Wisconsin Strategic Highway Safety Plan 2014 – 2016

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September 2014

Dear Colleague:

I am pleased to present the Wisconsin Strategic Highway Safety Plan (SHSP) for 2014-2016. This document provides background on and details about highway safety in Wisconsin and articulates strategies for the Wisconsin Department of Transportation (WisDOT) and its many highway safety partners to address key challenges in the highway safety arena over the next several years.

Partnership has been a key component of our achievements so far and will continue to be a critical part of our efforts in the future. Coordination of safety efforts at the federal, state, and local levels will enable all of us to reach our goals, maximize the effective use of available resources, and meet our shared objectives. The private sector, community organizations, and individual citizens will also play key roles in establishing and nurturing a culture of highway safety values in the Badger State.

This strategic plan was produced under the sponsorship of WisDOT's Traffic Safety Council, a multi-disciplinary team that forges effective partnerships within the department and with a wide range of safety professionals and advocates around the state. The plan was developed with valuable input from many people, both inside and outside the department.

To the extent that you contributed to the development of the plan, I thank you. To the extent that you take guidance and inspiration from the plan in your on-going efforts to make Wisconsin a safer place to live, work and travel, I thank you.

Remember: ***Any preventable traffic death is one too many.***

Mark Gottlieb, P.E.
Secretary

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Executive Summary

Wisconsin's Strategic Highway Safety Plan (SHSP) is a statewide, comprehensive, data-driven plan that provides a synchronized framework for reducing fatalities, injuries, and crashes by 5% by 2016. The SHSP examines various issue areas that affect highway safety in Wisconsin. The ten highest priority issue areas and their associated tasks are listed below.

Improve Design and Operation of Intersections

Task 1: Improve data and decision support
Task 2: Support Knowledge development and knowledge sharing
Task 3: Implement Concepts

Reduce Speed-Related Crashes/Curb Aggressive Driving

Task #1: Increase targeted enforcement and strengthen the efficiency of prosecutions
Task #2: Increase innovative education and outreach
Task #3: Implement sound engineering practices as a defense against unsafe driving behavior
Task #4: Provide research and data to support sound legislative policy
Task #5: Establish rational speed limits on state and local roads

Reduce Head-On and Cross-Median Crashes – Prevent/Mitigate Roadway Departure Crashes

Task 1: Develop and improve data and decision support systems for county/ municipal and state engineering to reduce the incidence and severity of lane departure crashes
Task 2: Develop/Implement a comprehensive program to reduce the incidence and severity of lane departure crashes
Task 3: Analyze and develop roadside and pavement strategies focusing on low cost treatment for rural non-STH highways

Provide Safe Pedestrian and Bicycle Travel

Task #1: Improve/Update education for multiple audiences
Task #2: Increase and strengthen targeted enforcement
Task #3: Educate and implement pedestrian/bicycle designs and countermeasures for engineering
Task #4: Improve data/Information collection and decision support
Task #5: Assess legislative changes

Reduce Alcohol/Drug-Impaired Driving

Task #1: Improve data collection, sharing, and distribution
Task #2: Continue communication program
Task #3: Partner with the Wisconsin Alcohol Policy Project
Task #4: Focus on prevention
Task #5: Focus on drinking among youth <25
Task #6: Promote transportation alternatives
Task #7: Continue overtime enforcement
Task #8: Streamline OWI process
Task #9: Improve drugged driving recognition

Task #10: Continue Traffic Safety Resource Prosecutor
Task #11: Create OWI courts
Task #12: Continue Intensive Supervision Program (ISP)/Intoxicated Driver Program (IDP)
Task #13: Support the Intoxicated Driver Program (IDP)
Task #14: Research lower allowable BAC

Reduce Driver Distraction/Improve Driver Alertness

Task #1: Continue to focus on the use of rumble strips to address the issue of driver alertness
Task #2: Promote the Zero in Wisconsin (ZIW) campaign
Task#3: Create education campaigns with direct outreach to teens/young adults and adult drivers
Task #4: Review the effectiveness of Wisconsin's texting ban and the ability of law enforcement to enforce and properly report distracted driving
Task #5: Explore marketing and signage on roadways to remind drivers to stay alert and not to text and drive
Task #6: Determine if further research is needed on the effects of different types of roadway signage, stationary billboards, and mobile billboards on driver's visual and cognitive attention. Work with advertising companies to assist in promoting rest stops as places to stop if motorist is drowsy
Task #7: Explore the possibility of creating incentives to motorist for safe driving records
Task #8: Keep abreast on upcoming vehicle technology and how it relates to distracted driving and vehicle safety and share this information accordingly

Reduce the Number of Unbelted Fatalities and Serious Injuries

Task #1: Increase public outreach to improve awareness
Task #2: Continue "Click It or Ticket" and other high visibility mobilization Initiatives
Task #3: Develop a proactive legislative agenda on occupant protection
Task #4: Continue the participation of external partners in the Seat Belt and Child Safety Seat Work Group
Task #5: Continue the federally-required annual field observation safety belt use survey
Task #6: Work with child safety seat advocates to improve education for parents
Task #7: Work with automotive industry stakeholders

Improve Teen Driver Performance – Ensure Drivers are Licensed/Competent – Sustain Proficiency in Older Drivers

Improve Teen Driver Performance

Task #1: Participate in driver education classes and "parents night" throughout the state when invited
Task #2: Maintain Teen Portal and cross link our portal with UW Children's Hospital's CrossRoads website
Task #3: Continue participation with professional associations, including Wisconsin Driver and Traffic Safety Education Association and the Wisconsin Professional Driving School Association
Task #4: Continue promotional activities of the National Teen Driver Safety Week
Task #5: Publish and provide outreach on the Parent's Supervised Driving Program Guide

Task #6: Use research from Virginia Tech to provide technical assistance to driver educators that supports them in enhancing parental engagement and parental awareness of Graduate Driver License (GDL)

Task #7: Migrate all teen driver education programs to online electronic submission of driver education completion certificates to improve ability to describe and analyze driver education impacts

Ensure Drivers are Licensed/Competent

Task #1: Strengthen commercial driver license (CDL) requirements and enforcement

Task #2: Increase enforcement activities related to traffic enforcement

Task #3: Continue New Entrant Program

Task #4: Continue to provide resources and oversight to ensure drivers are trained, eligible and medically qualified for light vehicles and commercial vehicles

Task #5: Support partners at the Wisconsin Technical Colleges

Task #6: Continue to provide expertise and related services as needed to the legislature, the Department, and other stakeholders on online driver education

Sustain Proficiency in Older Drivers

Task #1: Continue to train and monitor DMV Field Staff

Task #2: Monitor the practices of other states and use of functional assessments to determine if there is a better practice for some of our screening

Task #3: Continue to provide special exam tests as a high-priority activity

Task #4: Provide resources on WisDOT website regarding driving with a disability, driving with a medical condition, senior drivers, and procedures for reporting unsafe drivers, and outreach to family members of senior and disabled drivers

Improve Motorcycle Safety

Task #1: Develop data acquisition, analysis and countermeasures

Task #2: Provide rider training

Task #3: Promote motorist awareness

Task #4: Reduce Impaired Riding

Improve Traffic Incident Management/Safe Travel in Bad Weather

Task #1: Broaden education for Traffic Incident Management

Task #2: Improve travel in bad weather/poor travel conditions

Task #3: Continue improving the efficiency and effectiveness of Delayed Recovery

Introduction

Wisconsin has one of the best highway safety records in the United States, with a traffic fatality rate that has been below the national rate for more than a generation – and has remained near or below 1.0 death per 100 million vehicle miles of travel (VMT) since 2009. But a relatively good record is not enough. Any preventable traffic death on Wisconsin's streets and highways is one too many.

Traffic crashes are not "accidents" – they are, with few exceptions, avoidable events, caused by a single factor or chain of factors. Most often, these factors are human behavior, condition, and reaction – usually those of the vehicle operator, but sometimes those of a pedestrian or bicyclist.

Wisconsin ended 2013 with 527 traffic fatalities, which is the lowest annual total since 1944 when 526 people died in crashes. State traffic deaths in 2013 also were down 74- approximately 12% reduction- from 2012 when 601 people died and 44 fewer than the five-year average of 571 deaths. Traffic fatalities in 2013 were down in every category, including motorcyclists and pedestrians as well as drivers and passengers. However, each of those deaths was a person who died a violent, premature – and in many cases, preventable – death. That is unacceptable.

The Wisconsin Department of Transportation (WisDOT) and its many and diverse highway safety partners are challenged with continuing to lower the number and severity of traffic crashes. To that end, this Strategic Highway Safety Plan (SHSP) describes Wisconsin's most critically important highway safety issues and outlines a course of action to significantly reduce fatalities and serious injuries on the public streets and highways of the Badger State.

The detailed strategies and action items described in this plan support the overall strategic goal:

> ***By 2016, reduce traffic fatalities, injuries and crashes on Wisconsin roadways by 5% from their rolling 2008-2012 averages.***

This plan is divided into four sections:

Part I: Background – Overview of highway safety in Wisconsin, including a look at what the patterns and trends have been.

Part II: Highest Priority Issue Areas – Strategies to address Wisconsin's most critical highway safety issues.

Part III: Continuing Safety Issue Areas – Progress and activities in a number of other significant highway safety issues.

Appendices – SHSP Peer Exchange results and participants, Traffic Safety Council members, and list of acronyms.

Bringing Safety Partners Together

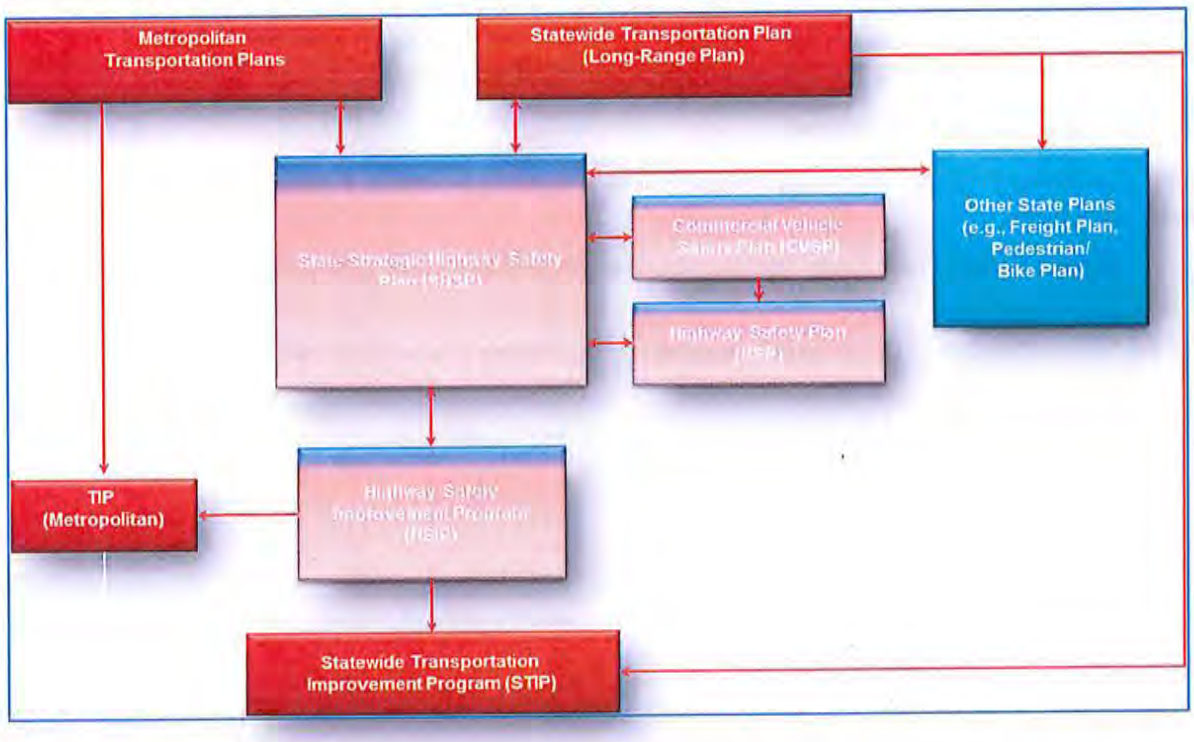
One of the most important functions of the Strategic Highway Safety Plan (SHSP) is to coordinate statewide goals and safety programs to help WisDOT and many other state and local highway safety partners work together to better leverage limited resources and more effectively meet common highway safety objectives.

The 2014-2016 SHSP will provide a framework for several WisDOT highway safety planning and program documents that are submitted annually to the US Department of Transportation to guide allocation of federal funds provided to Wisconsin, as shown in the Figure below. Some of these include:

- Highway Safety Performance Plan
- Highway Safety Improvement Program (HSIP)
- Traffic Safety Information Systems Strategic Plan
- Motor Carrier Safety Assistance Program (MCSAP) Commercial Vehicle Safety Plan

In addition, strategies and activities articulated in the 2014-2016 SHSP will be shared with other state and local entities to help guide their development and implementation of various annual and long range plans and programs, including:

- State Transportation Improvement Plan (STIP)
- Metropolitan Planning Organization (MPO) Urbanized Area Transportation Improvement Plans



The 2014-2016 SHSP is the fourth edition of a formally-adopted strategic highway safety plan. Like its three multi-year predecessors (2001-2003 SHSP, 2006-2008 SHSP, and 2011-2013 SHSP), the current plan was developed under the sponsorship of WisDOT's Traffic Safety Council (TSC).

The TSC is an interdivisional group of WisDOT staff, each with individual responsibility for some facet of highway safety programming or policy development. They work cooperatively with each other and with highway safety professionals and advocates outside the department. TSC members meet regularly to share information, establish consensus on highway safety policy direction for the department and, when appropriate, sponsor major highway safety planning, programming, or policy initiatives, such as the multi-year SHSP.

The 2014-2016 SHSP was developed by the TSC in partnership with external highway safety partners. The active involvement of external partners in the process is a critical element to ensure not only an appropriately-focused SHSP, but also successful implementation of various initiatives articulated in the plan.

The 2014-2016 SHSP satisfies federal requirements for state allocation of highway safety funds.

The SHSP Prioritization Process

Like its three predecessor strategic plans, the 2014-2016 SHSP was modeled on the conceptual framework used for the 1998 National Strategic Highway Safety Plan, which was developed by a multi-disciplinary coalition of organizations, under the leadership of the American Association of State Highway and Transportation Officials (AASHTO). For the 2014-2016 SHSP, 21 significant highway safety issue areas (shown in Table 1) were included in a structured group evaluation process.

Table 1: 2014-2016 Strategic Highway Safety Plan Issue Areas

Reduce driver distraction/Improve driver alertness	Reduce the number of unbelted fatalities and serious injuries
Improve traffic incident management	Improve safe travel in bad weather
Reduce speed-related crashes	Reduce alcohol and drug-impaired driving
Prevent or mitigate lane departure crashes and Reduce head-on and cross-median crashes	Sustain proficiency in older drivers
Provide safe work zones	Ensure drivers are licensed/competent
Improve motorcycle safety	Improve teen driver performance
Curb aggressive driving	Provide safe bicycle travel
Make large truck travel safer	Reduce deer and other animal crashes
Improve design/operation of intersections	Reduce vehicle-train crashes
Enhance EMS to increase survivability	Improve pedestrian safety
Improve safety data	

The first phase of the SHSP prioritization process involved an internet survey. The Traffic Operations and Safety Laboratory (TOPS Lab) at the University of Wisconsin-Madison developed and hosted a survey on their website. Over a thousand highway safety professionals and advocates, including WisDOT staff and a diverse array of state and local partners, were invited to access the website during a four week period in mid-2013 and complete the survey. All respondents remained anonymous. In total, 1072 respondents participated in the survey, tripling participation from the 2011-2013 SHSP survey. Respondents included engineers, planners, law enforcement professionals, elected officials, medical professionals, academics, safety experts, and concerned citizens, among others. [*See the Appendix to this report for a copy of the internet survey.*]

The second phase of the SHSP prioritization process involved a one-day peer exchange. Participation in the event, which was staged in Madison, WI in October 2013, was by invitation-only and brought together safety professionals with multi-disciplinary and multi-jurisdictional backgrounds. A total of 105 highway safety professionals and advocates participated in the event; about 2/3 of them were WisDOT staff, and the other 1/3 were external partners. [*See the Appendix to this report for a list of the SHSP Peer Exchange participants.*]

Of the 21 issues listed in the survey, the top issues were organized into 10 different issue areas. Participants in the SHSP Peer Exchange were broken up into groups based on backgrounds and experience, and each group discussed four of the 10 issue areas. A moderator was assigned to each issue area and led the discussion. Participants were asked to identify problems associated with the issue

and then suggest ways to address or mitigate the problems. Participants were also encouraged to sign up for task forces associated with each issue area. The task forces were then responsible for compiling the observations and solutions discussed in each session into overall strategies for their respective issue areas to be incorporated into the 2014-2016 SHSP.

Part I:

Background

Scope of Wisconsin's Highway Safety Challenge

Thanks in part to its many safety partners, Wisconsin has a notable highway safety record, and, in recent years, has achieved several milestones in terms of fatality and non-fatal injury reduction. However, far too many people still lose their lives or suffer a non-fatal injury every year on Wisconsin roadways, as can be seen in Figure 1: Wisconsin's Highway Safety Clock.

