STATE OF WISCONSIN
FEDERAL FISCAL YEAR 2021
HIGHWAY SAFETY PLAN

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State of Wisconsin
Federal Fiscal Year 2021
Highway Safety Plan

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Mission Statement

Our mission is simple: Zero fatalities on Wisconsin's roadways.

Our transportation system plays a vital role in economic growth, moving people to jobs, products to markets and connects citizens to a variety of destinations. As a society, we should not accept casualties as a foregone consequence of using the highway system. Wisconsin citizens, state and local government officials must work collectively toward achieving zero fatalities and incapacitating injuries on our roadways. Our belief is that any death is one too many, and we work toward preventing as many injuries and saving as many lives as possible using the resources available.

Executive Summary

The Wisconsin Department of Transportation's Bureau of Transportation Safety (BOTS) coordinates a statewide behavioral highway safety program using federal funds administered through the National Highway Traffic Safety Administration (NHTSA), state funds and other resources. Funds are primarily used to change system users' behaviors by:

- enforcing traffic laws
- increasing drivers' perception of the risk of being ticketed for non-compliance
- increasing public awareness of the dangers of high-risk behavior
- informing system users of the best way to avoid or reduce the severity of a crash

Through data analysis and targeted use of resources, BOTS works to provide leadership, innovation and program support in partnership with state, county, and community traffic safety leaders, professionals and organizations.

Figure 1 uses Fatality Analysis Reporting System (FARS) fatality data (preliminary) until 2019. The number of traffic fatalities has trended slightly downward over the last five years.

The 551 fatalities Wisconsin recorded in 2019 represents a decrease from the prior year and is also below the five-year (2015-2019) moving average of 585. There were 588 fatalities on Wisconsin roads in 2018; down from 613 fatalities in 2017.

As Figure 2 indicates, serious injury crashes spiked to 3,492 in 2017. There were 3,131 serious injuries in 2019 according to preliminary figures from Wisconsin's state crash data files.

Wisconsin achieved the national goal of one fatality per 100 million Vehicle Miles Traveled (VMT) in 2009, two years ahead of the national target date. As Figure 3 indicates, Wisconsin was slightly above the goal in 2017, but fatalities per 100 million Vehicle Miles Traveled (VMT) dropped to 0.83 in 2019.

The lead state agency for any grant type is the Wisconsin Department of Transportation. Match for maintenance of effort is achieved using the following table.

405b	Division of State Patrol (DSP) traffic enforcement

405c	DSP Traffic and Criminal Software (TraCS) staff, a BOTS safety data analyst, DSP Mobile Architecture for Communications Handling (MACH) and TraCS support, and MACH MiFi hardware expenditures
405d	DSP traffic enforcement and safe-ride grant program alternative transportation funds

Figure 1: Traffic Fatalities (FARS until 2019)

Goal C1: To decrease traffic fatalities 2 percent each year from the 2015-2019 five-year rolling average to 573.3 by December 31, 2021.
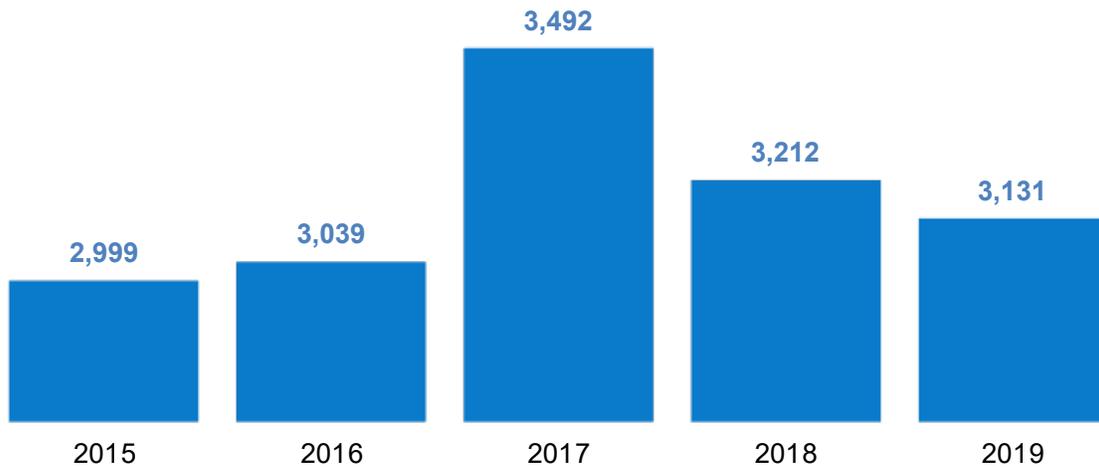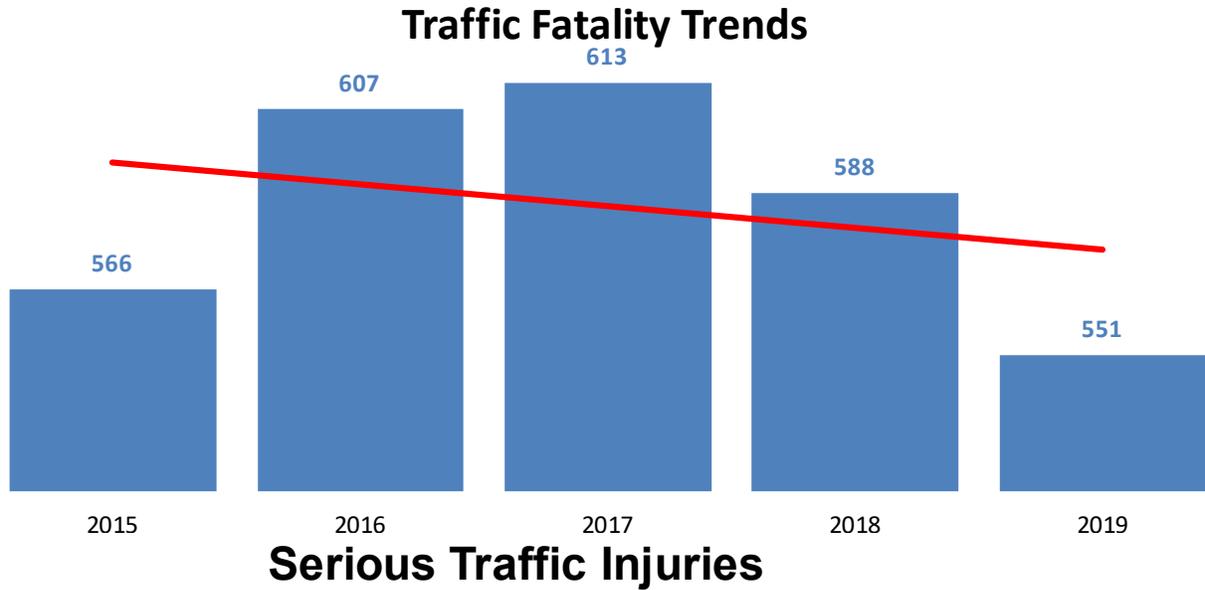
Traffic Fatality Trends

- 2015: 566
- 2016: 607
- 2017: 613
- 2018: 588
- 2019: 551

Serious Traffic Injuries

- 2015: 2,999
- 2016: 3,039
- 2017: 3,492
- 2018: 3,212
- 2019: 3,131

Figure 2: Serious Traffic Injuries (State Crash Data)

Fatalities per 100M VMT (FARS)
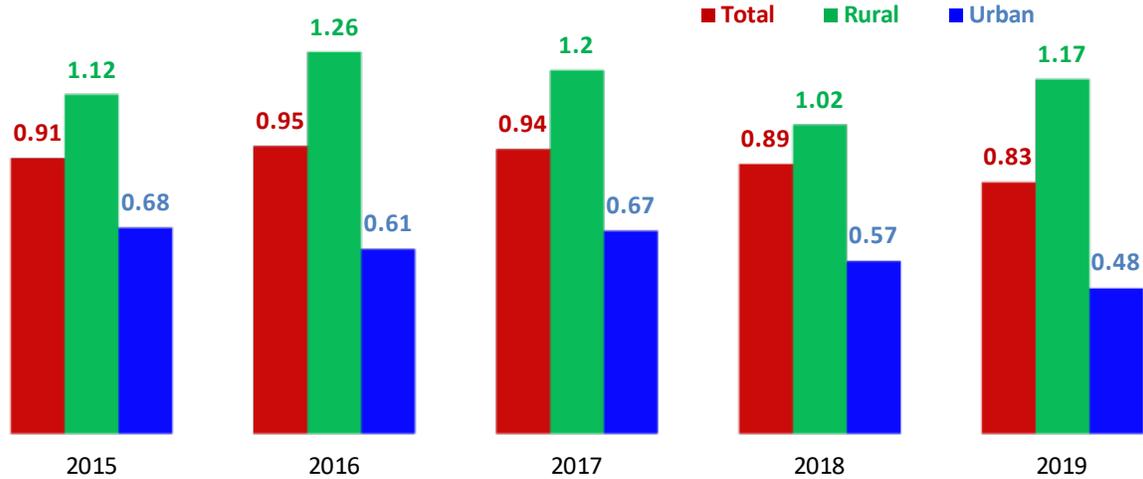
■ Total   ■ Rural   ■ Urban

Figure 3: Fatalities per 100M VMT (FARS until 2019)

Figure 4 provides the performance measures and goal statements developed by the Governors Highway Safety Association (GHSA) and NHTSA. FARS data was not available at the time of this application for 2019 and state numbers were used. The plan will be amended to use FARS data when it becomes available.

Measure	2015	2016	2017	2018	2019	2015-2019 Avg	2021 Target (2015-2019 Avg with 5% reduction, 2% for measures C1 and C3a)
C1. Traffic Fatalities (FARS)	566	607	613	588	551	**585**	**573.3**
C1. To decrease traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 576.2 to 564.7 by December 31, 2021.							
C2. Serious Traffic Injuries (State Crash Data Files)	2,999	3,039	3,492	3,212	3,131	**3,175**	**3,016**
C2. To decrease serious traffic injuries 5 percent from the 2015-2019 calendar year rolling average of 3,060 to 2,907 by December 31, 2021.							
C3a. Fatalities/VMT (FARS)	0.91	0.95	0.94	0.89	0.83	**0.90**	**0.89**
C3a. To decrease total fatalities/VMT, by 2 percent from the 2015-2019 calendar year rolling average of 0.906 to 0.888 by December 31, 2021.							
C3b. Rural Fatalities/VMT (FARS)	1.12	1.26	1.20	1.02	1.17	**1.15**	**1.10**
C3b. To decrease rural fatalities/VMT, by 5 percent from the 2015-2019 calendar year rolling average of 1.138 to 1.081 by December 31, 2021.							
C3c. Urban Fatalities/VMT (FARS)	0.68	0.61	0.67	0.57	0.48	**0.60**	**0.57**
C3c. To decrease urban fatalities/VMT, by 5 percent from the 2015-2019 calendar year rolling average of 0.620 to 0.589 by December 31, 2021.							
C4. Unrestrained Passenger Vehicle Occupant Fatalities (FARS)	167	183	180	153	136	**164**	**156**
C4. To decrease unrestrained passenger vehicle occupant fatalities in all seating positions 5 percent from the 2015-2019 calendar year rolling average of 186.2 to 177 by December 31, 2021.							
C5. Alcohol Impaired Driving Fatalities (FARS)	188	199	189	199	127	**180**	**171**

C5. To decrease alcohol impaired driving fatalities 5 percent from the 2015-2019 calendar year rolling average of 125.6 to 119 by December 31, 2021.							
C6. Speeding Related Fatalities (FARS)	167	212	180	186	163	**182**	**173**
C6. To decrease speeding-related fatalities 5 percent from the 2015-2019 calendar year rolling average of 168.6 to 160 by December 31, 2021.							
C7. Motorcyclist Fatalities	81	85	77	83	82	**82**	**78**
C7. To decrease motorcyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 78.2 to 74 by December 31, 2021.							
C8. Un-helmeted Motorcyclist Fatalities (FARS)	65	65	43	53	54	**56**	**53**
C8. To decrease un-helmeted motorcyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 59.4 to 56 by December 31, 2021.							
C9. Drivers Age 20 or Younger Involved in Fatal Crashes (FARS)	77	78	90	57	83	**77**	**73**
C9. To decrease drivers age 20 or younger involved in fatal crashes 5 percent from the 2015-2019 calendar year rolling average of 72.8 to 69 by December 31, 2021.							
C10. Pedestrian Fatalities (FARS)	57	51	56	56	52	**54**	**52**
C10. To reduce pedestrian fatalities 5 percent from the 2015-2019 calendar year rolling average of 53.6 to 51 by December 31, 2021.							
C11. Bicyclist Fatalities (FARS)	15	11	7	4	14	**10**	**10**
C11. To reduce bicyclist fatalities by one from the 2015-2019 calendar year rolling average of 8.2 to 8 by December 31, 2021.							
B1. Seat Belt Use Rate (Observed Seat Belt Use Survey)	85.80%	88.40%	89.40%	89.30%	90.20%	**88.62%**	**93.05%**
A1. Number of seat belt citations issued during grant-funded enforcement activities (FFY 2019)	13,373						
A2. Number of impaired-driving arrests made during grant-funded enforcement activities (FFY 2019)	1,998						
A3. Number of speeding citations issued during grant-funded enforcement activities (FFY 2019)	23,804						

The five key performance measures defined by the Federal Highway Administration (FHWA) for use in states' Strategic Highway Safety Plans (SHSPs) are:

- Number of fatalities
- Fatality rate
- Number of serious injuries
- Serious injury rate
- Number of non-motorized fatalities and serious injuries

The first three measures are included in the prior matrix as part of the agreed upon performance measures by the GHSA and NHTSA.

We are including the last two in this plan to reflect our commitment to the state's SHSP.

Measure	2015	2016	2017	2018	2019	2015-2019 Avg.	2021 Target
Serious Injury Rate	4.83	4.76	5.35	4.88	4.71	4.90	4.66
To decrease the serious injury rate by 5% from the 2015-2019 calendar year rolling average of 4.90 to 4.66 by 2021.							
Number of non-motorized fatalities and serious injuries	365	366	381	368	424	380.8	361.8
To decrease the number of non-motorized fatalities and serious injuries by 5 percent from the 2015-2019 calendar year rolling average of 380.8 to 361.8 by 2021.							

Highway Safety Planning Process

The highway safety planning process is circular and continuous. At any time during the year, the Bureau of Transportation Safety may be working on previous, current and upcoming fiscal year plans.

The SHSP serves as the principal planning document. The HSP is developed to:
- maximize integration and utilization of data analysis resources
- represent driver behavior issues and strategies
- utilize any statewide safety committees to obtain input from state and local traffic safety partners

BOTS works to ensure that the goals and objectives contained in the SHSP are considered in the annual development of the HSP and incorporated to the fullest extent possible.

BOTS reviews the SHSP and HSP to identify any gaps in addressing driver behavior issues and eliminate any redundancy for the maximum use of resources. The data source used by BOTS in identifying its highway safety problems is primarily the state's crash database, which is managed by BOTS. Other data sources include crash data from NHTSA's Fatality Analysis Reporting System (FARS). Wisconsin's highway safety planning process includes all of the components of 23 C.F.R. 1300.11(a), which are:

> (1) Description of the data sources and processes used by the state to identify its highway safety problems, describe its highway safety performance measures, establish its performance targets, develop and select evidence-based

countermeasure strategies and projects to address its problems and achieve its performance targets;

(2) Identification of the participants in the processes (e.g., highway safety committees, program stakeholders, community and constituent groups);

(3) Description and analysis of the state's overall highway safety problems as identified through an analysis of data, including but not limited to fatality, injury, enforcement and judicial data, to be used as a basis for setting performance targets and developing countermeasure strategies;

(4) Discussion of the methods for project selection (e.g., constituent outreach, public meetings, and solicitation of proposals);

(5) List of information and data sources consulted; and

(6) Description of the outcomes from the coordination of the HSP, data collection, and information systems with the SHSP.
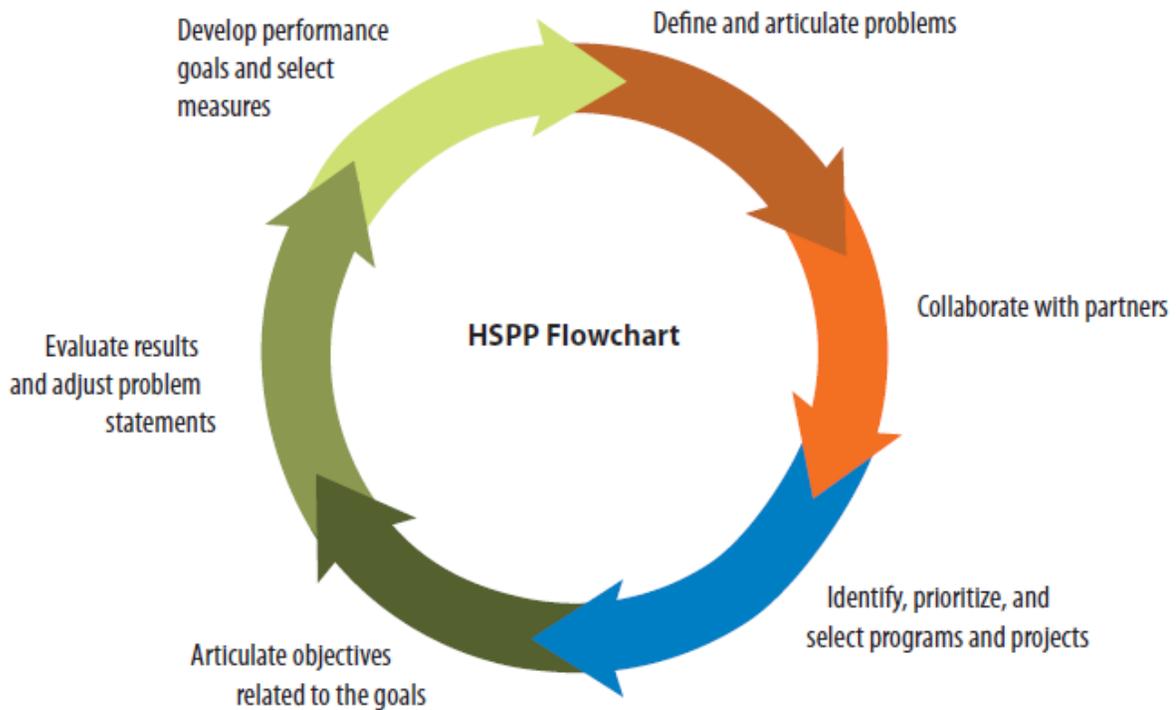
Highway Safety Planning Timeline

November to December
Prepare the prior year's Annual Report. This document is the companion report to the same year's Highway Safety Plan. The report provides NHTSA and the public with a summary of how funds were spent in that fiscal year.

January and continuing

Wisconsin is unique in that we have a law (s. 83.013, Wis. Stat.) that requires all 72 of its counties to have a Traffic Safety Commission. The law further defines who is supposed to participate at the quarterly meetings. A commission is required to include:

- the chief county traffic law enforcement officer
- the county highway safety coordinator
- the county highway commissioner
- a WisDOT engineer from the regional office
- the Regional Program Manager from BOTS
- a State Patrol Trooper
- representatives from the education, medicine, and legal professions

We recognize what a fantastic opportunity this requirement gives us to reach out and solicit ideas and input into our planning process and we utilize this opportunity.

In addition, each State Program Manager (SPM) obtains formal and informal recommendations, resources, and information from traditional and non-traditional partners and stakeholders including public health; emergency medical services; enforcement and adjudication; not-for-profit organizations; businesses; and community coalitions. This activity continues throughout the year (see Appendix 3: Safety: Partners, Committees, and Organizations).

During the first quarter of each year, BOTS program analysts and managers review the prior year's data and study the effectiveness of the prior year's projects. They also perform literature reviews and review best practices from other states.

Another valuable committee is the Wisconsin DOT's Traffic Safety Council. This is a multi-disciplinary group that meets on the first Thursday of each month. Representatives from FHWA, FMCSA, BOTS, Division of Motor Vehicles, Division of Transportation Investment Management, Division of Transportation System Development, WisDOT executive offices, and the University of Wisconsin-Madison serve on the committee. This group is responsible for authoring the Wisconsin Strategic Highway Safety Plan (SHSP) required by USDOT for federal Highway Safety Improvement Plan (HSIP) funds.

As a result of Wisconsin's Traffic Safety Council, and in compliance with the FAST Act, a Statewide Impaired Driving Task Force was chartered. This Task Force has accomplished a great deal. The group assembled a broad variety of stakeholders, developed a formal charter, approved the Statewide Impaired Driving Plan by agreeing to work on five signature items going forward, helped us to qualify for federal funding, assisted with the development of the federally-required SHSP and began work on signature items. Similar work groups have been established for other key safety initiatives included in Wisconsin's SHSP.

January to June

After the end of a calendar year, preliminary crash data are evaluated. Analysts may prepare preliminary reports of the previous year's fatality trends.

After finalized data are available, the most recent 10 years of crash data are used to determine the magnitude of the problem posed by each crash type and to develop trend lines. Goals are set using five-year rolling averages. In addition, conviction, medical, demographic, survey, program effectiveness, and other relevant data are analyzed and used as appropriate to generate rates and identify disproportionate representation of subgroups and trends for each program area.

BOTS identifies, describes, and analyzes the state's overall highway safety problems through an analysis of the data it maintains or has access to, as authorized to BOTS by the Governor's Representative for Highway Safety in 23 C.F.R. 1300.4(b)(4), including but not limited to fatality, injury, enforcement, and judicial data. BOTS uses this data as a basis for setting performance targets and developing countermeasure strategies. BOTS uses the data to generate targeting lists for enforcement grants. Grantees for the coming FFY are notified of their eligibility and the Regional Program Managers assist grantees with identifying their agency capacity (see Appendix 1: Law Enforcement Grant Targeting).

April to June

Analysts evaluate the nature and magnitude of each type of state-level and program area problem and each target location or group; establish the effectiveness of proposed program activities in addressing the problem; and determine the availability of resources to be applied to the problem and availability of data and information to be used to determine progress toward goals.

Where applicable, continuing activities that are determined to have been effective are funded at a progressively decreasing federal share. Recommendations from state program assessments are integrated into program objectives and funded activities.

Each program expert brings information from the processes described above to a committee of the Bureau of Transportation Safety to be included in the upcoming year's HSP.

At the project level, high risk target populations, jurisdictions and behaviors are identified as in the following example: All alcohol and speed-related crash data from the three previous years for every jurisdiction in Wisconsin are analyzed, from those involving property damage, through all ranges of injuries, and those that resulted in death. These data are scientifically weighted following established statistical protocol.

The annual HSP is coordinated with state and national strategic plans and related operational plans and guidelines, and especially with the WisDOT Strategic Highway Safety Plan. The 10 items of highest priority in the Department's 2017-2020 Strategic Highway Safety Plan are listed below (HSP-related goals bolded):

1. **Improve Safety Culture, Safety Data, Safety Technology**
2. **Reduce Driver Distraction/Improve Driver Alertness**
3. **Reduce Alcohol and Drug-Impaired Driving**
4. **Reduce the Incidence and Severity of Motorcycle Crashes**
5. **Improve Driver Performance (Teens, Older, Competent)**
6. **Improve Non-Motorist Safety**
7. Improve Safety of Intersections
8. **Increase Occupant Protection**
9. **Curb Aggressive Driving/ Reduce Speed-Related Crashes**
10. Reduce Lane Departure Crashes

Failure to be ranked in the high priority highway safety issue areas for the 2017-2020 SHSP does not mean the topic is unimportant - nor does it mean WisDOT will discontinue planned or on-going initiatives that have yielded results.

Initiatives such as making large truck travel safer, enhancing EMS to increase survivability, reducing vehicle-train crashes, improving incident management, improving work zone safety, safe travel in bad weather and reducing deer/other animal crashes will still be pursued.

Discussion for Wisconsin's 2020-2023 Strategic Highway Safety Plan are under way. Priorities will be set as part of that process, but it is expected they will be similar to the priorities in our current plan. As with prior plans, performance measures will be reviewed and adjusted as participants see fit.

End of June

Internal approval of the plan is received and the HSP is submitted to NHTSA.

Ongoing

Feedback from NHTSA management reviews, including traffic records strategic plans and other reviews of programs areas, are reviewed and incorporated into the planning process as well. Priority is given to the NHTSA Administrator's Motor Vehicle and Highway Safety Priorities, as well as overlapping FHWA and FMCSA safety priorities and goals. The latest version of NHTSA's *Countermeasures That Work* is used as part of project development.

State-Level Problem Identification

The process of identifying problems is integral to the planning process. Information used in identifying problems includes:
- WisDOT state crash, conviction, vehicle, roadway, traffic and survey data
- BOTS program effectiveness studies
- Demographic and other census data
- Emergency department, hospital discharge and death data from the state Department of Health Services
- National surveys
- Other relevant data.

These data are used, as appropriate, in trend, factor, disproportion and other analyses of each program area. The ID process is identified under the justification sections of each program plan. In the individual program areas, further program need and justification is identified.

Several program areas include plans for enforcement activities. It should be noted that law enforcement grants require individual grantees to set performance measures that consider all contacts (citations, warnings and stops with no action) with the motoring public.

Overall, BOTS attempts to fund the programs that will have the biggest impact on traffic fatalities.

Planning and Administration

The overall management and planning of Bureau of Transportation Safety activities are made possible through state and federal funds. Federal funds cover salaries and benefits of the Grants Management Supervisor, the Policy and Program Supervisor, two FTE Operations Program Associates, 0.5 FTE Office Associate and 0.5 FTE Office Operations Associate. Funds also cover out-of-state travel and training for each of these staff members.

State money for this program covers the salary and fringe of the Director, the Section Chief, and two full-time analysts.

Staff categorized as Planning and Administration have a positive impact on the traffic safety of Wisconsin. They have the following responsibilities:

- Prioritize the state's most significant highway safety challenges.
- Apply for all federal funding and write the state's Highway Safety Plan.
- Act as a representative for the state of Wisconsin as the Highway Safety Coordinator.
- Participate on committees and task forces.
- Target effective law enforcement grants.
- Promote highway safety in Wisconsin.
- Develop internal controls, monitor and analyze policies.
- Ensure grant shells have proper contract language.
- Manage the process of grant reimbursement requests from grant partners, as well as reimbursement requests to the federal government.
- Organize and host the Governor's Conference on Highway Safety.
- Report on results of funding to NHTSA.
- Prepare a report of grants subject to the Federal Funding Accountability and Transparency Act.

