 2009 as winter maintenance activities used more of the available maintenance funding. Conditions improved in 2010, based largely on the accelerated improvement program funded by the federal American Recovery and Reinvestment Act.

What are we doing to improve? Management strategies include leveraging the improvement program, increasing the cost efficiency of winter maintenance activities, communicating statewide maintenance targets to regions and linking targets to county routine maintenance agreement activities.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

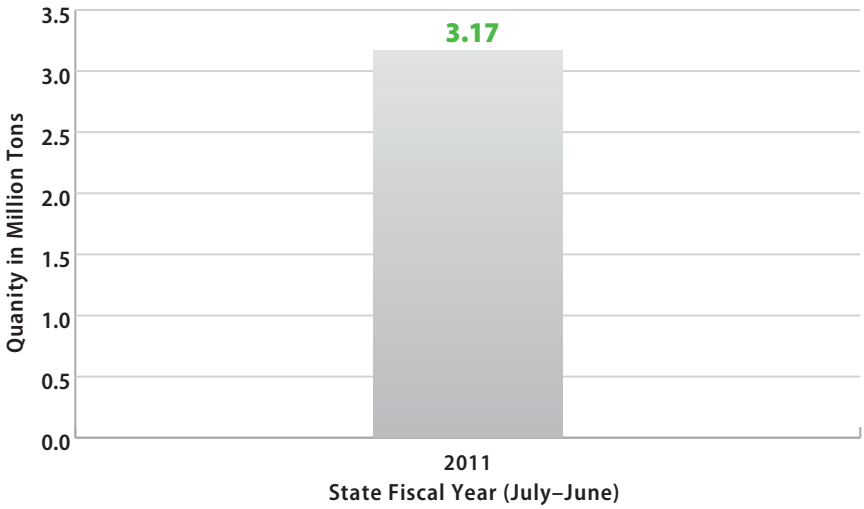
Preservation: Material recycling

Report Date: January 2012	**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 3.0 million tons of recycled materials into projects and to continually strive to improve, including 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 individual project estimates. The total of the estimates is added up for each state fiscal year.

How are we doing? Recycling 3.17 million tons of material on projects demonstrates the department is very aggressive in conserving resources, in minimizing waste and in keeping materials out of landfills. The largest type of recycled material is recycled concrete (1.7 tons) followed by reclaimed asphaltic pavement in hot mix asphalt and in base course. Other recycled materials include recycled asphaltic shingles, fly ash and boiler slag. The amount of reclaimed asphaltic pavement that was incorporated last year could pave a two inch thickness of roadway from Kenosha to Superior, Wisconsin.

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 research and evaluate both new material as well as ways to incorporate and maximize the use of recycled materials in projects at a lower cost. Any use of recycled material needs to provide equal or better performance of the end product in which the material was incorporated.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

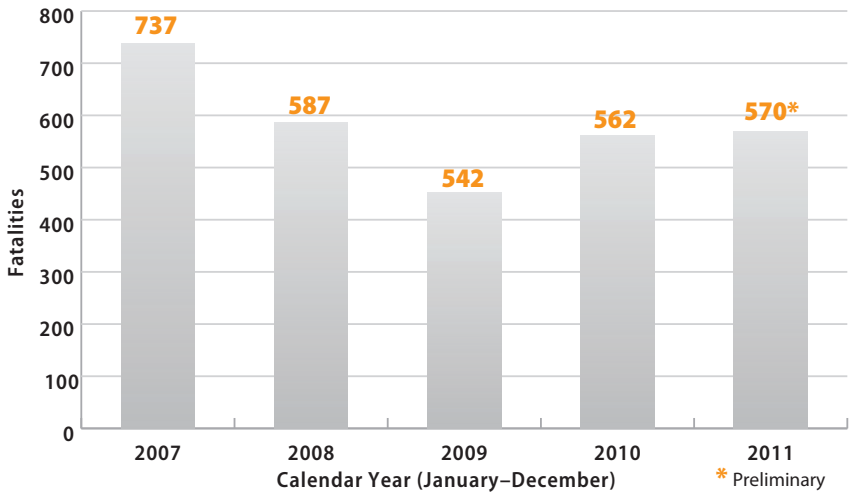
Safety: Traffic fatalities

Report Date: January 2012 | **Data Frequency:** Annual (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 each year as data is often reported late or needs verification.