2012 Key Facts and Figures

- There were 109,385 police-reported[1] traffic crashes in 2012 – an average of 299 per day.
- In 2012, 601 persons were killed in 535 fatal traffic crashes – an average of three lives lost every two days on Wisconsin roadways.
- 39,370 persons suffered non-fatal injuries in 2012 – an average of 108 people per day.
- Of the 601 persons killed, 37% (222) died in alcohol-involved[2] crashes and 28% (168) died in speed-related crashes.
- Of the 372 fatally injured drivers tested for alcohol concentration, 34% (125 drivers) had an alcohol concentration of 0.08 or above.
- Of the 601 persons killed, 9% were either pedestrians (44) or bicyclists (11), and 19% (112) were motorcycle drivers or passengers.
- When safety belt use could be determined by the investigating officer, 52% of persons killed in passenger car and light truck crashes were not using safety restraints.

Figure 1: Wisconsin's Highway Safety Clock

- When helmet use could be determined by the investigating officer, 73% of all motorcyclists killed in crashes were not wearing helmets.
- Roads and streets under local jurisdiction (i.e. non-State trunk or Interstate highways) accounted for 86% (94,270) of all crashes.
- There were 5,569,097 registered vehicles in 2012 – a 0.8% increase over 2011.
- There were 4,171,428 licensed drivers in 2012 – a 0.7% increase over 2011.
- There were 59,087,249,010 vehicle miles of travel in 2012 – a 0.9% increase over 2011.
- The fatality rate in 2012 was 1.02 deaths per 100 million vehicle miles of travel.
- 2008-2012 average fatality rate per 100 million vehicle miles traveled for high risk rural roads in Wisconsin was 2.1 compared to 2.3 for the 2006-2010 average.

[1] All traffic crash figures used in this document refer to crashes reported to WisDOT by State Patrol, county sheriffs or local police departments – they do not include driver-reported crashes.

[2] "Alcohol-involved" means one or more drivers, pedestrians, or bicyclists involved in the crash were determined to have been drinking. The presence of alcohol does not mean the individual under the influence was beyond the legal limit or that they were the at-fault party in the traffic crash.

United States Code Section 148(g) (1) establishes a High Risk Rural Roads Special Rule, which requires States to track their fatality rate on rural roads. A high risk rural road means any roadway functionally classified as a rural major or minor collector or a rural local road with significant safety risks. Significant safety risks are determined by the Bureau of State Highway Programs and are based on the documentation of or potential for intersection and non-intersection crashes, as identified through data analysis of crash reports, roadway characteristics, or other information such as field reviews, safety assessments, road safety audits, and local knowledge or experience.

Every issue area can be addressed by the four E's - engineering, education, enforcement, and emergency medical services (EMS). Looking at this issue more globally, everyone (a fifth E) is responsible for highway safety. The issue areas are not independent, but overlap just like the contributing factors to traffic fatalities that can be seen in Figure 2.

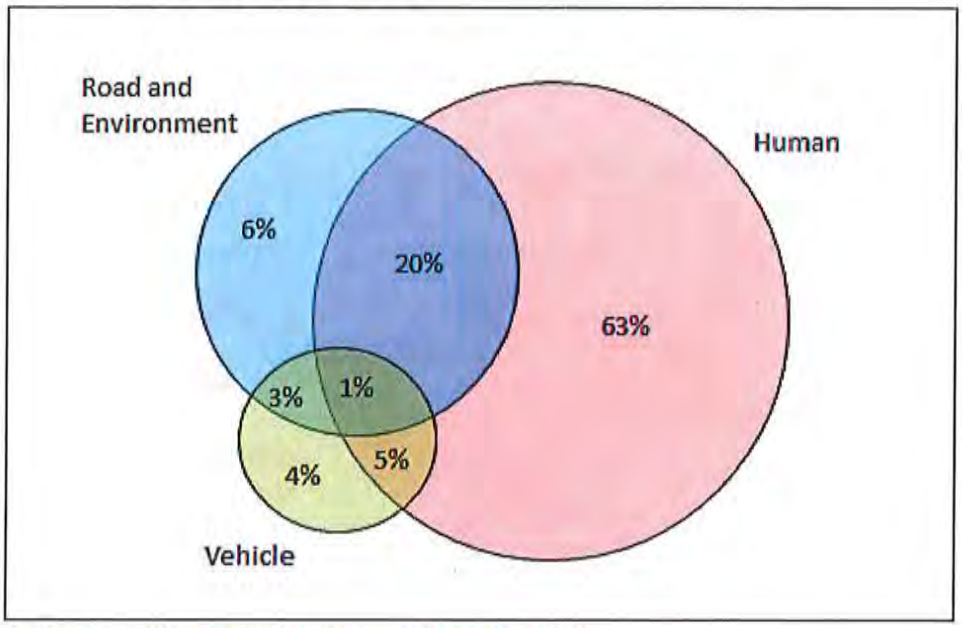


Figure 2: Contributing Factors to Traffic Fatalities

Wisconsin Transportation at a Glance[3]

- 11,800 miles of state and Interstate highways
- 103,000 miles of locally-owned county, town and municipal streets
- 13,700 bridges
- 114 lightly traveled rural roads designated as part of the Rustic Road System
- 81 public bus and shared-ride taxi systems
- 131 public use airports; 8 commercial airports
- Approximately 6,000 active registered aircraft
- Approximately 5.5 million people boarded commercial flights in Wisconsin each year
- Wisconsin airports handle approximately 105 million pounds of cargo each year
- 3,300 miles of track
- Freight railroads carry more than 162 million tons of cargo each year

[3] Transportation at a glance facts from http://www.dot.wisconsin.gov/about/overview/glance.htm

- 29 commercial ports that handle more than 30 million tons of cargo each year
- Two Amtrak passenger train routes (Hiawatha between Milwaukee and Chicago and Empire Builder between Chicago and the Pacific Northwest) carry more than 820,000 passengers annually
- 9% of all trips in Wisconsin are made by walking or bicycling

Where We've Been

Figure 3 shows the number of fatalities since 1966 and the relative changes in fatality rates since 1990. Figure 4 shows that the numbers of licensed drivers, registered vehicles, and vehicle miles traveled have been increasing since 1990, while Figure 5 shows that crashes, fatalities, and injuries have been decreasing over time.

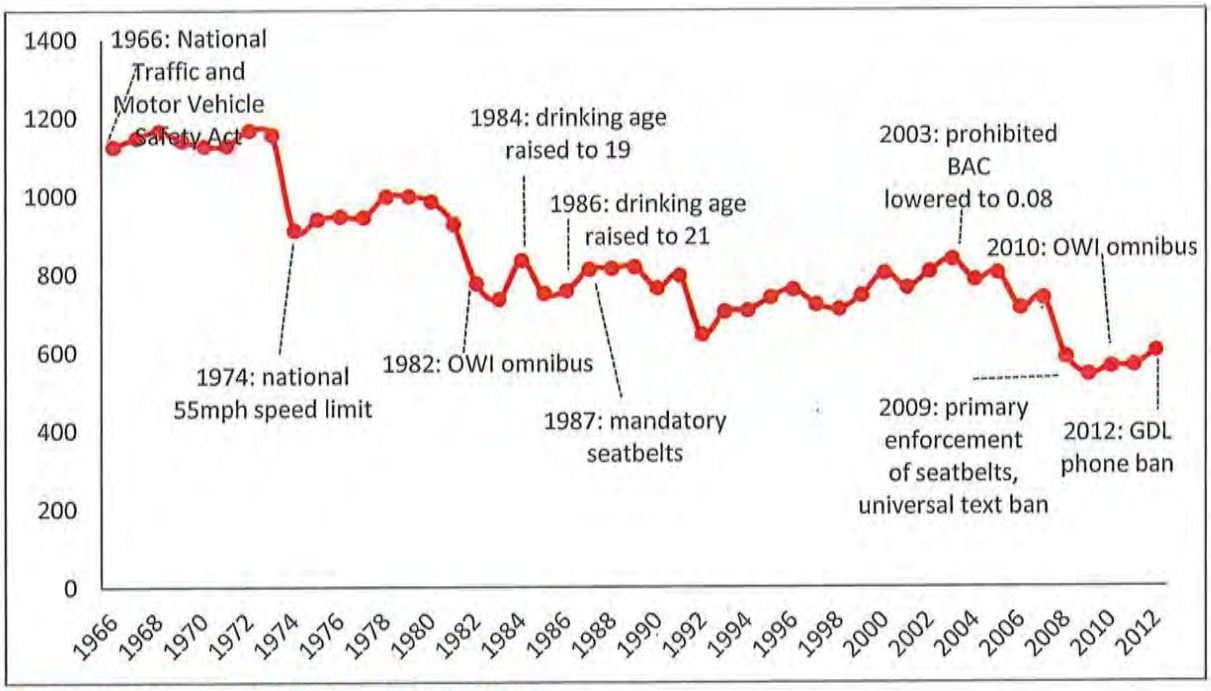


Figure 3: Wisconsin Traffic Fatalities by Year

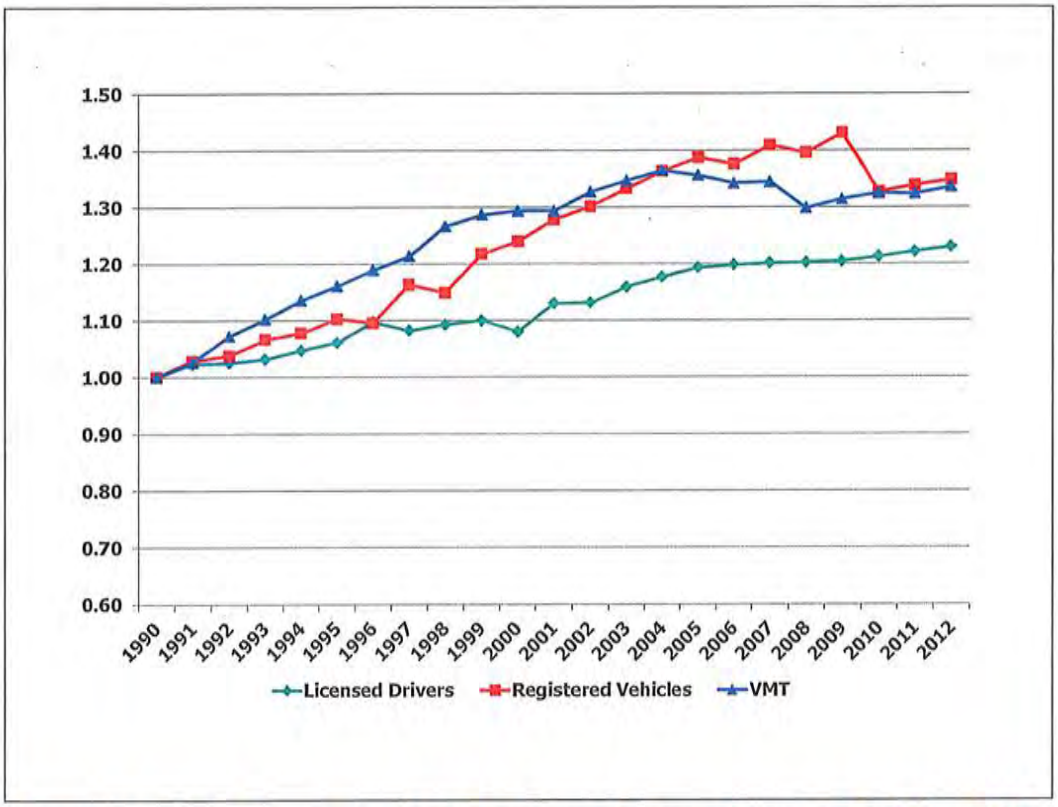


Figure 4: Relative Change since 1990 for Licensed Drivers, Registered Vehicles, VMT

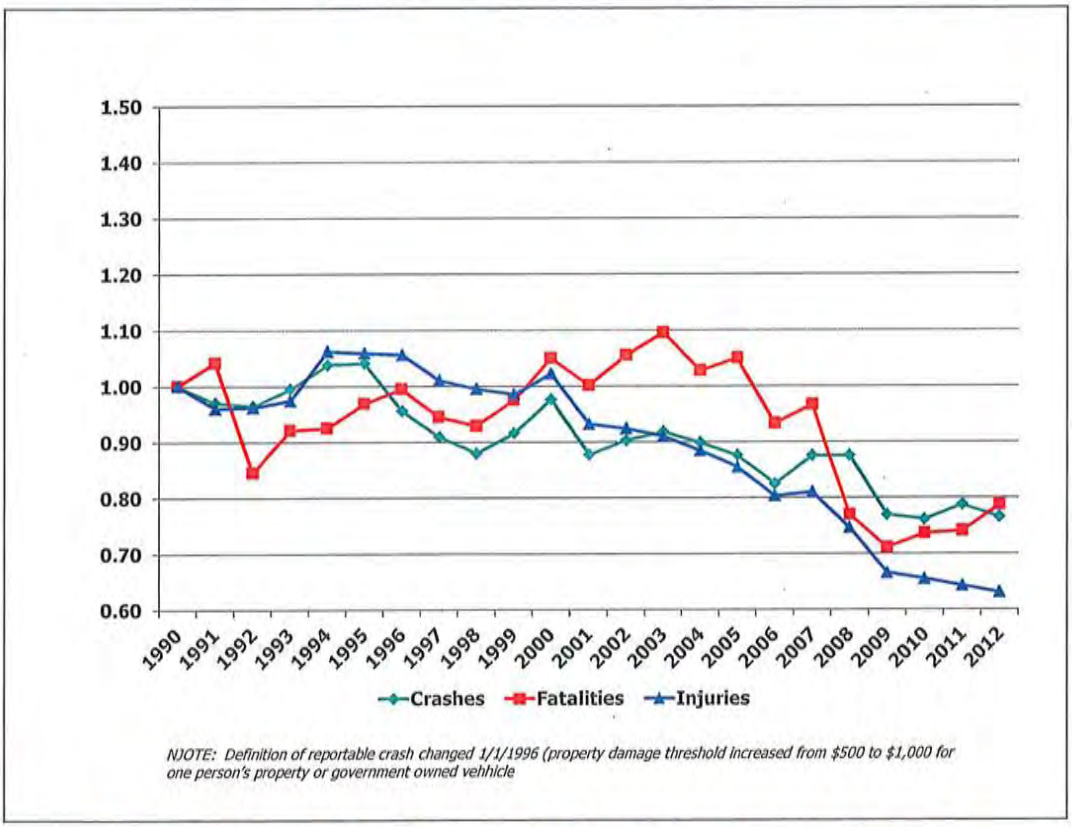


Figure 5: Relative Change since 1990 for Crashes, Fatalities, and Injuries

Since 1950, Wisconsin's fatality rate has been steadily decreasing and, in 2009, the rate was below 1.0 fatalities per 100 million vehicle miles traveled (VMT) as shown in Figure 6. Despite a small increase over the last three years, the fatality rate has been consistently decreasing since the 1970s.

- A sudden decline occurred in 1974 during a year that saw a new, national 55 mph maximum speed limit, an oil embargo, engineering improvements, and the beginning of a recession.
- A sharp decline in traffic deaths took place in 1982, the first year of Wisconsin's tougher drunk driving law and another recession.
- Another decline occurred in 1987 coinciding with the passage of a mandatory seatbelt law.
- Another sharp decline took place in 1992 with the passage of laws creating new penalties and treatment opportunities for Operating While Intoxicated (OWI) repeat offenders.

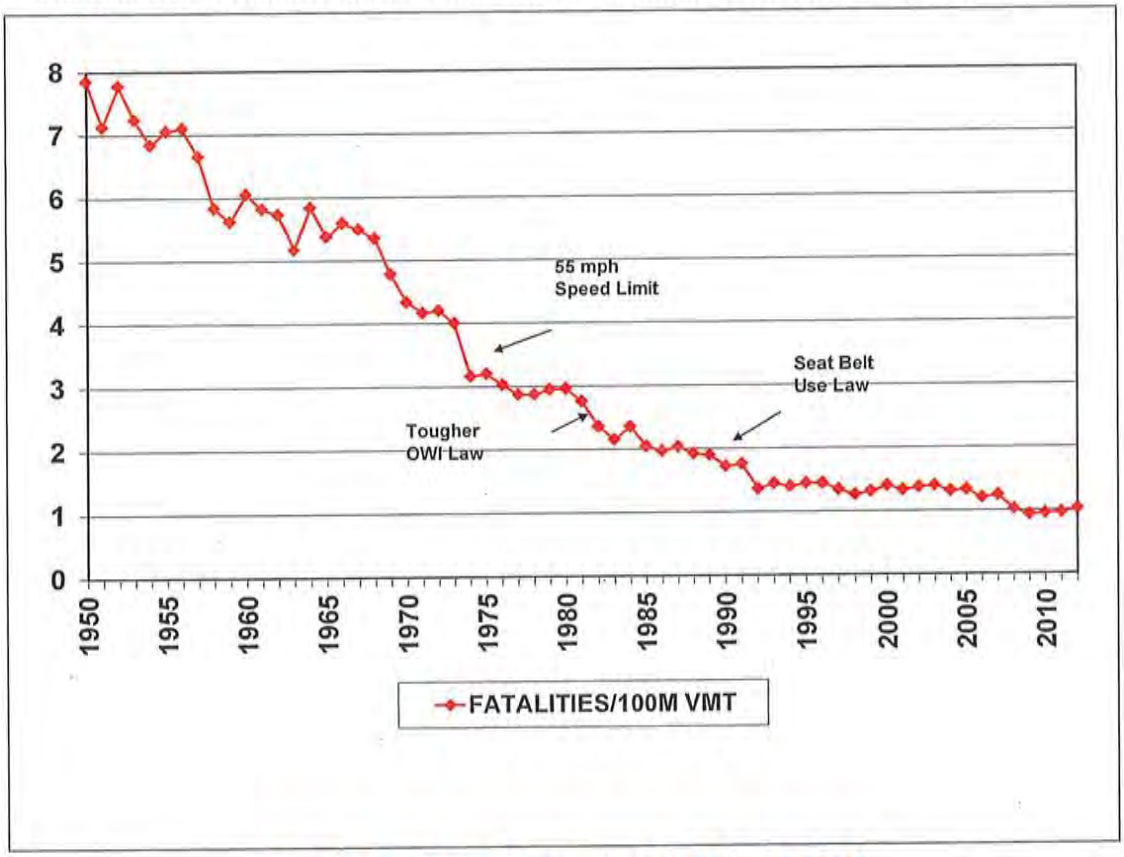


Figure 6: Fatality Rate per 100M VMT (1950-2012)

Traffic injury rates for the years 1950-2009 are shown in Figure 7. As with traffic fatalities, the rate of traffic injuries climbed through the 1950s and 1960s. However, as better safety features were incorporated into the design of motor vehicles (such as the use of safety belts, safety glass, plastics, and padded surfaces in automobile interiors) throughout the 1970s and the following decades, the rate of injuries has been in a steady decline.