Performance Measure: On-time submission of the Highway Safety Plan and the Annual Report:

Expenditures for planning and administration are specifically allowed under Appendix D to Part 1300 and as such are effective as a countermeasure strategy.

Planning and Administration – Budget Summary		
Fund	**Account**	**2020 Planned**
402	**2021-10-01-PA**	$320,000
State 562	**2021-19-01-WI**	$530,000
	Program Total	$850,000

Occupant Protection Program

Justification

This section serves as Wisconsin's occupant protection program plan as required under the FAST Act.

In 2000 (base year), Wisconsin's observed statewide seat belt use was very low at 65.4 percent. That year, 1,148 people were ejected or partially ejected in crashes and 40.5 percent of crash victims who were not belted were either killed or incapacitated.

In 2019, observed average statewide seat belt use was 90.2 percent. While higher than 18 years ago, it is still trailing the national average usage rate of 90.7 percent. The 9.8 percent of our population that does not buckle up accounts for almost 37 percent of our vehicle occupant fatalities. While Wisconsin does not beat the national average, it still qualifies as a high seat belt use rate state under 23 CFR § 1300.21.

Unrestrained passenger vehicle occupants is performance measure C4. Below is the graph of the prior five years and the goal for 2021.

Unrestrained Passenger Vehicle Occupant Fatalities

Legend: ⋯⋯ 5-Year Average   ■ 2021 Goal

2015	2016	2017	2018	2019	2021
167	183	180	153	136	156
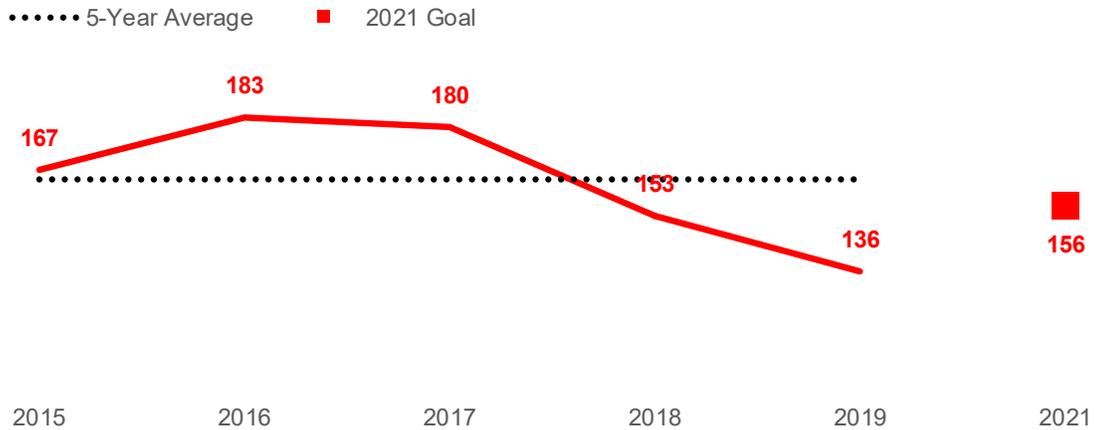
Seat belt usage lags with our most inexperienced drivers: those between the ages of 15 and 34.

**2019 Safety Belt Use by Age for
Fatal and 'A' Injuries**
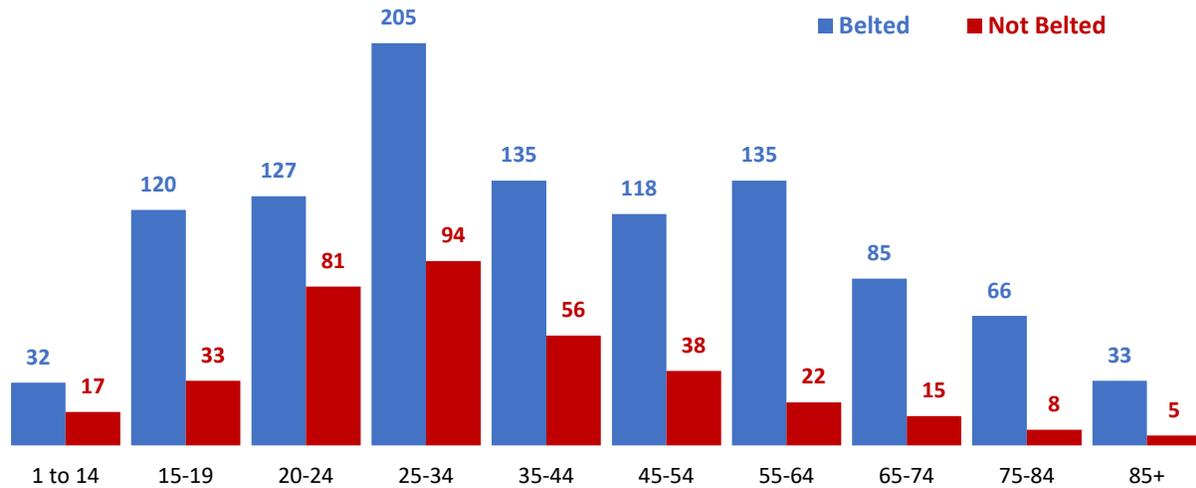
Under the criteria for funding, Wisconsin is required to have this occupant protection plan, participate in the Click-it-or-Ticket national mobilization, provide information on our child restraint inspection stations, have a program for recruiting, training, and maintaining technicians, and maintain our state level of effort. More details about our enforcement program can be found in Appendix 1: Law Enforcement Grant Targeting Methodology, in the discussion on how grants are targeted.

Performance measure B1 and our goal are in the chart below.

Seat Belt Use Rate
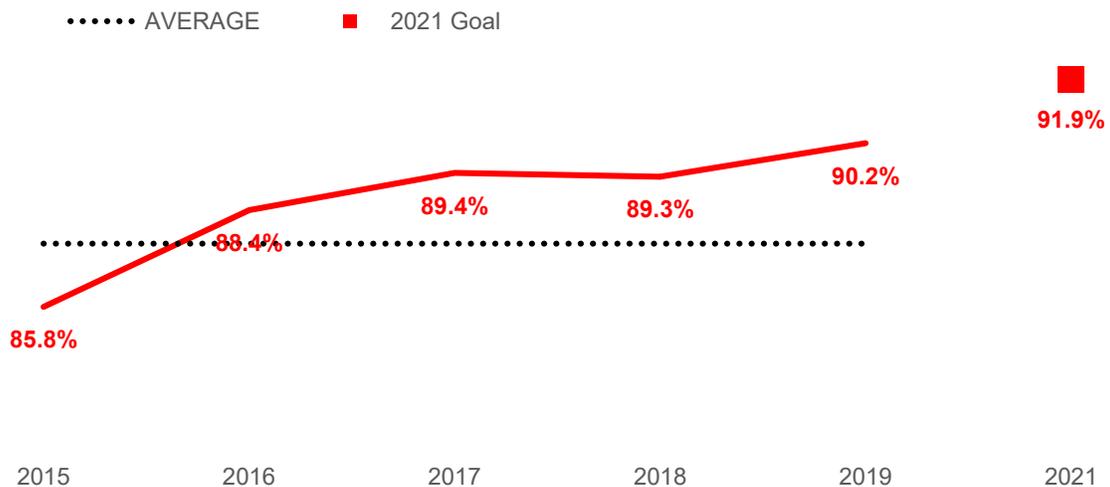
Wisconsin law enforcement agencies sustain their enforcement of seat belt and child restraint laws throughout the year. This graph reveals the yearlong effort.

2019 Safety Belt Convictions by Month

Month	Convictions
Jan	2,213
Feb	2,235
Mar	3,751
Apr	3,408
May	6,544
Jun	4,681
Jul	4,710
Aug	5,895
Sep	3,791
Oct	2,276
Nov	2,060
Dec	1,962
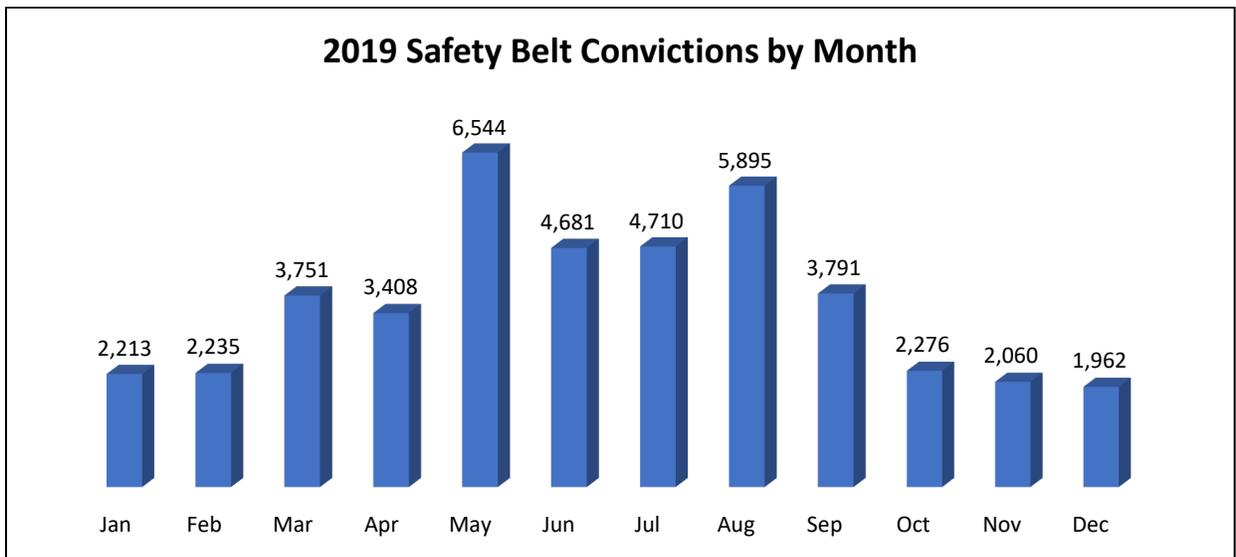
In 2019, there were 41,654 convictions for failure to fasten seat belts, an 18 percent decrease from 2018; and there were 2,436 convictions for child restraint violations, a 16 percent decrease over 2018.

For the period 1994-2019, individuals not wearing a seat belt were 53.7 times more likely to be ejected from their vehicle. In addition, they were 11 times more likely to be killed than someone wearing a shoulder and lap belt at the time of the crash. A 14.0 percent% fatality rate equates to approximately a one in seven chance of being killed.

Highway Safety Office Program Management/Program Management and Strategic Planning

Assess Traffic Safety Impact:
This state program manager position will positively impact traffic safety in Wisconsin by coordinating, planning, and managing the state occupant protection programs.

Goals that will have a positive impact on traffic safety in Wisconsin include enhancing volunteer agency participation, increasing community involvement, working with community organizations and non-profit programs to expand occupant protection activities and efforts, and encouraging state and local input into the HSP development process.

Linkage:
Funding program management and strategic planning for the occupant protection program will aid the state in reaching performance target C1, to decrease annual fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573 in 2021.

Rationale for Selecting Countermeasure/Amount:
Hiring a full-time occupant protection coordinator is specifically allowed under 402. Expenditures in 2019 were $62,833.68.

Description:
This activity will fund wage, fringe, data processing, materials and supplies, training and travel, printing and postage for the work of this position. This position will work with Regional Program Managers, Law Enforcement Liaisons, and law enforcement agencies of all sizes to coordinate occupant protection efforts, encourage safe and effective high-visibility enforcement and participation in mobilizations.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-20-01-OP**	$85,000	$0

High-Visibility Saturation Patrols/Enforcement

Assess Traffic Safety Impact:
Enforcement provides a deterrent effect impacting a person's decision to operate a motor vehicle without a seat belt. Enforcement increases the perception of the risk of being arrested. This strategy will decrease the incidence of fatalities and unbelted crashes.

Linkage:
Enforcement of the law prohibiting the operation of a motor vehicle while not wearing a seatbelt will provide support to the state in reaching performance target C1, to decrease annual fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573 in 2021.

Rationale for Selecting Countermeasure/Amount:
BOTS uses the high-visibility enforcement task force model for all its enforcement grants, which is a proven countermeasure strategy. This countermeasure is being funded at the same level as is planned in the 2020 Highway Safety Plan.

This project is a countermeasure that works on pages 2-16, 2-18, and 2-21 of the ninth edition. It is specifically allowed under 23 CFR § 1300.21(f)(1)(i). Enforcement of seat belt laws will lead to greater compliance with those laws. Expenditures in 2019 were $521,937.72 and $811,562.40.

Description:
Encourage law enforcement agencies to make occupant protection a priority by writing citations, sponsoring media events, and working overtime in geographical areas where low seat belt use is prevalent.

Plan statewide participation, encourage voluntary participation, and provide overtime funding for high-visibility enforcement task forces for occupant protection, including nighttime enforcement, accompanied by media for a demographic. These task forces will consist of multiple law enforcement agencies that coordinate their enforcement efforts during the same time frame.

Enforcement provides a deterrent effect which impacts a person's decision to operate a motor vehicle while unbelted. Enforcement increases the perception of the risk of being ticketed. This strategy will decrease the incidence of unbelted fatalities.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Targeted Grantees	402	**2021-20-05-OP**	$1,577,000	$1,365,320
Targeted Grantees	405b	**2021-25-05-M2**	$400,000	$400,000

Should additional dollars become available, more occupant protection enforcement will occur.

High-Visibility Enforcement/Click It Or Ticket (CIOT) Mobilization

Assess Traffic Safety Impact:
The effect of this program will be increased awareness of occupant protection efforts. The anticipated impact of this countermeasure strategy is a decrease in unbelted fatalities.

Linkage:
Encouraging participation in the CIOT national enforcement mobilization will support the state in attaining performance target C1, to decrease annual fatalities two percent from the 2015-2019 calendar year rolling average of 585 to 573 in 2021.

Rationale for Selecting Countermeasure/Amount:
The FAST Act under 23 CFR § 1300.21 (d)(2) requires states to participate in Click-It-Or-Ticket. This countermeasure strategy is planned to be funded based on the number of participants in the mobilizations.

Agencies are required to expend their own funds on paid media, a countermeasure that works on page 2-22 of the ninth edition. In 2020, approximately $275,311.13 was expended on equipment related to the Click It or Ticket national enforcement mobilization.

Description:
This will be used to provide equipment to some of the law enforcement agencies that participate in the Click It or Ticket mobilization.

The FAST Act requires states to participate in three national enforcement mobilizations. The state will participate in the Click It or Ticket national enforcement mobilization. BOTS encourages all law enforcement agencies to participate in the traffic safety commissions in each county.

All agencies that participate in the CIOT mobilization will need to sign a contract when they register before they can be included in the selection to receive equipment. Not all agencies receive equipment. Equipment must be on a pre-approved list, and equipment must support traffic enforcement activities.

The effect of this project will be increased awareness of seat belt law enforcement efforts. This program supports collaborative enforcement efforts.

No equipment purchased with this activity will be major equipment since all equipment will have an acquisition cost of less than $5,000 in value.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
One-third of Participants that fulfill guidelines	402	**2021-20-06-OP**	$400,000	$400,000

Child Passenger Safety (CPS) Programming

Assess Traffic Safety Impact:
The effect of this program will be increased awareness of child occupant protection efforts. The anticipated impact of this countermeasure strategy is a decrease in unbelted fatalities.

Linkage:
Training locals on CPS will support the state in attaining performance target C1, to decrease annual fatalities two percent from the 2015-2019 calendar year rolling average of 585 to 573 in 2021.

Rationale for Selecting Countermeasure/Amount:
This project is in accordance with NHTSA's Countermeasures that Work, ninth edition, 2-32. It is specifically allowed under 23 CFR § 1300.21(f)(1)(ii), (iii), and (iv). This project will lead to increased child restraint use. In 2019 expenditures were $188,680.56.

Description:
Support and administrative costs for statewide Child Passenger Safety Advisory Committee. Partnership with a contractor named through a state-sanctioned request for proposal to support and administer statewide CPS Technician Training including

recruitment, training, education, and retention rates that will service the level of need in the state of Wisconsin.

BOTS will work with the contractor to provide additional CPS training materials to community partners and for local events. Project will include CPS Training for law enforcement agencies, judges and other safety partners with community programs. Youth and senior seat belt initiatives including training opportunities for law enforcement will be developed. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol. The second portion of this grant program as described below, will distribute car seats to underserved communities.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Children's Hospital	405b	**2021-25-03-M2**	$230,000	$180,000

Rationale for Selecting Countermeasure/Amount:
This project is in accordance with NHTSA's Countermeasures that Work, ninth edition, 2-35. It is specifically allowed under 23 CFR § 1300.21(f)(1)(vi). This project will lead to increased use of child safety restraints. In 2019, expenditures were $188,680.56.

Description:
This project will change the behavior of those that transport children, providing child safety seats, installation and occupant protection education. 2019 expenditures were $139,773.96 for 402 and $17,354.50 for 405b.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Various local health services	402	**2021-20-06-OP**	$188,000	$188,000
Various local health services	405b	**2021-25-06-M2**	$54,000	$54,000

Contract for CIOT Mobilization Post Observational Surveys
Assess Traffic Safety Impact:
The effect of this program will be increased awareness of occupant protection efforts. The anticipated impact of this countermeasure strategy is a decrease in unbelted fatalities.

Linkage:
Assessing where the state is each year in terms of performance target B1.

Rationale for Selecting Countermeasure/Amount:
This project is specifically allowed under 23 CFR § 1300.21(f)(1)(v). In 2019 expenditures were $80,910.36.

Description:
Contract for CIOT Mobilization Post Observational Surveys to include June Observational Surveys.

Participation in the Click It or Ticket national enforcement mobilization is a requirement for receiving federal funds, and the survey that is conducted as a result of this project will provide us with more information on the effectiveness of this mobilization that will inform future mobilizations.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
UW-Whitewater	405b	**2021-25-09-M2**	$81,000	$0

Public Information and Education:

All media plans and public information and education for all issue areas are in the Community Traffic Safety Outreach and Media Programs.

Occupant Protection – Budget Summary		
Fund/Source	**ID**	**Amount**
402	2021-20-01-OP	$85,000
402	2021-20-05-OP	$1,577,000
405b	2021-25-05-M2	$400,000
402	2021-20-06-OP	$588,000
405b	2021-25-03-M2	$230,000
405b	2021-25-06-M2	$54,000
405b	2021-25-09-M2	$81,000
Total		$3,015,000

Impaired Driving Program

Justification

Impaired driving remains a significant concern in Wisconsin.

The pie chart below represents WisDOT's approach that no one solution for this problem exists. It illustrates the comprehensive approach that needs to be considered in each community. The size of the pie pieces does not reflect their relative importance, which varies depending on where a community is located within the state.
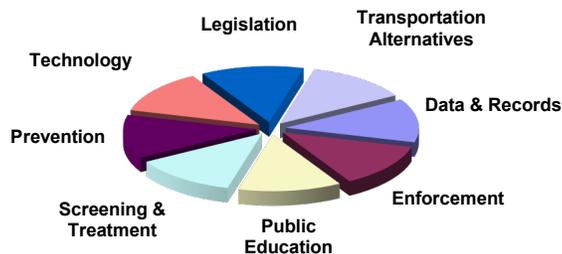
Impaired driving has a high economic cost to the state, as determined using national cost estimates obtained from the National Safety Council (NSC). Applying this approach to 2019 crash statistics demonstrates the significant cost to the state. See performance measure C5 in the introduction for a performance measure and goal for this program.
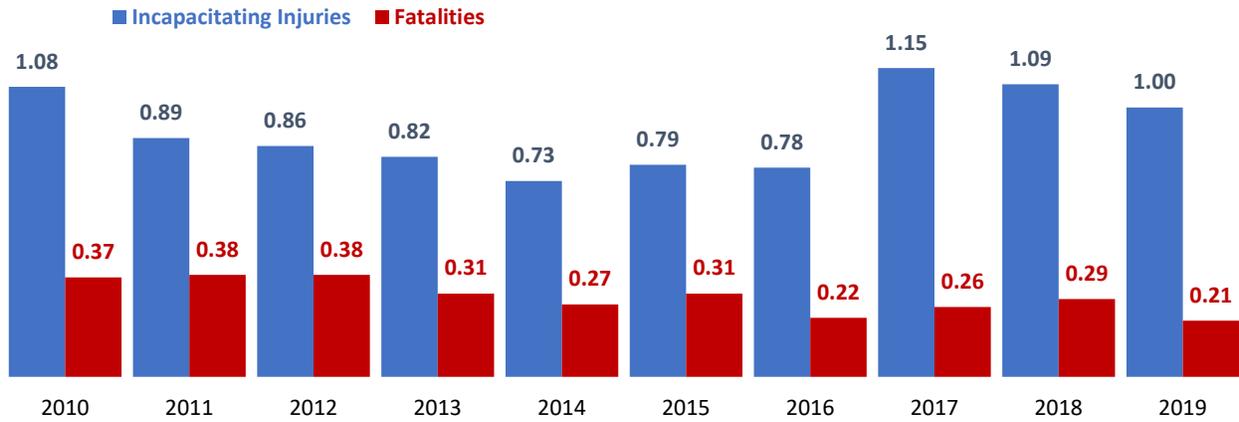
Economic Loss from Traffic Crashes, 2019

Crash Severity	Total Persons	Cost per Person	Total Cost
Fatality (K)	139	$1,659,000	$230,601,000
Incapacitating (A)	667	$96,200	$64,165,400
Non-incapacitating (B)	1390	$27,800	$38,642,000
Possible C	861	$22,800	$19,630,800
Property Damage	3718	$4,500	$16,731,000
Total Economic Loss			**$369,770,200**

Note that the injury categories are actual people injured, unlike the property damage crashes, which are events. All crashes - injury or not - have a property damage element. For a more complete explanation of items included in per occurrence estimates, visit www.nsc.org

In 2003 (Wisconsin's base year), 9,007 alcohol-related crashes resulted in 348 deaths (42% of all deaths) and 6,445 injuries. Since then, Wisconsin has seen significant improvement. In 2019, 6,055 alcohol-related crashes resulted in 139 deaths and 2,918 injuries—but alcohol remains a factor in 25.3 percentof all traffic-related deaths.

As the first graph on the next page illustrates, combined alcohol-related fatalities and incapacitating ('A') injuries have declined since 2010, with a significant decrease in fatalities between 2010 and 2019. In 2010, the alcohol fatality rate was 0.31 per 100 million VMT compared to 0.21 per 100M VMT in 2019, a 32 percent decrease.

Alcohol Related Fatalities and 'A' Injuries Per 100M VMT

■ Incapacitating Injuries ■ Fatalities

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Incapacitating Injuries	1.08	0.89	0.86	0.82	0.73	0.79	0.78	1.15	1.09	1.00
Fatalities	0.37	0.38	0.38	0.31	0.27	0.31	0.22	0.26	0.29	0.21

The next graph illustrates performance measure C5. Alcohol Impaired Driving Fatalities.

Alcohol Impaired Driving Fatalities

—— Fatalities ■ 2021 Goal •••••• 5-Year Average

2015	2016	2017	2018	2019	2021
188	199	189	199	127	■ 171
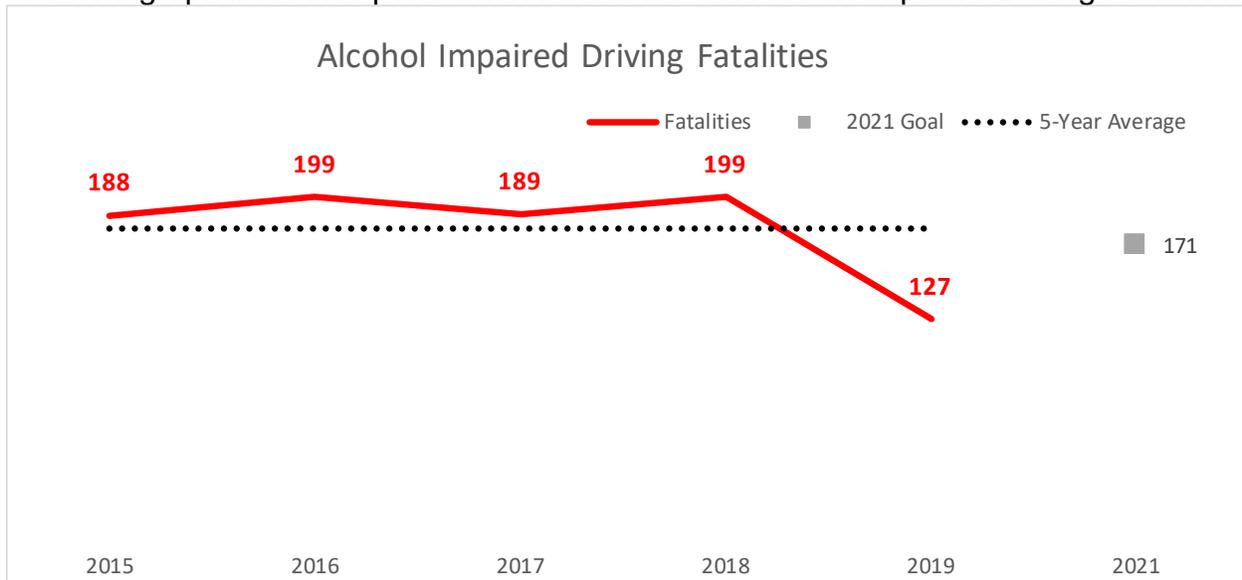
In 2019, 31,182 convictions for operating a motor vehicle while intoxicated were entered into driver records, compared to 32,004 in 2018.