How are we doing? Wisconsin has experienced a dramatic reduction in traffic fatalities on its roads in recent years, but each fatality is a tragic and preventable loss of life. During 2008 to 2011, Wisconsin had four consecutive years of less than 600 annual fatalities reported for the first time since 1924 to 1927. Preliminary estimates indicate fatalities in Wisconsin for 2011 finished about nine percent below the prior five-year average of 628. While this means the department met its target, the actual number of fatalities increased from 2010 to 2011, so we're identifying the performance trend arrow as holding steady.

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.

What are we doing to improve? The department uses engineering, education, enforcement and emergency response to prevent traffic fatalities. This includes designing safer roads and maintaining the highway infrastructure, educational efforts targeted on prevention and expanded 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 Dashboard

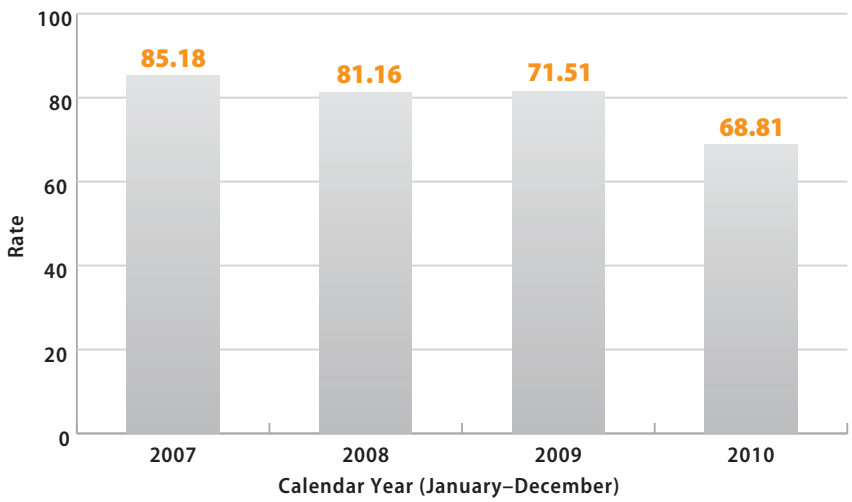
Safety: Traffic injuries

Report Date: January 2012 | **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 personal injury rate from traffic crashes by five percent from the prior five-year rolling average.

Figure: Injury Rate Per 100 Million Vehicle Miles Traveled



2011 data available in summer 2012

How do we measure it? In order 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.

How are we doing? The personal injury rate in 2010 was the lowest rate recorded. In calendar year 2010, there were 40,889 injuries related to crashes on Wisconsin roads. When calculated against vehicle miles traveled in 2010, the personal injury rate in Wisconsin was 68.81 personal injuries per 100 million vehicle miles traveled. This is 16.39 percent below the prior five-year rolling average of 82.30.

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 vehicle. Safety and road design improvements and tougher laws can have a positive impact on crash severity. In addition, the severity of injuries in crashes can be lessened through rapid and high-quality emergency medical services.

What are we doing to improve? The department uses engineering, education, enforcement and emergency response to prevent traffic crashes and injuries. This includes designing safer roads and maintaining the highway infrastructure; educational efforts targeted on prevention and expanded 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 Dashboard