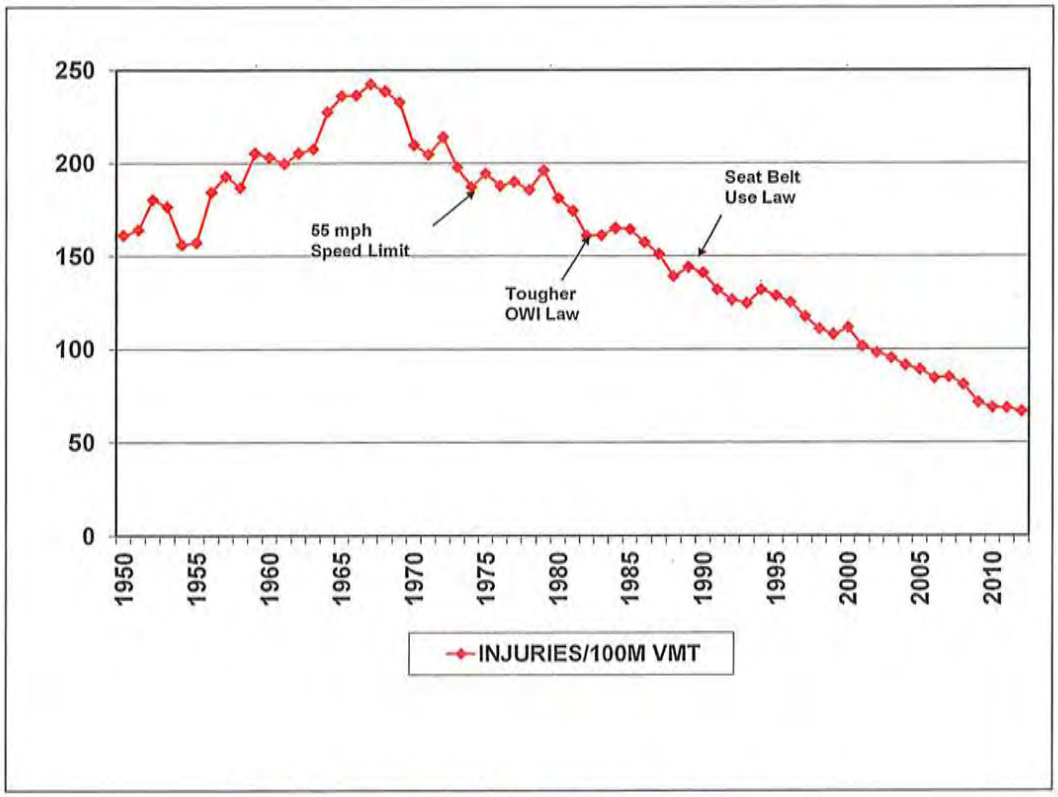


Figure 7: Injury Rate per 100M VMT (1950 – 2012)

Where We Need to Go

To reach the overall strategic goal of reducing traffic fatalities, injuries, and crashes on Wisconsin roadways by 5% from their 2008-2012 average, partners need to know what the goal is for each strategic area.

All the issue areas have similar focus areas and related challenges that are being faced. They include

- *Data/information and decision support*
- *Knowledge development, knowledge sharing, and participation in related training*
- *Concept implementation*
- *Increase targeted enforcement and strengthen the efficiency of prosecutions*
- *Increase innovative education and outreach*
- *Implementation of sound engineering practices as a defense against unsafe driving behavior*
- *Provision of research and data to support sound legislative policy*

The TSC will shepherd the SHSP and will monitor the implementation with an informal annual check-in when the 2013, 2014, and 2015 crash data become available. At the conclusion of this SHSP (2016), the performance measures will be summarized in 2017 as soon as the 2016 crash data are finalized. The following divisions will be responsible for their respective issue areas.

- Division of Transportation System Development
  - Improve Design and Operation of Intersections
  - Reduce Head-on and Cross-Median Crashes – Prevent/Mitigate Roadway Departure Crashes
  - Create More Effective Safety Decision Processes-Improve Incident Management/Safe Travel in Bad Weather
- Division of State Patrol
  - Reduce Speed-Related Crashes
  - Reduce Alcohol/Drug Impaired Driving
  - Reduce the Number of Unbelted Fatalities and Serious Injuries
  - Improve Motorcycling Safety
  - Improve Driver Alertness/Reduce Driver Distraction
  - Safe Bike and Pedestrian Travel
- Division of Motor Vehicles
  - Improve Teen Driver Performance – Ensure Drivers are Licensed and Competent – Sustain Proficiency in Older Drivers

Implementation at the local level will largely be carried out through local Traffic Safety Commissions. Wisconsin has a unique opportunity through current statutes. In 1971, Governor Patrick Lucey signed into law Statute 83.013, which requires each county to have a community-level, multi-disciplinary Traffic Safety Commission. Since then, Wisconsin has been the envy of other states for our grassroots approach to traffic safety. Some states have laws that allow—but do not require—cities or counties to establish similar groups; Iowa, for example, has only a handful of them.

A commission is required to include the county's:

- Chief traffic law enforcement officer (or designated representative)
- Highway safety coordinator (if there is one)
- Highway commissioner (or designated representative)

and from WisDOT:

- An engineer from the regional office
- Regional program manager (RPM) from the WisDOT Bureau of Transportation Safety (BOTS)
- State Patrol trooper/inspector

along with representatives from:

- Education (e.g., driver education instructor, high school principal)
- Medicine (e.g., doctor, nurse, EMS provider)
- Law (e.g., DA's office, municipal prosecutor)

Additional members might include county highway committee members, town board supervisors, civic leaders, safety advocates and the local news media.

Commissions must meet at least quarterly and state law specifies these duties:

- Review local crash data and other traffic safety-related matters
- Prepare "spot maps" showing crash locations on county and town roads and on city/village streets for places with populations under 5,000
- For municipalities of 5,000 or more, spot maps aren't required, but the TSC must look at the crash data

Based on their review of this data and reports of citizens' concerns, TSCs can recommend corrective action to WisDOT, the county board or highway committee, or any other appropriate branch of government. Recommending to government and responding to citizens often takes considerable initiative. As one TSC coordinator has said, "We tell them what we think, not necessarily what they want to hear."

WisDOT provides commissions with crash and citation data for rural state and county highways, and the BOTS RPM provides legislative updates and information on traffic safety initiatives and grant funding opportunities.

TSCs can also:

- Ask the State Patrol or local law enforcement to increase patrols in problem areas
- Ask WisDOT to review possible engineering problems on a state highway, and advise WisDOT on planned work zones or detour routes
- Review proposals for local traffic safety improvements
- Review fatal or other high-profile crashes, usually via in-squad video or in person by a site visit.
- Foster public awareness of traffic safety issues and initiatives (e.g., by working with local news media)
- Encourage/sponsor local activities (e.g., bike rodeos, Safe Routes to School campaigns)

This information was taken from the Wisconsin Highway Safety Coordinators Association website and can be found at http://www.wihsca.org/County-Traffic-Safety-Commisions.

Part II:

Highest Priority Issue Areas

Improve Design and Operation of Intersections

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *40,926 intersection crashes [37% of all crashes]*
- ✓ *166 deaths in intersection crashes [29% of all traffic fatalities]*
- ✓ *20,103 non-fatal injuries in intersection crashes [50% of all non-fatal injuries]*
- ✓ *1,440 incapacitating injuries in intersection crashes [39% of all incapacitating injuries]*

Background

Intersection safety is a national, state, and local transportation safety priority because intersection crashes represent a disproportionate percentage of the safety problem. Intersections make up only a small part of the overall highway system, yet over 25% of all fatal crashes occur at intersections, and about one-third of those occur at signalized intersections. Intersections are planned points of conflict in a roadway system where motorized and non-motorized users cross paths as they travel through or turn from one route to another, so it is not surprising that crashes are concentrated at intersections. Strategies to address intersection safety are diverse and constantly evolving.

Performance Measure Goals

<u>Outcomes</u>

- Reduce the 5-year average number of intersection crashes by 5% by 2016.
- Reduce the 5-year average number of intersection injury crashes by 5% by 2016.
- Reduce the number of fatal and incapacitating injury intersection crashes by 5% by 2016.

<u>Outputs</u>

- Encourage implementation and installation of reduced conflict intersections and interchanges through design guidance, training, and outreach to stakeholders. Reducing the number and type of conflict points at an intersection has been proven to reduce the risk of crashes.
- Begin implementation and installation of Intersection Conflict Warning Systems (ICWS) at high-speed rural intersections to reduce right angle crashes, which are often severe.
- Continue installation of signal head-per-lane at signalized intersections to improve the visibility of traffic signals and signs. Improving the visibility of traffic signals and signs at intersections has been proven to reduce right-angle and rear-end crashes.
- Continue installation of flashing yellow arrow at signalized intersections to improve driver compliance with permissive left turn signal indications. Improved compliance with left turn signal indications will reduce the frequency of left turn crashes, which are widely recognized as the highest-risk movements at signalized intersections.
- Continue ongoing traffic signal timing and optimization program. Retiming traffic signals every 3-5 years has been shown to reduce the frequency and severity of rear-end and right-angle crashes at signalized intersections.
- Continue ongoing roundabout outreach and education to reduce improper lane use and failure to yield issues.
- Implement a systemic approach to safety to reduce targeted crash types at high-risk intersections.
- Continue development of standards, policies and evaluation tools that enhance safety decision making.

SHSP Action Plan

Task 1: ***Improve data and decision support***

- Revise the Wisconsin Motor Vehicle Accident Report Form (MV4000) to include data on roundabouts, clarify left-turn crashes, and enhance the usability for intersection safety studies.
- Create new MV4000 crash database to account for additional/new fields on the crash form.
- Investigate network screening tools such as Safety Analyst to identify sites with potential for safety improvements and assist with countermeasure selection.
- Continue to improve safety data management tools, such as WisTransPortal, to share crash data across WisDOT and with local transportation partners.
- Develop a process to inventory traffic volume and traffic asset data for use in safety evaluations.
- Develop safety performance benchmarks for a range of intersection types to improve intersection safety decision-making.
- Evaluate the safety performance of new signalized intersection standards and technologies, including retroreflective backplates, signal head-per-lane, and flashing yellow arrow.

Task 2: ***Support knowledge development and knowledge sharing***

- Institutionalize traffic safety by providing training to state, local, and consultant practitioners to expand their knowledge of traffic safety engineering.
- Promote implementation of alternative intersection solutions for safety through WisDOT's Intersection Design and Operations Task Force.
- Training and Staff Development:
    - Intersection Safety Analysis Training
    - Design and Operation of Roundabouts
    - Design and Operation of Traffic Signals
    - Alternative Intersection Design
    - Highway Safety Manual
    - Bike/Pedestrian Facility Planning and Design
- Continue to participate in national research on intersection safety and implement the Highway Safety Manual. Participation in national research allows knowledge sharing with other agencies to discuss implementation planning. WisDOT should continue to participate in the following research:
    - FHWA's HSM Implementation Pooled Fund
    - FHWA's Evaluation of Low-Cost Safety Improvements Pooled Fund

Task 3: ***Implement Concepts***

- Implement the Highway Safety Manual to allow quantitative safety evaluation of intersection alternatives.
- Develop safety performance functions (SPF) and crash modification factors (CMF) for intersections on all highway functional classifications in Wisconsin.
- Develop traffic volume and safety warrants for J-turn intersections.
- Develop traffic volume and safety warrants for Intersection Conflict Warning Systems.
- Investigate strategies for implementing low cost safety countermeasures at intersections.
- Develop pilot projects using techniques identified in the Evaluation of Low-Cost Safety Improvements pooled fund study.
- Continue education and outreach to the public on the safety benefits and proper use of alternative intersection designs.

- Begin implementation and installation of Intersection Conflict Warning Systems.
- Complete pilot testing of traffic signal technologies to improve dilemma zone detection on high-speed signalized intersection approaches.
- Consider policy modifications:
    - Incorporate Highway Safety Manual into Intersection Control Evaluation (ICE) process
    - Pedestrian Facility Design Manual development
    - Conversion of protected-only left turns to protected-permissive using Flashing Yellow Arrow (FYA)
    - Investigate legislative and policy changes to fund standalone traffic signals, Intelligent Transportation Systems (ITS) solutions, signs and pavement markings

Highlighted Safety Initiatives

- Completed Roundabout Operations Study
- Completed Roundabout Safety Evaluation Study (roundabouts built in 2008 and before)
- Began implementation of reduced conflict intersections (i.e., J-turns) and low-cost safety improvements (i.e., retroreflective backplates)
- Completed systemic safety improvements in 2012 and 2013
- Continued WisDOT Traffic Safety Engineering Workgroup (TSEWG) – A cooperative effort with the UW–TOPS Lab, the TSEWG provides a working forum for technical issues with regional safety engineers.
- Statewide roundabout outreach and education – WisDOT has provided and is continuing to provide roundabout outreach and education to the public.
- Data accessibility – Local agencies have access to electronic crash data via the WisTransPortal.
- Local Crash Location – In past years, locating crashes on the local network was not possible. WisDOT has completed a project where many of the local crashes can be located on a map.
- Policy Modifications:
    - FDM guidance regarding access spacing near interchanges
    - FDM guidance regarding roundabout site selection and design
    - FDM Intersection Control Evaluation (ICE)
    - TGM policy requiring intersection lighting at all signalized intersections

Reduce Speed-Related Crashes/Curb Aggressive Driving

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *22,242 speed-related crashes [18% of all crashes]*
- ✓ *178 deaths in speed-related crashes [31% of all traffic fatalities]*
- ✓ *8,902 non-fatal injuries in speed-related crashes[21% of all non-fatal injuries]*
- ✓ *1,035 incapacitating injuries in speed-related crashes [27% of all incapacitating injuries]*

Background

In Wisconsin, aggressive driving is a factor in 47% of traffic crashes and 61% of fatal traffic crashes. Common crash factors that would be considered "aggressive" include failure to yield, following too closely, disregarding signals, driving outside traffic lanes, improper overtaking, and unsafe speed. Aggressive driving is typically understood as the exercise of multiple aggressive behaviors in a short amount of time. Any of these behaviors alone, while dangerous, would not necessarily be considered aggressive. When done concurrently or in rapid succession, they become the behavior of high-risk drivers.

Performance Measure Goals

Outcomes

- Reduce the 5-year average number of speed-related/aggressive driving crashes by 5% by 2016.
- Reduce the 5-year average number of speed-related/aggressive driving injury crashes by 5% by 2016.
- Reduce the number of fatal and incapacitating injury speed-related/aggressive driving crashes by 5% by 2016.

Outputs

- Develop a new public service announcement (PSA) warning of the monetary penalties and the dangers of speeding.
- Maintain 80 aerial enforcement deployments per year. In addition to being a NHTSA countermeasure, this is also a WisDOT MAPSS measure.
- Add one additional speed task force per year. High visibility enforcement is more effective than single officer deployments.

SHSP Action Plan

Task #1: Increase targeted enforcement and strengthen the efficiency of prosecutions

- Promote the use of high-visibility enforcement strategies in areas with a disproportionate number of speed-related crashes.
- Continue to use aerial support deployments for collaborative speed enforcement task forces.
- Utilize multi-jurisdictional saturation enforcement efforts along targeted corridors with speed-related crash histories.
- Promote sustained enforcement following a saturation patrol.
- Reduce vacancies and increase the size of the Wisconsin State Patrol.
- Provide law enforcement agencies with speed detection tools for enhanced enforcement of speed violations.
- Promote consistent statewide practices for the efficient prosecution of speed-related traffic violations.
- Provide training to local prosecutors on the consequences of unmanaged speeds.