OWI, Drug, Commercial OWI, and Implied Consent Convictions

```
55,848
        39,330
                36,468
                        33,328   33,660   33,449
                                                   32,183   31,687   32,004
                                                                              31,182

2010    2011    2012    2013     2014     2015     2016     2017     2018     2019
```
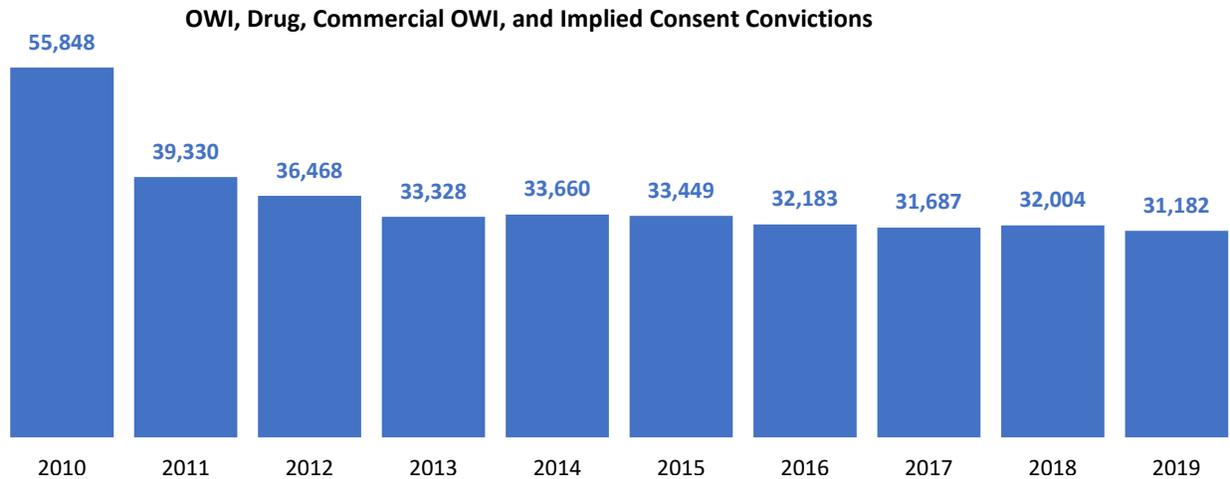
Under the FAST Act, Wisconsin is considered a low-range state with a 0.30 alcohol impaired-driving fatality rate per 100 million VMT. Prior to becoming a low-range state, Wisconsin was a mid-range state and was required to convene a statewide impaired driving task force and develop a Statewide Impaired Driving Plan.

Wisconsin's task force convened on August 6, 2013, established a charter, set priorities, and submitted its first report by September 1, 2013. The task force approved a new Statewide Impaired Driving Plan, dated May 23, 2016, and is submitting it in this Highway Safety Plan. See supplemental appendix AL-1 for this report. This report identifies six signature initiatives:
- Reducing the Cultural Acceptance of Impaired Driving
- Reducing Drinking among Persons under Age 25
- Streamlining OWI Enforcement and Prosecution Processes
- Improving Drugged Driving Recognition
- Promoting Alternative Transportation Programs
- Improving Data Collection, Sharing and Distribution

BOTS continues to convene this work group quarterly and it serves as the Impaired Driving Work Group for our state's Strategic Highway Safety Plan issue area.

Highway Safety Office Program Management / Program Management and Strategic Planning

Assess Traffic Safety Impact:
The state program manager position will positively impact traffic safety in Wisconsin by coordinating, planning, and managing the state impaired driving programs. Goals that will have a positive impact on traffic safety in Wisconsin include enhancing volunteer agency participation, increasing community involvement, working with community organizations and non-profit programs to expand impaired driving activities and efforts, and encouraging state and local input into the HSP development process.

Linkage:
Funding program management and strategic planning for the impaired driving program will aid the state in reaching performance target C5 - to decrease annual alcohol-impaired driving fatalities 5 percent from the 2015-2019 calendar year rolling average of 180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
Hiring a full-time impaired driving coordinator is specifically allowed under 23 CFR §1300.23(j)(1)(ii). Expenditures in 2019 were $81,167.75.

Description:
This activity will fund wage, fringe, data processing, materials and supplies, training and travel, printing and postage for the work of this position.

The position will work with Regional Program Managers, Law Enforcement Liaisons, and law enforcement agencies of all sizes to coordinate impaired driving efforts, encourage safe and effective high-visibility enforcement and participation in mobilizations. It will also work directly with the DRE program coordinator to provide support of the Wisconsin Drug Evaluation and Classification program.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405d	**2021-31-01-M5**	$85,000	$0

Promotion of Transportation Alternatives

Assess Traffic Safety Impact:
Promoting transportation alternatives for intoxicated persons from establishments licensed to sell alcohol beverages to their home will result in a decrease in alcohol-related crashes.

Linkage:
Wisconsin's transportation alternatives programs provide support to the state in reaching performance target C5, to decrease annual alcohol-impaired driving crashes 5 percent from the 2015-2019 calendar year rolling average of 180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
The Wisconsin Department of Transportation (WisDOT) administers a state-funded safe-ride grant program and supports other federally-funded transportation alternatives programs to bolster efforts to reduce the incidence of operating a motor vehicle while

intoxicated in local communities. Expenditures of federal funds in 2019 were $56,006.75, and expenditures of state funds were $617,235.59.

Description:
BOTS will collaborate with the Tavern League of Wisconsin in administering WisDOT's safe-ride grant program throughout the state. The Tavern League of Wisconsin's SafeRide Program collaborates with Lyft in some jurisdictions.

This is a state funded program.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Tavern League of Wisconsin	State 531	**2021-39-04-WI**	$900,000	$900,000

Rationale for Selecting Countermeasure/Amount:
Countermeasures That Work, ninth edition, page 1-57. We are expanding this program.

Description:
As an enhancement to law enforcement grants and efforts, additional funds will be provided to law enforcement agencies that coordinate alternative transportation in communities. This will also fund grants to provide short-term alternative transportation (vans, buses, or vehicles) to transport community members from local summer events to their home. These festival grants are local in nature such as a beer tent or annual fundraiser where alcohol is legally served. The grant also covers limited marketing and advertising costs as it relates to responsible drinking.

There must be sufficient evidence that a safe-ride program has the potential of reducing risk due to drinking and driving. Grant applicants should provide some evidence that poor driver judgment could be expected, and that drinking and driving has been a problem at the event they are applying for. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Baraboo, Lodi, Sauk Prairie, Spring Green, Reedsburg, Arlington, Crawford Co, Barron Co, Watertown, Seymour, Ashland, Darlington	402	**2021-30-04-AL**	$120,000	$120,000

High-Visibility Saturation Patrols/Enforcement

Assess Traffic Safety Impact:
Enforcement provides a deterrent effect on a person's decision to operate a motor vehicle while intoxicated. Enforcement increases the likelihood and increased perception of the risk of being ticketed and helps decrease the incidence of OWI.

Linkage:
Enforcement of the law prohibiting the operation of a motor vehicle while intoxicated will provide support to the state in reaching performance target C5, to decrease annual alcohol-impaired driving crashes 5 percent from the 2015-2019 calendar year rolling average of 180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
BOTS uses the high-visibility enforcement task force model for all its enforcement grants, which is a proven countermeasure strategy and is allowable under 23 CFR §1300.23(j)(1)(i). This countermeasure is being funded at the same level as is planned in the 2020 Highway Safety Plan.

Description:
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.

Plan statewide participation, encourage voluntary participation, and provide overtime funding for high-visibility enforcement task forces for impaired driving, including nighttime enforcement, accompanied by media for a demographic. These task forces will consist of multiple law enforcement agencies that coordinate their enforcement efforts during the same time frame.

Enforcement provides a deterrent effect on a person's decision to operate a motor vehicle while intoxicated. The goal of this strategy is to decrease the incidence of OWI.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol. Targeting methodology can be found in Appendix 1. In addition, a law enforcement agency that wants to gauge the size of the drugged driving population can include roadside collection in their impaired driving enforcement.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Targeted Grantees	405d	**2021-31-05-M5**	$2,347,000	$1,885,000

High-Visibility Enforcement/Drive Sober or Get Pulled Over Mobilization

Assess Traffic Safety Impact:
The effect of this program will be increased awareness of impaired driving enforcement efforts. The anticipated impact of this countermeasure strategy is a decrease in impaired driving.

Linkage:
Encouraging participation in two Drive Sober or Get Pulled Over national enforcement mobilizations will support the state in attaining performance target C5, to decrease annual alcohol-impaired driving fatalities 5 percent from the 2015-2019 calendar year rolling average of 180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
23 CFR part 1300.11(d)(6) requires states to participate in three national enforcement mobilizations. This will include participating in Drive Sober or Get Pulled Over mobilizations around Labor Day as well as around the winter holidays.

This countermeasure strategy is in the ninth edition of Countermeasures That Work on page 1-27 and is planned to be funded based on the number of participants in the mobilizations.

Description:
This planned activity is for the Drive Sober or Get Pulled Over mobilization during the winter holidays, and the Drive Sober or Get Pulled Over mobilization around the Labor Day holiday.

This program supports collaborative enforcement efforts. Law enforcement agencies that participate in this mobilization coordinated by BOTS may be considered in a drawing for equipment that is provided to law enforcement agencies to conduct ongoing high-visibility enforcement within their jurisdictions to improve traffic safety. Not all agencies receive equipment.

Law enforcement agencies receiving equipment must fulfill guidelines set by BOTS, which includes signing a project agreement prior to reporting enforcement activity during the mobilization. Other requirements include:
- a commitment to community education about traffic safety
- engaging the local media
- reporting enforcement data
- and, if possible, coordination with other law enforcement agencies through their county traffic safety commissions

Agencies chosen for an equipment grant will sign a contract to receive equipment. BOTS will encourage local law enforcement to engage in the enforcement of impaired driving laws in their community to create awareness of impaired driving enforcement efforts and education about the benefits of wearing safety belts, and BOTS will

encourage local law enforcement to view impaired driving enforcement as a sustained effort rather than an occasional enforcement mobilization. Equipment must support ongoing traffic enforcement activities. Agencies are required to spend their own funds on paid media. No equipment purchased with this activity will be major equipment since all equipment will have an acquisition cost of less than $5,000 in value. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
One-third of Participants that fulfill guidelines	402	**2021-30-06-AL**	$600,000	$600,000

Drug Recognition Expert (DRE) Training/Drug Evaluation and Classification Program

Assess Traffic Safety Impact:
The education of law enforcement and education professionals will lead to the increased ability to identify Driving Under the Influence of Drugs (DUID). This strategy will help decrease the incidence of DUID.

Linkage:
Funding the Drug Evaluation and Classification Program will aid the state in reaching performance target C1, to decrease the five-year average number of traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 585.0 to 573.3 in 2021.

Rationale for Selecting Countermeasure/Amount:
This countermeasure strategy aligns the state with national priorities and is allowable under 23 CFR §1300.23(j)(1)(vi) and will eventually lead to less incidence of DUID. More funding is being allocated to this program in 2021 since we are increasing the size of this program.

Description:
The education of law enforcement and other traffic safety professionals will lead to the increased ability to identify DUID.

This program supports a contracted coordinator position and includes expenses to train new Drug Recognition Experts (DREs). In addition, costs are covered to provide continuous training and re-certification for existing DREs. DRE expenses, including instructor wages, travel to conferences, supplies (such as DRE kits), printing, postage, lodging, and meals for students and instructors are covered.

BOTS also supports DRE callouts to assist other agencies where a DRE evaluation is needed.

In the case of a DRE evaluation where synthetic cannabinoids are suspected, BOTS will pay for the cost of the test.

WisDOT will fund expenses and instructor costs related to programs including Advanced Roadside Impaired Driving Enforcement (ARIDE), Drugs That Impair Driving (eight-hour drug block), Drug Impairment Training for Educational Professionals (DITEP), and Standard Field Sobriety Testing (SFST).

BOTS will continue to expand the ARIDE program by increasing the number of classes to accommodate demand. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405d	**2021-31-03-M5**	$275,000.00	$275,000.00

Description:
This program supports expenses to train new Drug Recognition Experts (DREs) during two DRE schools. The costs covered include instructor wages, travel cost (such as lodging for instructors and students), supplies (including DRE kits and classroom supplies) and printing.

BOTS has historically covered the cost for the school schedule in the fall, while the spring school was covered by other funding. The funding for the spring school is no longer available. By holding two schools, Wisconsin has been able to continue to increase the number of DREs, avoiding decreasing numbers due to retirements and/or attrition. All expenses and supplies will be purchased according to state contracts and follow purchasing guidelines for allowable costs.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405d	**2021-31-03-M5**	$167,000.00	$167,000.00

Traffic Safety Resource Prosecutors

Assess Traffic Safety Impact:
Providing training, education, and technical support to those prosecuting offenders of the state's OWI laws will ensure that appropriate sanctions are delivered to offenders, which will reduce repeated incidence of impaired driving.

Linkage:
Providing funding for the state's Traffic Safety Resource Prosecutors will help the state reach performance target C5, to decrease annual alcohol-impaired driving fatalities 5 percent 2015-2019 calendar year rolling average of 180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
Prosecutors around the state can learn from their strategies in complex or nuanced cases, and these cases help set solid precedent. This program is under Countermeasures That Work, ninth edition, on page 1-34. Expenditures in 2019 were $324,291.50.

Description:
This planned activity includes salary and fringe for two statewide Traffic Safety Resource Prosecutors acting as a resource on legal issues surrounding OWI and the prosecution of those offenders. They will provide specialized training to prosecutors, judges, law enforcement, and others in the state. They will also conduct outreach at county traffic safety commissions.

These positions also provide technical assistance to a wide variety of professionals such as law enforcement officers, Drug Recognition Experts, blood and alcohol testing staff, and policy development staff.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Wisconsin DOJ	402	**2021-30-03-AL**	$350,000.00	$82,500

Judicial Outreach Liaison

Assess Traffic Safety Impact:
Providing training, education, and technical support to judges for the state's operating a motor vehicle while intoxicated laws to ensure that appropriate sanctions are delivered to offenders. This will reduce repeated incidence of impaired driving.

Linkage:
Providing funding for the state's Judicial Outreach Liaison will help the state reach performance target C5, to decrease annual alcohol-impaired driving fatalities 5 percent 2015-2019 calendar year rolling average of 180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
The creation of a Judicial Outreach Liaison is a task identified in Wisconsin's Strategic Highway Safety Plan. Judges around the state can learn from complex or nuanced cases, and these cases help set solid precedent.

This program is allowable under 23 CFR §1300.23(j)(1)(iii). This is a new program for Wisconsin.

Description:
This planned activity includes salary and fringe for one statewide Judicial Outreach Liaison acting as a resource on legal issues surrounding OWI. They will provide specialized training to judges, law enforcement, and others in the state. They will also conduct outreach at county traffic safety commissions.

This position also provides technical assistance to a wide variety of professionals such as law enforcement officers, Drug Recognition Experts, blood and alcohol testing staff, and policy development staff.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405d	**2021-31-03-M5**	$75,000	$75,000

DWI Courts/Adjudication

Assess Traffic Safety Impact:
Ongoing training helps adjudicate OWI cases effectively.

Linkage:
Providing funding for agencies to participate in training offered by the National Center for Driving While Intoxicated (DWI) Courts (NCDC) will support the state in attaining performance target C5, to decrease annual alcohol-impaired driving fatalities 5 percent from the 2015-2019 calendar year rolling average of180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
DWI Courts are a proven countermeasure, and this countermeasure strategy is allowable under 23 CFR §1300.23(j)(1)(iii) and will allow specialists in Wisconsin to learn best practices from specialists in other jurisdictions.

Description:
This planned activity will provide funding for travel cost for agencies to participate in training offered by NCDC. These training sessions are partnerships between NCDC, NHTSA and the state highway safety offices. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405d	**2021-31-03-M5**	$20,000.00	$20,000.00

24-7 Sobriety Program / Frequent Sobriety Testing Pilot Programs

Assess Traffic Safety Impact:
This countermeasure strategy will result in a reduction in OWI recidivism.

Linkage:
Providing funds to help start Wisconsin's Frequent Sobriety Testing Pilot Program will serve the state in reaching performance target C5, to decrease annual alcohol-impaired driving fatalities 5 percent 2015-2019 calendar year rolling average of 180.4 to 171.4 in 2021.

Rationale for Selecting Countermeasure/Amount:
The countermeasure strategy has proven to be very effective at reducing OWI recidivism and is allowable under 23 CFR §1300.23(j)(1)(x). This countermeasure strategy is planned to be funded at the same amount as indicated in the 2020 Highway Safety Plan.

Description:
The Wisconsin Department of Justice will create 24-7 sobriety pilot programs in select Wisconsin counties. These programs will require an individual arrested for or convicted of driving under the influence of alcohol to abstain from alcohol and be subject to testing for alcohol at least twice per day.

Funding will be used for start-up projects only. Programs will be proportionally-funded to ensure NHTSA funds will be used for that proportion of the program whose participants have convictions related to impaired driving. The goal is for the programs to become self-sufficient.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Wisconsin DOJ	405d	**2021-31-04-M5**	$70,000	$70,000

Data and Program Evaluation

Assess Traffic Safety Impact:

The evaluation of the impaired driving program and of the impaired driving issues within the state will create a better a highway safety program, thereby improving traffic safety.

Linkage:

Providing funds for research and surveys in the impaired driving program will help the state reach performance target C1, to decrease the five-year average number of traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 585.0 to 573.3 in 2021.

Rationale for Selecting Countermeasure Amount:

This is a continuing countermeasure strategy that has been successful in determining the scope of the drugged driving problem in Wisconsin and is allowable under 23 CFR §1300.23(j)(1)(vi). It has also been successful in evaluating the effectiveness of paid media for impaired driving. Expenditures in 2017 were $57,739.86.

Description:

The planned activity will collect data regarding driving under the influence of drugs in a small metropolitan area. It will help to identify the size and scope of the state's drugged driving program. A previous project studied this problem in a larger metropolitan area.

This project will use roadside oral fluid testing devices in conjunction with forensic toxicology testing of the legal blood draw to examine the validity and efficacy of the roadside devices. Drug Recognition Experts (DRE) will administer the roadside testing and the data from the device and the DRE evaluation will be compared.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Wisconsin State Lab of Hygiene	405d	**2021-31-09-M5**	$60,000	$60,000

<u>Rationale for Selecting Countermeasure Amount</u>:
To understand the knowledge, attitude, and behavior of youth, it is necessary to survey youth. This is in Countermeasures That Work, ninth edition, page A1-12.

<u>Description</u>:
This planned activity will evaluate the effectiveness of impaired driving paid media and capture the knowledge, attitudes, and behaviors of youth drivers.

This project has been done in previous years and it has been successful. In 2020, BOTS entered into a new collaboration with the Wisconsin Department of Health Services to conduct this evaluation.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Wisconsin DHS	402	**2021-30-09-AL**	$25,000	$0

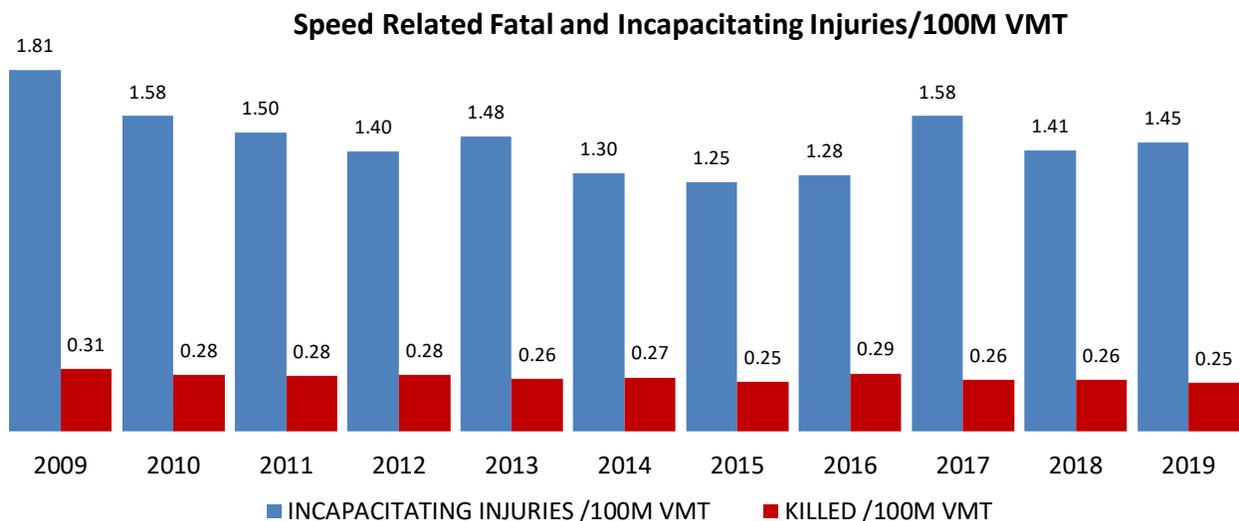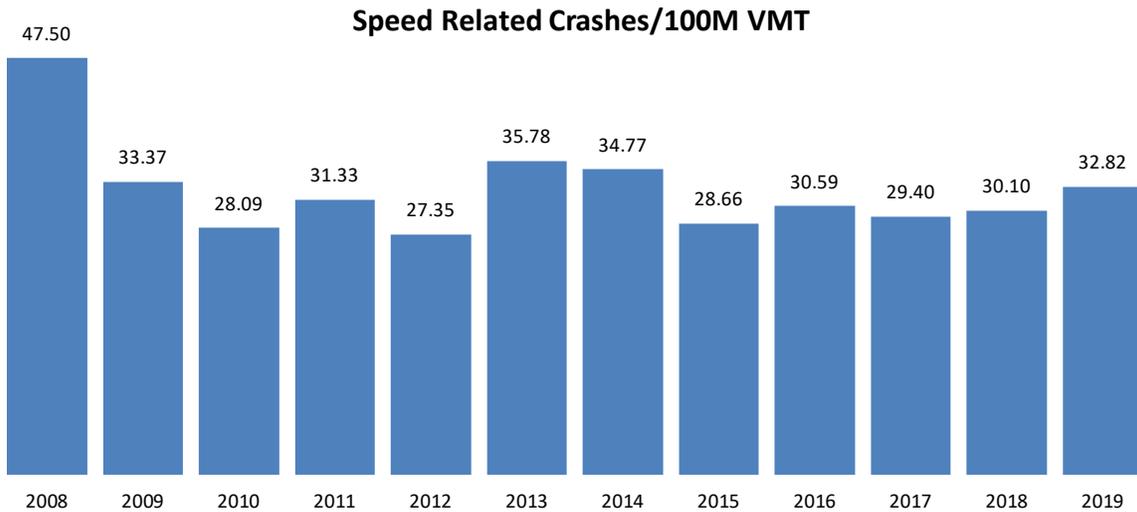**Public Information and Education:**

All media plans and public information and education for all issue areas are in the Community Traffic Safety Outreach and Media Programs.

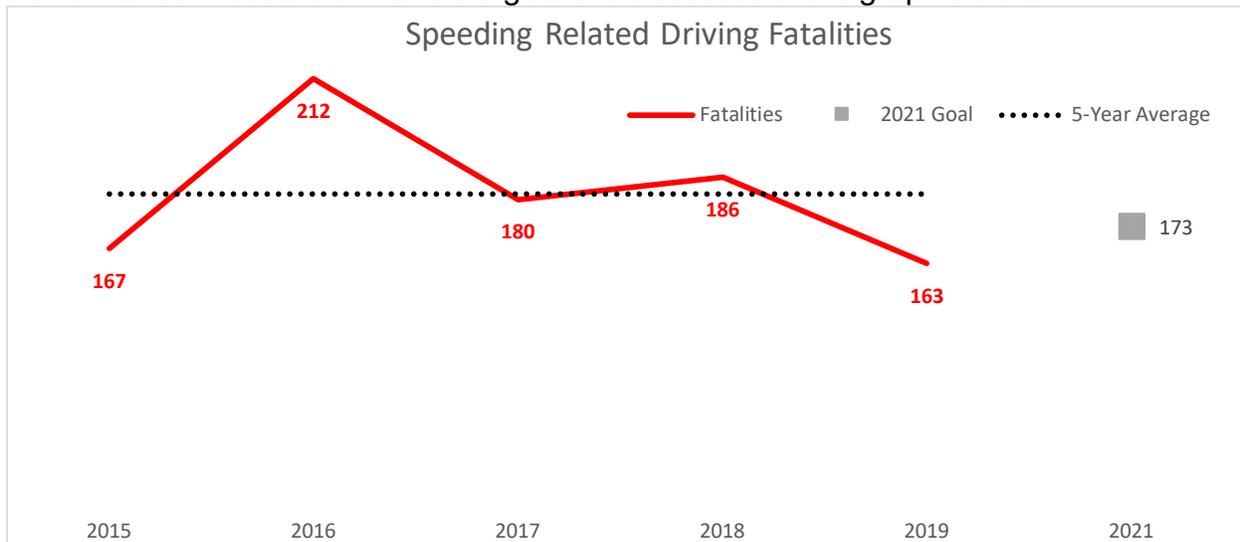| Impaired Driving -- Budget Summary		
405d	2021-31-01-M5	$85,000.00
State	2021-39-04-WI	$900,000.00
402	2021-30-04-AL	$120,000.00
405d	2021-31-05-M5	$1,825,000.00
402	2021-30-06-AL	$600,000.00
405d	2021-31-03-M5	$382,000.00
402	2021-30-03-AL	$350,000.00
405d	2021-31-03-M5	$75,000.00
405d	2021-31-03-M5	$20,000.00
405d	2021-31-04-M5	$70,000.00
405d	2021-31-09-M5	$60,000.00
402	2021-30-09-AL	$25,000.00
	Total	$4,512,000.00

Police Traffic Program

Justification

The number of crashes for which speed is recorded as a possible contributing circumstance (PCC) is assumed to be far fewer than the number of crashes for which speed actually played a factor. This assumption is based on data indicating that speeding is the most commonly cited driver behavior. Speed-related crashes resulted in 30 percent of all deaths and 21 percent of all injuries in 2019 (preliminary). In addition, 163 people died and 8,561 were injured in 21,810 speed-related crashes. In total, there were 156,242 convictions for speeding violations in 2019.

Speed Related Crashes/100M VMT

Year	Value
2008	47.50
2009	33.37
2010	28.09
2011	31.33
2012	27.35
2013	35.78
2014	34.77
2015	28.66
2016	30.59
2017	29.40
2018	30.10
2019	32.82

Speed Related Fatal and Incapacitating Injuries/100M VMT

Year	Incapacitating Injuries /100M VMT	Killed /100M VMT
2009	1.81	0.31
2010	1.58	0.28
2011	1.50	0.28
2012	1.40	0.28
2013	1.48	0.26
2014	1.30	0.27
2015	1.25	0.25
2016	1.28	0.29
2017	1.58	0.26
2018	1.41	0.26
2019	1.45	0.25

■ INCAPACITATING INJURIES /100M VMT   ■ KILLED /100M VMT

Performance measure C6. and the goal are illustrated in the graph below.

Speeding Related Driving Fatalities

Fatalities — 2021 Goal — 5-Year Average

167 — 2015
212 — 2016
180 — 2017
186 — 2018
163 — 2019
173 — 2021

In 2019, there were 26 fatalities and 282 incapacitating injuries as a result of inattentive driving. Distracted driving results in an economic cost of over $428 million to the state annually.