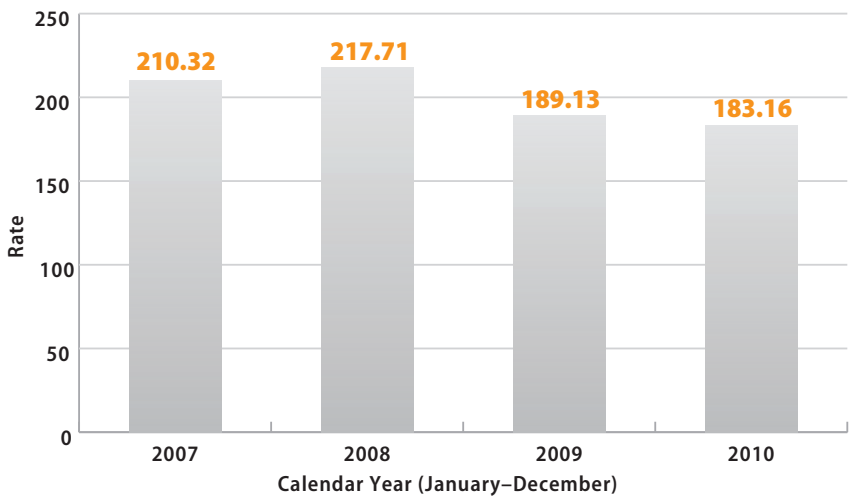
Safety: Traffic crashes

Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** State Patrol

Why is this important? Each crash creates the possibility of loss of life, debilitating injuries and lost income of 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 the crash rate on Wisconsin roads by five percent from the prior five-year rolling average.

Figure: Crash Rate Per 100 Million Vehicle Miles Traveled



2011 data available in summer 2012

How do we measure it? In order to calculate the annual crash rate, the total number of crashes is calculated against vehicle miles traveled each calendar year to generate a crash rate per 100 million vehicle miles traveled.

How are we doing? The crash rate in 2010 was the lowest rate recorded since 1944. In calendar year 2010, there were 108,808 total crashes (fatal crashes, injury crashes and property damage crashes) on Wisconsin roads. When calculated against vehicle miles traveled in 2010, the crash rate was 183.16 crashes per 100 million vehicle miles. This is 10.58 percent below the prior five-year rolling average of 204.83.

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 engineering, education, enforcement and emergency response to prevent traffic crashes and injuries. This includes designing safer roads and maintaining the highway infrastructure; educational efforts targeted on prevention and expanded 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 Dashboard

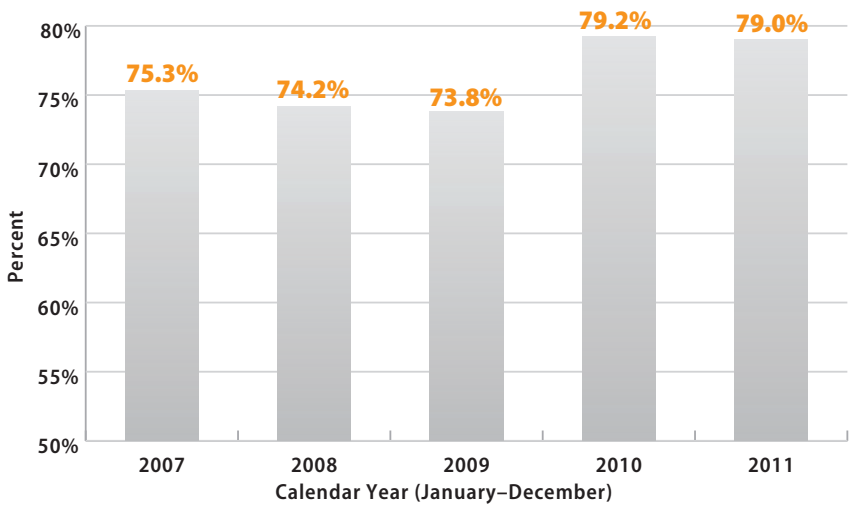
Safety: Seat belt use

Report Date: January 2012	**Data Frequency:** Annual	**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. Approximately 60 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 85 percent for all passenger vehicle occupants by 2013.