- Educate law enforcement officials on uniform enforcement practices to reduce speed tolerances.
- Enhance speed conviction data tracking for more efficient decision processes by law enforcement agencies.

***Task #2:* Increase innovative education and outreach**

- Develop innovative PSA campaigns to raise awareness of the personal, financial, and legal consequences of speeding, such as risk of injury and/or death, cost of citation, and loss of license.
- Develop public and private partnerships to expand the reach of targeted PSAs.
- Promote calling 911 as an appropriate means of reporting dangerous driving.
- Encourage the use of alternative transportation options like public transit, biking, and walking as a way to mitigate instances of speeding and aggressive driving.

***Task #3:* Implement sound engineering practices as a defense against unsafe driving behavior**

- Facilitate the appropriate use of engineering countermeasures, such as innovative pavement markings, signal coordination, and roundabouts, to help reduce opportunities for speeding and aggressive driving.
- Promote project-level implementation of "complete streets" principles and target speed considerations to permanently embed traffic calming strategies into specific roadway designs.
- Encourage intergovernmental collaboration in the development of community sensitive design in state projects.
- Continue implementing countermeasures to address wrong way driving occurrences, particularly on new and existing interchanges.

***Task #4:* Provide research and data to support sound legislative policy**

- Monitor state legislative activity for proposals that will impact speeding and aggressive driving.
- Promote sound policy by providing relevant data and research to decision-makers in both the executive and legislative branches.
- When necessary, propose statutory revisions that will have a positive impact on curbing speeding and aggressive driving.

***Task #5:* Establish rational speed limits on state and local roads**

- Increase availability of the Wisconsin Speed Management Guidelines.
- Encourage the development and completion of local speed studies.
- Promote intergovernmental collaboration on speed study research.
- Expand the use of speed management concepts and conduct outreach through local media outlets.
- Promote the use of USLIMITS2 web tool.

Highlighted Safety Initiatives

- Speed task force model was developed in coordination with aerial enforcement deployments from the WisDOT Division of State Patrol's Air Support Unit.

Reduce Head-On and Cross-Median Crashes – Prevent/Mitigate Roadway Departure Crashes

Key Performance Measures (2008-2012 Annual Averages, except as indicated):

- ✓ *1,866 head-on crashes [1.5% of all crashes]*
- ✓ *85 deaths in head-on crashes [13% of all traffic fatalities]*
- ✓ *1,922 non-fatal injuries in head-on crashes [4% of all non-fatal injuries]*
- ✓ *345 incapacitating injuries in head-on crashes [7% of all incapacitating injuries]*

- ✓ *21,150 run-off-the-road crashes [18% of all crashes]*
- ✓ *241 deaths in run-off-the-road crashes [36% of all traffic fatalities]*
- ✓ *8,701 non-fatal injuries in run-off-the-road crashes [18% of all non-fatal injuries]*
- ✓ *1,339 incapacitating injuries in run-off-the-road crashes [29% of all incapacitating injuries]*

- ✓ *4,457 rollover crashes [4% of all crashes]*
- ✓ *77 deaths in rollover crashes [11% of all traffic fatalities]*
- ✓ *2,921 non-fatal injuries in rollover crashes [6% of all non-fatal injuries]*
- ✓ *494 incapacitating injuries in rollover crashes [11% of all incapacitating injuries]*

- ✓ *40 freeway/expressway cross-median crashes (2001-2008 average)*
- ✓ *12 deaths in freeway/expressway cross-median crashes (2001-08 average)*

Background

A "lane departure" crash is a "non-intersection crash which occurs after a vehicle crosses an edge line or a center line, or otherwise leaves the travel way." While lane departure crashes represent a relatively modest portion of all traffic crashes, they result in a greatly disproportionate number of fatalities and serious injuries. Nationwide, about 40 percent of roadway departure crashes involve single vehicles, and there are twice as many fatalities from rural roadway departure crashes than from urban crashes. About one in every five non-intersection fatal crashes involves a head-on collision, and three-fourths of these occur on rural two-lane roadways.

Lane departure crashes are a rural and urban problem. In 2010, FHWA conducted a study on fatal, fixed object crashes that indicated 57% of the crashes occurred in rural areas, while 42% occurred in urban areas.

Performance Measure Goals

<u>Outcomes</u>

- Reduce the 5-year average number of lane departure crashes by 5% by 2016.
- Reduce the 5-year average number of lane departure injury crashes by 5% by 2016.
- Reduce the number of fatal and incapacitating injury lane departure crashes by 5% by 2016.

<u>Outputs</u>

- Give at least two presentations to local units of government about roadside design. This is done to increase general awareness of local highway staff and public officials of run off the road problems and potential solutions.
- Review asphalt safety edge maintenance and construction policies. Evaluate if wider asphalt shoulders or concrete shoulders should have safety edge. Using a safety edge on roadways with wider shoulders can help reduce edge drop concerns on these roadways.

- Complete development of WisDOT-based predictive and retro-fit warrants for median protection, including a corridor approach to median protection. Include these warrants in the WisDOT FDM. This will help the department determine where additional median barrier installations could be used to reduce cross median crashes.
- Provide information in DMV driver handbooks and DPI driver education curricula regarding avoiding over-correction when a vehicle leaves the roadway on the right side. Educating young drivers to not over-correct can reduce run off the roadway crashes.
- Investigate if other media (e.g. You Tube, PSAs, Facebook, etc.) can be used to educate the public to avoid over-correcting for edge drop.
- Investigate if other states have other media (e.g. You Tube, PSA, Facebook, etc.) that Wisconsin could use to inform the public on how not to over-correct for edge drop. Using another state's media will likely save Wisconsin state funds and allow for quicker deployment.
- Identify locations and segments on state and county trunk highways with high numbers or rates of lane departure crashes and recommend systemic safety improvement strategies.
- Evaluate extending the Department's End Treatment Replacement Initiative to additional roadways. Given the severity of hitting end treatments, removing noncompliant end treatments or updating these treatments will reduce fatal and serious injury crashes.
- Educate stakeholders on the connection between lane departure crashes and other emphasis areas such as speed related crashes, distracted driving, impaired driving and improved occupant protection. Connecting these issues and addressing these problems will assist in reducing run off the road crashes.
- Sponsor research in the area of lane departure crashes. This will allow WisDOT to find technical solutions for run off the road crashes that are appropriate for Wisconsin roadways.
- Continue to participate in national and regional research. Participation will make it easier to implement national research on roadside design. Research that WisDOT should continue to participate in are:
    - Midwest Regional Safety Facility (MwRSF) Pooled Fund
    - NCHRP Panels on roadside design
    - AFB20 Committee on Roadside Safety
    - FHWA's Evaluation of Low-Cost Safety Improvements Pooled Fund

SHSP Action Plan

***Task 1:* Develop and improve data and decision support systems for county/ municipal and state engineering to reduce the incidence and severity of lane departure crashes**

- Review if existing software (e.g. Safety Analyst, Roadside Analysis Program (RSAP), Interactive Highway Safety Design Manual (IHSDM)) can be implemented into a decision support system for designers and engineers.
- Integrate the lane departure crashes decision support system into the WisDOT project planning/programming process and at the design level to set the appropriate level of improvement.
- New crash report form is required to provide additional lane departure crash information. Adding a new crash report form will limit manual review of crashes to collect data and speed up analysis.
- Evaluate data needs for Safety Analyst, Highway Safety Manual, RSAP, and ISHDM implementation for lane departure crashes.
- Develop/maintain inventory system of roadside geometry data (e.g. lateral clearance, foreslope, back slope, shoulder type/width, curve) for more effective use of analytical safety software.

- Assist local agencies in relevant data collection and maintenance of an inventory system for roadside geometry data.
- For the state's highway network:
    - Determine feasibility of Light Detection and Ranging (LiDAR) datasets to meet WisDOT business needs (e.g. to calculate shoulder slopes and to identify clear zone encroachments).
    - Update the roadside geometry data inventory system at reasonable intervals.
    - Complete TOPS Lab project to develop WisDOT-based predictive and retro-fit warrants for median protection, including a corridor approach to median protection.
    - Continued annual effort to identify CMC "hotspots" and program projects to provide median protection. (UW TOPS Lab, Regions, Bureau of Project Development, Bureau of State Highway Programs).
    - Develop data collection mechanisms necessary to implement Safety Analyst and the Highway Safety Manual.
- Develop project design policy and guidance to increase emphasis on roadside design.
    - Update or add various standard detail drawings to assist designers and construction staff.
    - Update Construction Materials Manual to assist construction staff on the installation of roadside hardware (e.g. crash cushions).
    - Add additional FDM guidance on Roadside Design
        - Roadside Grading Guidance
        - Minimum Effective Length of Beam Guard
        - Crash Testing Safety Investigation of Retrofitting Existing Guardrail Transitions
        - Concrete Traffic Barrier Attachments to Decks Utilizing Epoxy Concrete Masonry Anchors
        - Add design information from NCHRP Report 612: "Safe and Aesthetic Design of Urban Roadside Treatments"
        - Limiting use of curb on roadways with design speeds greater than 45 mph (per AASHTO Roadside Design Guide)
        - Update FDM roadside design guidance on transitional roadways, urban roadways
        - Add design information from NCHRP Report 737 Design Guidance for High-Speed to Low-Speed Transition Zones for Rural Highways
- Investigate opportunities for WisDOT staff participation in TRB Committee on Roadside Safety Design (AFB20) meetings and AASHTO Technical Committee for Roadside Design.
- Sponsor roadside design improvement research projects at Midwest Roadside Safety Facility.

<u>Task 2:</u> Develop and implement a comprehensive program to reduce the incidence and severity of lane departure crashes

- Communicate the importance of roadside design to county/ municipal and state engineering staff by providing training workshops and other technical presentation opportunities at conferences and meetings. These presentations should emphasize the importance of roadside design and help designers make appropriate roadside design decisions. Some possible opportunities are:
    - Provide roadside design update during the Annual Construction Specification Training
    - Provide regional NHI roadside design training classes

- Provide speakers on an as needed basis for maintenance, traffic, regional staff and other meetings
- Coordinate with Local Technical Assistance Program (LTAP) to provide county/municipal agencies with low cost safety improvement information and strategies
- Ask if the Wisconsin County Highway Association would like a presentation on roadside design issues at one of their meetings
- Participate in Regional Maintenance Meetings to discuss roadside design issues
- Ask if the Wisconsin Chapter of American Public Works Association would want a presentation on roadside design issues at one of their meetings
- Ask if the Public Works Institute would want a presentation on roadside design at one of their meetings
- Ask if the League of Wisconsin Municipalities would like articles on roadside design
- Ask if Crossroads would like articles on roadside design

- Provide information in DMV driver handbooks and DPI driver education curricula regarding avoiding over-correction when a vehicle leaves the roadway on the right side.
  - See if there are other ways to provide education to drivers (e.g. YouTube, PSAs, Facebook, etc.). See if there are resources or tools that other states have developed to address over-correction.
- Provide support for other focus areas that influence lane departure crashes (e.g. speed related crashes, distracted driving, impaired driving and improved occupant protection).

Task 3: ***Analyze and develop roadside and pavement strategies focusing on low cost treatment for rural non-STH highways***

- Identify locations and segments on county trunk highways with high number or rate of lane departure crashes for the High Risk Rural Road Program (HRRRP) and recommend systemic safety improvement strategies.
- Review research provided by FHWA's Evaluation of Low-Cost Safety Improvements Pooled Fund. Determine which strategies could be implemented on rural non-STH highways.
- Encourage counties to use Safety Edge on their roadways.

Highlighted Safety Initiatives

Efforts recently completed with the objective of preventing/mitigating head-on, cross-median, and other lane departure crashes have included:

- Standard Specification and design guidance for Safety Edge and two lane rural roadways with rumble strips has been implemented
- The following research projects have be implemented into state standards
  - MGS with Crash Tests with Native Wood Species
  - Down Stream Anchor Terminal Design
  - Synthesis of Crash Cushion Guidance

Provide Safe Pedestrian and Bicycle Travel

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *2,271 crashes involving pedestrian and bicyclists (2.0% of all traffic crashes)*
- ✓ *58 pedestrian/ bicycle deaths per year (10.2% of all traffic deaths)*
- ✓ *2,205 pedestrian/bicyclists injured per year (5.3% of all non-fatal injuries)*
- ✓ *338 pedestrian/bicyclists suffering incapacitating injuries per year (8.8% of all incapacitating injuries)*

Background

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WisDOT developed the "Wisconsin Guide to Pedestrian Practices," which provides detailed design, planning and program information for improving all aspects of the pedestrian environment. This guide serves as a companion document to "Wisconsin Pedestrian Policy Plan 2020."
http://www.dot.state.wi.us/projects/state/ped-guide.htm
http://www.dot.state.wi.us/projects/state/ped2020.htm

WisDOT also has a Wisconsin Bicycle Policy Plan as part of the agency's long range 2020 policy planning project. http://www.dot.state.wi.us/projects/state/docs/bike2020-summary.pdf Continuing to make positive strides toward the safety of pedestrian and bicycle travel will move Wisconsin toward successful completion of the goals listed below.

Performance Measure Goals

Outcomes

- Reduce the 5-year average number of pedestrian/bicycle crashes by 5% by 2016.
- Reduce the 5-year average number of pedestrian/bicycle injury crashes by 5% by 2016.
- Reduce the number of fatal and incapacitating injury pedestrian/bicycle crashes by 5% by 2016.

Outputs

- Train one hundred people in leading Walkability Audits in order to increase Wisconsin's knowledgebase of the walking environment.
- Train 60 engineers/planners per year in designing for pedestrian/bicycle safety to enhance the knowledgebase and increase the likelihood of incorporating pedestrian/bicycle users in the design process.
- Educate 250,000 motorists, bicyclists and pedestrians through PSA's and special events.
- Improve pedestrian/bicycle targeting methodology in order to make the best data driven decisions for enforcement grants.

SHSP Action Plan

Task #1: Improve/Update education for multiple audiences

- Update existing pedestrian/bicycle safety materials and create new materials, including PSA's in multiple languages
- Improve driver education related to bicycle and pedestrian interaction
- Provide Pedestrian/Bicycle education for elementary school students and older adults, including motorists, bicyclists, and pedestrians
- Educate everyone regarding pedestrian/bicycle rights (i.e., pedestrian/bicycle, engineers, planners, motor vehicles, community leaders/decision makers)
- Review possibility of mandatory Pedestrian and Bicycle question on written test

- Work with schools on outreach- Safe Routes to School- Parents take turns walking kids to school, school districts sponsorships (walking school bus)
- Continue and expand statewide direct safety education (Share and Be Aware)

Task #2: ***Increase and strengthen targeted enforcement***

- Increase the amount of pedestrian/bicycle education for law enforcement officers (i.e., ped/bike laws, MV4000)
- Create a reference sheet for collecting ped/bike crashes for law enforcement
- Strengthen traffic enforcement in general, including High Visibility Pedestrian and Bicycle enforcement and task forces
- Provide public information and education about enforcement of pedestrian and bicycle laws
- Review educational/diversion classes for bicyclists for traffic citations, motorists with pedestrian/bicycle citations
- Work with and educate Judges and DA's on Pedestrian/Bicycle laws and related fines

Task #3: ***Educate and implement of pedestrian/bicycle designs and countermeasures for engineering***

- Educate engineers and planners on pedestrian/bicycle designs
- Expand design courses offered (i.e., ADA, AASHTO)
- Update the pedestrian/bicycle design manual to reflect changes in design practice
- Finish work zone bicycle/pedestrian accommodations chapter (FDM)
- Continue implementation of complete streets
- Implement proven countermeasures

Task #4: ***Improve data/information collection and decision support***

- Increase/improve collection of pedestrian/bicycle exposure data
- Update crash report form (MV4000) to include more information about what led up to the crash (contributing circumstances)
- Continue to improve pedestrian and bicycle roadway inventory data (roadway and asset)
- Conduct research or potential survey about comfort of walking (walkability audit), understanding latent demand

Task #5: ***Assess legislative changes***

- Research legislative changes that may provide prosecutors more options
- Promote changing the law from "yield to pedestrian in crosswalk" to "stop for pedestrians in crosswalk"
- Pursue changes to require local ordinances to be consistent with state statutes
- Promote changing the state statute from accident to crash
- Review laws to make sure they are relevant (pedestrian tune-up)
- Review the options to change the type of curb ramp that is listed in the state statutes (State Statute 66.0909)

Highlighted Safety Initiatives

- A high-visibility pedestrian enforcement and education pilot was developed in the city of La Crosse to address crashes.
- A new bicycle safety PSA was created to encourage the use of safety gear while biking.

- Implemented Trans 75 requiring bikeways and sidewalks on state and federally funded highway construction and reconstruction projects.
- Improved design guidance on enhancing bicycle/pedestrian safety infrastructure at intersections, including shortening crossing distances and providing refuge areas.
- Began implementation and developed outreach materials for enhanced pedestrian crosswalk solutions including pedestrian hybrid beacons (PHB) and rectangular rapid flashing beacons (RRFB).