According to Wisconsin State Statutes, writing or sending emails or text messages while driving is illegal - "No person may drive… any motor vehicle while composing or sending an electronic text message or an electronic mail message," Wis. Stats. §346.89(3)(a).

In November 2012, a state law went into effect that prohibits drivers with an instruction permit or probationary license, which includes many teenagers, from "using a cellular or other wireless telephone except to report an emergency" while driving.

Additionally, inattentive driving is also illegal according to Wisconsin law - "No person while driving a motor vehicle may be engaged or occupied with an activity, other than driving the vehicle, that interferes or reasonably appears to interfere with the person's ability to drive the vehicle safely," Wis. Stats §346.89(1). Furthermore, using a cellular telephone that is not hands-free or voice-operated is prohibited "where persons engaged in work in a highway maintenance or construction area or in a utility work area are at risk from traffic, except to report an emergency," Wis. Stats. §346.89 (4m).

Economic Cost of Inattentive Driving Crashes in Wisconsin, 2015-2019 Average

Economic Loss from Traffic Crashes, 2019

Crash Severity	Total Persons	Cost per Person	Total Cost
Fatality (K)	75	$1,659,000	$124,425,000
Incapacitating (A)	553	$96,200	$53,198,600
Non-incapacitating (B)	3059	$27,800	$85,040,200
Possible C	4544	$22,800	$103,603,200
Property Damage	13823	$4,500	$62,203,500
Total Economic Loss			**$428,470,500**

[1]National Safety Council. "Estimating the Costs of Unintentional Injuries, 2019." (adjusted for inflation)
https://injuryfacts.nsc.org/all-injuries/costs/guide-to-calculating-costs/data-details/

Law Enforcement

High-Visibility Saturation Patrols/Enforcement

Assess Traffic Safety Impact:
Enforcement provides a deterrent effect upon a person's decision to break the law. Enforcement increases the perception of the risk of being ticketed. This strategy will decrease the incidence of fatalities.

Linkage:
Enforcement of the law prohibiting speeding and inattentive driving will provide support to the state in reaching performance target C1, to decrease annual fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573.3 in 2021 and C6 by decreasing speeding fatalities by 5 percent from the 2015-2019 calendar year rolling average of 182 to 173.

Rationale for Selecting Countermeasure/Amount:
BOTS uses the high-visibility enforcement task force model for all its enforcement grants, which is a proven countermeasure strategy as indicated in Countermeasures That Work, ninth edition, page 3-27 and 4-15. This countermeasure is funded at the same level as is planned in the 2019 Highway Safety Plan. Speed and distracted driving were funded for $1,000,000 in FFY2019.

Description:
Encourage law enforcement agencies to make speeding and inattentive driving a priority by writing citations, sponsoring media events, and working overtime in geographical areas where speed and inattentive driving related crashes are prevalent.

Plan statewide participation, encourage voluntary participation, and provide overtime funding for high-visibility enforcement task forces for these behaviors accompanied by media for a demographic. These task forces will consist of multiple law enforcement

agencies that coordinate their enforcement efforts during the same time frame. Enforcement increases the perception of the risk of being ticketed.

Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Targeted Grantees	402	**2021-40-05-PT**	$1,000,000	$1,000,000

If additional dollars become available, more enforcement will occur.

Police Traffic Services – Budget Summary		
Fund/Source	**ID**	**Amount**
402	**2021-40-05-PT**	**$1,000,000**
	Total	**$1,000,000**

Traffic Records Improvement Plan

Justification

The federal FAST Act requires states to have a Traffic Records Coordinating Committee (TRCC) and a Traffic Records Coordinator to administer the Traffic Records Program.

Members of the TRCC include owners, operators, collectors, and users of traffic records and public health and injury control data systems. The TRCC also includes representatives from organizations related to highway safety, highway infrastructure, law enforcement, adjudication, public health, EMS, and others. The TRCC meets at least quarterly (and sometimes more often, such as when plans are being formulated).

The members of the TRCC have review and approval authority with respect to state highway safety data and systems. The TRCC members make decisions concerning membership and leadership, changes to the state's multi-year Strategic Plan and interim performance measures used to demonstrate progress.

A list of TRCC members with their names, titles, home organizations, and the core safety databases represented is in Appendix 4, which is included in the State Traffic Records Strategic Plan. Appendix 5 provides a written description of the performance measure, and all supporting data, to show quantitative improvement within the preceding 12 months of the application's due date in relation to one or more of the significant data program attributes.

States can use grant funds for making data program improvements to core highway safety databases related to quantifiable, measurable progress in any of the significant data program attributes of accuracy, completeness, timeliness, uniformity, accessibility, or integration.

What follows is a list of the project concepts that the TRCC has approved for grant funding for FFY 2021. Performance measures and targets for this program are listed within the project matrix below. Full descriptions of the projects can be found in Appendix 3b.

Project Title	Database	Attribute	Budget	Status	Improvement and Measure
IID Dictionary	Driver	Uniformity	$50,000	Lack of Uniformity	Correct data dictionary
Exploring Emergent Data Sources to Augment Seat Belt Counts in WI	Driver	Completeness and Uniformity	$60,000	240 sites with 32,000 observations now	Increase to 22,000 vehicles plus video (nighttime conditions and all roadways).
Crash Information Extraction, Analysis and Classification Tool	Crash	Accessibility	$100,000	Assess and create text mining data points to create a crash-data vocabulary to extract, validate and determine quality of crash reports. Current baseline is 0.	Complete crash-data vocabulary. Create a mining process to capture information from narratives and validate analysis process of automated report review. Increase accuracy by 15 percent.

2021 CODES Traffic Crash Linkage	CODES	Integration:	$55,911	CODES integrates crash data with hospital patient and EMS runs.	(1) Develop new linkage process to add trauma registry data: integrate 50 percent of crash-related patients. (2) Expand EMS run match to include Iowa and Minnesota hospitals treating WI crash victims: integrate 50 percent of those victims. (3) Update crash-hospital patient integration with 2020 crashes: 75 percent of injured are matched.
TraCS Location Tool (TLT) Enhancements	Crash and Roadway	Timeliness	$35,000	Location clarity	Improve RP coding automation
Wisconsin Crash Report Manual Online	Crash	Accessibility	$65,000	Multiple sources for information	Combine multiple sources for information
Crash Data Quality and Data Linkages Reporting System	Crash, Driver, Adjudication, Vehicle	Integration	$30,000	No direct linkages	Will create a pathway for linkages
Community Maps	Crash	Accessibility	$90,000	Distinct Logins and Website hits	Increase number of users and analysis queries
Wisconsin CODES Project	CODES (Crash Outcome Data and Evaluation System)	Accessibility	$114,581	Online reports and query system for CODES data: healthcare outcomes of crashes.	Update reports and query system with 2020 CODES data, increasing data years for trends and comparisons to 12.
Safety Data Warehouse Data Linkage	Citation Driver	Integration	$25,000	Create linkages of all TRCC crash databases for accessibility. Current baseline is 0.	Increase the integration and accessibility of dbases by 30 percent.
Predictive Analytics	Crash	Accessibility	$65,000	Distinct users	Number of logins for analyze tab in CM. Number of HVE deployments based on PA data.
Modernize the FARS Processes	Crash	Timeliness	$117,000	Reduce processing time by FARS coordinator to improve timeliness of reporting	Reduce annual FARS data release time.
IID Dictionary	Driver	Uniformity	$50,000	Lack of Uniformity	Correct data dictionary
E-Citation	Citation Driver	Uniformity	$250,000		
			$1,107,492		

Highway Safety Analysts

Assess Traffic Safety Impact:
Highway safety analysts are an essential component to improve traffic safety in the state of Wisconsin. This position functions within the Bureau of Transportation Safety to work with partner agencies including but not limited to law enforcement, technical colleges, private business, advocacy groups and other BOTS staff to coordinate traffic safety awareness efforts to reduce fatalities and injuries as indicated by crash and injury data.

<u>Linkage</u>:

Spending funds on management of the community traffic safety program will be of service to the state of Wisconsin to help achieve performance target C1, to decrease traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573 by December 31, 2021.

<u>Rationale for Selecting Countermeasure/Amount</u>:
These positions are essential for continuing coordination of Wisconsin's strong programs, associated grants, and outreach efforts.

<u>Description</u>:
There are three 402-funded analysts and two state-funded analysts that work to improve highway safety by providing statistics to local Traffic Safety Commissions, the wider population, federal, state and local partners. This activity includes wage and fringe, data processing costs, materials and supplies, training and travel, printing and postage.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-50-01-TR**	$260,000	$0

Project Name: Laptops
Core State Safety Database: Crash
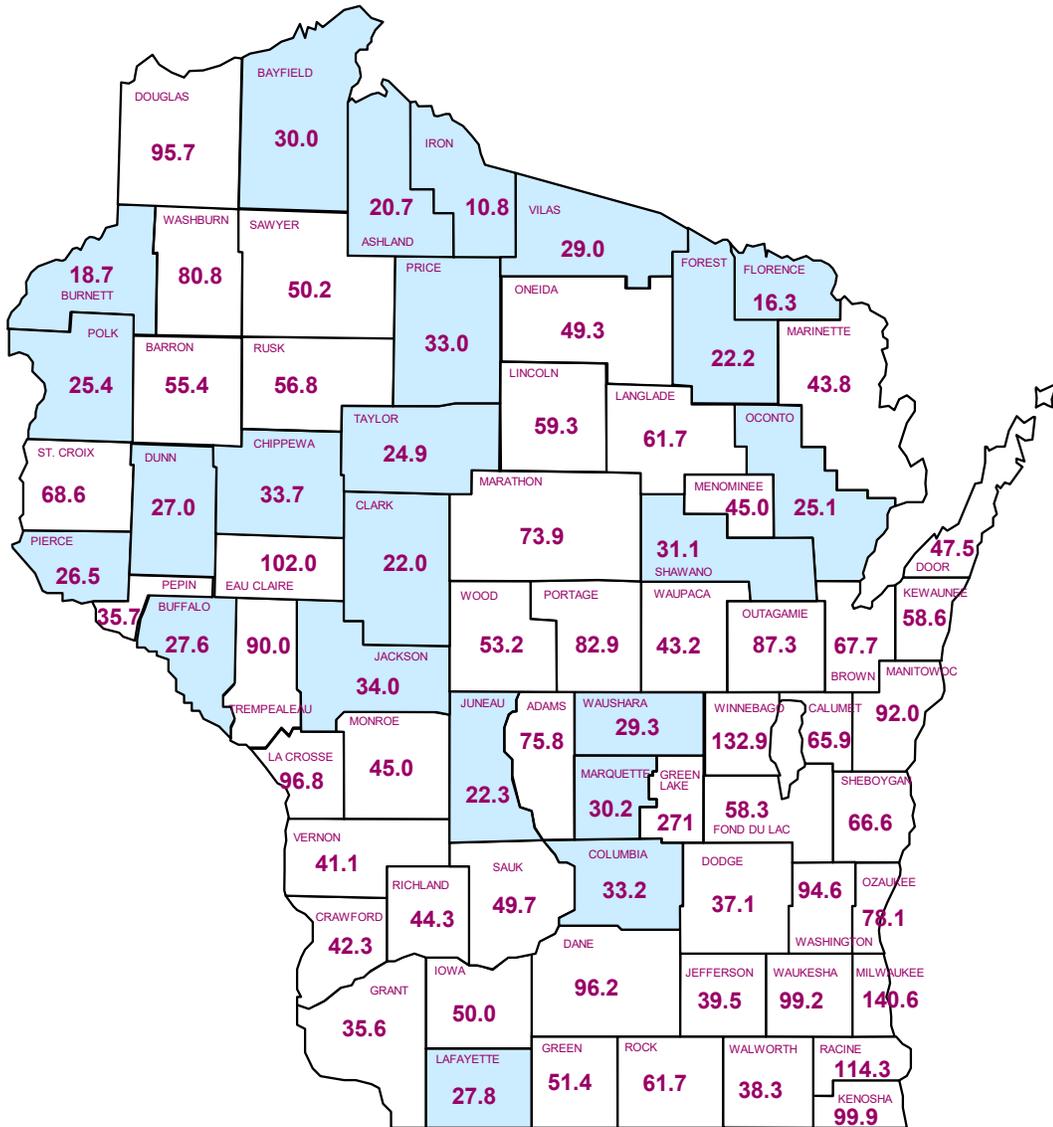**Proposed Attribute of Data to Improve:** Timeliness
Project Description: Provide laptops to law enforcement agencies that have new vehicles.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Various	405c	**2021-58-06-M5**	**$65,000**	$65,000

Traffic Records Improvements -- Budget Summary		
Fund	**Unique Identifier**	**Amount**
402	**2021-50-01-TR**	**$260,000**
405c	**2021-58-03-M3**	**$1,107,492**
405c	**2021-58-06-M3**	**$65,000**
	Total	**$1,432,492**

MAP 07-02
2017-2019 3-Year Average
Injury-to-Death Ratios

DOUGLAS **95.7**

BAYFIELD **30.0**

IRON **20.7**

10.8

VILAS **29.0**

WASHBURN

SAWYER **80.8**

ASHLAND

PRICE **33.0**

ONEIDA **49.3**

FOREST

FLORENCE **16.3**

BURNETT **18.7**

50.2

22.2

MARINETTE **43.8**

POLK **25.4**

BARRON **55.4**

RUSK **56.8**

LINCOLN **59.3**

LANGLADE **61.7**

OCONTO

ST. CROIX **68.6**

DUNN **27.0**

CHIPPEWA **33.7**

TAYLOR **24.9**

MARATHON **73.9**

MENOMINEE **45.0**

25.1

PIERCE **26.5**

102.0

CLARK **22.0**

SHAWANO **31.1**

DOOR **47.5**

PEPIN **35.7**

EAU CLAIRE

BUFFALO **27.6**

90.0

WOOD **53.2**

PORTAGE **82.9**

WAUPACA **43.2**

OUTAGAMIE **87.3**

BROWN **67.7**

KEWAUNEE **58.6**

JACKSON **34.0**

TREMPEALEAU

MONROE **45.0**

JUNEAU **22.3**

ADAMS **75.8**

WAUSHARA **29.3**

WINNEBAGO **132.9**

CALUMET **65.9**

MANITOWOC **92.0**

LA CROSSE **96.8**

MARQUETTE **30.2**

GREEN LAKE **271**

FOND DU LAC **58.3**

SHEBOYGAN **66.6**

VERNON **41.1**

SAUK **49.7**

COLUMBIA **33.2**

DODGE **37.1**

94.6

OZAUKEE **78.1**

RICHLAND **44.3**

CRAWFORD **42.3**

DANE **96.2**

WASHINGTON

JEFFERSON **39.5**

WAUKESHA **99.2**

MILWAUKEE **140.6**

IOWA **50.0**

GRANT **35.6**

LAFAYETTE **27.8**

GREEN **51.4**

ROCK **61.7**

WALWORTH **38.3**

RACINE **114.3**

KENOSHA **99.9**

State Average Injury to Death Ratio
2019 = 72.4
2016-2018 = 72.3

Source: WisDOT Crash Database

Shaded Counties averaged at least 1 death
per every 35 injuries over the past 3 years.

Publicity and Outreach – Emergency Response

Assess Traffic Safety Impact:
Emergency response coordination and training will mean improved outcomes for occupants and persons involved in crashes.

Linkage:
Funding publicity and outreach will aid the state in reaching all performance targets.

Rationale for Selecting Countermeasure/Amount:
A willing and able emergency response program is important for timely and expedient health care. The Department of Health Services (DHS) will collaborate with us on this project and expects to spend $50,000 on the effort.

Description:
With the Department of Health Services and the Wisconsin Division of the American Trauma Society (WATS), the Bureau of Transportation Safety will develop an EMS plan with a focus on recruitment and retention of first responders. Other goals include to educate the general population and emergency responders about the state Trauma System, and to review and duplicate highway safety materials for distribution locally by EMS/trauma care personnel. We planned to expend this amount in the HSPs of previous years, and we plan to expend this amount in fiscal year 2021. Distance to trauma centers has been proven to have a significant role affecting the severity of injuries after a crash. This project will focus on areas with fewer ambulance services and will focus on recruitment and retention of EMTs in those areas. This will impact traffic safety by providing better EMS services in remote areas, increase response times, which will help make it less likely that a relatively minor traffic incident would result in a fatality.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-60-02-EM**	$50,000	$0

Rural Emergency Response Programs, Equipment and Training

Rationale for Selecting Countermeasure/Amount:
A willing and able emergency response program is important for timely and expedient health care. The Department of Health Services (DHS) will collaborate with us on this project and expect to spend $50,000 on the effort.

Description:
Fund equipment and training for initial or first-time first responder groups in targeted high-risk areas. Connect returning military service personnel with local EMS providers. We planned to expend this amount in the HSPs of previous years and we plan to expend this amount in fiscal year 2021.
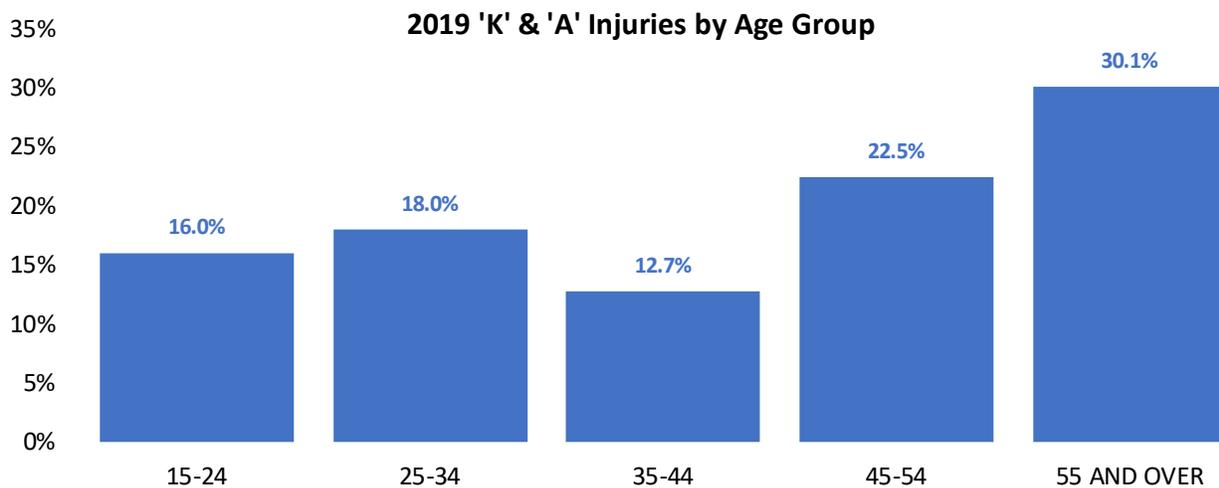
Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-60-03-EM**	$50,000	$0

EMERGENCY MEDICAL SERVICES – BUDGET SUMMARY			
402	**2021-60-02-EM**	**PI&E**	**$50,000**
402	**2021-60-03-EM**	**Training – Equipment**	**$50,000**
	Total		**$100,000**

Motorcyclist Safety Program

Program Justification

In 2019, 523 motorcyclists or moped users were seriously injured and 82 were killed in 1,967 reported traffic crashes. Over the prior five years, 82% of motorcycle/moped crashes resulted in fatality or injury. In 2019, if you were a rider in a reportable motorcycle or moped crash, you were most likely injured—only 374 motorcycle and moped crashes did not result in injury. Most of these injuries are to people over the age of 35 years old. The chart below shows that 65% of the motorcyclist and moped user fatalities and incapacitating injuries occur to individuals 35 years old and older. See performance measures C7 and C8 in the introduction for performance measures and targets for this program.

2019 'K' & 'A' Injuries by Age Group

Age Group	Percentage
15-24	16.0%
25-34	18.0%
35-44	12.7%
45-54	22.5%
55 AND OVER	30.1%

Riding motorcycles and mopeds for most riders is a seasonal endeavor. Rarely does Wisconsin have a warm enough winter for even the most avid rider to continue around-the-year use. Motorcyclist fatalities nonetheless accounted for 14.9% of total fatalities on Wisconsin roads in 2019. The following graph illustrates when those fatalities occurred and that a large share of motorcyclist fatalities typically occur during summer months.

2019 Motorcycle/Moped Fatalities Compared to Other Fatalities by Month

■ Motorcycles ■ All Others

Month	Motorcycles	All Others
Jan	0.0%	100.0%
Feb	0.0%	100.0%
Mar	7.4%	92.6%
Apr	11.4%	88.6%
May	11.1%	88.9%
Jun	34.1%	65.9%
Jul	30.2%	69.8%
Aug	27.8%	72.2%
Sep	21.0%	79.0%
Oct	10.9%	89.1%
Nov	2.3%	97.7%
Dec	0.0%	100.0%
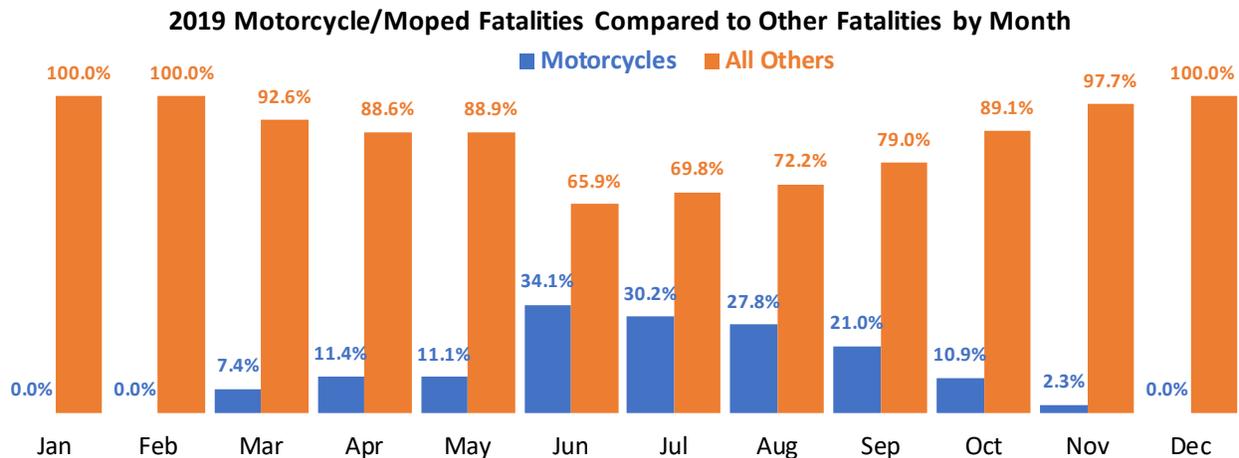
Percentage of Riders in Fatal Crashes Not Wearing a Helmet 2010-2019									
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
77%	92%	78%	76%	71%	83%	79%	65%	64%	65%

The chart above indicates that the percentage of riders in fatal crashes that chose not to wear a helmet remains high.

Highway Safety Office Program Management

Assess Traffic Safety Impact:
Program management is an essential component to improve traffic safety in the state of Wisconsin. This position functions within the Bureau of Transportation Safety to work with partner agencies including but not limited to law enforcement, technical colleges, motorcycle dealerships, private business, advocacy groups and other BOTS staff to coordinate traffic safety and rider education grants, impairment enforcement and awareness efforts to reduce fatalities and injuries among motorcycle riders as indicated by crash and injury data.

Linkage:
State transportation safety funds are used to support the management of the Wisconsin Motorcyclist Safety funds, which will benefit the state in reaching performance measure C7, to decrease annual motorcyclist fatalities five percent from the 2015-2019 average of 81.6 to 77.5 in 2021.

Rationale for Selecting Countermeasure/Amount:
This position is essential for continuing coordination of Wisconsin's strong rider education program, associated grants and outreach efforts. This countermeasure strategy will help Wisconsin increase use of rider education resources and motorist awareness of motorcyclists. This will in turn decrease fatalities, including those of un-helmeted motorcyclists. The same amount of expenditures is planned in 2021 as that which were indicated in the 2020 Highway Safety Plan.

Description:
This State Program Manager position will coordinate, plan, and manage the Wisconsin Motorcyclist Safety Program (WMSP) to include assisting the Wisconsin rider education program and WMSP through continued clerical support to training sites. This activity will include wage and fringe, data processing costs, materials and supplies, training and travel, printing and postage, and National Association of State Motorcycle Safety Administrator Membership Dues.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	State	**2021-79-01-WI**	$85,000	$0

Motorcycle Rider Training/Motorcycle Rider Education and Training – Federal and State Funded

Assess traffic safety impact:
Licensing requires motorcyclists to have basic knowledge of safe operation of a motorcycle along with demonstrating basic knowledge of traffic laws. With the additional knowledge gained in rider education classes, rider education students gain awareness of potential traffic hazards, and gain the physical skills necessary for safe operation of a motorcycle. Students also gain knowledge of how to mitigate risks of riding through use of proper safety gear and the effects of impairment which can lead to fatal crashes. Rider education programs aim to teach motorcycle control skills, recognize potential road hazards, encourage use of conspicuous safety gear and encourage in-depth self-assessment of rider risk and limitations.

Linkage:
Providing funding for motorcycle rider education and training will aid the state in attaining performance target C8, to decrease annual un-helmeted motorcyclist fatalities five percent from the 2015-2019 average of 56.0 to 53.2 in 2021.

Rationale for Selecting Countermeasure/Amount:
This countermeasure is specifically allowed under 23 CFR 1300.25(l)(1)(i),(ii), and (iii) and will help Wisconsin increase use of the latest rider education resources to increase licensing among riders. This countermeasure strategy will remain funded at the same levels as indicated in the 2020 Highway Safety Plan.

Description:
The Wisconsin Motorcyclist Safety Program/Rider Education Program will administer classroom and hands-on rider training programs through the Wisconsin Technical College System (WTCS)/funded training sites as well as private/non-funded training sites, including the Harley-Davidson Riding Academy sites that meet the Motorcycle Safety Foundation and Wisconsin Motorcycle Safety Program requirements for basic motorcycle/scooter, new, seasoned, and advanced motorcycle riders. The Wisconsin Motorcyclist Safety Program will continue rider education courses to address novice, intermediate and seasoned motorcyclists. It will also fund the Motorcycle Safety Foundation (MSF) Basic RiderCourse curriculum and the MSF Basic Rider Course-2. In addition to providing valuable safety information to students, these courses allow participants to receive their class M license without being required to take the on-road test with the Division of Motor Vehicles. This project also includes professional development of RiderCoach Trainers and train-the-trainer staff including curriculum updates, motorcyclist safety conferences and workshops. Wisconsin meets its

requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405f	**2021-72-04-M9**	$30,000	$30,000
BOTS	State	**2021-79-04-WI**	$463,000	$463,000

Motorcycle Training Equipment

Assess traffic safety impact:
Better educated/trained drivers should result in a reduction of crashes.