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 79 percent in 2010 and 2011. That means one in five motorists is still not buckling up—putting themselves and others at risk of serious injury or death in the event of a crash. Wisconsin still lags behind the 84 percent national average for safety belt use and 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 Dashboard

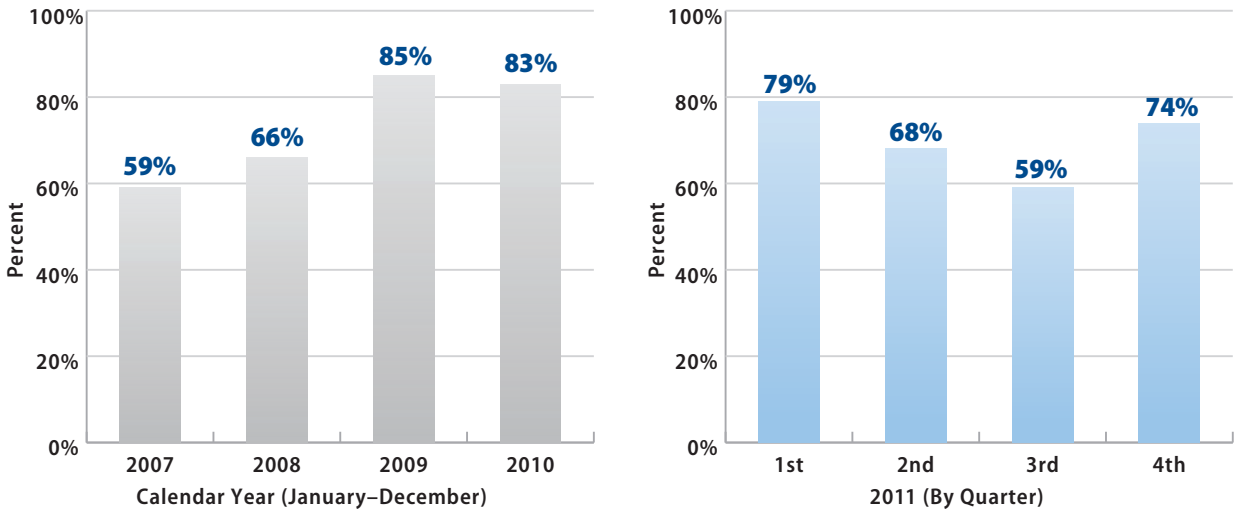
Service: DMV wait times

Report Date: January 2012 | **Data Frequency:** Annual (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). And while many DMV services do not require a visit to a customer service center, the DMV service centers still experience large volumes of customers. Customers expect convenient 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 customers who waited 20 minutes or less at service locations that are open five days per week and divides that number by the total number of customers who waited in those locations. Service locations that are open less than five days per week are not included in the measure because they are too small to warrant having a system to track wait times. Ninety percent of customers are served in the five-day-per-week stations.

How are we doing? The annual trend is down for 2011 because of an unusually larger number of retirements coupled with restrictions on hiring. Those restrictions were lifted during 2011 and DMV is hiring and training new staff. As a result, the percent served within 20 minutes rose in the last six months of 2011, creating a favorable trend. We expect continued improvement in 2012.

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). More self-service options being available by phone and on-line also affect the demand for counter service.

What are we doing to improve? Additional DMV staff and service center hours are being added in 2012. New online service and renewal options help to minimize the need for customers to visit a customer service center.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