Reduce Alcohol/Drug Impaired Driving

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *5,947 alcohol-related crashes [5% of all traffic crashes]*
- ✓ *228 deaths in alcohol-related crashes [40% of all traffic fatalities]*
- ✓ *3,503 injuries in alcohol-related crashes [8% of all non-fatal injuries]*
- ✓ *639 incapacitating injuries in alcohol-related crashes [17% of all incapacitating injuries]*

Background

Alcohol and other drug impaired driving are illegal and dangerous. Although alcohol-involved crashes are a relatively modest portion of all crashes (5%), they tend to result in more severe outcomes. For example, over the past five years (2008-2012), alcohol-involved crashes accounted for 8% of all non-fatal injuries, 17% of all serious/incapacitating injuries, and 40% of all fatalities. Clearly, making positive strides in reducing impaired driving over the next several years will contribute significantly toward the highway safety goals of Wisconsin.

Performance Measure Goals

Outcomes

- Reduce the 5-year average number of drug/impaired driving crashes by 5% by 2016.
- Reduce the 5-year average number of drug/impaired injury crashes by 5% by 2016.
- Reduce the number of fatal and incapacitating injury drug/impaired crashes by 5% by 2016.

Outputs

- Consistently engage 350 law enforcement agencies in the Drive Sober or Get Pulled Over mobilization. This is a nationwide mobilization promoted by NHTSA.
- Increase the number of High-Visibility Enforcement Task Forces to 20 by 2016 to promote coordinated, multi-jurisdictional law enforcement efforts to enforce traffic safety laws and improve safety.
- Continue strong statewide law enforcement participation in the national *Drive Sober or Get Pulled Over* mobilization and the state-coordinated *Booze and Belts* mobilization to promote sustained high-visibility law enforcement presence and to decrease impaired driving.
- Address drinking among youth (age 25 and younger) – provide better education of young people and increased enforcement of existing laws through compliance testing.
- Promote Transportation Alternatives - Collaborate with the Tavern League of Wisconsin and local municipalities to administer the Safe Ride Program statewide. Maintain the number of rides provided through Safe Ride Program.
- Conduct a pilot program in order to estimate the drugged driving problem.
- Gain additional presence through social media (Facebook and Twitter).
- Research lower allowable BAC to discover any benefits that might be found in other countries.
- Increase the number of OWI Courts, as they are proven to prevent recidivism.

SHSP Action Plan

Task #1: ***Improve data collection, sharing, and distribution***

Combating impaired driving requires the coordinated efforts of many different players. From state and local agencies, including schools, emergency medical professionals/trauma centers, to the law enforcement community, to the prosecuting attorneys, and every agency in between, multiple stakeholders have a unique opportunity to have an impact. Effective coordination depends on collecting complete data and sharing it amongst relevant stakeholders. Potential solutions require identifying

various existing databases, the linking of that data, identifying the needs of collectors and users, and strategic planning of future data collection efforts.

Task #2: ***Continue communication program***

Continue to develop a statewide public information and education campaign to reduce OWI injuries and fatalities based on NHTSA's goals and objectives utilizing various methods such as the Internet, print, radio, and TV. Contractual services include product and placement, printing and postage. Collaborate with partners, revise and update all information, identify specific needs, and target information to various audiences, including Spanish-speaking customers. Use the Website more to reduce production costs. Develop and disseminate "Best Practices" information. Provide up-to-date educational materials and current data to the public. Collaborate with community prevention organizations to assist them in developing successful evidence based prevention programs.

Task #3: ***Partner with the Wisconsin Alcohol Policy Project***

The project is a position with the UW Law School. The role of this position includes the role public policy plays in shaping the alcohol environment as it relates to the underage drinker in Wisconsin. A large body of research indicates the public policy and private practices of a community exert significant influence over the amount and style of underage drinking within the community. Changes in public and private policies have proven effective in remediating drinking behaviors leading to drunk driving, specifically underage drinking and binge drinking.

Task #4: ***Focus on prevention***

Develop relationships with targeted high-risk occupations, organizations, medical professionals, and businesses to develop, design, and implement a program focusing on the impact of employers who employ staff with drinking problems, especially as it relates to impaired driving, missed work time, and additional health and societal costs as a result of drinking.

Task #5: ***Focus on drinking among youth <25***

Drinking among youth under age 25 is a serious concern. Ease of access to alcohol is one factor, as is low compliance with laws prohibiting alcohol sales to minors. Perhaps the largest factor is the drinking behavior of young people, which so often trends towards frequent binge drinking. Previously, law enforcement agencies had access to funding through USDOJ to perform compliance checks. Those funds are no longer available, and those programs have largely ceased operations. Solutions identified by the task force were better education of young people and increased enforcement of existing laws.

Task #6: ***Promote transportation alternatives***

Collaborate with the Tavern League of Wisconsin and local municipalities to administer the Safe Ride Program statewide. Additionally, federal funds are provided to law enforcement agencies that coordinate alternative transportation in communities. Covered activities include publicity, transportation costs, and advertising using the "Zero in Wisconsin" message. Targeted enforcement aimed at directing impaired event attendees to alternative transportation would also be considered.

Task #7: ***Continue overtime enforcement***

Plan statewide participation, encourage voluntary participation, and provide overtime funding for the high-visibility Labor Day alcohol enforcement crackdown. Encourage law enforcement agencies to make OWI a priority by writing citations, sponsoring media events, and working overtime in geographical areas where impaired driving is highest. Provide overtime and equipment funding for sustained Alcohol Saturation Patrols consisting of at least monthly High-Visibility Enforcement (HVE)

overtime patrols, including nighttime enforcement, accompanied by media in targeted jurisdictions covering at least 65% of the state's population using 2011 population estimates.

Task #8: ***Streamline OWI Process***

A large portion of the federal funds awarded to Wisconsin for impaired driving are devoted to enforcement efforts. Innovative enforcement strategies have yielded very positive results in recent years. However, an OWI arrest remains a lengthy and cumbersome process. Streamlining the process would mean officers spend less time processing a violation and more time conducting enforcement. Possible solutions identified by the task force included: investing in roadside evidentiary testing technology, continuing innovations, increasing the use of saturation patrols and local task forces, and increasing process efficiency within the local courts.

Task #9: ***Improve Drugged Driving Recognition***

While law enforcement officers are well-trained to recognize alcohol impairment, recognizing drug impairment remains a challenge. Illicit drugs produce a wide range of effects, and officers may not always be prepared to recognize the signs of impairment. Wisconsin does use drug recognition experts (DRE), but this training is expensive and somewhat impractical to implement on a large scale basis. Some suggested solutions would be: targeted use of the DRE program, abbreviated training in Advanced Roadside Impaired Driving Enforcement (ARIDE) curriculum made available to a wider range of law enforcement officers, and increased use of roadside impairment testing devices.

Task #10: ***Continue Traffic Safety Resource Prosecutor***

Provide salary and fringe for a prosecutor who will serve as a statewide expert on legal issues surrounding OWI and other vehicular crimes. In addition to providing specialized training to prosecutors, law enforcement, judges, and others in the community, the TSRP will also prosecute serious vehicular crimes. The "Traffic Safety Resource Prosecutor," as defined by the federal rule, "means an individual or entity used by the State on a full-time basis to enhance the performance of a State's judicial system by providing education and outreach programs and technical assistance to enhance the capability of prosecutors to effectively prosecute across-the-State traffic safety violations." This position also provides technical assistance to a wide variety of professionals such as law enforcement officers, Drug Recognition Experts, representatives from the breath and blood testing agencies, and policy development staff.

Task #11: ***Create OWI Courts***

Work with other agencies to fund start-up costs for OWI/drug court and implementing the program. Utilize best practices and lessons learned from the La Crosse OWI drug court. Work with other agencies to create a judicial liaison position modeled after the Traffic Safety Resource Prosecutor program. Partner with other agencies to provide training for Screening and Brief Intervention and Treatment (SBIRT) practices targeting new and innovative programs.

Task #12: ***Continue Intensive Supervision Program (ISP)***

This pretrial court intervention program provides funding to monitor, supervise, and connect the repeat OWI offender with assessment and treatment as soon as possible after the arrest and before conviction. Implement a standardized risk assessment tool at all agencies. Research how to decrease the workload by using continuous monitoring such as Scram or other technology.

Task #13: ***Support the Intoxicated Driver Program (IDP)***

Every driver convicted of Operating While Intoxicated (OWI) is court ordered to obtain an Intoxicated Driver Program (IDP) assessment to develop a Driver Safety Plan (DSP), which may include

education and/or treatment. The assessment tool was developed in the mid-1970's. Utilize data to evaluate the effectiveness of the assessment tool. Improve the tool to better identify the appropriate intervention with the goal of reducing recidivism.

Task #14: ***Research lower allowable BAC***

Gather information on lower allowable BAC, outlet density (impact of alcohol outlet density on alcohol-related vehicle crashes and OWI arrests for analysis and evaluation), and possibly retest (for drugs) blood cases over 0.08 in order to understand the extent of the drug problem in Wisconsin.

Highlighted Safety Initiatives

Wisconsin's Statewide Impaired Driving Task Force is a multi-disciplinary working group that includes professionals in the fields of education, law, engineering, policy, enforcement, medicine, and insurance.

- Ten multi-jurisdictional, high visibility enforcement OWI task forces have been formed around the state.
- WisDOT has developed a Drive Sober mobile app that can be downloaded for free. The app, which offers functions that help select a designated driver, calculates impairment, and provides resources to find a safe way home, has been downloaded over 50,000 times.
- A Designated Traffic Safety Resource Prosecutor has been funded at the Wisconsin Department of Justice as a pilot program with the goal of assisting in the streamlining of impaired driving prosecution.
- A "Daredevils" PSA was developed to reinforce the dangers of impaired driving to young people aged 18-34.

Improve Driver Alertness / Reduce Driver Distraction

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *22,021 crashes with "Inattentive" as a driver factor [19% of all traffic crashes]*
- ✓ *104 deaths in crashes with "Inattentive" as a driver factor [18% of all traffic fatalities]*
- ✓ *10,499 injuries in crashes with "Inattentive" as a driver factor [25% of all non-fatal injuries]*
- ✓ *862 incapacitating injuries in crashes with "Inattentive" as a driver factor [22% of all incapacitating injuries]*

Background

The dangers of distracted driving have become a prominent traffic safety challenge. Research by the National Highway Traffic Safety Administration (NHTSA) shows that in 2008 alone, nearly 6,000 people were killed and more than a half million people were injured in crashes involving a distracted driver nationwide. Almost 20 percent of all crashes that same year involved some type of distraction. However, NHTSA maintains that the devastating effects of distracted driving are underreported; making distracted driving data difficult to collect.

Although various forms of distracted driving have been problems for decades, cell phone use—particularly texting—has been identified as an egregious, prevalent, and dangerous form of distracted driving because it severely reduces the visual, mechanical, and mental acuity needed behind the wheel. Wisconsin has taken steps to address the growing problem of cell phone texting by enacting a ban that went into effect on December 1, 2010.

Undoubtedly, there will be continued discussion and debate on whether to ban **all** cell phone use while driving. The National Safety Council (NSC) is calling for a national ban. While this debate continues, traffic safety law enforcement and education efforts in Wisconsin can be focused on preventing all texting while driving and motivating motorists to voluntarily put away their cell phones while driving.

Performance Measure Goals

Outcomes

- Reduce the 5-year average number of distracted driving crashes by 5% by 2016.
- Reduce the 5-year average number of distracted driving injury crashes by 5% by 2016.
- Reduce the number of fatal and incapacitating injury distracted driving crashes by 5% by 2016.

Outputs

- Install rumble strips on all appropriate road projects.
- Develop a new PSA and create a press release for corresponding earned media, warning of the costs and dangers of distracted driving.
- Partner with ATandT for at least 10 Don't Text and Drive presentations per year.
- Incorporate the collection of data on cell phone use into the annual Seat Belt survey starting in 2014.
- Provide analysis of a new research project relating to distracted driving annually to WisDOT, the legislature, partners, etc.

SHSP Action Plan

***Task #1:* Continue to focus on the use of rumble strips to address the issue of driver alertness**

- Continue to research and implement the use of rumble strips on rural roads as possible
- Create an educational component for rural drivers and those who live near rumble strips

***Task #2:* Promote the Zero in Wisconsin (ZIW) campaign**

As part of the ZIW campaign, WisDOT will:

- Continue the use of a WisDOT-produced PSA, "*Anywhere but There*," aimed at teenagers staring the LG's National Texting Champion, Austin Wierschke
- Develop opportunities for earned media (new releases, speeches, and other public information) regarding distracted driving
- Target website and banner ad messages to teens through partnerships with high school sports sponsors

Beginning in 2014, the ZIW initiatives will include:

- Increase the broadcast time for the Austin Wiershke "*Anywhere but There*" PSA
- Increase the earned media
- Create new peer to peer messaging campaigns
- Create new "slogan" for distracted driving
- Continue internet and social media advertising and messaging while exploring new ways to deliver the ZIW message through these media sources
- Create more awareness about the ZIW website and its PSAs that can be used for driver's education course
- Create a video explaining the ZIW concept – What number of traffic deaths is acceptable for your family?

***Task #3:* Create education campaigns with direct outreach to teens/young adults and adult drivers**

- Programs focused on teens and young adults
    - Focus on creating peer to peer safe driving programs
    - Continue partnership with ATandT on the Don't Text and Drive campaign
    - Partner with additional cell phone companies and distracted driving prevention groups to create teen safe driving programs
    - Expand use of the Distracted Driving simulator in high schools and colleges
    - Work with the sporting associations and the School Board's Association to add not driving distracted as part of the Code of Conduct for all high school athletes
    - Research what programs/policies/instruction changes teen and young adult behavior
    - Create a teen advisory board or actively engage existing teen groups throughout the state to provide input and direction
- Programs focused on adults
    - Create a "be an example" campaign for adults including messages from kids to parents
    - Create a campaign for novice drivers
    - Explore peer to peer education campaigns
    - Work with businesses and the State of Wisconsin's Department of Administration to institute "no distracted driving" policies for all company vehicles and rental cars used on business time

***Task #4:* Review the effectiveness of Wisconsin's texting ban and the ability of law enforcement to enforce and properly report distracted driving**

- Review enforcement details from other states with hand held bans. Determine what type of enforcement is effective. Focus on interstate vs. intersection
- Support communities' creation of task force/HVE enforcement of the texting ban
- Review the data gathered during the task forces to identify if texting and driving is a traffic safety problem in Wisconsin
- Study crash data from other states with hand held cell phone bans and compare to Wisconsin data to determine if crashes are reduced in states with statewide hand held cell phone bans
- Provide research to the legislature and Department Secretaries regarding research on hands free cell phone vs. hand held cell phone use while driving
- Review law enforcement's process for completing crash forms and create a focus on distracted driving as a contributing factor
- Explore possible research opportunities within WisDOT and with external partners using the naturalistic driving study data collected by Virginia Tech, insurance companies, cell phone companies and vehicle manufacturers
- Incorporate cell phone usage into the annual seat belt survey
- Expand marketing to parents of young drivers and pre-drivers on the law requirements of Graduated Driver's Licensing
- Work with insurance companies and cell phone companies to allow the sharing of data from their cell phone usage research projects

Task #5: ***Explore marketing and signage on roadways to remind drivers to stay alert and not to text and drive***

- Market rest stops and tourism centers as "Texting Stops"
- Offer free Wi-Fi at rest stops. Work with cell phone companies to create "Hot Spots"
- Offer free coffee at rest stops
- Research potential partner with a gas station or private company to create a "Stop and Rest" campaign. Allow campaign to offer free products from the private company
- Research use of "Pull off Areas" in other states (example: Iowa) to determine if they are utilized as places to use cell phone by motorists.

Task #6: ***Determine if further research is needed on the effects of different types of roadway signage, stationary billboards, and mobile billboards on driver's visual and cognitive attention. Work with advertising companies to assist in promoting rest stops as places to stop if motorist is drowsy***

Task #7: ***Explore the possibility of creating incentives to motorist for safe driving records***

- Lower vehicle registration prices
- Work with cell companies to provide free cell phones
- Create incentives with insurance companies

Task #8: ***Keep abreast on upcoming vehicle technology and how it relates to distracted driving and vehicle safety and share this information accordingly***

Highlighted Safety Initiatives

- Over five hundred miles of centerline and shoulder rumble strips were cut on roads around the state.

- WisDOT developed a new PSA in which the LG US National texting champion, Austin Wierschke, warns the motoring public of the dangers of texting and driving.
- WisDOT acquired a driving simulator and has educated an estimated 10,000 students, teachers, and the general public at schools and sporting events around the state.
- WisDOT has partnered with ATandT on over 50 presentations to high schools on the dangers of texting and driving.