Linkage:
Providing funding for motorcycle rider education and training will aid the state in attaining performance target C7, to decrease motorcyclist fatalities 5 percent from the 2015-2019 calendar year rolling average 81.6 to 77.5 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
This countermeasure is specifically allowed under 23 CFR 1300.25(l)(1)(ii)(A) and will help Wisconsin increase use of the latest rider education resources to increase licensing among riders. This countermeasure strategy will remain funded at the same levels as indicated in the 2020 Highway Safety Plan.

Description:
BOTS will purchase training motorcycles, three-wheel motorcycles, trikes, scooters, traffic (motorcycle) simulators, or other motorcycle trainers or traffic simulators. This activity will fund new training and support materials for motorcycle awareness. Providing necessary training vehicles will complement and enhance the Rider Education Program. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405f	**2021-72-06-M9**	$60,000	$60,000

Alcohol Impairment: Detection, Enforcement, and Sanctions/Motorcycle Operation under the Influence of Alcohol or Other Drugs Law Enforcement

<u>Assess Traffic Safety Impact:</u>
Impairment has been a significant contributing factor to fatal crashes among motorcyclists. Enforcement will occur to reduce the number of impaired motorcyclists on the roadways.

<u>Linkage:</u>
Providing highway safety funds to address impaired operation of a motorcycle will help the state to reach performance target C7, to decrease motorcyclist fatalities 5 percent from the 2014-2018 calendar year rolling average of 81.6 to 77.5 4 by December 31, 2021.

<u>Rationale for Selecting Countermeasure/Amount:</u>
Enforcement of the state's OWI laws among the motorcycling community will help Wisconsin decrease the number of fatal crashes among motorcyclists. An increase in funding toward this countermeasure strategy is planned this year since BOTS will expand these activities into new areas. This countermeasure strategy is found on page 5-13 of the ninth edition of Countermeasures That Work.

<u>Description:</u>
BOTS will encourage participation in impaired driving high-visibility enforcement (HVE) and deterrence activities where there is the highest occurrence of motorcyclist crashes and fatalities involving motorcyclists impaired by drugs or alcohol. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-70-05-MC**	$70,000	$35,000

Motorcyclist Awareness Program

<u>Assess Traffic Safety Impact:</u>
The ability to communicate directly with individual constituents allows for targeted discussions related to misconceptions and challenges related to motorcycles on the roadway. This includes topics such as right of way collisions, conspicuity, appropriate safety gear, rider education opportunities, and mechanical issues related to motorcycles that can present safety hazards to all roadway users. Increasing motorist awareness of motorcyclists with "Share the Road" and "Watch for Motorcyclists" messaging at key times during the riding season, along with the consistent messaging that the specialty

license plates provide will result in a safer riding environment for motorcyclists, leading to fewer motorcycle crashes.

<u>Linkage:</u>
Providing federal highway safety funding for outreach to the motorcyclist community about safe riding as well as spending state revenue generated from the sale of specialized Harley-Davidson license plates for automobiles and trucks will help the state reach performance target C7, to decrease motorcyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 81.6 to 77.5 by December 31, 2021.

<u>Rationale for Selecting Countermeasure/Amount:</u>
This countermeasure strategy will help Wisconsin increase use of rider education resources, awareness of motorcyclist responsibilities for safe riding strategies, and motorist awareness of motorcyclists to decrease fatalities, including un-helmeted motorcyclists. This countermeasure strategy will also help Wisconsin increase motorist awareness of motorcyclists to decrease motorcyclist fatalities. State expenditures in 2017 were $175,656.66 and we expect to obligate the same amount of federal funds in 2021.

<u>Description:</u>
Continue expansion of the role the mobile outreach program plays and the number of activities it participates in to promote all aspects of motorcyclist awareness, safety and rider education. Offer a variety of motorist and motorcyclist-related training and awareness activities, promote appropriate Class M Endorsement for owners of all on-road motorcycles, placement and promotion of SMARTrainers. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol. The state will also pay for paid media with revenue generated from the Harley-Davidson plate as indicated.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-70-04-MC**	$200,000	$0
BOTS	State 535	**2021-79-07-WI**	$180,000	$0

Program Evaluation

<u>Assess Traffic Safety Impact:</u>
Proper delivery of the approved curriculum materials will ensure that students gain additional knowledge of awareness of potential traffic hazards and gain the physical skills necessary for safe operation of a motorcycle.

Linkage:

Spending motorcyclist safety funds on program evaluation will help the state in reaching performance target C7, to decrease motorcyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 81.6 to 77.5 by December 31, 2021.
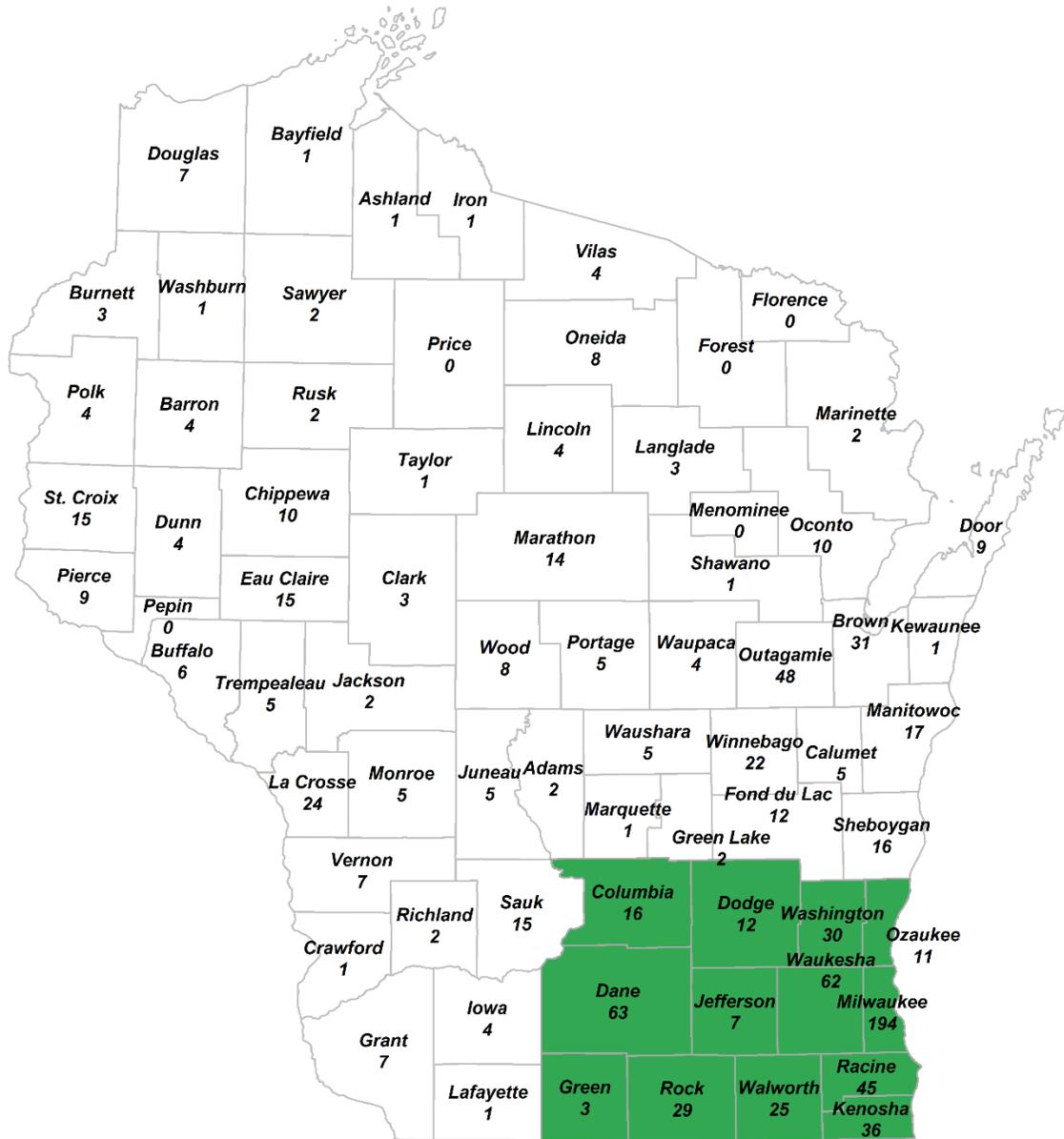
Rationale for Selecting Countermeasure/Amount:

This countermeasure strategy will help Wisconsin increase proper use of rider education resources, motorist awareness of motorcyclists to decrease fatalities, including un-helmeted motorcyclists.

Description:

BOTS will evaluate the effectiveness of grant funding provided as well as ensure accurate curriculum implementation and adherence to all policies and procedures at all rider education sites across the state. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-70-09-MC**	$30,000	$0

2019 Motorcycle Crashes involving another Motor Vehicle
Target Regions for FFY 2021

Douglas 7
Bayfield 1
Ashland 1
Iron 1
Vilas 4
Burnett 3
Washburn 1
Sawyer 2
Florence 0
Price 0
Oneida 8
Forest 0
Polk 4
Barron 4
Rusk 2
Marinette 2
Lincoln 4
Langlade 3
St. Croix 15
Dunn 4
Chippewa 10
Taylor 1
Menominee 0
Oconto 10
Door 9
Pierce 9
Pepin 0
Eau Claire 15
Clark 3
Marathon 14
Shawano 1
Buffalo 6
Trempealeau 5
Jackson 2
Wood 8
Portage 5
Waupaca 4
Outagamie 48
Brown 31
Kewaunee 1
Manitowoc 17
Waushara 5
Winnebago 22
Calumet 5
La Crosse 24
Monroe 5
Juneau 5
Adams 2
Fond du Lac 12
Sheboygan 16
Marquette 1
Green Lake 2
Vernon 7
Richland 2
Sauk 15
Columbia 16
Dodge 12
Washington 30
Ozaukee 11
Crawford 1
Waukesha 62
Dane 63
Jefferson 7
Milwaukee 194
Grant 7
Iowa 4
Racine 45
Lafayette 1
Green 3
Rock 29
Walworth 25
Kenosha 36

Communications and Outreach Plan

The Wisconsin Motorcyclist Safety Program improves motorist awareness of the presence of motorcyclists on or near its roadways and promotes safe driving practices that avoid injuries to motorcyclists.

In 2019, the most recent year finalized crash data are available, the year required per 23 C.F.R. §1300.25(f)(2), Wisconsin experienced 854 motorcycle crashes involving a motorcycle and another motor vehicle. The highest number of motorcycle crashes

happened in the heavily-populated southeastern portion of the state. This area is being targeted in 2021 for numerous activities intended to reduce crashes and fatalities. Although the southeast region is being targeted for programming, events and activities of the Wisconsin Motorcycle Safety Program will happen throughout the state. Activities will include:

- Promoting motorcycle awareness and provide information regarding motorcycles and motorcyclists to the general motoring public.
- Meeting members of the motorcycling community face-to-face to promote motorcycle safety, motorcycle training opportunities and motorcyclist risk reduction techniques.

Wisconsin has a long history of promoting motorcyclist awareness. In 1990, the Wisconsin DOT and the Wisconsin Motorcyclist Safety Program established the Wisconsin Motorcycle Safety Advisory Council (MoSAC), which reports to the Department of Transportation Secretary. The council is comprised of key members of the motorcycling community as well as law enforcement, highway engineering, rider education and others. The council typically meets on a quarterly basis, or more often when needed. In recent years the primary focus of the council has been to establish how to reduce motorcyclist fatalities and promote motorist awareness

Since the early spring of 2009, WMSP and BOTS staff members have been conducting an in-depth analysis of all Wisconsin motorcyclist fatalities to establish an accurate profile of those motorcyclists involved in fatalities and establish appropriate countermeasures to reduce motorcyclist crashes and fatalities. To that end, BOTS staff members study and analyze MV4000 Crash Reports, corresponding narratives, coroner reports, as well as crash reconstruction documents. Performing this analysis over many years provides critical information regarding where these crashes and fatalities most often occur.

To reduce motorcyclist crashes and fatalities, beginning in 2010 and continuing through 2021, the Wisconsin Motorcyclist Safety Program is continuing to build its partnership with the Motorcycle Safety Foundation in a concerted effort to provide a variety of appropriate levels of rider education to address all members of the motorcycling community. The overall function of the rider education program is to not only improve the skill level of all participating motorcyclists, but to influence motorcyclists' attitudes, behaviors, choices and decision making in a positive manner to reduce crashes and fatalities.

Continuing in 2021, and in partnership with ABATE and the Department of Tourism, an expanded campaign is in place to further promote motorcycle awareness to the general motoring public and motorcycle safety for motorcyclists using radio and television PSAs in high fatality rate target areas and throughout the state. In addition, motorcycle awareness promotional materials are being posted in highly-traveled areas, information

centers, rest areas and businesses that cater to motorcyclists. Further, numerous electronic billboards have been selected in strategic locations and are being employed to remind the general motoring public of the presence of motorcyclists on Wisconsin roadways.
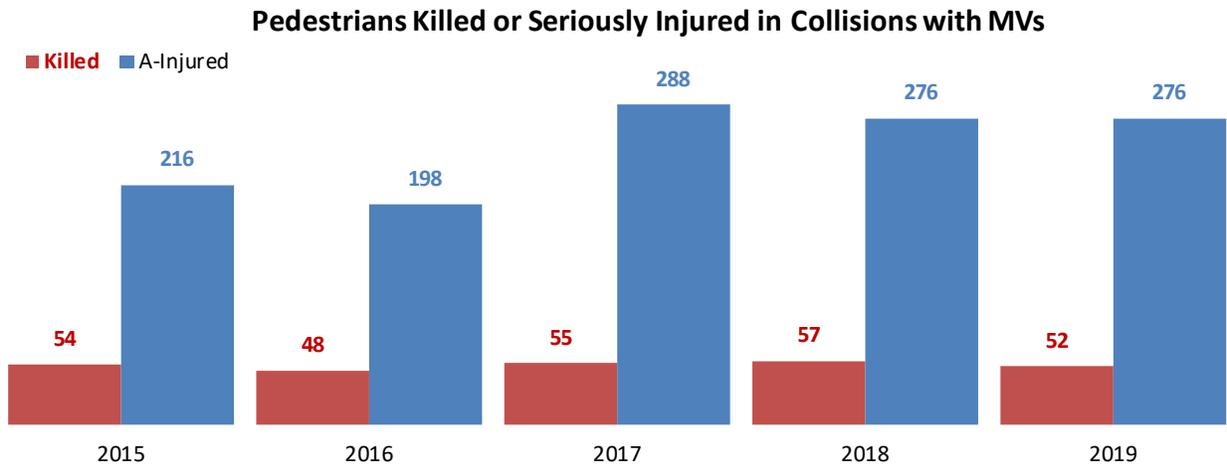
Through analysis of motorcycle crashes, it is evident that motorcycle awareness on the part of the general motoring public is a key component to reducing crashes and fatalities. A key issue that continues to be a contributing factor to multiple vehicle crashes is the fact that motorists claim to have not seen the motorcyclist. As a result, and via an ongoing campaign through WisDOT media efforts, motorists are encouraged to "look twice" for motorcyclists as they enter the driver's field of vision, change lanes, or approach intersections. In addition, motorists are also continually encouraged to "share the road" with motorcyclists.

Motorcyclist Safety Program -- Budget Summary		
State	2021-79-01-WI	$85,000
405f	2021-72-04-M9	$30,000
State	2021-79-01-WI	$463,000
405f	2021-72-06-M9	$60,000
402	2021-70-05-MC	$70,000
402	2021-70-04-MC	$200,000
State	2021-79-07-WI	$180,000
402	2021-70-09-MC	$30,000
	Total	$1,118,000

Pedestrian and Bicyclist Safety Program

Program Justification, Performance Goals and Measures

In 2019, 52 pedestrians died in pedestrian-motor vehicle crashes. As illustrated in the graph, pedestrians killed or incapacitated in 2019, totaled 327 people. This represents almost a 21 percent increase from the 270 pedestrians killed or incapacitated in 2015.

Pedestrians Killed or Seriously Injured in Collisions with MVs

■ **Killed** ■ A-Injured

Year	Killed	A-Injured
2015	54	216
2016	48	198
2017	55	288
2018	57	276
2019	52	276

There were 1,371 pedestrian injuries reported in 2019, a 16 percent increase from the 1,181 pedestrian injuries reported in 2016. Adult men and women make up the largest number of pedestrians injured in collisions.

Pedestrians Killed & Injured in Collisions with MVs by Adult Status (per 100,000 persons)

■ **Adult Female** ■ **Adult Male** ■ **Female Juvenile** ■ **Male Juvenile**

Year	Adult Female	Adult Male	Female Juvenile	Male Juvenile
2015	18	24	20	31
2016	18	23	18	28
2017	23	29	18	27
2018	23	28	22	24
2019	22	26	20	24
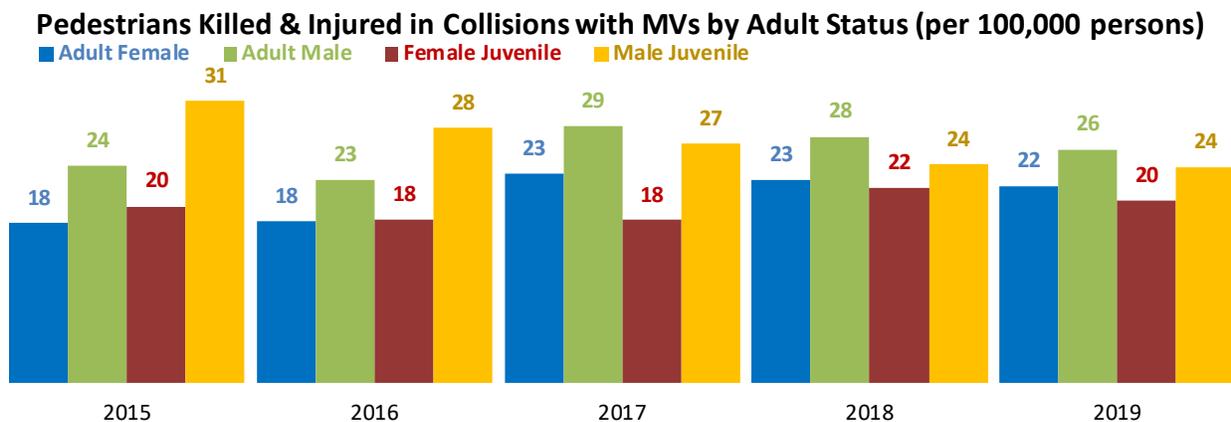
In 2019, 14 bicyclists died in bicycle-motor vehicle crashes. As illustrated in the graph below, bicyclists killed or incapacitated in 2019 totaled 94 people. This represents a 37 percent increase from the most recent five-year average.

Bicyclists Killed or Seriously Injured in Collisions with MVs

Killed ■ A-Injured

	2015	2016	2017	2018	2019
Killed	15	11	7	4	14
A-Injured	76	105	76	76	80
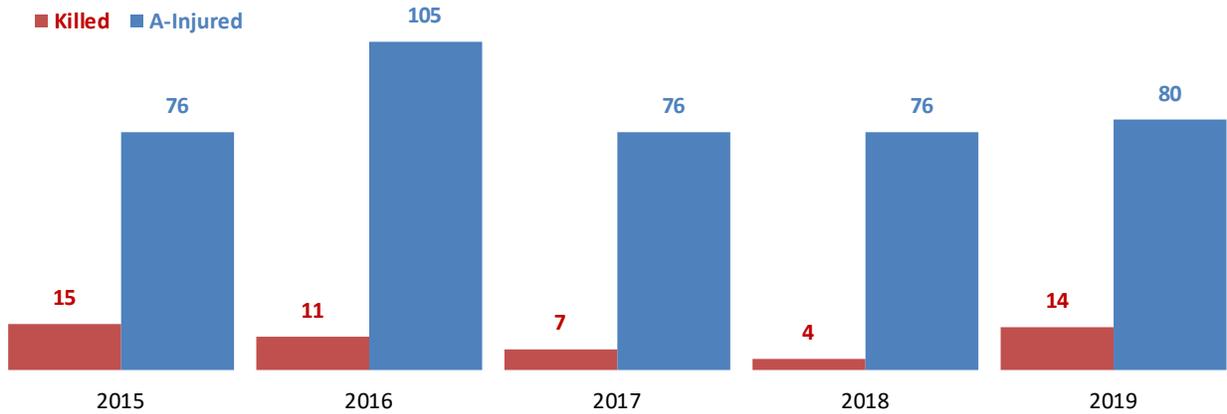
There were 688 total bicyclist injuries and fatalities reported in 2019, which is an 18 percent decrease from the most recent five-year average. Adult and juvenile males make up the largest number of bicyclists injured in collisions. Male juveniles are clearly overrepresented in injuries across all years in the chart below.

Bicyclists Killed & Injured in Collisions with MVs by Adult Status (per 100,000 persons)

■ Adult Female ■ Adult Male ■ Female Juvenile ■ Male Juvenile

	2015	2016	2017	2018	2019
Adult Female	8	7	6	4	6
Adult Male	19	18	17	17	14
Female Juvenile	10	11	13	9	8
Male Juvenile	36	32	32	29	26
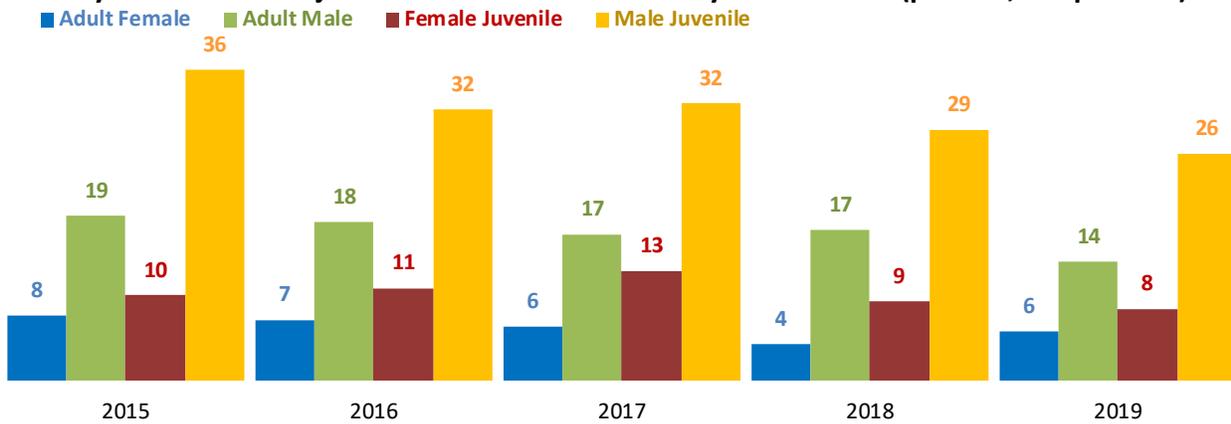
Performance measures and targets for this program include measure C10 and measure C11 in the introduction.

There were 52 pedestrian fatalities and 14 bicyclist fatalities for a combined total of 66 non-motorist fatalities in 2019. Since there were 585 total fatalities using FARS data,

11.3 percent of the fatalities in 2018 were non-motorists, so Wisconsin doesn't qualify for section 405h funding.

Bicyclist and Pedestrian Fatalities (FARS Data)
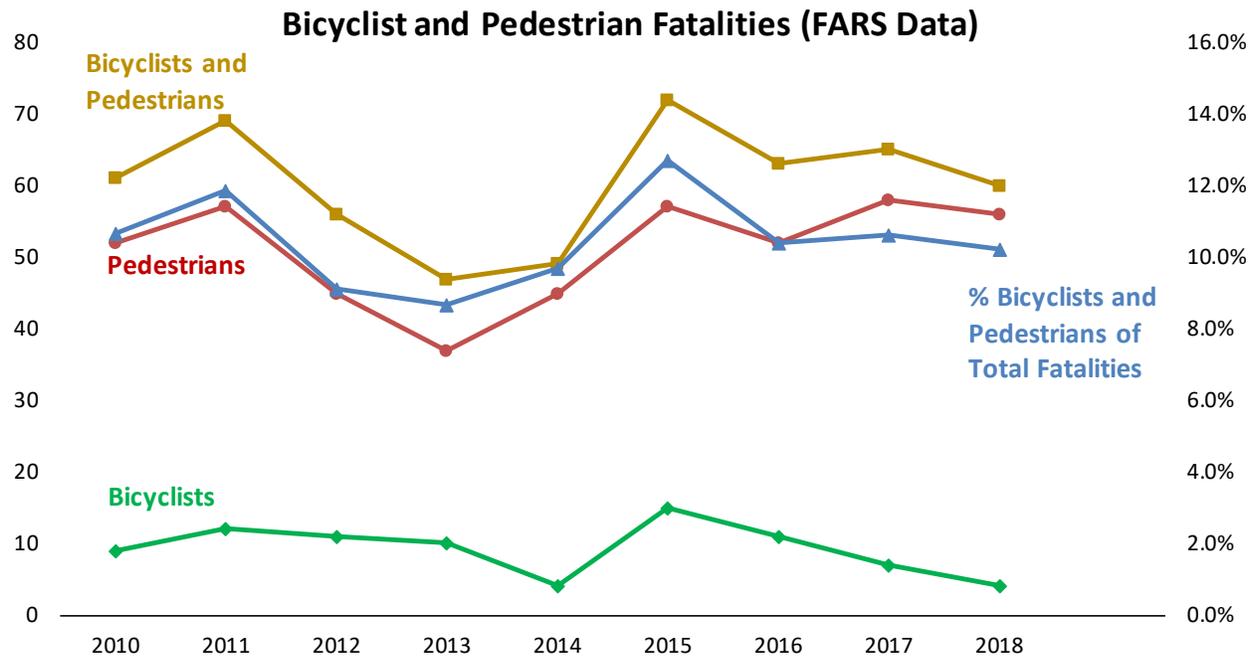
State Funded Bicyclist and Pedestrian Program Manager

Assess Traffic Safety Impact:
This state program manager position will positively impact traffic safety in Wisconsin by coordinating, planning, and managing the bicycle and pedestrian program. Goals that will have a positive impact on traffic safety in Wisconsin include enhancing volunteer agency participation, increasing community involvement, working with community organizations and non-profit programs to expand activities and efforts, and encouraging state and local input into the HSP development process.