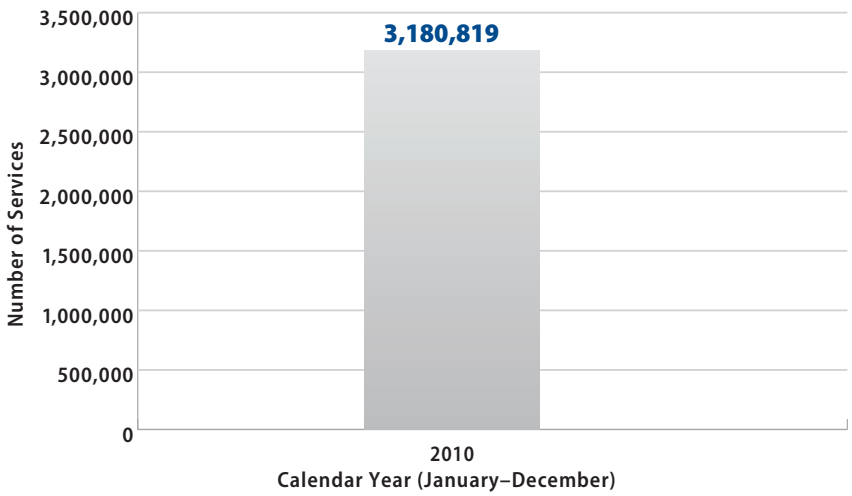
Service: DMV electronic services

Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** Motor Vehicles

Why is it important? Electronic service options give customers the choice of completing business with the DMV from the comfort of their own homes or other remote locations. Electronic transactions are fast, easy and the cost to the department is negligible. When customers do business electronically, it helps reduce wait times to receive assistance via the telephone or at a DMV customer service center. As electronic options increase, DMV is able to decrease the need for staff processing transactions.

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. Our goal is also to represent a shift from manual work by DMV staff to self-serve through automation.

Figure: Total Electronic Services Provided



2011 data available in February 2012

How do we measure it? The measure is a count of all services provided to customers electronically.

How are we doing? This is a new measure and, as such, there is no history to display. We are doing well. Using technology to improve the quality and decrease the cost of services has been a priority for DMV in the past and will continue on into the future. DMV had 22 services offered electronically as of 2010 and five more were added in 2011 to bring the total to 27 services available electronically.

What factors affect results? The total number of DMV interactions with customers varies from year to year for a variety of reasons: seasonality of demand related to the economy, the term of specific products (e.g., some registrations are biennial rather than annual), and changes in laws that result in surges of demand for particular services. Typically, DMV responds to more than 5.5 million requests for service annually.

What are we doing to improve? The department is creating new electronic services and encouraging users to complete transactions online. Public awareness campaigns help publicize the availability of electronic service options.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

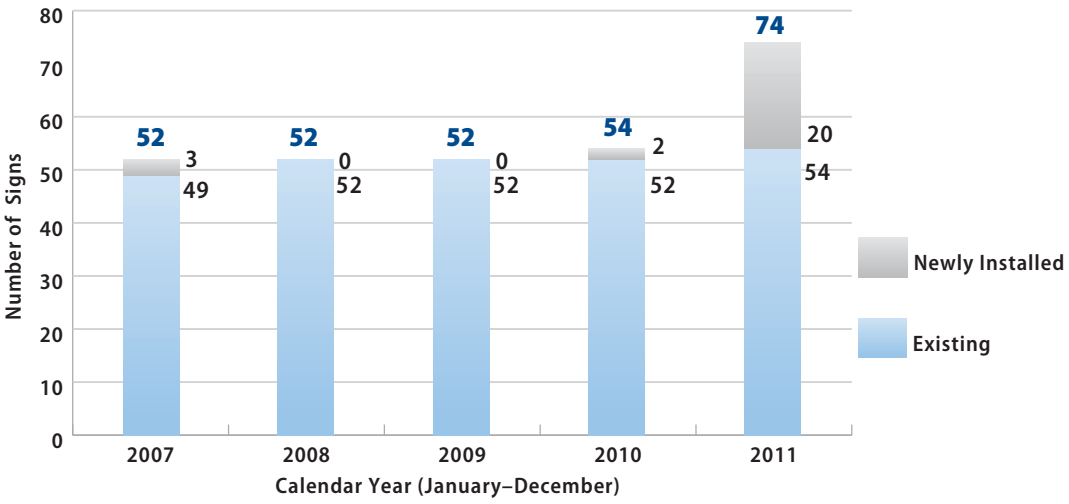
Service: On-road traffic information

Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** Transportation System Development

Why is it important? Electronic signs installed along freeways provide information to travelers. Some are used to display travel times while others display incident and travel information. The signs allow travelers to adjust their routes and warn of coming congestion or slower speeds. This helps to keep travel safe—know before you go. Electronic message signs also help the state manage the freeway system efficiently.