Reduce the Number of Unbelted Fatalities and Serious Injuries

Key Performance Measures (2008-2012 Annual Averages):

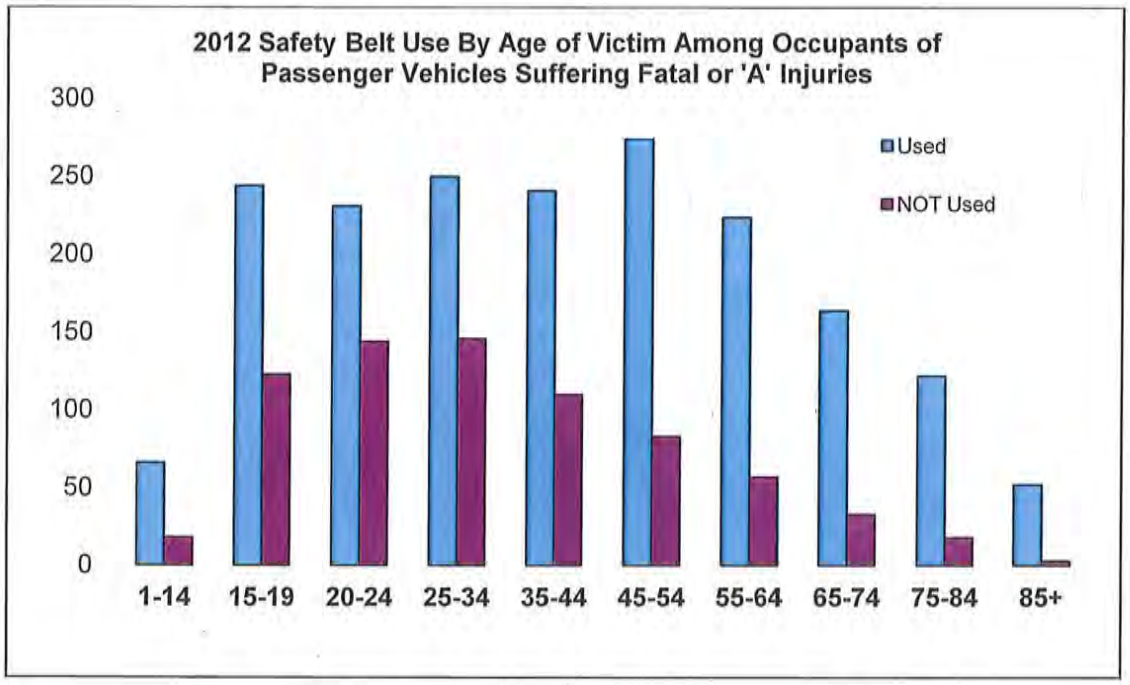
- ✓ *187 unrestrained passenger vehicle occupants killed [53% of all passenger vehicle occupant fatalities]*
- ✓ *688 unrestrained passenger vehicle occupants suffering incapacitating injuries [27% of all passenger vehicle occupant incapacitating injuries]*

Background

In 2013, observed average statewide safety belt use was at an all-time high of 82.4%. There were 104,489 convictions for failure to fasten safety belts and 4,207 convictions for child restraint violations entered in Wisconsin driver records in 2012.

Passenger vehicle occupants involved in a fatal or injury crash for the period 1994-2012 who were not using safety equipment were 49.3 times (8.14% vs. 0.17%) more likely to be either partially or totally ejected from the vehicle. In addition, they were 11.7 times (13.65% vs. 1.17%) more likely to be killed than occupants who were wearing a shoulder and lap belt at the time of the crash. A 13.65% fatality rate equates to approximately a one in seven chance of being killed.

The graph below illustrates not only which age groups were involved in the majority of fatal and incapacitating (A-injury) crashes in 2012, but also their safety belt usage (when known). Safety belt usage lagged among the most inexperienced drivers/occupants (those between the ages of 15 and 34). From age 35 on, safety belt non-usage declined for each age group, with victims in fatal and A-injury crashes being much more likely to be wearing their safety belts. The information below represents all occupants of passenger vehicles and utility trucks who were killed or suffered incapacitating injuries during 2012.



Performance Measure Goals

Outcomes

- Increase seat belt use by passenger vehicle front seat occupants to 86% by 2016.
- Reduce unrestrained passenger vehicle occupant fatalities by 5% from the most recent five-year average.
- Reduce unrestrained passenger vehicle occupant serious injuries by 5% from the most recent five-year average.

Outputs

- Continue strong statewide law enforcement participation in the national *Click it or Ticket* mobilization and the state-coordinated *Booze and Belts* mobilization to promote sustained high-visibility law enforcement presence and to increase safety belt use. Recruit at least 400 state, county, municipal and tribal law enforcement agencies (funded and unfunded combined) to participate in the national *Click It or Ticket* mobilization each year to promote safety belt enforcement efforts statewide. Sustained high visibility enforcement is a countermeasure proven to increase voluntary compliance with the law and improve the use of safety belts.
- Continue with two (pre and post mobilization) safety belt surveys to provide visual verification of seat belt use on Wisconsin's roadways. Safety belt utilization is the most effective way to prevent being ejected from a vehicle or being thrown about violently in the event of a crash.
- Continue to support 75 child safety seat fitting stations to educate parents and care givers about how to properly fasten children in the appropriate seat for the child's height and weight. Estimates indicate that approximately 75% of child safety seats are improperly installed. Continue to support certification training for child safety seat technicians. Continue to provide funding to help purchase child safety seats for families in need of a proper child seat, but who are unable to afford them.
- Increase the number of High-Visibility Enforcement Task Forces to 20 by 2016 to promote coordinated, multi-jurisdictional law enforcement efforts to enforce traffic safety laws. Highly visible enforcement is a proven countermeasure to gain voluntary compliance with the law and educate the public about the importance of buckling up every trip, every time.

SHSP Action Plan

Task #1: Increase public outreach to improve awareness

Work with communities and schools to increase awareness of the primary enforcement safety belt law and the importance of wearing a safety belt. Work with employers around the state to encourage safety belt use for their employees. Encourage law enforcement agencies that receive Federal Highway Safety program funds to develop and enforce an employee safety belt use policy. Encourage health providers to make questions about safety belt use a regular part of their health risk screening. Encourage the insurance industry to encourage policy holders to consistently and properly use safety belts and child safety seats.

Task #2: Continue "Click It or Ticket" and other High Visibility Mobilization Initiatives

Encourage statewide participation from both voluntary and overtime-funded law enforcement agencies in the national high visibility *Click It or Ticket* mobilization, other expanded mobilizations, and nighttime enforcement initiatives. Promote zero tolerance for safety belt violations (see the violation, write the ticket). Continue to promote sustained High Visibility Enforcement through coordinated, multi-jurisdictional Task Forces that maximize law enforcement participation and educate the public through highly visible and nighttime enforcement, as well as communication of enforcement efforts with the media. Focus public attention on the life-saving benefits of safety belts and child safety seats

through a targeted paid and earned media campaign. Develop an active social media presence to reach the desired targeted audiences.

Task #3: Develop a proactive legislative agenda on occupant protection

This will help to guide the Department during the 2015-2016 legislative session. Participants in the SHSP Peer Exchange and Seat Belt and Child Safety Seat Work Group suggested that this agenda should consider a variety of options (e.g. Increase the fine for safety belt violations to at least $50, consider a stepped fine for subsequent violations, and add court costs to recoup local adjudication expenses).

Task #4: Continue the participation of external partners in the Seat Belt and Child Safety Seat Work Group

Further develop external partnerships with community groups, business organizations (grocery stores, banks, convenience stores, etc.), churches, and safety advocates to generate a community-based approach to increasing safety belt use. Develop approaches to better reach drivers and passengers who practice only situational or short-distance usage of safety belts. Improve social norming initiatives so that societal influences further encourage consistent and proper safety belt and child safety seat use.

Task #5: Continue the federally-required annual field observation safety belt use survey

Collect data and information from other states about best practices in data collection. Improve crash-related occupant protection data collection methods through the development of a new crash data base to improve data-driven decision making relating to improved safety belt and child safety seat usage. Add information gathered through FARS to provide more robust data about behavioral issues affecting safety belt usage and the exact location of crashes to assist with targeting of enforcement efforts.

Task #6: Work with Child Safety Seat advocates to improve education for parents

Ensure that parents and care givers are educated about how to properly install child safety seats and how to properly fit children in the appropriate seat for the child's height and weight. Develop additional public information to promote child safety seat usage. Provide funding for the purchase of child safety seats for parents who are unable to afford them to make sure their children are fastened in the appropriate safety seat. Work with health care providers, AAA, physical therapists, and educators to promote Senior Car Fit seminars to ensure that seniors are properly fitting into their vehicles and safety equipment.

Task #7: Work with automotive industry stakeholders

Collaborate with NHTSA, members of the Wisconsin Congressional delegation, and the auto industry to promote improved passenger vehicle design features that encourage consistent and proper safety belt usage. These efforts should focus on the engineering elements of safety belt technology, vehicle technology, and the comfort and fit of safety belts in vehicles.

Highlighted Safety Initiatives

- Updated seat belt field survey to a more standardized methodology beginning in 2013.
- Implemented a new targeting methodology for enforcement grants that incorporated high-risk populations including pick-up truck drivers and people driving at night.
- Three seat belt task forces were developed around the state.

- A CPS DVD was developed and distributed to birthing hospitals around the state to inform the public about state requirements regarding child safety seats and to provide more resources about getting children in the appropriate seat for their height and weight.
- In Federal Fiscal Year 13, approximately 4,500 child safety seats and booster seats were distributed to families around the state, who were in need of a safe seat for their children.

Improve Teen Driver Performance – Ensure Drivers are Licensed and Competent – Sustain Proficiency in Older Drivers

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *75 deaths in crashes involving drivers age 16-19 [13% of all traffic fatalities]*
- ✓ *8,612 injuries [21% of all non-fatal injuries]*
- ✓ *63 deaths in crashes involving drivers age 65-74 [11% of all traffic fatalities]*
- ✓ *3,838 injuries [9% of all non-fatal injuries]*
- ✓ *59 deaths in crashes involving drivers age >74 [10% of all traffic fatalities]*
- ✓ *2,833 injuries [7% of all non-fatal injuries]*

Background

WisDOT provides oversight, policy expertise, outreach, testing and enforcement to ensure that drivers of all ages are licensed and competent. This includes improving teen driver performance and sustaining proficiency in older drivers.

DMV provides an array of driver licensing and testing services that are designed, collectively, to ensure drivers are licensed and competent. These include licensing requirements (testing, retesting, operating restrictions, medical screening), license withdrawals due to violations or disqualification, license reinstatement, and driver improvement programs. DMV works closely with Federal Motor Carriers Safety Administration (FMCSA) to comply with federal regulation of Commercial Driver Licenses (CDLs), including ensuring drivers meet federal medical requirements. Because ensuring that CDL drivers are medically qualified to operate vehicles critical to ensuring highway safety, DMV provided extensive outreach to meet the January 30, 2014 deadline for all drivers operating in interstate commerce to submit a federal medical certificate (or "FedMed card") to DMV.

DMV also offers products and services that benefit older drivers. These include offering a large print condensed version of the motorist handbook called The Wisconsin Driver's Book, as well as an audio version of the Driver's Book. They also include offering specialized skills testing and restricted/limited area licenses for drivers of all ages, in addition to partnering with statewide organizations and advocates to identify and meet the needs of aging drivers. Because medical conditions are likely to increase with age, many of these activities are designed to support drivers of all ages with medical conditions.

DMV also offers extensive programming intended to keep younger drivers safe.

In 2000, WisDOT implemented a Graduated Driver License for young drivers. The GDL law gives new, young drivers a healthier, safer start to their driving careers by requiring more practice time prior to getting a probationary license, restricting teen drivers from being on the road during late night hours, limiting the number of passengers riding with teen drivers, and allowing teen drivers a longer and safer driving experience before earning an unrestricted license. GDL continues to be a primary strategy in Wisconsin's work to keep young drivers safe, and provides a strong foundation for more recent efforts.

DMV has also created a Teen Portal to provide information to teens and sponsors as they go through the licensing process, as well as a parent-teen contract to support informed conversations and awareness between parents and teen drivers. DMV has developed and launched mobile applications to assist new drivers in preparing for knowledge exams.

In 2013, a grant from WisDOT's Bureau of Transportation Safety allowed Children's Hospital to do a statewide needs assessment. As a result, Children's Hospital launched the website "Cross Roads on Teen Driving," which provides resources and guidance on teen driving to teens and parents. In 2014,

Children's Hospital plans to form a state council for teen traffic safety, as well as local coalitions in each county, to identify and organize around evidence-based practices in teen safety. Wood County has already done this.

In 2013, WisDOT hired Virginia Tech Transportation Institute to conduct research on good practices in effective driver education. This research will provide the Department with guidance and assessment tools to provide technical assistance to Wisconsin's driver education programs. The results emphasized the importance of parental engagement and GDL integration in effective driver education to help keep teen drivers safe. These twin themes will drive many of DMV's upcoming efforts.

Because parent engagement is critical to keeping teen drivers safe, in 2013, DMV also partnered with the not-for-profit Safe Roads Alliance, the Wisconsin Department of Public Instruction, and WisDOT's Division of State Patrol to develop The Parent's Supervised Driving Program Guide. This step-by-step lesson plan will support parents and guardians as they train their teens during the Supervised Driving portion of GDL. It will include an eBook version and a mobile application to track hours of supervised driving. Both DMV and DPI will work with Driver Educators to coach them on working with parents in implementing this guide.

Several efforts are underway to strengthen data quality related to driver training and competence. DMV is in the design phase of an IT project that will allow medical professionals to securely complete DMV medical reports online. This new functionality will make these reports easier to identify and complete. Electronic data submission offers opportunities to improve efficiencies and data analysis for medical standards and licensing outcomes. In addition, DMV has recently implemented the online electronic submission of Driver Education Completion Certificates from driver education schools to DMV. This allows significant improvement in data quality related to driver training, and supports future assessments and technical assistance.

DMV staff members continue to provide outreach and training to senior groups, health care professionals, support groups, health organizations, family members, law enforcement, and driver educators.

SHSP Action Plan

Improve Teen Driver Performance

Task #1: DMV staff members will participate in Driver Education classes and "parents night" throughout the state when invited. Because strengthening the partnership among DMV, parents, and driver educators is important for teen safety, DMV will continue this activity.

Task #2: Maintain Teen Portal and cross link the portal with UW Children's Hospital's CrossRoads website. Because education can impact the safety of young drivers, DMV will continue providing online resources to parents, teens, and driver educators.

Task #3: Continue participation with professional associations, including Wisconsin Driver and Traffic Safety Educator Association and the Wisconsin Professional Driving School Association. To support parent engagement and GDL awareness, DMV will speak at annual conferences as invited and continue to provide technical assistance to these partner organizations.

Task #4: Continue promotional activities of the National Teen Driver Safety Week.

Task #5: Publish and provide outreach on the Parent's Supervised Driving Program Guide. Provide related materials to support driver educators.

Task #6: Use research from Virginia Tech to provide technical assistance to driver educators that supports them in enhancing parental engagement and parental awareness of GDL. Because this is important to young driver safety, DMV will begin deploying this tool for technical assistance by January 2016.

Task #7: Migrate all teen driver education programs to online electronic submission of driver education completion certificates to improve ability to describe and analyze driver education impacts by January 2015.

Ensure Drivers are Licensed and Competent

Task #1: Strengthen commercial driver license (CDL) requirements and enforcement. DMV conducts covert and overt audits of its third-party testers. FMCSA also funds a full-time CDL auditor position within the DMV. Because reducing fraud in CDL testing is critical to highway safety, DMV will implement all fraud prevention requirements of the federal commercial learner's permit rule by July 2015.

Task #2: Increase enforcement activities related to traffic violations. In response to crash data that suggested driver-related behavior significantly contributed to the cause of large truck crashes, the Wisconsin State Patrol implemented a special emphasis enforcement program that focused additional enforcement resources on behavior-related traffic violations in high crash corridors.

Task #3: Continue New Entrant Program. Title 49 CFR, Part 385 requires that all new motor carriers receive a New Entrant Audit (NEA) within the first 18 months of operation – preferably within the first six months of operation. Wisconsin continues to be a national leader in the New Entrant Program in an effort to reduce crashes by educating new carriers and assuring their compliance with the Federal Motor Carrier Safety Regulations (FMCSRs).

Task #4: Continue to provide resources and oversight to ensure drivers are trained, eligible, and medically qualified for light vehicles and commercial vehicles. Because driver qualifications are critical to highway safety, DMV will provide enhanced online tools for employer notification and CDL medical certification submission by January 2016.

Task #5: Support partners at the Wisconsin Technical Colleges in providing training to drivers with serious or multiple citations through its Traffic Safety School, Group Dynamics, and Multiple Offender courses. Because providing tools to change behavior for drivers with a history of poor driving is critical to highway safety, DMV will participate in Traffic Safety School Council meetings as requested, and will organize a biennial conference in March 2014 and April 2016 for instructors on relevant and emerging topics.

Task #6: Because driver education supports the novice driver and is a key component of GDL, DMV will continue to provide expertise and related services as needed to the legislature, the Department, and other stakeholders on online driver education.

Sustain Proficiency in Older Drivers

Task #1: Continue to train and monitor DMV Field Staff for appropriate functional ability assessments and referrals for testing to ensure that this practice is administered fairly across the state. Every counter employee should be verified as being trained and able to assess a person correctly, regardless of age. DMV will maintain a current training record for all DMV employees, showing that each has received Advanced Driver License training, including a unit focused on assessing functional ability.

Task #2: Monitor the practices of other states and use of functional assessments to determine if there is a better practice for some of the state's screening procedures. Because learning from others is critical to enhancing practice, DMV will conduct an AAMVA survey or literature review at least biennially to understand the gains made in other states.

Task #3: Continue to provide special exam tests as a high-priority activity.

Task #4: Provide resources on the WisDOT website regarding driving with a disability, driving with a medical condition, senior drivers, procedures for reporting unsafe drivers, and outreach to family members of senior and disabled drivers. Because outreach to families and drivers is critical to understanding and evaluating potentially unsafe drivers, DMV will provide these resources by January 2015.