Linkage:
Funding program management and strategic planning for the program will aid the state in reaching performance targets C10 and C11, to decrease annual pedestrian and bicyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 54.4 and 10.2 (respectively), to 51.7 and 9.7 in 2021.

Rationale for Selecting Countermeasure/Amount:
Hiring a full-time pedestrian and bicyclist coordinator with state funds illustrates our commitment to non-motorist safety.

Description:
This activity will fund wage, fringe, data processing, materials and supplies, training and travel, printing, and postage for the work of this position. This position will work with Regional Program Managers, Law Enforcement Liaisons, and law enforcement

agencies of all sizes to coordinate efforts, encourage safe and effective high-visibility enforcement and participation in mobilizations.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	562	**2021-89-01-WI**	**$87,000**	$0

Teaching Safe Bicycling

Assess Traffic Safety Impact:
The impact of this project will increase knowledge of safe bicycling behaviors among children. The anticipated impact of this countermeasure strategy is a decrease in non-motorized traffic fatalities.

Linkage:
Assist the state in attaining performance targets C10 and C11, to decrease annual pedestrian and bicyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 54.4 and 10.2 (respectively), to 51.7 and 9.7 in 2021.

Rationale for Selecting Countermeasure/Amount:
This is a Countermeasure That Works in the ninth edition on page 9-19. We planned to expend this amount in the HSPs of previous years, and we plan to expend this amount in fiscal year 2021.

Description:
Provide Teaching Safe Bicycling (train-the-trainer) style workshops for participants interested in providing youth cycling instructions. Attendees frequently include teachers, non-profit organizations, law enforcement, and youth groups. The goal is for attendees to host youth cycling instruction and bicycle rodeos following participation in this workshop. Workshop instruction is led by instructors of the Wisconsin Bicycle Federation, but the course administration is managed by the Pedestrian/Bicycle Safety Program Manager. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Various local governments	402	**2021-80-03-PS**	$10,000	$10,000

Pedestrian Safety Workshop

Rationale for Selecting Countermeasure/Amount:
This project is a Countermeasure That Works on page 8-30 of the ninth edition. This project will have an impact on highway safety with a reduction of crashes and injuries for pedestrians in pedestrian zones that are properly designed and implemented.

Description:

Two one-day workshops will give participants tools for teaching safe walking and developing pedestrian safety plans in their communities. The goal for this project is for attendees to host a walking event that teaches safe walking and/or addresses motorist behavior, perform a walk audit, or facilitate a pop-up demonstration project in an area of concern like a school or business district.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Milwaukee et al	402	**2021-80-04-PS**	$10,000	$10,000

MilWALKee WALKS

Rationale for Selecting Countermeasure/Amount:
This project will impact traffic safety with a reduction in crashes and injuries among pedestrians in the target area.

Description:

MilWALKee Walks is a safety coalition that aims to increase yielding to pedestrians at marked and unmarked crosswalks in Milwaukee. Milwaukee leads the state in terms of the number of pedestrian crashes and the number of fatal pedestrian crashes. This grant would allow for outreach to minority communities and organizing around intersections where there are the highest pedestrian crash numbers. Materials developed for this project would be posted electronically and made publicly available. MilWALKee Walks is managed and developed by the Wisconsin Bike Federation.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Milwaukee	402	**2021-80-04-PS**	$30,000	$10,000

UW-Milwaukee Phase 2 Pedestrian Exposure Data Pilot Study
Rationale for Selecting Countermeasure/Amount:

There is little information on exposure for pedestrians and bicyclists and in order to calculate risk and assess the effectiveness of a treatment, there needs to be both exposure and crash data. The lack of exposure data makes it difficult to prioritize site selection for safety treatments based on volume of users, but also eliminates the ability to calculate risk by looking at crashes in the context of exposure.

Description:

This Phase 2 pilot study would expand on a 2020 TRCC project that operationalized a methodology for doing pedestrian/bike counts. Phase 2 will test the methodology in other areas in the southeastern region of the state. The methodology consisted of a limited number of counts, geographic and demographic information that helped develop an algorithm to estimate exposure. This project will work to refine the algorithm and add to what is known of bike/pedestrian exposure for the region.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
UW Milwaukee	402	**2021-80-09-PS**	$20,000	$0

Designing for Pedestrian Safety

Rationale for Selecting Countermeasure/Amount:
Currently, two courses cost approximately $13,000. This is a continuing project that has demonstrated success in the past. This project will have a positive impact on highway safety by reducing exposure through environmental countermeasures.

Description:
Provide four Designing for Pedestrian Safety or Designing for Pedestrian Safety Accessibility workshops in Wisconsin. The workshops provide engineers, planners, designers, and advocates from the Wisconsin Department of Transportation, and employees from local government with the knowledge to improve safety of the pedestrian environment. Increase the number of course offerings from two to four.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
Various	402	**2021-80-03-PS**	$30,000	$30,000

<u>High-Visibility Enforcement/Drive Sober or Get Pulled Over Mobilization</u>

Assess Traffic Safety Impact:
This project will have a positive impact on highway safety by increasing compliance with traffic laws that affect pedestrians, bicyclists and motorists.

Linkage:
Assist the state in attaining performance targets C10 and C11, to decrease annual pedestrian and bicyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 54.4 and 10.2 (respectively), to 51.7 and 9.7 in 2021.

Rationale for Selecting Countermeasure/Amount:
This project is a Countermeasure That Works on pages 8-38 and 9-27 of the ninth edition.

Description:
Collaborate with law enforcement agencies to provide, improve the quality, and increase the number of enforcement initiatives that impact pedestrians and bicyclists. Enforcement should focus on behaviors that lead to crashes—failure to yield, red light violations, speeding in advance of marked and unmarked crosswalks, sudden pedestrian movement, and bicyclist violation of stop signs and stop lights. These grants should only be used to supplement existing enforcement related to pedestrian and bicyclist safety. Additionally, agencies targeted for this training should complete specific training related to pedestrian/bicyclist law enforcement. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
LEAs	402	**2021-80-05-PS**	$260,000	$260,000

Wisconsin Pedestrian/Bicycle Law Enforcement Training

Rationale for Selecting Countermeasure/Amount:
This project is a countermeasure that will make the Countermeasures That Work on pages 8-38 and 9-27 of the ninth edition more effective by providing law enforcement with the training necessary to conduct that enforcement. Law enforcement professionals require more training related to laws for bicycle riders and pedestrians as well as laws that apply to operators of motor vehicles that impact pedestrians and bicyclists. Law enforcement officers cannot enforce laws if they do not completely understand them, and as a result traffic officers currently cannot optimally control traffic involving non-motorists and prevent crashes involving pedestrians and bicyclists.

Description:
Through an RFP, contract with a firm to do the following: develop roll-call trainings to be presented at each of the departments participating in Ped Bike HVE; host two, one-day seminars which must be attended by at least one individual from the agencies receiving ped-bike enforcement funding and then other officers and interested members of the community as space allows; Present two sessions at the 2021 Governor's Conference on Highway Safety. Develop and recommend materials and training to help law enforcement fill out crash forms; participate in the non-motorized focus group for the State Highway Safety Plan (SHSP) and SHSP Ped Bike Crash Records and Exposure Data Discussion Group with regard to best practices in ped/bike officer trainings; share promotional and training materials developed in furtherance of the training with the BOTS website. Wisconsin meets its requirements for match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
LEAs	402	**2021-80-03-PS**	$35,000	$30,000

Pedestrian and Bicyclist Safety Program – Budget Summary		
State	2021-89-01-WI	$87,000
402	2021-80-03-PS	$75,000
402	2021-80-04-PS	$40,000
402	2021-80-05-PS	$260,000
402	2021-80-09-PS	$20,000
	Total	$487,000

Community Traffic Safety Outreach and Media Programs

Outreach Program Management

Assess Traffic Safety Impact:
Law Enforcement Liaisons (LELs) are a proven measure to improve traffic safety by supporting law enforcement agencies and conducting outreach to them. The Wisconsin LEL program is modeled after the recommendations of the national LEL program. The LELs, along with the Regional Program Managers (RPMs) will coordinate the community traffic safety program by conducting outreach with local partners. The RPMs and LELs develop safety initiatives to reduce fatalities and injuries among high-risk groups as indicated by crash and injury data trends and they lead WisDOT efforts to increase participation of law enforcement agencies in quarterly Traffic Safety Commissions in each County in Wisconsin. In addition, the RPMs assist grantees in completing grant applications, activity reports, reimbursement requests, and ultimately monitor federal grants. Assist at least one TSC to have a dedicated facilitator.

Linkage:
Spending funds on management of the community traffic safety program will be of service to the state of Wisconsin to help it achieve performance target C1, to decrease traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
Participation in TSCs is essential for outreach to LEAs for WisDOT policy and programs and is key to the state implementation of its Strategic Highway Safety Plan. Participation by law enforcement agencies also allows WisDOT to have a better understanding of the issues in traffic safety in local communities. Costs are explicitly allowed under 402 and are an effective countermeasure strategy. Total expenditures in 2019 for the planned activities under this countermeasure were $388,410.69.

Description:
BOTS has two Regional Program Managers (RPMs) and four contracted Law Enforcement Liaisons (LELs) that coordinate, plan, and manage the state Community Traffic Safety Program. Wage and fringe, data processing costs, materials and supplies, training, travel, printing, and postage. Continue to provide leadership, training, information, and technical assistance as liaisons between law enforcement agencies, organizations, and non-profit programs involved in community traffic safety and WisDOT.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-90-01-CP**	$450,000	$0

Grant Management System

Assess Traffic Safety Impact:

An electronic grant management system allows BOTS to efficiently manage its programs and it provides for better subrecipient monitoring. Increased efficiencies in program management allow BOTS to focus greater resources on activities that promote traffic safety in local communities.

Linkage:

Allocating funds to an electronic grant management system allows BOTS to direct resources to all grantees, which will aid the state in reaching performance target C1, to decrease traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:

An electronic grant management system is necessary to support the BOTS's traffic safety programs throughout the state. Approved reimbursements in 2019 were $34,489.00.

Description:

This project funds the electronic grants management system, Wise Grants, which manages the grants distributed by BOTS. This system previously received a commendation from NHTSA after a management review. BOTS has been communicating with the Wise Grants vendor to improve processes and reporting. Those changes are expected to increase costs, but, when coupled with the state's new business and accounting system, will help track expenditures better.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-90-04-CP**	$90,000	$30,000

Governor's Conference on Highway Safety and Law Enforcement Luncheon

Assess Traffic Safety Impact:

The Governor's Conference on Highway Safety is an opportunity to network with law enforcement and other safety stakeholders and partners. Sharing best practices, discussing progress, new and emerging initiative, and coordination of efforts is top priority. Input from local partners into the state's programs and plans is key to implementing the Strategic Highway Safety Plan and formulating our Highway Safety Plan application.

Linkage:

Providing funding for the conference and the luncheon enables traffic safety stakeholders around Wisconsin to meet and learn from each other, which will aid the state in reaching performance target C1, to decrease traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
The conference is a culmination of the entire outreach program. When groups outside of WisDOT support its messaging that aims to decrease traffic fatalities on our roads, it benefits the department's program. The amount of funding for this countermeasure strategy is the same as it was in 2019.

Description:
This planned activity funds the conference as well as the recognition luncheon for law enforcement. The conference is a meeting of current and future partners. The conference has improved and will continue to improve inter-agency cooperation and collaboration. It will help the development of multi-jurisdictional HVE task forces across the state. No equipment purchased with this activity will be major since all equipment will have an acquisition cost of less than $5,000. Wisconsin meets its match with traffic enforcement conducted on straight time by the Wisconsin State Patrol.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-90-06-CP**	$375,000	$200,000

Public Information and Education – Occupant Protection

Assess Traffic Safety Impact:
Promoting occupant protection will help to increase seat belt usage among low-belt use groups.

Linkage:
Wisconsin's occupant protection outreach plan will assist the state in reaching a usage rate of 93.05% by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
The support of high visibility enforcement through public information is specifically allowed under 23 CFR §1300.21(f)(1)(i) and it is also an effective countermeasure that works on pages 2-22, 2-23, and 2-30 of the ninth edition.

Description:
BOTS will review and update information regarding child passenger safety, safety belt materials, and other items in both Spanish and English. We will create state-specific occupant protection message using CIOT, Zero in WI, and messages targeted at the unbuckled motor vehicle occupant. BOTS will partner with teen safe driving programs to promote young adult driver seat belt use. We will review and update web-based information and materials for accuracy and to reduce printing and duplication costs. This will also encompass the rollover convincer project.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405b	**2021-25-02-M2**	$200,000	$100,000

Public Information and Education – Impaired Driving

Assess Traffic Safety Impact:
Promoting impaired driving programs will help to decrease impaired driving among the traveling public.

Linkage:
Wisconsin's impaired driving outreach plan will assist the state in decreasing alcohol impaired driving fatalities 5 percent from the 2015-2019 calendar year rolling average of 180 to 171 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
The support of high visibility enforcement through public information is specifically allowed under 23 CFR §1300.23(j)(1)(vi) and it is also an effective countermeasure that works on pages 1-27 and 1-54, 1-57, and 1-58 of the ninth edition.

Description:
Continue to develop a statewide public information and education campaign to reduce impaired driving injuries and fatalities based on NHTSA's goals and objectives utilizing various methods such as the web, print, and TV. Contractual services for 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. Collaborate with community prevention organizations to assist them in developing successful evidence-based prevention programs.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	405d	**2021-31-02-M5**	$250,000	$150,000

Media – Motorist Awareness and Motorcyclist Conspicuity

Assess Traffic Safety Impact:
Promoting awareness will help to decrease motorcyclist crashes among the traveling public.

Linkage:
Wisconsin's motorcyclist and motorists outreach plan will assist the state in decreasing motorcyclist fatalities 5 percent from the 2015-2019 calendar year rolling average of 82 to 78 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
The support of public information for motorists and motorcyclists is an effective countermeasure that works on pages 5-19 and 5-20 of the ninth edition.

Description:
This will fund media campaigns that address "May is National Motorcycle Safety Awareness Month" and in Wisconsin "May is Motorcycle Awareness Month." These campaigns will promote motorists' awareness of motorcyclists in a campaign to "look twice for motorcycles" via radio and television PSAs, posters, and other means.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-70-07-MC**	$50,000	$0

Public Information and Education – Pedestrian and Bicyclist

Assess Traffic Safety Impact:
Promoting awareness will help to decrease non-motorist crashes among the traveling public.

Linkage:
Wisconsin's bicycle and pedestrian outreach plan will assist the state in reducing pedestrian fatalities 5 percent from the 2015-2019 calendar year rolling average of 54 to 52 by December 31, 2021 and maintaining bicyclist fatalities from the 2015-2019 calendar year rolling average of 10 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
The support of high visibility enforcement through public information is an effective countermeasure that works on pages 8-29, 9-16, and 9-26 of the ninth edition.

Description:
Work with partners to keep information up-to-date and add information to WisDOT website. Continue to work with the variety of Drivers Education Programs to ensure beginning drivers receive the correct pedestrian/bicycle training. Additional information will be produced in 2021 as well as updates to training programs. The impact of this project will help to ensure that young drivers receive the necessary information to share the road with pedestrians and bicyclists. Continue to develop and educate all people involved in pedestrian/bicyclist safety. Work in cooperation with Share and Be Aware to develop new training/educational materials. This project will help to ensure that bicyclists get up to date information regarding rules of the road.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-80-02-PS**	$20,000	$0

Public Information and Education – Campaign Development

Assess Traffic Safety Impact:
> Promoting awareness will help to decrease motorist crashes among the traveling public.

Linkage:
> Wisconsin's outreach plan will assist the state in reducing traffic fatalities 2 percent from the 2015-2019 calendar year rolling average of 585 to 573 by December 31, 2021.

Rationale for Selecting Countermeasure/Amount:
The support of high visibility enforcement through public information is an effective countermeasure that works on pages 1-54, 2-23, 3-31, 4-17, 4-18, 5-16, 5-19, 5-20, and 8-27of the ninth edition.

Description:
Continue to develop a statewide public information and education campaign on distracted driving, speed, and other campaigns to reduce injuries and fatalities based on NHTSA's goals and objectives utilizing various methods such as the Web, print, and TV. Contractual services for 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. Provide up-to-date information and current data to the public. Collaborate with community prevention organizations to assist them in developing successful evidence-based prevention programs. Multiple program information outreach. This project will help to support the countermeasure that works on page 3-37 of the eighth edition. The impact of the project is to help raise awareness among drivers of the importance of highway safety rules and regulations.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-90-02-CP**	$480,000	$0

Paid Media

Rationale for Selecting Countermeasure/Amount:
The support of high visibility enforcement through public information is an effective countermeasure that works on pages 1-54, 2-23, 3-31, 4-17, 4-18, 5-16, 5-19, 5-20, and 8-27of the ninth edition. It is also allowable under 23 CFR §1300.23(j)(1)(vi).

Description:
Contract for paid media for all major behavioral areas and with an emphasis on impaired driving. These projects will help to support all communication and outreach countermeasures that work described in each section of the HSP. The impact of the project is to help raise awareness among drivers of the importance of highway safety rules and regulations.

Intended Subrecipients	Funding Source	Unique Identifier	Funding Amount	Local Benefit
BOTS	402	**2021-90-07-PM**	$500,000	$0
BOTS	405d	**2021-31-07-M5**	$250,000	$0

Community Traffic Safety Outreach and Media Programs —Budget Summary		
402	**2021-90-01-CP**	**$450,000**
402	**2021-90-04-CP**	**$90,000**
402	**2021-90-06-CP**	**$375,000**
405b	**2021-25-02-M2**	**$200,000**
405d	**2021-31-02-M5**	**$250,000**
402	**2021-70-07-MC**	**$50,000**
402	**2021-80-02-PS**	**$20,000**
402	**2021-90-02-CP**	**$480,000**
402	**2021-90-07-PM**	**$500,000**
405d	**2021-31-07-M5**	**$250,000**
	Total	**$2,665,000**

Appendix 1:

LAW ENFORCEMENT GRANT TARGETING METHODOLOGY

As It Relates to Alcohol, Speed, and Occupant Protection Grants

Introduction:

The following is documentation for the methodology on how the targeting lists of political entities and their respective law enforcement agencies were selected for alcohol, speed, and occupant protection law enforcement grants.

This methodology includes the minimum three requirements under 23 CFR 1300.11(d)(5)(i) and (ii), the evidence-based traffic safety enforcement program to prevent traffic violations, crashes, and crash fatalities and injuries in areas most at risk for such incidents. At a minimum, the State shall provide for:

(1) An analysis of crashes, crash fatalities, and injuries in areas of highest risk;

(2) Deployment of resources based on that analysis; and

(3) Continuous follow-up and adjustment of the enforcement plan.

Continuous follow-up is provided by monthly reviews of grants by the State Program Managers, grant monitoring by the Regional Program Managers, and through attendance at the quarterly Traffic Safety Commissions in each county.

This appendix also covers requirements under 23 CFR 1300.21 (e)(4) for high risk population countermeasure programs. Agencies/municipalities that meet the criteria are encouraged to participate in enforcement efforts either through funded overtime grants (which require participation in national mobilizations) or through our non-overtime grant program which runs during the national mobilization periods. New targeting lists are created each year using the most recent three years of data.

Initially Wisconsin counties were grouped by descending degree of apparent crash problem (alcohol, speed, and occupant protection), within the respective grant types (alcohol, speed, and occupant protection). The following summarizes the larger steps taken for all three types of law enforcement grants in generating the overall list.

Initial Scoring:

The Bureau of Transportation Safety's Traffic Crash files were queried for instances of alcohol, speed, and occupant protection related crashes, by crash type (fatal, injury, and property damage), as noted on the DT4000 crash report form, in Wisconsin cities, villages and townships and grouped together by county for the calendar years 2017, 2018, and 2019. Three years of data were collected to disguise some of the natural fluctuations from year to year. Not all locations in Wisconsin have recorded each of the three types of crashes during the 2017-2019 three-year period; those locations were

immediately excluded from further investigation, within their respective targeting list grant type (alcohol, speed, and occupant protection).

Reported crashes on public roads were matched with the people involved in the crashes, assigning numeric weights to reported injuries (and non-injuries). The numeric weights assigned were:

Fatal injury = 20
~~Incapacitating~~ Suspected Serious injury = 20
~~Non-incapacitating~~ Suspected Minor injury=10
Possible injury = 5
Unknown or no injury = 1

Numeric weights of the injuries (and non-injuries) were summed by county and cities, villages, or townships, within a county. That value was named *Calculated Score for Injuries*.

A *Normalized Score* for injuries was calculated by matching the *Calculated Score for Injuries* with the final January 1, 2019 population estimates (per 1,000), as released by the Wisconsin Department of Administration's Demographic Services Center (Ex. Calculated Score * (1000/Population Number)) for counties, cities, villages, and towns. Population estimates are based on the 2010 census and an analysis of more current data such as housing units and automobile registrations. 2019 population data was used because it is the most recent available. An example of the formula to be used for each of the respective seventy-two counties in the state is the following:

Calculated Score * (1,000/(2018 County Population))

Each county is evaluated with regard to its *Calculated Score for Injuries* and its *Normalized Score* to see if it meets the criteria for selection. The county-level criteria varies by grant type (alcohol, speed, and occupant protection) and can be found in one of the three respective subsections for grant types, below. The exception to this scoring are all counties with a population of 500,000 or greater, where counties meeting this criterion will automatically be included in the three law enforcement grant types (Alcohol, Speed, and Occupant Protection).

I.   Full-year Law Enforcement Grants (Alcohol and Occupant Protection Only)

Municipalities located in multiple counties have been combined, thus only appear once in the listings. The county containing the largest percentage of the municipality's population has been designated the county of record for the listings. If counties in which a municipality exists are needed, please reference the worksheet named "2019MuniInMultiCounties", in the MS Excel files named "2019MuniAlcWeightedTrgtNormal.xlsx".

<u>Criteria at County Level</u>:
Select counties with the criteria of Weight >= 3,000 for alcohol and speed and 1,800 for occupant protection OR NormalScore >= 50.00 OR (Weight >= 2,000 AND NormalScore >= 30.00).

Select the next four counties, from those counties that are still unselected who have a Rural-Urban Continuum Code of one through six and have the next highest NormalScore scores from ALL counties per RPM Region.

<u>Criteria at Municipal Level</u>:

A list of municipalities for each of the counties selected as a possible grant candidate will be generated, showing the NormalScore and Weight, for each of the municipalities within a county. Municipalities within each of these counties will be selected for potential grants using the following criteria:

Weight >= 300
NormalScore >= 50.00

Each of these municipalities will be highlighted in blue. Please note that municipalities that have a law enforcement agency presence, besides the county sheriff will also be highlighted, by the use of **bold** text.

Each county NOT having a Rural-Urban Continuum Code of seven through nine is evaluated with regard to its *Calculated Score for Injuries* and its *Normalized Score* for each of the four quarters to see if it meets the criteria for selection. The county-level criteria varies by grant type (alcohol, speed, and occupant protection) and can be found in one of the three respective subsections for grant types, below.

Counties with normalized scores that fall outside one or more standard deviations, but less than two standard deviations from the population group's average, but whose normalized score is at least 15% above the group mean are displayed against a lightly red shaded background and will be selected as grant candidates. Counties with normalized scores that fall outside two or more standard deviations from one of the six population group means are displayed against a more darkly shaded background and are automatically eligible as a grant candidate.

II.	Occupant Protection Grants by County, Based Upon the Number of Unbelted Youth Drivers Aged 16-19 Years of Age in Crashes.

The selection process will also make counties eligible for Occupant Protection Grants, based upon the calculated score for injuries of unbelted youth driver's aged 16-19 in crashes in a particular county, for the years 2017 through 2019, relative to the population per county, for the state as a whole, where the county has not been previously targeted for Occupant Protection grant(s).

Counties, which have the largest normalized score of unbelted 16-19 year old drivers statewide, will be considered for occupant protection grants. The local County Sheriff's law enforcement agency will be the first enforcement agency contacted, for each county, given they have county-wide jurisdiction.

III.   All Grants Types (Alcohol, Speed, and Occupant Protection) by County, Based Upon Population.

Counties with a population greater than or equal to 500,000 will be targeted for all three categories of law enforcement grant types (Alcohol, Speed, and Occupant Protection), regardless of the grant distribution methodology selected for a given targeting year.

Please note population was used as the metric, instead of VMT, because of the on-going regularity and timeliness of annual population estimates (both state and federal) versus, the unpredictability of when VMT data will become available, for a given year.

After each county that has been selected for a particular type of grant (Alcohol, Speed, and Occupant Protection) we then drilled-down to the municipal (City, Village, or Town) level to indicate the specific municipal entities that qualified the county for a grant. This will be achieved by measuring the *Normalized Score* for injuries and the *Calculated Score for Injuries*, for each of the municipalities against the criteria set for municipalities, in each of the grant types (Alcohol, Speed, and Occupant Protection) as described in Section I., above. Please note that the County Sheriff of a selected county, regardless of grant type will always be considered for a grant, otherwise the local law enforcement agency that has a selected municipality within its jurisdiction will be considered to implement a grant on behalf of the selected municipality.

<p style="text-align:center">Appendix 2:</p>

<p style="text-align:center">405(B) Occupant Protection Grant</p>

Participation in Click-it-or-Ticket (CIOT) national mobilization

Wisconsin will participate in the Click It Or Ticket high-visibility national enforcement mobilization in 2021. The mobilization will have an enforcement, paid media, and earned media component. Wisconsin has had good participation from law enforcement agencies throughout the state.