Performance measure target: The goal of this measure is to meet the number of electronic message signs identified in the department's Transportation Operations Infrastructure Plan.

Figure: Number of Electronic Message Signs



How do we measure it? The measure is a count of the total number of electronic message signs installed on the freeway system.

How are we doing? At the end of 2011, there were 74 electronic message signs in place. A total of 49 signs were installed prior to 2007. The trend chart show minimal installations until 2011 when 20 signs were installed.

What factors affect results? New installations of electronic message signs are identified in the department's Transportation Operations Infrastructure Plan. There are 16 new electronic message signs planned for 2012.

What are we doing to improve? The department is continuing to make improvements and install electronic message signs on major freeways in order to provide travelers with accurate travel information. The department will continue to implement and maintain electronic message signs that are strategically located in those areas where the information is most needed to make travel safe and efficient.

Wisconsin Department of Transportation

MAPSS Performance Dashboard

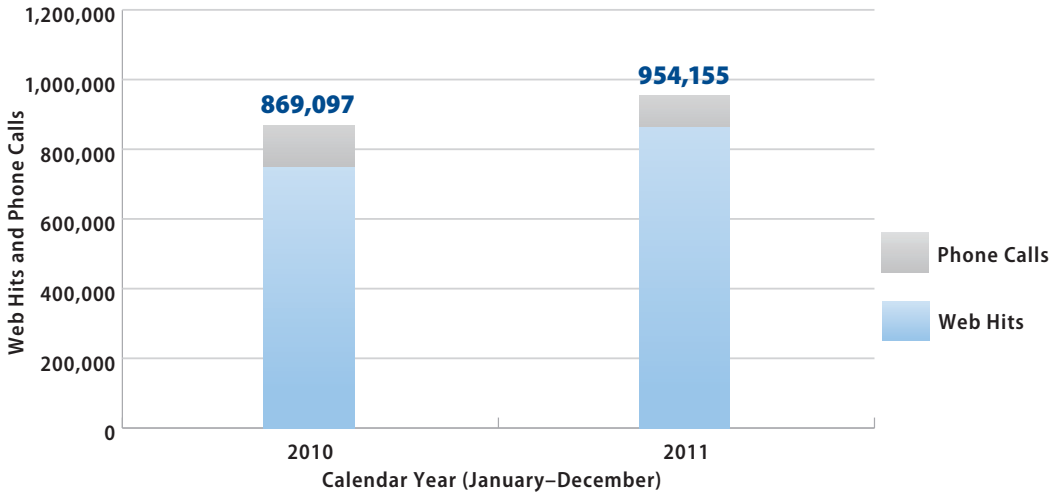
Service: Phone and web traffic information

Report Date: January 2012 | **Data Frequency:** Annual (Calendar Year) | **Division:** Transportation System Development

Why is it important? Travelers are safer when they know what to expect for travel times and travel conditions—know before you go. Wisconsin's 511 travel information system provides information via the web and telephone. The department monitors 511 calls and web use to help detect traffic issues on major Wisconsin roads and Interstates. The earlier problems are detected, the sooner an incident response can occur. This helps to keep traffic flowing and all travelers safe.

Performance measure target: The goal of this measure is to increase the use of the 511 travel information system.

Figure: Numbers of 511 Web Hits and Phone Calls



How do we measure it? The 511 system automatically tracks the number of telephone calls and web visits. The system was launched in 2009. Complete calendar year data was available beginning in 2010.

How are we doing? During 2011, the number of 511 calls and web visits increased by 10 percent. In addition, there were fewer calls, but significantly more web visits

What factors affect results? Weather, special events and traffic crashes can create a large influx of telephone calls and web visits.

What are we doing to improve? The department continues to monitor how people are using 511 and is working to upgrade the system to make it more user-friendly and reliable. The department will continue to promote the 511 system as the source of travel information.