Improve Motorcycling Safety and Awareness

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *2,462 crashes involving motorcycles [2 .2% of all traffic crashes]*
- ✓ *92 motorcyclist deaths [16.1 % of all traffic fatalities]*
- ✓ *2,297 motorcyclist injuries [5.5% of all non-fatal injuries]*
- ✓ *628 motorcyclists suffering incapacitating injuries [16.4 % of all incapacitating injuries]*

Background

In 2012, motorcycles represented only 6.1 % of all registered vehicles in Wisconsin; however motorcyclist fatalities represented 18.6% of all vehicle fatalities. These figures are significant when one considers that the motorcycle riding season typically averages only approximately seven months of any given year in Wisconsin. Also of note in 2012 is the fact that 42.7% of all motorcyclists involved in a fatal crash were either not properly licensed or did not possess a Class M Endorsement on their license.

What may not be obvious to the motoring public, and even some motorcyclists, is the fact that the cognitive skill and dexterity required to minimize risk when operating a motorcycle is significantly greater for motorcyclists than it is for all other types of motor vehicle operators. This being the case, motorcyclists are more susceptible to the adverse effects of weather, fatigue, and the effects of alcohol or drugs. On average over the five year period, 2008-2012, alcohol or drugs are believed to have played a role in 46.4% of all motorcyclist fatalities.

In addition, motorcyclists are also more likely to be injured or killed in the event of a crash, since they rely primarily on the use of protective riding gear for protection. It should also be noted that the appropriate riding gear not only serves as protection, but also serves to make the motorcyclist more conspicuous in traffic. On average, during the five year period noted, 74.4% of motorcyclist fatalities were not wearing a helmet, and 34.6% of motorcyclist fatalities occurred at an intersection where, many times, the motorcyclist's right-of-way was violated because the driver of the other vehicle claimed not to have seen the motorcycle.

Motorcyclists, like aircraft pilots, need to continually sharpen their mental and physical skills so as to maintain a margin of safety and minimize their level of risk. Motorcycling is predominantly a mental activity, in that motorcyclists must exhibit appropriate behavior and make appropriate choices and decisions in order to manage and minimize risk. Nearly 48.6% of motorcyclist fatalities during the period noted were single vehicle fatal crashes. The majority of these single vehicle crashes occurred on curves, often as a result of a non-Class M endorsed motorcyclist misjudging the appropriate speed for the turn and ultimately losing control of the motorcycle. It is also likely that many of these crashes occurred as a result of the motorcyclist's inability to make proper adjustments to speed or lean angle while on a curve. Another contributing factor to motorcycle crash fatalities is an encounter with a deer or other animal. Almost 10.2% of motorcyclist fatalities during the noted time period involved a motorcycle crash with a deer or other animal. In order for a motorcyclist to manage and minimize risk, and ultimately be a lifelong motorcyclist, that motorcyclist must become a lifelong learner, and be continually developing and improving their mental and physical skills relative to motorcycle operation.

Performance Measure Goals

Outcomes

- Reduce the 5-year average number of motorcycle crashes by 5% by 2016.
- Reduce the 5-year average number of motorcycle injury crashes by 5% by 2016.
- Reduce the number of fatal and incapacitating injury motorcycle crashes by 5% by 2016.

- Effectively increase the number of Class M Endorsed motorcyclists that are currently riding without appropriate licensure.

Outputs

- Provide a minimum of 900 training courses per year in order to get riders properly licensed and endorsed.
- Revitalize and update WisDOT's social marketing campaigns to promote attitudinal and behavioral changes in motorcyclists regarding the use of alcohol and riding, as well as risk reduction pertaining to speed and use of appropriate riding gear.
- Promote motorcycle awareness through television, radio, posters, and outdoor advertising to all levels of the general motoring public and inform motorists of the idiosyncrasies that surround sharing Wisconsin roadways with motorcycles.
- Inform and educate the motorcycling community via formal rider education courses and motorcycle specific club and organization events regarding the value of being conspicuous in traffic on our roadways through the use of multiple headlights, modulating headlights and/or taillights, proper lane positioning, signaling intent, and reflective gear.
- Work to develop motorcyclist crash and citation data, motorcyclist registration data, and motorcyclist training data via linkage between existing databases.

SHSP Action Plan

Task #1: Develop data Acquisition, analysis and countermeasures

- Access and merge data from crash, citation, licensing and registration, and rider training data warehouses
- Train law enforcement officers to improve adequacy of motorcycle specific data on crash reports
- Update and revise MV4000 crash reports to include motorcycle specific data necessary to establish appropriate countermeasures
- Develop useful reporting systems from data gathering and analysis
- Obtain data to find out what immeasurable factors may be driving trends
- Be certain that data accurately reflects who was under the influence of alcohol or drugs when a crash occurs between a motorcycle and another vehicle

Task #2: Provide rider training

- Revise Administrative Code Chapter Trans 129 to permit advanced levels of rider training to grant a skill test waiver
- Promote new Wisconsin curricula that provide for licensing opportunities and encourage life-long learning
- Promote the value of the Class M Endorsement, as well as offer both basic rider courses and advanced rider courses that will, upon successful completion, garner a rider their Class M Endorsement
- Promote training and life-long learning by fostering and creating incentives such as discounts and reimbursements
- Provide rider education opportunities that will attract and address Wisconsin motorcycle riders at all skill and experience levels
- Improve the Wisconsin Motorcycle Safety Program's website to provide more up to date information regarding available training. Website should be conducive to SMARTPHONE access
- Incorporate skilled riders with Law Enforcement in providing riding demonstrations to show what may be accomplished through advanced training

- Promote and encourage (ATG-ATT) ALL THE GEAR - ALL THE TIME to all motorcyclists

***Task #3:* Promote motorist awareness**

- Step-up motorcycle awareness promotional activities to the general motoring public
- Emphasis on "Watch for Motorcycles", "Look Twice for Motorcycles" and "Look, look, and look again for motorcycles" messages
- Expand awareness campaign to billboards in partnership with the Department of Tourism and WisDOT electronic message boards
- Expand awareness campaign via press releases, PSAs, posters, etc.
- Continue direct contact with the general motoring public to promote motorcycle awareness via the Transportation High End Rider Education Facility (THE REF), WisDOT's mobile training facility
- Include motorcycles in all WisDOT media campaigns. Examples: Roundabouts, impaired driving (riding), caution at intersections, etc.
- Educate law enforcement and judiciary regarding the importance of appropriate enforcement and sentencing options

***Task #4:* Reduce impaired riding**

- Promote and emphasize a cultural behavioral change to discourage the acceptance of impaired riding - peer pressure
- Educate and inform those that serve alcohol, as well as motorcyclists
- Consider revitalizing and updating of a social marketing campaign to reduce impaired riding. Consider and evaluate past activities and effectiveness, as well as further promote the "5=ZERO" initiative
- Produce and promote Drive Sober mobile APP for motorcyclists
- Educate and emphasize that impaired riding extends beyond the use of alcohol

Highlighted Safety Initiatives

- THE REF has participated in approximately 45 motorcycle specific and general public events and activities on average per year reaching over 20,000 motorists and motorcyclists.
- Four SMARTrainers were purchased and utilized around the state in 2013 at 15 different locations.
- Through a collaborative effort between ABATE and the WisDOT, a poster has been designed, produced, and is being distributed throughout Wisconsin promoting the need for, and value of existing motorcyclists obtaining their Class M Endorsement.
- The enactment of Wisconsin Act 371 on April 23, 2014, affords existing motorcyclists in Wisconsin the opportunity to obtain a *Motorcycle Waiver* by successfully completing an advanced form of rider education course.
- For the first time, in late summer of 2013 and again during the 2014 May is Motorcycle Awareness Month, WisDOT has partnered with the Wisconsin Department of Tourism to promote motorcycle awareness via strategically located electronic and static billboards, as well as radio and television ads, and posters.

Improve Incident Management /Safe Travel in Bad Weather

Background

Information about roadways' conditions and their environments, user characteristics and behaviors, and traffic crashes and their outcomes, should be timely, complete, consistent, accurate, and readily accessible. State of the art technologies and procedures should be applied to gather, integrate, and utilize information. Institutional cooperation and coordination, both within and outside WisDOT, resulting in open, coordinated, defensible, decision-making processes, will ensure the best use of limited resources and improved safety on Wisconsin roadways.

As a northern tier Midwestern state, Wisconsin typically faces challenging travel conditions during winter months. 30% of all traffic crashes occur during snow, ice, slushy, or wet roadway conditions.

Performance Measure Goals

Outcomes

- Increase the proportion of traffic crashes reported electronically via TraCS to 99% by 2016.
- Increase the proportion of traffic convictions from citations issued via TraCS to 98% by 2016.
- Reduce the number of fatalities and injuries in crashes in snow/ice/slush/wet conditions by 5% from the 2008-2012 average by 2016.

Outputs

- Develop and implement Safety Standards for Delayed Recovery.
- Complete revisions of the MV4000 crash report form to better track Secondary and Struck By Crashes.
- Publish field operations guidelines for first responders.
- Complete Traffic Incident Management (TIM) curriculum and lesson plans to be instructed for all new first responders, drivers' education and technical colleges.

SHSP Action Plan

Task #1: Broader education for Traffic Incident Management

- Emergency Traffic Control and Scene Management Training
  - Continue to practice and implement the WisDOT's Emergency Traffic Control and Scene Management Guidelines. *(http://www.dot.wisconsin.gov/travel/stoc/docs/emer-tc-sm-guidelines.pdf)*
    - Continue to update guidelines and publish field operations guidelines
  - Continue to do outreach and train first responders in rural areas
  - Continue to enhance the program's effectiveness, ensure uniformity of instruction, and improve the quality of TIM instructors
  - Develop TIM curriculum and lesson plans to be instructed for all new first responders, drivers' education and technical colleges
  - Continue to help educate first responders with Extended Duration Incidents (EDIs) (incidents longer than two hours) debriefs and After Action Review meetings.
- Increase the utilization of social media for TIM related topics, such as Twitter, Facebook, YouTube, etc. for WisDOT safety message campaigns. For example:
  - Steer it/ Clear it
  - Move Over/ Slow down
  - Quick Clearance
  - Vision Decision/ No Zone – Truck Passing

- Other Traffic Incident Management related WisDOT's safety messages to the traveling public in poor traveling conditions.
- Secondary/ Roadway Worker Struck By Crashes
  - Complete revisions of the MV4000 crash report form to better track Secondary and Struck By Crashes
  - Continue to identify and investigate potential hotspots
  - Continue to analyze contributing factors of Secondary Crashes
  - Continue to educate the traveling public of driver's alertness in work zones.

Task #2: ***Improve travel in bad weather/poor travel conditions***

- Continue to promote and expand the technology capabilities of 511 communications with the traveling public regarding road conditions
- Prioritize bridges on the STN for anti-icing/skid resistance improvement based on winter weather-related crashes
- Investigate the need for statewide variable speed limits on State Highways
- Continue to work on Maintenance Decision Support System (MDSS)

Task #3: ***Continue improving the efficiency and effectiveness of Delayed Recovery***

- Develop and implement Safety Standards for Delayed Recovery
- Increase the awareness of Heat Maps Decision Tool among private towing companies and law enforcement

Highlighted Safety Initiatives

- Continue education and outreach to first responders such as law enforcement, EMS, fire departments and towing companies about the Emergency Traffic Control and Scene Management Guidelines. This is a uniform approach to incident management developed across disciplines and among several jurisdictions. For more information, please go to the following location: https://www.wisconsintimecoalition.org/. Some topics included in this document that focus on this issue include delayed recovery, ramp gates, and supplemental training materials.
- Continue the integration of up-to-the-minute weather information into STOC control room protocol.

Part III:

Continuing Highway Safety Issue Areas

Failure to be ranked in the high priority highway safety issue areas for the 2014-2016 SHSP does not mean the topic is unimportant, nor does it mean WisDOT will discontinue planned or on-going initiatives and programs to strive for continued progress in the safety performance.

In some cases, these continuing highway safety issue areas overlap one or more of the higher priority issue areas identified for emphasis in the 2014-2016 SHSP (e.g. truck travel is a key subset of intersection safety).

The WisDOT Traffic Safety Council will continue to monitor key performance measures in each issue area and will recommend Department-sponsored initiatives to respond to emerging challenges, as necessary.

The remaining highway safety issue areas include:

Enhance EMS to Increase Survivability

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *Injury-to-Fatality Ratio in Wisconsin Counties = 77:1*

Background

- WisDOT conducts annual inspections of ambulances and promulgates administrative rules governing ambulance equipment. The Department of Health Services is directly responsible for regulating/licensing EMS personnel or coordinating improvements in EMS-related services in Wisconsin.
- WisDOT's BOTS has provided $70,000 for electronic transfer of run reports to the Wisconsin Ambulance Run Data System, for capacity building, data validation and integration into the National EMS Information System.
- WisDOT's BOTS provides $50,000 annually in federal safety funding to train and equip volunteer first responders.

Make Large Truck Travel Safer

Key Performance Measures (2008-2012 Annual Averages)

- ✓ *6,378 crashes involving large trucks (6% of all traffic crashes)*
- ✓ *63 deaths in crashes involving large trucks (11% of all traffic fatalities)*
- ✓ *2,031 non-fatal injuries involving large trucks (5% of all non-fatal injuries)*
- ✓ *249 incapacitating injuries in crashes involving large trucks (6% of all incapacitating injuries)*

Background

Within the Division of State Patrol's (DSP) Motor Carrier Enforcement Section, the DSP utilizes Motor Carrier Safety Assistance Program (MCSAP) funding to target activities in its mission to reduce the number and severity of commercial motor vehicle (CMV) crashes. Each year, the DSP develops the Commercial Vehicle Safety Plan (CVSP) that outlines the goals and activities for accomplishing large truck safety. For 2014, Wisconsin's broad goal is to maintain large truck and bus fatalities per 100 million VMT to .10 or less.

DSP activities to support this goal include:

- Inspecting commercial vehicles and their drivers at safety and weight enforcement facilities (SWEF) and at mobile roadside locations to ensure that vehicles are mechanically sound and to ensure that driver behavior is in compliance with federal and state laws and regulations.
- Assuring the implementation of the Federal Motor Carrier Safety Administration (FMCSA) initiatives to further large truck safety and program quality standards.
- Providing outreach, education, and enforcement to new carriers and their drivers through the New Entrant Program (through funding of New Entrant grant) and conducting compliance reviews of existing motor carriers in Wisconsin.
- Developing motor coach destination inspections through strike forces and addressing related unsafe driver behavior such as speeding, following too closely, operating in violation of an out-of-service order, and hours of service violations.
- Monitoring emerging and existing industry initiatives throughout the state using special details to ensure that safety, as well as size and weight, regulations are being followed.
- Ensuring oversight of data measures to assure that Wisconsin remains in good standing with all rated FMCSA categories.
- Ensuring that a motor carrier's operating authority is confirmed during each inspection and that action is taken if not in compliance.
- Actively participating in national enforcement strike forces targeting Hazmat shippers, cargo tank repairers and other shippers.
- Conducting post-crash MCSAP inspections.

In addition to WisDOT's Division of State Patrol, the Division of Motor Vehicles (DMV) also enhances large truck safety through the commercial driver licensing (CDL) program and through the provision of its oversize/overweight permitting program. The Division of Transportation System Development (DTSD) provides for large truck safety and the safety of other motorists through the design, development and approval of transportation infrastructure for safe truck travel; and through the development of SWEFs for weighing and inspecting large trucks (operated by DSP on a daily basis).

Reduce Vehicle-Train Crashes

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *54 train-vehicle collisions at public crossings [0.04% of all traffic crashes]*
- ✓ *4 deaths in train-vehicle collisions at public crossings [0.6% of all traffic fatalities]*
- ✓ *23 non-fatal injuries in train-vehicle collisions [0.05% of all non-fatal injuries]*
- ✓ *6 incapacitating injuries in train-vehicle collisions [0.1% of all incapacitating injuries]*

These totals do not include deaths/injuries that occurred on private property or did not involve motor vehicles

Background

The Division of Transportation Investment Management (DTIM) manages the WisDOT section 130 federal funds intended to improve railway-highway grade crossing safety. At least half of these funds must be spent on railroad crossing warning devices. The remaining portion is available for warning devices and other safety-related improvements at railway-highway grade crossings (e.g. upgraded crossing surface, channelization, separation structures, roadway relocations, closures, traffic signal pre-emption, etc.).

- DTIM staff manages the Railroad Crossing Information System (RCIS), which includes rail crossing inventory data (track data, train crossing frequency and speed, approach roadway data,

motor vehicle crossing frequency and speed). The RCIS interfaces with the Federal Railroad Administration's (FRA) database, which includes crash data reported by railroad companies.

- DTIM staff uses a WisDOT-developed computer procedure that analyzes a dataset created from information in the RCIS database to identify and prioritize railway-highway grade crossing warning device upgrade needs from a statewide perspective. This analysis is performed on an as-needed basis, at minimum once every two years, to ensure railway-highway grade crossing projects with the highest need receive funding.
- WisDOT provides the Office of the Commissioner of Railroads (OCR) annually $2.7 million in federal funds and $1.7 million in state funds to implement high-need railway-highway grade crossing safety improvements. The OCR also utilizes a statewide data analysis to inform programming decisions.
- The Wisconsin Chapter of Operation Lifesaver, Inc. collaborates with the OCR, WisDOT, and various railroad companies to provide public education programs to prevent collisions, injuries, and fatalities on and around railroad tracks and railway-highway grade crossings. These important education efforts emphasize how all roadway users, including pedestrians and bicyclists, can help prevent accidents from occurring. Safety education and outreach will continue to play a critical role in improving Wisconsin's rail safety as rail lines experience an increase in train frequency and speeds. This is particularly true for communities seeing significant increases in train traffic on previously dormant or minimally used rail lines.