As required under 23 CFR § 1300.11(d)(6) and 23 CFR § 1300.21 (d)(2), participating agencies include:

Adams County Sheriff's Office	Black River Falls Police Department	Colby Abbotsford Police Department
ALBANY PD	Bloomfield Township Police Department	Colfax Police Dept.
Altoona Police Department	Boscobel Police Dept.	Coloma Police Department
AMERY POLICE DEPARTMENT	Brandon Fairwater Police Dept.	Columbia County Sheriff's Office
Antigo Police Department	Brillion Police Dept.	Columbus Police Department
Appleton Police Department	Brodhead Police Department	Cornell Police Department
Arcadia Police Department	Brooklyn Police Dept.	Cottage Grove Police Department
Arena Police Department	Brown County Sheriff's Department	Crawford County Sheriff's Department
Ashwaubenon Public Safety	Brown Deer Police Department	Cudahy Police Department
Athens Police Department	Brownsville Police Department - Village Of	Cumberland Police Department
AUGUSTA POLICE DEPT	Buffalo County Sheriff's Office	Dane County Sheriff's Office
Baldwin Police Dept.	Burnett County Sheriff's Department	De Pere Police Department
Baraboo Police Department	Butler Police Department	DeForest Police Department
Barneveld Police Dept.	Caledonia Police Department - Village Of	Dickeyville Police Dept.
BARRON COUNTY SHERIFF'S DEPT	Campbell Police Department	Dodge County Sheriff's Office
Bayfield County Sheriff's Office	Campbellsport Police Department	Dodgeville Police Department
Bayfield Police Department	Cascade Police Dept.	Door County Sheriff's Department
Bayside Police Department	CEDARBURG PD	Douglas County Sheriff's Department
Beaver Dam Police Department	Chetek Police Department	Dunn County Sheriff's Office
BELLEVILLE PD	Chilton Police Department	Durand Police Department
Beloit Police Department	Chippewa County Sheriff's Office	East Troy Police Department - Village of
Birchwood Police Dept.	Clark County Sheriff's Department	Edgar Police Department
BLACK CREEK PD	Clintonville Police Department	Edgerton Police Department
Elk Mound Police Dept.	Horicon Police Dept.	Marathon County Sheriff's Office
Elkhart Lake Police Department	Hortonville Police Department	Marinette County Sheriff's Office
Elkhorn Police Department	Hudson Police Department	Marinette Police Department
Ellsworth Police Department	Hurley Police Department	Markesan Police Department
Elm Grove Police Department	Iowa County Sheriff's Office	Marquette County Sheriff's Department
Elmwood Police Department	Iron County Sheriff's Department	Marquette University Police Dept
Evansville Police Department	IRON RIVER PD - TOWN OF	Marshall Police Department
Everest Metropolitan Police Department	Jackson County Sheriff's Office	Marshfield Police Department
Fairchild Police Dept.	Jackson Police Department	Mayville Police Department

Fennimore Police Department	Janesville Police Department	McFarland Police Department
Fitchburg Police Department	Jefferson County Sheriff's Office	Mellen Police Department
Florence County Sheriff's Office	Jefferson Police Dept.	Melrose Police Department
Fond du Lac Police Department	Johnson Creek Police Department	Menasha Police Department
Fond du Lac Sheriff's Office	Juneau Police Department	Mequon Police Department
Fort Atkinson Police Department	Kenosha Police Department	Merrill Police Department
Fox Lake Police Department	Kewaskum Police Department	Merrillan Police Department
Fox Point Police Department	Kiel Police Department	Middleton Police Department
Fox Valley Metro Police Department	Kohler Police Department	Milton Police Department - City Of
Franklin Police Department	Kronenwetter Police Department	Milton Police Department - Town Of
Fredonia Marshal	La Crosse County Sheriff's Office	Milwaukee County Sheriff's Office
Fulton Town of Police Dept.	La Pointe Police Department	Milwaukee Police Department
Geneva Police Department - Town Of	Lafayette County Sheriff's Office	Mineral Point Police Department
Glendale Police Department	Lake Delton Police Department	Minocqua Police Department
Grand Chute Police Department	Lake Geneva Police Department	Minong Police Dept.
Grand Rapids Police Department	LAKE HALLIE PD VILLAGE OF	Mishicot Police Dept.
Grant County Sheriff's Office	Lake Mills Police Department	Mondovi Police Department
Grantsburg Police Department	Lancaster Police Department	Monona Police Department
Green Bay Police Department	Lannon Police Department	Monroe County Sheriff's Office
Greendale Police Department	Linden Police Department	Montello Police Department
Greenfield Police Department	LINN PD - TOWN OF	Monticello Police Department
Hales Corners Police Department	Lodi Police Department	Mosinee Police Dept.
Hammond Police Department	Lomira Police Department	Mount Pleasant PD – Village of
Hancock Police Department	Luck Police Department	Mukwonago PD - Village of
Hartland Police Department	Madison Police Department	Muscoda Police Department
Hazel Green Police Dept.	Madison Police Department - Town Of	Muskego Police Department
Highland Police Dept.	Manitowoc Police Department	NEILLSVILLE POLICE DEPARTMENT
Hillsboro Police Department	Maple Bluff Police Department - Village of	Nekoosa Police Department
Hobart/Lawrence Police Department	Marathon City Police Department	Neosho Rubicon Ashippun Police Dept
New Berlin Police Department	Pulaski Police Department	Sturgeon Bay Police Department
New Glarus Police Department	Racine County Sheriff's Office	Sturtevant Police Department
New Holstein Police Department	Randolph Police Department	Summit Police Department - Village of
New Richmond Police Department	Red Cliff Police Dept.	SUN PRAIRIE POLICE DEPARTMENT
Newburg Police Department	Rock County Sheriff's Office	UW - Whitewater Police Services
Nicolet Area Technical College	Rome Police Department - Town Of	UW Green Bay Police Department
North Fond du Lac Police Department	Rosendale Police Department	Vernon County Sheriff's Office
North Hudson Police Department	Rothschild Police Department	Verona Police Department
Oak Creek Police Department	Sauk County Sheriff's Office	Village of Fox Crossing PD
Oakland Township Police Department	Sauk Prairie Police Department	Walworth County Sheriff's Department
Oconomowoc Lake Police Department	Sawyer County Sheriff's Office	Walworth Police Department - Village of
Oconomowoc Police Department	Seymour Police Department	Washburn County Sheriff
Oconto Falls Police Dept.	Sharon Police Department - Village Of	Washburn Police Department

Onalaska Police Department

Oneida Police Department

Oregon Police Department

Orfordville Police Department

Osseo Police Department

Outagamie County Sheriff's Department

Owen-Withee Police Department

Ozaukee County Sheriff's Office

Palmyra Police Department

Pepin County Sheriff's Department

Pepin Police Department

Pewaukee Police Department - Village Of

Pierce County Sheriff's Department

Pittsville Police Department

Plain Police Department

Platteville Police Department
Pleasant Prairie Police Department - Village Of

Plover Police Department

Plymouth Police Department

Port Edward Police Dept.

Port Washington Police Department

Portage County Sheriff's Office

Portage Police Department

Poynette Police Department

Prairie du Chien Police Department

Princeton Police Dept.

Rice Lake Police Department

Richland Center Police Department

Richland County Sheriff's Office

Ripon Police Department

Ripon Police Department - Town Of

River Hills Police Department

Roberts Police Department

Shawano County Sheriff's Department

Shawano Police Department

Sheboygan County Sheriff's Office

Sheboygan Falls Police Department

Shell Lake Police Department

Shiocton Police Department

Shorewood Hills Police Dept.

Siren Village of Police Dept.

Slinger Police Department

SOMERSET PD

Sparta Police Department

Spring Green Police Department

Spring Valley Police Department

St. Francis Police Department

St. Nazianz Police Dept.

Stanley Police Department

Star Prairie Police Dept.

Stevens Point Police Department
Stoughton Police Department

Superior Police Department

Thorp Police Department

Tomah Police Department

Tomahawk Police Department

Town of Hayward Police Dept.

Trempealeau County Sheriff's Office

Turtle Lake Police Department

UW - Platteville Police Department

UW - Eau Claire Police Department

UW - Madison Police Department

UW - Milwaukee Police Department

UW -Oshkosh Police Department

UW - Parkside Police Department

UW - Stout Police Department

Washington Island Police Department

Waterford Police Department - TOWN

Waterloo Police Department
WATERTOWN POLICE DEPARTMENT

Waukesha County Sheriff's Office

WAUNAKEE PD

Waupaca County Sheriff's Office

Waupun Police Department

Wausau Police Department

Waushara County Sheriff's Department

West Allis Police Department

Weyauwega Police Department

Whitefish Bay Police Department

Wild Rose Police Department

Winneconne Police Department

Wisconsin Dells Police Department

Wisconsin Rapids Police Department

Wood County Sheriff's Office

Woodville Police Department

Wrightstown PD - Village of

Child restraint inspection stations

County	Number of Inspection Stations	Number of Inspection Events	Stations/Events Serving an Urban Population	Stations/Events Serving a Rural Population	Stations/Events Serving an At-Risk (Low Income)
Brown	1		1		
Dane	1		1		1
Fond du Lac	1		1		
Iron	1			1	1
La Crosse	2	2	4		4
Langlade	1			1	1
Marinette	2			2	2
Milwaukee	13		13		13
Ozaukee	3		3		
Portage	2			2	2
Racine	1		1		1
Sauk	1			1	
Sheboygan	1		1		
Washington	3		3		
Waukesha	5		5		
Wood	2			2	
Totals	40	42	33	9	25
	Inspection Stations	Inspection Stations or Events	Stations/Events Serving Urban Areas	Stations/Events Serving Rural Areas	Serving an At-Risk (Low Income)
			USDA rural-urban continuum code 1-3	USDA rural-urban continuum code 4-9	

CERTIFICATION: The inspection stations/events are staffed with at least one current nationally Certified Child Passenger Safety Technician.

Child passenger safety technicians

Enter an estimate of the total number of classes and the estimated total number of technicians to be trained in the upcoming fiscal year to ensure coverage of child passenger safety inspection stations and inspection events by nationally Certified Child Passenger Safety Technicians.

Estimated total number of classes   10

Estimated number of technicians   150

Maintenance of effort

ASSURANCE: The lead State agency responsible for occupant protection programs shall maintain its aggregate expenditures for occupant protection programs at or above the level of such expenditures in fiscal year 2014 and 2015.

This plan could be affected by the ongoing pandemic.

Appendix 3

405 (C) STATE TRAFFIC SAFETY INFORMATION SYSTEM IMPROVEMENTS GRANT

Traffic records coordinating committee (TRCC)
Submit at least three meeting dates of the TRCC during the 12 months immediately preceding the application due date.

Meeting Date
June 12, 2019
November 11, 2019
March 3, 2020

Enter the name and title of the State's Traffic Records Coordinator

| Name of State's Traffic Records Coordinator | Laura C. Vande Hey and Andrea Bill |

| Title of State's Traffic Records Coordinator | Program and Policy Supervisor and Traffic Safety Engineer Research Program Manager |

Enter a list of TRCC members by name, title, home organization and the core safety database represented, provided that at a minimum, at least one member represents each of the following core safety databases: (A) Crash; (B) Citation or adjudication; (C) Driver; (D) Emergency medical services or injury surveillance system; (E) Roadway; and (F) Vehicle.

	2020 TRCC MEMBERS		
Member Organizations	Representative		Database Representation
	DOT		
SHSO Co-Chair (Tie vote)	Vande Hey	Laura	Crash
UW TOPS Lab Co-Chair	Bill	Andrea	Crash
OPFI	Pavich	Peter	
WSP -	Harvey	Dave	Citation or Adjudication
WSP - TraCS (alt)	Wolfe	Paul	Citation or Adjudication
WSP BDS	Schwartz	Darlene	Driver
DMV/BVS (alt)	Galbraith	Timothy	Vehicle
DTIM/BSHP (alt)	Schieldt	Kelly	Roadway
DBM/BITS - GIS	Moline	Mitch	Crash
DTSD/BHO	Adams	Angela	Roadway
DTSD/BHO	Szymkowski	Rebecca	Roadway

DTSD/BHO (alt)	Porter	Brian	Roadway
BOTS	Corsi	Larry	Crash
BOTS	Muthumari	Chokkalingam	Crash
BOTS	Barkholtz	Heather	Citation or Adjudication
DOT	McGinn	Reed	Vehicle
	State Agencies and Organizations		
DOJ/CIB TIME	Doberstein	Courtney	Citation or Adjudication
DOJ	Fortunato	Dennis	Citation or Adjudication
OSC-CCAP	Olson	Andrea	Citation or Adjudication
OSC-CCAP (alt)	Hicks	Kim	Citation or Adjudication
DHS/DPH-EMS	Happel	Chuck	EMS or Injury Surveillance
DHS/DPH/BHIP	Taylor	Laurie	EMS or Injury Surveillance
DOJ	Jenswold	Tara	Citation or Adjudication
MenomineeTribal PD	Warrington	Warren	
DPI	Dean	Brian	Driver
	UW		
UW TOPS-CODES	Bigelow	Wayne	EMS or Injury Surveillance
UW TOPS Lab (alt)	Parker	Steven	Crash
CIREN Center Milwaukee	Halloway	Dale	EMS or Injury Surveillance
	Local Agencies & Organizations		
AAA	Jarmusz	Nick	
Jefferson County	Udovich	Brian	
Onalaska PD	Berg	Tim	
Dane County SO	Alsaker	Matt	
Madison PD	Knight	Trevor	
Madison PD (Alt)	Reilly	Deanna	
	Federal Partners		
NHTSA	Kinnard	Kari	
FHWA/WI Division	Jolicoeur	David	
FMCSA/WI Division	Oesterle	Mark	
FMCSA/WI Division	Gessler	Mark	

State traffic records strategic plan

Upload a Strategic Plan, approved by the TRCC, that— (i) Describes specific, quantifiable and measurable improvements, as described in paragraph (b)(3) of this section, that are anticipated in the State's core safety databases, including crash, citation or adjudication, driver, emergency medical services or injury surveillance system, roadway, and vehicle databases; (ii) Includes a list of all recommendations from its most recent highway safety data and traffic records system assessment; (iii) Identifies which recommendations identified under paragraph (b)(2)(ii) of this section the State intends to address in the fiscal year, the countermeasure strategies and planned activities, at the level of detail required under § 1300.11(d), that implement each recommendation, and the performance measures to be used to demonstrate quantifiable and measurable progress; and (iv) Identifies which recommendations identified under paragraph (b)(2)(ii) of this section the State does not intend to address in the fiscal year and explains the reason for not implementing the recommendations.

Appendix 3b contains our TSIS with detailed descriptions of the projects below.

Project Title	Database	Attribute	Budget	Status	Improvement & Measure
IID Dictionary	Driver	Uniformity	$50,000	Lack of Uniformity	Correct data dictionary
Exploring Emergent Data Sources to Augment Seat Belt Counts in WI	Driver	Completeness & Uniformity	$60,000	240 sites with 32,000 observations now	Increase to 22,000 vehicles plus video (nighttime conditions and all roadways).
Crash Information Extraction, Analysis and Classification Tool	Crash	Accessibility	$100,000	Assess and create text mining data points to create a crash-data vocabulary to extract, validate and determine quality of crash reports. Current baseline is 0.	Complete crash-data vocabulary. Create a mining process to capture information from narratives, and validate analysis process of automated report review. Increase accuracy by 15%.
2021 CODES Traffic Crash Linkage	CODES (Crash Outcome Data and Evaluation System)	Integration: Crash Reporting System and Injury Surveillance System (hospital patients, EMS, vital records mortality, trauma registry)	$55,911	CODES integrates crash data with hospital patient and EMS runs.	(1) Develop new linkage process to add trauma registry data: integrate 50% of crash-related patients. (2) Expand EMS run match to include Iowa and Minnesota hospitals treating WI crash victims: integrate 50% of those victims. (3) Update crash-hospital patient integration with 2020 crashes: 75% of injured are matched.
TraCS Location Tool (TLT) Enhancements	Crash and Roadway	Timeliness	$35,000	Location clarity	Improve RP coding automation
Wisconsin Crash Report Manual Online	Crash	Accessibility	$65,000	Multiple sources for information	Combine multiple sources for information
Crash Data Quality and Data Linkages Reporting System	Crash, Driver, Adjudication, Vehicle	Integration	$30,000	No direct linkages	Will create a pathway for linkages
Community Maps	Crash	Accessibility	$90,000	Distinct Logins and Website hits	Increase number of users and analysis queries
Wisconsin CODES Project	CODES (Crash Outcome Data and Evaluation System)	Accessibility	$114,581	Online reports and query system for CODES data: healthcare outcomes of crashes.	Update reports and query system with 2020 CODES data, increasing data years for trends and comparisons to 12.
Safety Data Warehouse Data Linkage	Citation Driver	Integration	$25,000	Create linkages of all TRCC crash databases for accessibility. Current baseline is 0.	Increase the integration and accessibilty of dbases by 30%.
Predictive Analytics	Crash	Accessibility	$65,000	Distinct users	Number of logins for analyze tab in CM. Number of HVE deployments based on PA data.
Modernize the FARS Processes	Crash	Timeliness	$117,000	Reduce processing time by FARS coordinator to improve timeliness of reporting	Reduce annual FARS data release time.
IID Dictionary	Driver	Uniformity	$50,000	Lack of Uniformity	Correct data dictionary
E-Citation	Citation Driver	Uniformity	$250,000		
			$1,107,492		

Quantitative improvement

Appendix 3a

State highway safety data and traffic records system assessment

Enter the date of the assessment of the State's highway safety data and traffic records system that was conducted or updated within the five years prior to the application due date and that complies with the procedures and methodologies outlined in NHTSA's "Traffic Records Highway Safety Program Advisory" (DOT HS 811 644), as updated.

Date of Self-Assessment:　　2/3/2020

Date of full Assessment:　　6/8/2015

Requirement for maintenance of effort

ASSURANCE: The lead State agency responsible for State traffic safety information system improvements programs shall maintain its aggregate expenditures for State traffic safety information system improvements programs at or above the average level of such expenditures in fiscal years 2014 and 2015.

Appendix 3a
State Traffic Safety Information System Improvements Grant
Interim Progress Report

State: <u>Wisconsin</u>   Report Date: _2020-07-14_____   Submitted by: _Steven Parker____
Regional Reviewer:

System to be Impacted	_X_CRASH ___DRIVER ____VEHICLE ____ROADWAY __CITATION/ADJUDICATION ____EMS/INJURY OTHER specify:
Performance Area(s) to be Impacted	__ACCURACY __TIMELINESS _X_ COMPLETENESS __X__ACCESSIBILITY __ UNIFORMITY __ INTEGRATION OTHER specify:
Performance Measure used to track Improvement(s)	Crash data accessibility for state and local traffic safety review.
Specification of how the Measure is calculated / estimated	Crash data is available for online mapping and analysis through the Community Maps system (https://communitymaps.wi.gov), which is updated on a nightly basis from the Wisconsin Crash Database. A primary objective of Community Maps is to support the regular review of crashes by Wisconsin's 72 county Traffic Safety Commissions (TSCs), however the system is also increasingly used by law enforcement, other safety professionals, and by members of the general public. This measure examines the number of distinct users per month that access the "advanced" features of Community Maps, which represent the core set of interfaces used by the TSC's. It also includes the average number of page hits per day along with the percentage of crashes displayed on the crash map. Taken together, these values are intended to provide an overall baseline and measure for Wisconsin crash data accessibility improvements.
Date and Baseline Value for the Measure	**2018-04-01 to 2019-03-31 (inclusive)** Total Users 399 Number of Distinct Users Per Month 81 Number of Average Page Hits Per Day 100 % of Crashes Displayed on the Map 93%
Date and Current Value for the Measure	**2019-04-01 to 2020-03-31 (inclusive)** Total Users 544 Number of Distinct Users Per Month 120 Number of Average Page Hits Per Day 129 % of Crashes Displayed on the Map 98%
Regional Reviewer's Conclusion	Check one __Quantitative performance improvement *has* been documented __Quantitative performance improvement has *not* been documented __Not sure
If "has not" or "not sure": What remedial guidance have you given the State?	
Comments	

State of Wisconsin
Traffic Safety Information System
2021 Strategic Plan
March 2020

STATE of WISCONSIN

TRAFFIC SAFETY INFORMATION SYSTEM IMPROVEMENTS

STRATEGIC PLAN
2021

Content

INTRODUCTION

On December 4th, 2015, President Obama signed into law P.L. No. 114-94, the new surface transportation reauthorization bill known as the "Fixing America's Surface Transportation Act" (otherwise known as the "FAST Act." The bill replaces the "Moving Ahead for Progress in the 21st Century Act" (otherwise known

as "MAP-21"), which was signed into law on July 6th, 2012. The FAST Act contains sections that require the collection, management, distribution, and analysis of transportation safety data by local, state, or federal agencies.

23 U.S.C. §405(c), provides the basis for Section 405(c) State Traffic Safety Information System Improvements Grants. Such grants are the vehicle by which the federal government assists states with the crucial task of improving identified deficiencies in their various data systems.

To assure that the required data are properly, efficiently, and effectively collected, as well as well-managed and available to support increasingly data-driven traffic safety programs, 23 U.S.C. §405(c)(3)(C) requires each state to craft and update comprehensive Traffic Safety Information Systems (TSIS) strategic plans for the improvement of all the safety data systems in the state.

Wisconsin's TSIS Strategic Plan, developed with input from data collectors, program managers, and users, can be used to guide the most cost-effective use of resources to result in the greatest quality improvements to the state's data in terms of accessibility, completeness, timeliness, uniformity, accessibility, and integration.

BACKGROUND

In the past, Wisconsin has met the criteria for participation in the 23 U.S.C. 405(c) State Traffic Safety Information Systems Improvements Grant Program under the 2012 surface transportation reauthorization bill, called "MAP-21." The FAST Act of 2015 has now superseded MAP-21, and Wisconsin must follow the FAST Act regulations for fiscal year 2021 grants.

The committee that organizes this Traffic Safety Information System Improvement Plan (TSISP) is the Traffic Records Coordinating Committee (TRCC). This committee dates to 2005 when the state underwent a traffic records assessment (TRA). It was decided that a TRCC could most efficiently spearhead traffic records projects and serve as a vehicle for promoting digital excellence. The TRCC is composed of a diverse group of individuals from government, academia, law enforcement, the private sector, the insurance industry, and the healthcare and EMS fields. The TRCC has been led by the state highway safety office (in Wisconsin's case, the Bureau of Transportation Safety, or BOTS). The group endeavors to meet at least every quarter for approximately three hours ,though the COVID pandemic prevented that this past year. While this plan has existed in an independent manner for well over a decade, it has always been created in concert with other plans, and its content has informed related plans. For example, Wisconsin's strategic highway safety plans (SHSPs) have been updated under the leadership of the Wisconsin Department of Transportation's Traffic Safety Council. Members of the TRCC have been involved in drafting the SHSP section addressing data and information improvements for decision making, and many SHSP contributors are also TRCC members.

This plan is broadly consistent with earlier plans, including the 2010-2014 plan, the 2015-2019 plan, and last year's plan. The primary objectives of the 2010-2014 Strategic Plan for Traffic Records Improvement were automation of crash data, improved incident location, development of a state ambulance run reporting system, and increased access to safety data. The TRCC recommended that funds be used primarily for the adoption of the national model TraCS law enforcement data collection. Such a system allowed—and continues to allow—officers all throughout the state to enter crash information into a centralized portal.

The 2015-2019 TSISP diverged from the 2010-2014 plan in that it more closely matched the data projects called for by the 2014-2016 Strategic Highway Safety Plan (SHSP). It broadly continued, however, in its

funding priorities: significant monies were used to support TraCS expansion and training, as well as the introduction of a new crash form and data warehouse (the data warehouse mandated only internet submissions from law enforcement agencies as of Jan 1st, 2017). There were several projects which also strengthened the connections between crash data on one hand, and hospital and EMS data on the other, and smaller projects that focused on improving the access and visualization of safety data for traffic safety professionals. This 2021 plan focuses on similar priorities and projects.

It is important to note that, in past years, such plans have had multi-year scales. Since the 2018 Highway Safety Plan, following NHTSA guidelines, a one-year time scale was adopted. This will allow BOTS to develop a more focused plan that can be more responsive to the rapidly changing technologies and shifting needs of TRCC members. As such, a new 2022 plan will be developed near the end of FFY 2021.

I.   **STRATEGIC PLANNING PROCESS**
   A.   Participants
   - TRCC Policy Group, This group is responsible for oversight of the state's highway safety data systems. The policy-level group is composed of agency heads or division administrators who have authority and charge of overseeing the planning and improvement of safety data systems and/or who are collectors or users of these data. This group can meet on an ad-hoc basis to review the work of the TRCC Technical Group, and to set state policy to result in a statewide data improvement program that assures coordination of efforts and sharing of data. Members represent the Departments of Administration, Transportation (Highways, Motor Vehicles, and State Patrol, including its Bureau of Transportation Safety that is the state highway safety office for the State of Wisconsin), Health Services, Justice as well as the Office of State Courts. Members and affiliations are listed in Appendix 1, "TRCC Policy Group." The Members are customarily presented with a draft Charter for review and adoption during the plan approval process.
   - TRCC Technical Group. This group is comprised of a core group of members who have met quarterly since the TRCC was organized under TEA-21 in 1999 and additional members who represent new users and/or collectors of these data. The TRCC Technical Group comprises the main group that plans the state's data projects and management systems. The group is quite large, with representatives who are managers of crash, exposure, roadway, citation/adjudication, driver, vehicle, and injury control/EMS data. Furthermore, data users and analysts in the fields of public health, highway safety, and roadway engineering also contribute to this group. Members and affiliations are listed in Appendix 2, "TRCC Technical Group."
   - TRCC Technical Group Subcommittees or Workgroups, as required. The purpose of these sub-groups is to provide more specific attention to the sub-groups of: crash data; exposure data; roadway data; citation/adjudication data; driver data; vehicle data; and injury control/EMS data. Time was given for members of these subgroups to meet during TRCC Technical Group meetings, but members were also encouraged to meet at other times when possible.
   B.   Identification of "Deficiencies" in State Traffic Records Data
   Generally, BOTS analysts and TRCC Technical Group members used processes that had been used the previous years to identify state data deficiencies. In late 2019 and early 2020, the co-chairs of the TRCC Technical group coordinated a self-assessment of the state's data-systems by interviewing each of the database's owners, stewards, and users and completing NHTSA's self-assessment tool. Databases were analyzed for:
   - *Accuracy*
   - *Completeness*
   - *Timeliness*
   - *Uniformity*

- o *Accessibility*
- o *Integration*

C. <u>Process for Establishing Improvement Objectives</u>

After determining what would be beneficial for state data systems, the TRCC Technical Group used the following information for establishing objectives that could reasonably be accomplished in FFY 2020.

- o Requirements and priorities from the most recent Strategic Highway Safety Plan Issue Areas.
- o 2020 Highway Safety Plan (HSP) priorities and planned expenditures.
- o TRCC member knowledge of the data files they manage and/or use, and feedback that they receive from users.

Such knowledge was then balanced against the 2019 405(c) funds and the projected 2020 405(c) funds to create TRCC-specific goals and goals corresponding to TRA recommendations.