Reduce Deer and Other Animal Crashes

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *17,114 police-reported deer-involved crashes [14% of all traffic crashes]*
- ✓ *10 deaths in police-reported deer-involved crashes [1.5% of all traffic fatalities]*
- ✓ *577 non-fatal injuries in deer-involved crashes [1.2% of all non-fatal injuries]*
- ✓ *92 incapacitating injuries in deer-involved crashes [2% of all incapacitating injuries]*

These totals do not include unreported deaths/injuries that occurred in "swerve-to-avoid" crashes

Background

- As crash data is entered into the DMV database, current extracts are provided at monthly intervals. From these, BOTS pulls the latest deer/other animal crash data to fulfill data requests from government agencies, media agencies, and the general public. Deer crash data is also provided to the public in the form of statistics in the Wisconsin Traffic Crash Facts book and the Deer Crash Monograph. Both of these documents are updated annually and provided on the WisDOT website:
  http://www.dot.wisconsin.gov/safety/motorist/crashfacts/docs/deerfacts.pdf
- Each Spring and Fall, BOTS records a radio message on deer safety that is distributed to various radio networks. This message usually contains the number of deer crashes, injuries, and fatalities in the previous year along with safety tips of what to do if you see deer while driving. Knowing that BOTS has this data available, various news outlets call frequently for the latest crash statistics concerning deer. WisDOT also maintains a link to the Deer Vehicle Crash Clearinghouse:
  http://www.deercrash.com/

Create Safer Work Zones

Key Performance Measures (2008-2012 Annual Averages):

- ✓ *1,601 traffic crashes in work zones [1.4% of all traffic crashes]*
- ✓ *8 deaths in work zone crashes [1.4% of all traffic fatalities]*
- ✓ *717 non-fatal injuries in work zone crashes [1.7% of all non-fatal injuries]*
- ✓ *54 incapacitating injuries in work zone crashes [1.4% of all incapacitating injuries]*

Background

Highway work zones can pose major safety risks for motorists, as well as utility, construction, and maintenance personnel. Work zone fatalities can occur on every type of highway – rural or urban, high volume or low volume, two-lane or divided. In the past decade, work zone crashes, fatalities and injuries have declined, but they have not been totally eliminated.

Work zones require special attention because motorists are often faced with unique situations requiring them to exercise special care. Increasing traffic volume on an aging highway network necessitates the need for more work zones in the future, work zones that often will be done under live traffic conditions. Recent and projected increases in the number of resurfacing and reconstruction projects require the Department to continue to give high priority to ensure the safety of motorists traveling through work zones, as well as the safety of personnel working in the zones.

Task #1: *Adopt improved procedures to ensure effective practices for managing work zone operations.*
Task #2: *Enhance and extend training for the planning, implementation, and maintenance of work zones to maximize safety.*
Task #3: *Enhance the safety of work zone driving through education and enforcement actions.*

SHSP 2103 Survey Update

Thanks for providing input to the update of WI's SHSP; to find more information on SHSP, please visit the WisDOT website. The collective results will be used to inform discussion at a one-day peer exchange in October 2013; responses will be kept anonymous. This exercise should take no more than 10 minutes.

* Required

Q1a: Wisconsin faces many highway safety challenges. Among the competing priorities are the 21 issue areas shown below. From this list, which FIVE do you think are most important for Wisconsin to focus on FOR THE NEXT THREE YEARS? (Select up to, but no more than, 5)*

- ☐ Provide Safe Work Zones
- ☐ Reduce Alcohol and Drug-Impaired Driving
- ☐ Ensure Drivers are Licensed/Competent
- ☐ Improve Teen Driver Performance
- ☐ Provide Safe Bicycle Travel
- ☐ Reduce Driver Distraction/Improve Driver Alertness
- ☐ Improve Safety Data
- ☐ Prevent or Mitigate Lane Departure Crashes/Reduce Head-on and Cross-median Crashes
- ☐ Reduce the Number of Unbelted Fatalities and Serious Injuries
- ☐ Improve Design/Operation of Intersections
- ☐ Reduce Speed-related Crashes
- ☐ Improve Safe Travel in Bad Weather
- ☐ Sustain Proficiency in Older Drivers
- ☐ Improve Motorcycle Safety
- ☐ Curb Aggressive Driving
- ☐ Make Large Truck Travel Safer
- ☐ Improve Pedestrian Safety
- ☐ Enhance EMS to Increase Survivability
- ☐ Reduce Deer/Other Animal Crashes
- ☐ Reduce Vehicle-Train Crashes
- ☐ Improve Traffic Incident Management

Q1b: For each of the selected issues, what one or two specific activities or initiatives should be pursued? Please limit responses to 50 words. *

Issue 1 (Please specify which issue you are discussing in the response)

Issue 2 (Please specify which issue you are discussing in the response)

Issue 3 (Please specify which issue you are discussing in the response)

Issue 4 (Please specify which issue you are discussing in the response)

Issue 5 (Please specify which issue you are discussing in the response)

Q2: Of the remaining highway safety issues that did NOT make your Top 5 list, for which issues do you think there is a unique opportunity to make some progress in over the next 3 years. You can choose up to 3 issues. *

Why do you think there is a window of opportunity for this issue? (Select all that apply.)

- ☐ Public Concern/Media Attention
- ☐ Political will to change law/provide resources
- ☐ New/emerging technology
- ☐ Changing population demographics
- ☐ Easy-to-implement/low cost fix available
- ☐ Other:

Why do you think there is a window of opportunity for this issue? (Select all that apply.)

- ☐ Public Concern/Media Attention
- ☐ Political will to change law/provide resources
- ☐ New/emerging technology
- ☐ Changing population demographics
- ☐ Easy-to-implement/low cost fix available
- ☐ Other:

Why do you think there is a window of opportunity for this issue? (Select all that apply.)

- ☐ Public Concern/Media Attention
- ☐ Political will to change law/provide resources
- ☐ New/emerging technology
- ☐ Changing population demographics
- ☐ Easy-to-implement/low cost fix available
- ☐ Other:

Q3: Is there another highway safety issue that was not included among the 22 issue areas listed in Question 1 that should have been?

Q4: For classification purposes, which of the following categories best describes you? *

Q5: Which area(s) are you most concerned about? *

- ☐ Local Road Safety Issues

- ☐ County Road Safety Issues
- ☐ State/Interstate Road Safety Issues
- ☐ All of the above

The full survey results are available by request.

SHSP Peer Exchange Participants

A one-day peer exchange was held in Madison, WI on 10/10/2013. Participation was by invitation-only. A total of 103 highway safety professionals and advocates participated in the event; about 2/3 of them were WisDOT staff, and the other 1/3 were external partners. The full roster is shown below.

Name	Name
Aggie Stearns	Kristina Boardman
Alex Mahfood	Kurt Schultz
Alison Lebwohl	Larry Corsi (Madison)
Andi Bill* (Madison)	Laura Vande Hey* (Madison)
Angela Adams (LaCrosse)	Libbe Slavin
Ann Perry	Lt. Brian Ausloos (Madison)
Barb Deans (Madison)	Lt. Mike Klingenberg (Madison)
Bill Bremer (Madison)	Lyn Warren (WI Liaison, Matteson, IL)
Bill McNary* (Madison)	Major J.D. Lind (Madison)
Brian Litzka (EMS Section/Madison)	Matt Aslesen (Madison)
Brian Porter* (Madison)	Michael Witter (Regl Administrator, Matteson, IL)
Capt. Chuck Teasdale (Deforest)	Mike McManus
Chief Earl Lemeiux (Ho Chunk PD)	Misha Lee
Colette Brown (Madison)	Nancy Hernandez (Abrazo/Milwaukee)
Craig Thompson (Madison)	Neil May (Madison)
Craig Wucivic (Whitewater)	Patrick Fleming (Madison)
Dan Fedderly (Boyceville)	Paul Keltner (Milwaukee)
Danielle Yancey (Madison)	Paul Krupski (Health First Wisconsin/Madison)
Dave Leucinger	Paul Woodard
David Charlebois	Peg Laftky
David Pabst* (Madison)	Peg Schmidt (Madison)
Dennis Hughes	Randy Romanski* (Madison)
Donald Lyden (Madison)	Ray Lemke (DHS)
Donna Brown-Martin	Rebecca Szymkowski* (Madison)
Dr. David Noyce (Madison)	Representative Penny Bernard Schaber

Dr. Deb Newsome (Matc)	Rich Coakley
Emily Thompson (Madison)	Rick Stadelman (Shawano)
Erik Emerson (Madison)	Ryan Mayer (Madison)
George Poirer	Sandy Stankovich (Rapids/Superior?)
Greg Helgeson (Eau Claire)	Scott Janowiak
Greg Patzer (Madison)	Sgt. Dave Harvey (Madison)
Jeff Kwilinski	Sgt. Jeff Sunn
Jeff Plale	Sgt. John Heffernan(Ft. McCoy)
Jerry Zogg* (Madison)	Sgt. Roberto Colon
Jessica Binder (Milwaukee)	Sheri Schmit (Waukesha)
Jill Benkert (Madison)	Stacey Pierce (Waukesha)
Jill Mrotek Glenzinski	Steve Cardarella (Madison)
Jim Stearns	Steve Olson* (Madison)
John Corbin* (Madison)	Steve Pazynski
John Reblin	Susie Forde
John Swissler	Terry Witkowski (Consultant/Milwaukee)
Johnna Scott (Mosaic/Milwaukee)	Tim McClain* (Madison)
Julia Sherman (Madison)	Tina Bondurant (Madison)
Justin Shell	Todd Szymkowski (Madison)
Kasey Deiss	Tom Faella (LAPC)
Katie Horrigan	Tom Howells (Madison)
Katie Mueller (Madison)	Tommy Winkler
Kelly Jackson* (Madison)	Tondra Davis* (Madison)
Ken Voight	Tony Kemnitz (Rapids)
Kirk Fedrichs	Travis Feltes (Madison)
	Walt Raith
	Zachary Wyatt* (Madison)

*TSC Members

SHSP Peer Exchange Follow-Up

A follow-up survey was sent out after the SHSP Peer Exchange and provided feedback for future peer exchanges.

Pictures from SHSP Peer Exchange

List of Acronyms

AASHTO	American Association of State Transportation Officials	MnDOT	Minnesota Department of Transportation
BDS	Bureau of Driver Services	MPO	Metropolitan Planning Organization
BFS	Bureau of Field Services	MUTCD	Manual on Uniform Traffic Control Devices
BOTS	Bureau of Transportation Safety	MwRSF	Midwest Roadside Safety Facility
CDL	Commercial Driver's License	NCHRP	National Cooperation of Highway Research Program
CMC	Cross Median Crash	NEA	New Entrant Audit
CME	Continuing Medical Education	NHTSA	National Highway Traffic Safety Administration
CMF	Crash Modification Factor	NSC	National Safety Council
CMV	Commercial Motor Vehicle	OSOW	Oversize/Overweight
CODES	Crash Outcome Data Evaluation System	OWI	Operating While Intoxicated
CPS	Child Passenger Safety	PCC	Possible Contributing Circumstance
DMV	Division of Motor Vehicles	PSAs	Public Service Announcements
DPI	Department of Public Instruction	RICAS	Rural Intersection Collision Avoidance System
DSP	Division of State Patrol	ROR	Run-off-the-road
DTIM	Division of Transportation Investment Management	SCAODA	State Council on Alcohol and Other Drug Abuse
DTSD	Division of Transportation System Development	SDD	Standard Detail Drawings
EMS	Emergency Medical Services	SHSP	Strategic Highway Safety Plan
ETO	Emergency Transportation Operations	SIMS	Signing Inventory Management System
FDM	Facilities Design Manual	SPF	Safety Performance Functions
FHWA	Federal Highway Administration	STH	State Trunk Highway
FMCSA	Federal Motor Carrier Safety Administration	STIP	State Transportation Improvement Plan
FYA	Flashing Yellow Arrow	STOC	Statewide Traffic Operations Center
GDL	Graduated Driver Licensing	TGM	Traffic Guidelines Manual
HRRRP	High Risk Rural Road Program	TMPs	Transportation Management Plans
HSIP	Highway Safety Improvement Program	TOPS Lab	Traffic Operations and Safety Laboratory
HSM	Highway Safety Manual	TRB	Transportation Research Board
HVE	High Visibility Enforcement	TRCC	Traffic Records Coordinating Committee
ICE	Intersection Control Evaluation	TSC	Traffic Safety Council
IID	Ignition Interlock Device	TSDM	Traffic Signal Design Manual
ILT	Incident Location Tool	TSEWG	Traffic Safety Engineering Workgroup
ISET	Intersection Safety Evaluation Tool	UW	University of Wisconsin-Madison
JSOOC	Joint Systems Operations Oversight Committee	VMT	Vehicle Miles Traveled
LEL	Law Enforcement Liaison	WARDS	Wisconsin Ambulance Run Data System
LiDAR	Light Detection and Ranging	WDTSEA	Wisconsin Driver and Traffic Safety Educator Association
LTAP	Local Technical Assistance Program	WisDOT	Wisconsin Department of Transportation
MCSAP	Motor Carrier Safety Assistance Plan	WISLR	Wisconsin Information System for Local Roads
MDSS	Maintenance Decision Support System	WTSOA	Wisconsin Traffic Safety Officer's Association
MIMS	Marking Inventory Management System	ZIW	Zero in Wisconsin

SHSP ISSUE AREA TASK FORCES

Improve Design and Operation of Intersections: City of Green Bay; Institute of Transportation Engineers; and Motorcycle Safety Advisory Committee (MoSAC)

Reduce Speed-Related Crashes/ Curb Aggressive Driving: Institute of Transportation Engineers

Reduce Head-on and Cross-Median Crashes- Prevent/Mitigate Roadway Departure Crashes: APWA; City of Fitchburg; Institute of Transportation Engineers; and WCHA

Provide Safe Pedestrian and Bicycle Travel: Federal Highway Administration; Wisconsin Rapids Police

Reduce Alcohol/Drug Impaired Driving: AAA Wisconsin; Abrazo Communications; Brown County Sheriff's Office; Appleton Police Department; Dane County District Attorney's Office; Dane County Sheriff's Office; Department of Health Services; Department of Public Instruction; Eau Claire County Sheriff; Health First Wisconsin; Ho-Chunk Nation; La Crosse County District Attorney's Office; Marathon County Circuit Court; Marshfield Clinic; Medical College of Wisconsin; Milwaukee Police Department; Mosaic Communications; MoSAC; Sheboygan County Sheriff's Office; Tavern League of Wisconsin; UW Law School; UW Madison Cognitive Systems Laboratory; UW School of Medicine and Public Health; Wisconsin Institute to Promote Healthy Lifestyles; Wisconsin Insurance Alliance; Department of Justice; Wisconsin Traffic Safety Officer's Association; and WisDOT Office of General Counsel; Marinette Police Department; Wisconsin State Laboratory of Hygiene

Improve Driver Alertness/ Reduce Driver Distraction: Children's Hospital of Wisconsin; Department of Public Instruction; Federal Highway Administration; MoSAC; and Wisconsin Insurance Alliance

Reduce the Number of Unbelted Fatalities and Serious Injuries: Children's Hospital of Wisconsin; Madison Police Department; Federal Highway Administration; Grant County Sheriff's Office; Lakeside Engineers; National Highway Traffic Safety Administration; Transportation Development Association of Wisconsin; Wisconsin Insurance Alliance; Wisconsin State Patrol; and Wisconsin Association of Women Highway Safety Leaders

Drivers: All American Driver Training School; CESA2; Children's Hospital of Wisconsin; and Department of Public Instruction

Reduce Motorcycling Crashes: MoSAC

Improve Incident Management/Safe Travel in Bad Weather: CH2M Hill; Department of Health Services; Lakeside Engineers; and Wisconsin State Patrol

In addition to the above, multiple groups received input from the UW TOPS Lab, WisDOT Regional Offices, and the following WisDOT Bureaus: Driver Services; Highway Maintenance; Project Development; State Highway Programs; Traffic Operations; Traffic Safety; Transit, Local Roads, Rails, and Harbors; and Transportation Safety

WisDOT Traffic Safety Council (2011-2013)

Division of State Patrol
Dave Pabst (TSC Chair)
Randy Romanski
Laura Vande Hey
Tondra Davis
Tim McClain
Zachary Wyatt

Division of Transportation System Development
Bill McNary
Rebecca Szymkowski
Brian Porter
Jerry Zogg

Division of Transportation Investment Management
Scott Janowiak
David Leucinger

Division of Motor Vehicles
Rob Combs
Tommy Winkler
Allison Lebwohl

Executive Division
Steve Olson
John Swissler

Ex Officio
Andrea Bill (University of Wisconsin/TOPS Lab)
Dave Jolicoeur (FHWA)
Mark Gessler (FMCSA)