D. <u>Process for Selecting Specific Projects for 405(c) Funding</u>

1. Before the March 2020 meeting of the TRCC, BOTS staff requested that individuals or groups proposing projects describe how their project would help improve the accuracy, completeness, timeliness, uniformity, accessibility, and integration of the state's traffic records data systems. In their proposal, BOTS asked individuals to reference past plans and the Traffic Records Assessment. Appendix ("Sample Worksheet").
2. Each project was related to the data deficiencies noted in Section (B) above. Timelines will be approved for project objectives that can reasonably be accomplished in FFY 2021, given existing resources plus 405(c) funds. Accountability will be clearly identified in each project application.

E. <u>Steps for Monitoring and Reporting Progress in Achieving Project Objectives</u>

1. Each 405(c)-funded project plan will include performance indicators to measure the success or failure of the project in terms of progress from baselines to quality improvement objectives. Project sponsors will be required to provide monthly reports reviewed at the TRCC quarterly meetings, and, when requested, at subcommittee meetings.
2. Matrices for measuring progress will be produced by the state highway safety office (SHSO) based upon project reports and will be reviewed by the technical group at its quarterly meetings.
3. The highway safety plan annual report is prepared near the end of the FFY and then forwarded to the TRCC policy group for review.
4. The signed report will be forwarded to NHTSA.

F. <u>Process for Modifying or Replacing Objectives</u>

- o The Wisconsin TSIS Plan is intended to be an active document that will reflect new issues, new technologies and changing environments. As such, the TRCC technical group will review the existing objectives and will begin gathering information about changes in the technology and strategic resources.
- o As soon as information is available about the progress of funded projects and this information will be reviewed by the Technical Group. Significant changes in the environment and/or progress of projects will form the basis for proposed changes in objectives. Historically, this has resulted in annual updates to Wisconsin's Traffic Records Strategic Plan. Going forward, a new plan will be created each year.
- o Any proposed changes in the TSIS will be forwarded to the TRCC Policy Group for signoff and subsequently will be included in the annual report and annual update of the Strategic Plan. Changes in the measurement methodologies of existing plans will be incorporated into subsequent TSIS plans when projects span multiple years.

II. **STRATEGIC PLANNING VISION, MISSION, PRINCIPLES, AND GOALS**

A. <u>Vision</u>

Integrated planning for Wisconsin's public health, safety and security information systems results in traffic safety information that is timely, accurate, and complete, and thus meets the needs of many types of users; this information is readily accessible in formats that meet the needs of these users, is consistent between organizations and with national standards, and can be integrated with other types of data and with information from other jurisdictions.

B. Mission

The State of Wisconsin provides for the safety and welfare of its citizens through development and implementation of science-based and periodically reviewed public health, safety and security regulations, programs and activities, and promotes the use of technology to support agency missions and make government more accessible, responsive, and accountable.

The State of Wisconsin Traffic Records Coordinating Committee (TRCC), a group consisting of collectors, managers, and users of all components of Wisconsin's Traffic Safety Information System (TSIS), serves as a forum for discussion of records issues, reviews proposed changes in state TSIS improvement activities before they are implemented, reviews new technology and annually plans, monitors, and analyzes safety information improvement projects.

C. Principles

Data components of Wisconsin's traffic safety information systems are collected by many organizations and agencies for their individual business purposes. The usefulness of these many types of data for highway safety programming and analysis depends upon their availability and quality. Decisions made about changes to any one component of the system may have many down-stream consequences. The following principles guide this group and this specific plan:

- o Issues of cost of collection and storage should be discussed and decided on a state-level basis.
- o Data should be entered and stored once but used many times.
- o Data should be linked and shared between systems.
- o Data should meet national standards (MMUCC, NEMSIS, MIRE, etc.)
- o Data quality is defined by the user; business needs of the collector and/or manager should not be paramount in making quality determinations.

D. Traffic Safety Information System Strategic Plan Goals

Goal 1: Maintain and continue to improve the now-updated DT4000 crash data warehouse in areas of timeliness, completeness, accuracy, consistency, accessibility, and data integration. Ensure that this data source conforms as much as possible to MMUCC (Model Minimum Uniform Crash Criteria) and to MIRE (Model Inventory of Roadway Elements). Furthermore, BOTS's Crash Records Unit (CRU) should continue to improve the data quality and integration possibilities of the DT4002 (the self-reported crash used for minor crashes). The Crash Records Unit of BOTS should be supported in their attempts to automate the data input for both forms—and associated linkages—as much as possible.

Goal 2: Link, as comprehensively as possible, citation and crash data; this will particularly help DSP's innovative Predictive Analytics Project in determining resource allocation.

Goal 3: Organize and assist law enforcement training to improve the completeness and accuracy of the new DT4000 crash data form (as well as citation and adjudication forms). Such training should include periodic field training by CRU. Keep the system up-to-date over the coming years by promoting strategic and planned upgrades to the system. Continue to assist law enforcement agencies (LEAs) with any questions they have.

Goal 4: Coordinate traffic safety information with related public health, safety, and security information to minimize duplication of effort and inefficient use of resources, and to

enable multi-factorial analyses. To this end, the DOT should expand and deepen outreach to the Department of Health Services (DHS) and the Department of Children and Families (DCF).

Goal 5: Improve the link between crash data on the one hand, and EMS data/hospital records on the other. This will help state analysts quantify and study the health impacts of crashes, the importance of rapid and effective EMS service in determining positive health outcomes, and the relationship between proximate hospitals and health outcomes. Furthermore, this will allow researchers to understand the unique health risks from certain types of crashes (thus improving health outcomes).

Goal 6: Improve the interoperability, data completeness, data timeliness, and ease of use of WisTransPortal, the querying and visualization tool that was built by the Transportation Operations and Safety Laboratory (TOPS) for use in traffic safety commissions (TSCs). All of these improvements will increase the use of this tool by TSCs, thereby boosting the effectiveness of these bodies and the local analysis of traffic crashes that they bring.

Goal 7: Focus on improving the data sources that users can bring into WisTransPortal's Community Maps system (which is used at TSCs by BOTS staff, law enforcement liaisons (LELs), and law enforcement agencies (LEAs). Moreover, linkages between the DT4000 crash reports and Community Maps should be made automatically.

Goal 8: Continue strategic investments in data gathering regarding risky driving behaviors in Wisconsin, such as the use of alcohol, opioids, and cell phones while driving. Such data will be helpful in the analyzing of such behaviors over the coming years (and the impacts of interventions and policy changes).

Goal 9: Ensure TRCC involvement at all stages in future strategic planning efforts, by establishing a forum for discussion, by the TRCC of all issues and initiatives to be addressed in the new Plan including the findings of the Traffic Records Assessment. TRCC members should consider the TRA a living document and should measure projected projects against its goals.

Goal 10: Support efforts to collect high-quality bicycle and pedestrian exposure data, which can include latent demand factors. Such data is as of yet unavailable, and this data limitation hinders effective safety analysis.

Goal 11: Implement predictive crash analytics programs (advanced computer statistics and mapping programs that allow users to predict where and when different types of crashes are most likely to occur). Such programs can improve law enforcement visibility (to prevent crashes) and decrease law enforcement response times when such crashes occur.

Goal 12: Support efforts within DOT divisions that are focused on connecting roadway and crash data. Such efforts will bolster traffic safety analysis being conducted by DOT engineers.

Goal 13: Strive to present information as visually as possible; this will allow research to be more widely adopted within and outside the DOT.

Goal 14: Create simple data architecture and linkages (as much as possible). If datasets and systems are already in existence, strive to adopt strategies to simplify the structure of the database.

E. <u>State Data System Recommendations from the TRA</u>

TRCC Management Recommendations

Strengthen the capacity of the Traffic Records Coordinating Committee that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Strategic Planning Recommendations

Strengthen the TRCC's abilities for strategic planning that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Crash Recommendations

Improve the interfaces with the Crash data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the data quality control program for the Crash data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Driver Recommendations

-

Improve the data quality control program for the Driver data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Vehicle Recommendations

-

Improve the interfaces with the Vehicle data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the data quality control program for the Vehicle data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Roadway Recommendations

Improve the applicable guidelines for the Roadway data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the data dictionary for the Roadway data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the data quality control program for the Roadway data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Citation and Adjudication Recommendations

Improve the description and contents of the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the data dictionary for the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the interfaces with the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the data quality control program for the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Injury Surveillance Recommendations

Improve the interfaces with the Injury Surveillance systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Improve the data quality control program for the Injury Surveillance systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Data Use & Integration Recommendations

Improve the traffic records systems capacity to integrate data that reflect best practices identified in the Traffic Records Program Assessment Advisory.

III. TRAFFIC SAFETY INFORMATION SYSTEM STRATEGIC PLAN PROJECTS

1. **Project Title**
   Wisconsin Ignition Interlock Devices (IID) Data Dictionary

   Organization Name
   TOPS Laboratory, University of Wisconsin – Madison

   Project Coordinator and Contact Information
   Dr. David Noyce, Professor and Executive Associate Dean
   TOPS Laboratory, Department of Civil and Environmental Engineering, University of Wisconsin-
   2205 Engineering Hall, Madison, WI 53706

   Core State Safety Database to Improve (*choose only one, unless selecting integration below*)

   ☐Crash   ☐EMS or Injury Surveillance System

   ☐Citation or Adjudication   ☐Roadway

   ☒Driver   ☐Vehicle

   Proposed Attribute of Data to Improve (*choose only one*)

   ☐Accuracy   ☒Uniformity

   ☐Completeness   ☐Accessibility

   ☐Timeliness   ☐Integration

   Problem Identification
   Ignition Interlock Devices (IID) are intended to reduce the recurrence of impaired driving on Wisconsin roadways. There is increasing interest in the potential benefits of IID; however, there is limited data available to monitor and quantify the effectiveness of the program in Wisconsin. There are currently four IID models certified for use in Wisconsin and installation is carried out by service centers throughout the state. Since certified IID models are from different manufacturers, data is not reported in the same format. Thus, there are not consistent definitions and data dictionary.

   Provide a baseline measure for this specific and quantitative improvement
   Consistency / Uniformity.

   Project Objectives
   As part of this project, uniform definitions and standardized IID data dictionary will be created. The research team will collaborate with the WisDOT Bureau of Transportation Safety Chemical Test Section, vendors, and other stakeholders. The evaluation plan will consist of identifying existing IID programs, definitions, and data dictionaries from other states. Currently, there is not an IID data repository, and the development of standardized definitions and data dictionary will help build the foundation to assemble a database for the IID program in Wisconsin.

   Itemized Budget
   The estimated budget for this project is $ 50,000 including:
   Principal Investigator – 1% effort over project duration
   TOPS Assistant Researcher – 4.5 months effort over project duration

2. **Project Title**
   Exploring Emergent Data Sources to Augment Seat Belt Counts in Wisconsin

   Organization Name
   TOPS Laboratory, University of Wisconsin – Madison

   Project Coordinator and Contact Information
   Dr. David Noyce, Professor and Executive Associate Dean

TOPS Laboratory, Department of Civil and Environmental Engineering, University of Wisconsin-2205 Engineering Hall, Madison, WI 53706

Core State Safety Database to Improve (*choose only one, unless selecting integration below*)

☐Crash	☐EMS or Injury Surveillance System
☐Citation or Adjudication	☐Roadway
☒Driver	☐Vehicle

Proposed Attribute of Data to Improve (*choose only one*)

☐Accuracy	☐Uniformity
☒Completeness	☐Accessibility
☐Timeliness	☐Integration

Problem Identification

Safety belt usage in Wisconsin is at an all-time high of 88 percent. Nevertheless, Wisconsin lags the national average of 89% and the over-90% average of neighboring states. Since 1987, Wisconsin Department of Transportation (WisDOT) has conducted statewide observation surveys of safety belt annually. Safety belt observational studies are conducted at intersections during the day. Developing an understanding of how safety belt usage varies at other locations such as country/local roads as well as with time, will provide valuable information for developing remedial measures to address this vital safety issue.

Provide a baseline measure for this specific and quantitative improvement

The baseline data is provided by the field observation studies carried out by WisDOT. This study will provide additional dimension to the observational studies, specifically how safety belt usage varies spatio-temporally. Currently, about 24,000 observations are carried out during the safety belt observational studies. In this project, we propose to add 30,000 observations to make a total of 54,000 observations in Wisconsin.

Project Objectives

The intent of this project is to explore two different data sources to provide spatio-temporal information on safety belt usage. The first data source would use high-resolution cameras to collect video information at non-intersection locations. This would augment WisDOT's observational studies. The video collected would be processed in an automated fashion to quantify the seat belt usage. Second data source is Wejo, which provides a whole host of information from close to 200,000 anonymized vehicles in Wisconsin. The information provided includes several characteristics including usage of safety belt during individual (anonymized) trips. Analysis of Wejo data would provide insights into spatio-temporal variation in safety belt usage of individuals. These two emergent data sources will provide invaluable insights into spatio-temporal safety belt usage patterns across Wisconsin.

Itemized Budget

The estimated budget for this project is $ 60,000 including:

Principal Investigator – 1% effort over project duration

TOPS Researchers – 3.3 months effort over project duration

Also included are costs of data and equipment purchase.

3. **Project Title:** Crash Information Extraction, Analysis and Classification Tool (CIEACT)
   Organization Name: University of Wisconsin-Milwaukee
   Project Coordinator and Contact Information: Dr. Xiao Qin, qinx@uwm.edu; Dr. Rohit Kate, katerj@uwm.edu, and Dr. Robert J. Schneider rjschnei@uwm.edu.

Core State Safety Database to Improve (*choose only one, unless selecting integration below*):
- o **<u>Crash</u>**
- o Citation or Adjudication
- o Driver
- o EMS or Injury Surveillance System
- o Roadway
- o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):
- o Accuracy
- o Completeness
- o Timeliness
- o Uniformity
- o **<u>Accessibility</u>**
- o Integration

Problem Identification (Reference the Traffic Records Assessment, if applicable.):
Wisconsin Motor Vehicle Accident Reports (MV4000 and DT4000) are the primary source for analyzing crashes and identifying crash contributing factors. In a crash report, crash narrative is used to describe the sequence of events for all units involved in the crash, and record additional information on citations, witness, drug medication, hazardous materials, school bus, etc. As nearly every crash scene contains unique aspects or circumstances, the narrative description of observed events provides irreplaceable and crucial information that cannot be captured in the structured data field.

The UWM research team was awarded a TRCC project in 2019 that used text data mining techniques to identify underreported crash types, including work zone, distracted driving. In the project, two-year crashes data (2017 and 2018) – 284,078 crash narratives – have been scanned via text mining techniques, NoisyOr classifier and a recurrent neural network model called Gated recurrent unit-RNN (GRU-RNN), to look for work zone crashes that are not flagged by police officers. Although work zone crashes only account for 2 percent of total crashes. Both text mining techniques have yielded very promising results. Among the top 100 crash cases ranked by NoisyOR, 61 crashes are confirmed to be related to work zones through a manual review. Similarly, among the top 100 crash cases ranked by GRU, 71 crashes are manually confirmed to be work zone related. Together, both techniques identified 95 additional work zone crashes out of 155 crashes that are not flagged as work zone.

The proven technologies are efficient and effective in automatically extracting crucial information from crash narrative to facilitate crash analysis and crash classification, particular for the ones that have been misclassified or overlooked. However, they are only useful when safety practitioners can use them. Such a tool is currently not available and the safety practitioners still rely on time-consuming and labor intensive manual work to sift through tens of thousands narrative for relevant information.

Provide a baseline measure for this specific and quantitative improvement:
The project will revolutionize highway safety analysis by providing safety practitioners with quick, direct and convenient access to information stored in crash narrative texts and structured data fields as compared to manual reviews. Additionally, the tool will also identify useful crash constructs and characteristics that have the potential to inform future DT4000 updates. The proposed baseline measures for this project include, but are not limited to:
a) the number of cases with narrative reviewed with the assistance of the tool (as compared to a manual review) per unit time;
b) the amount of time spent validating and correcting misclassified crash types (as compared to a manual review) per unit time;

c) the amount of time spent extracting relevant information from crash narratives using the tool (as compared to a manual review) per unit time;

d) the number of misclassified crashes by type identified with the tool; and

e) the new types or crash scenarios identified from crash narratives using the tool.

Project Objectives:

The research project will develop an online **Crash Information Extraction, Analysis and Classification Tool (CIEACT).** The engine of the tool is the models developed from NoisyOr classifier and the neural network model GRU. The interface of the tool will be an interactive crash map that can display the results and support safety analysis in a spatial context. The primary functions of this online tool include, but not limited to, the following:

a) Automatic crash classification by a particular type (e.g., pedestrian, bicyclist, work zone, distractive) and display on a map after a user uploads crash narrative to the tool.

b) Intelligent search for key words and return of the sentence or entire narrative containing relevant information. An intelligent search means words of similar meaning will also be queried (e.g. "pedestrian" is associated with "walking"), thanks to the natural language processing applications such as bag-of-words and skip-gram architectures for computing vector representations of words. One of the open sources is https://code.google.com/archive/p/word2vec/

c) Ontological analysis of crash occurrence. For example, many work zone crashes are associated with traffic congestion that involves stopping/slowing traffic. Ontological analysis allows prevailing or representative crash patterns to be elicited and discovered from crash narrative and displayed on a map.

d) Integration of extracted information from crash narrative with structured data fields in a crash form for advanced safety analysis.

It is expected that the Crash Information Extraction, Analysis and Classification Tool can provide safety practitioners with maximum access to information stored in the texts of crash narrative.

Itemized Budget: $100K

4. **Project Title:** 2021 CODES Traffic Crash Record Linkage Project

Organization Name: Office of Health Informatics, Division of Public Health, Department of Health Services

Project Coordinator and Contact Information: Erica Garcia-Lago, Erica.GarciaLago@dhs.wisconsin.gov

Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

✓ Crash	✓ EMS or Injury Surveillance System
o Citation or Adjudication	o Roadway
o Driver	o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):

o Accuracy	o Uniformity
✓ Completeness	o Accessibility
o Timeliness	✓ Integration

Problem Identification (reference the Traffic Records Assessment, if applicable):

For many years, the Wisconsin CODES Project (Crash Outcome Data and Evaluation System), with the National Highway Traffic Safety Administration's (NHTSA) encouragement, has linked/matched hospital patient records with DOT's traffic crash records from the DT4000 reports. The DOT's Bureau of Transportation Safety, the Wisconsin Department of Health Services (DHS) Division of Public Health, NHTSA, and other agencies and traffic safety programs

use these linked records for traffic crash-related research and for program planning, evaluation, and administration at national, state and local levels.

This year's project will make significant advances in our efforts to integrate all elements of Wisconsin's Injury Surveillance data system with DOT's traffic crash reports. The DHS' Office of Health Informatics (OHI) is the public sector repository for the Wisconsin Hospital Patient Data Systems (i.e., inpatient discharge and emergency department visit records). OHI developed and has been completing Wisconsin's CODES linkage process and documentation since 2002 under previous Highway Safety Project Agreements. OHI has used its technical familiarity with the individual data files and its role as the hospital patient data custodian to utilize both public and confidential data elements to create the most effective and efficient record linkage processes. OHI also directly manages the State's Vital Records' Death Certificate system and has access to the EMS records in the Wisconsin Ambulance Run Data System (WARDS), the detailed hospital medical records in the Wisconsin Trauma Registry (WTR), and the Prescription Drug Monitoring Program (PDMP). These are all of the key elements of Wisconsin's Injury Surveillance system and all are housed, along with OHI itself, in the DHS's Division of Public Health.

The particular value added by the CODES data integration project is to enable researchers to add detailed information about the medical and economic consequences of traffic crashes to the initial and incomplete information available to law enforcement officers who complete the DT4000 crash report. This project links those crash reports to detailed injury surveillance medical data collected from the hospitals and EMS agencies that treat crash victims. OHI has obtained patient records from Minnesota and Iowa hospitals and access to ambulance run records from all Wisconsin EMS agencies (WARDS) and to the hospitals' trauma registries (WTR) in order to supplement its Wisconsin hospitals patient data and Vital Records mortality data.

In this FFY 2021 project year:
- OHI will match year 2020 traffic crash reports to crash victims' inpatient and emergency department records from hospitals in Wisconsin, Minnesota, and Iowa. This uses a well-established linkage process.
- OHI will compare the results of a new, alternative method for linking hospital patient records to DOT Crash reports in order to evaluate that method relative to the current method used in CODES projects.
- OHI also will repeat and refine a new record matching process to link year 2020 EMS ambulance run reports from the Wisconsin Ambulance Run Data System (WARDS) to their DT4000 crash reports and the consequent Wisconsin hospital patient records. This records-matching process is being developed with year 2019 data as part of the current FFY 2020 CODES Traffic Crash Record Linkage Project.
- OHI will develop new record matching processes that link year 2020 EMS reports from WARDS to the Minnesota and Iowa hospital patient records that have been matched to crash reports. Matching those records will improve the completeness of the CODES data integration system in a number of border counties.
- OHI will develop and implement a record matching process to link year 2020 hospital patient and traffic crash records to the patient records in the Wisconsin Trauma Registry (WTR). This process is being developed as a proof of concept in the current FFY 2020 CODES Traffic Crash Record Linkage Project. The Wisconsin Trauma Registry provides a more detailed medical record of the consequences of traffic crashes than do the hospital patient records.

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- OHI will explore the possibility of linking CODES files with other data sources such as PDMP data and other opioid-related datasets.
- OHI will extend record linkages to include the matching of hospital inpatient and emergency department records to death records over the 2019 period. These matches capture the long-term effects of injuries on mortality rates.
- OHI will continue its collaboration with the Wisconsin Hospital Association to obtain hospital patient records from Illinois and Michigan hospitals. Obtaining those records and linking them to crash reports will improve the completeness of the CODES data integration system in certain border counties.
- OHI will continue to support the work of the TOPS Lab by providing record-linking identifiers and facilitating TOPS' access to DHS databases, such as hospital patient records, WARDS ambulance run records, and records from the Wisconsin Trauma Registry.
- OHI will continue to participate in the activities of the Traffic Records Coordinating Committee.

This CODES data integration project gives researchers the data tools to analyze traffic crashes and the responses of emergency medical services and health care systems in ways that include detailed medical information from patient records and estimates of the economic costs of treatment.

Note that our work to include treatment provided to crash victims in Minnesota and Iowa hospitals improves the completeness of the CODES data integration system in a number of border counties (i.e., Grant and Lafayette counties from Iowa data; Douglas, Burnett, Polk, St. Croix, Pierce, and Buffalo counties from Minnesota data). Obtaining and incorporating records from Michigan and Illinois hospitals will improve the completeness of information for additional border counties (i.e., Iron, Vilas, Florence, Forest, and Marinette from Michigan data; Lafayette, Green, Rock, Walworth, and Kenosha from Illinois data). Adding information from crash-related EMS ambulance runs to out-of-state hospitals will also add to data completeness in these counties.

This Project's Place in the TSIS Strategic Plan and TRA Recommendations
This project is in line with the principle outlined in the 2020 Strategic Plan for Traffic Safety Information System Improvements (TSIS) that "data should be linked and shared between systems." The project reflects the following TSIS goals:
- Goal 3. Coordinate traffic safety information with related public health, safety, and security information to minimize duplication of effort and inefficient use of resources, and to enable multi-factorial analyses. To this end, the DOT should expand and deepen outreach to the Department of Health Services (DHS) and the Department of Children and Families (DCF).
- Goal 4. Improve the link between crash data on the one hand, and EMS data/hospital records on the other. This will help state analysts quantify and study the health impacts of crashes, the importance of rapid and effective EMS service in determining positive health outcomes, and the relationship between proximate hospitals and health outcomes. Furthermore, this will allow researchers to understand the unique health risks from certain types of crashes (thus improving health outcomes).

This 2021 CODES Traffic Crash Record Linkage Project also addresses two state data system recommendations from the most recent Traffic Records Assessment (TRA):
    EMS / Injury Surveillance Recommendations
        a. Improve the description and contents of the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

      b.   Improve the interfaces with the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

      c.   Improve the data quality control program for the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Data Use and Integration Recommendations

      d.   Improve the traffic records systems capacity to integrate data to reflect best practices identified in the Traffic Records Program Assessment Advisory.

This project is detailed in the TSIS as the "CODES Database" project. It also leverages the TSIS "WARDS & Trauma Update and Integration Project."

Itemized Budget: $55,911

5.   **Project Title:** TraCS Location Tool (TLT) Enhancements for Reference Point (RP) Coding Automation

Organization Name: Crash Records Unit of the Bureau of Transportation Safety of the Division of State Patrol of the Wisconsin Department of Transportation, DTIM, TOPS and BITS

Project Coordinator and Contact Information: Joe Bartaula, jyoti.bartaula@dot.wi.gov
Mike Satteson (Supervisor), Michael.Satteson@dot.wi.gov

Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

o Crash	o EMS or Injury Surveillance System
o Citation or Adjudication	o Roadway
o Driver	o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):

o Accuracy	o Uniformity
o Completeness	o Accessibility
o Timeliness	o Integration

Problem Identification (Reference the Traffic Records Assessment, if applicable.):

The Department is undertaking a multi-division reference point (RP) coding automation project, which is being coordinated by the crash records unit (CRU). We had obtained TRCC funding to support this effort but have found that, so far, this work is best done by internal resources, and we have not tapped this funding. However, during the requirements development and exploratory phases of this project we have identified fixes and enhancement to the TraCS Location Tool (TLT) that will improve crash location data and enhance the outcome of the RP coding automation project and are seeking funding to implement these TLT improvements.

The TLT is the tool used by law enforcement officers investigating crashes to indicate the location of each crash. The outputs of this tool are geospatial coordinates, on and from/at roadway information and WISLR Link Node + Offset data. This location information is used to place crashes that occur on the State Trunk Network (STN) according to its Linear Referencing System (LRS). The LRS locations of crashes are critical to linking them to STN inventory and meta-data and thus to many STN safety analyses. RP coding is the process that places crashes within the STN LRS. The quality of the information provided by the TLT has a direct and important impact on the accuracy, completeness and timelines of crash locations made to the STN LRS and thus upon crash safety analyses made to the STN LRS.

Currently the RP coding is a manual process that requires the equivalent of 2.5 full time persons to complete each year. The RP coding automation project aims to reduce if not eliminate the department's reliance on manual coding to no more the 0.5 full time person equivalents. Doing

so would not only reduce costs but make the association of crashes to STN LRS locations available in near real time to higher accuracy and with greater completeness.

One issue with data currently provided by the TLT is that it may be ambiguous as to the roadway segment upon which the crash occurred, and it is necessary to examine the crash diagram and the officer narrative to identify and resolve such ambiguities. By allowing officers to more clearly indicate the crash location to these roadway segments, the improved TLT would reduce the need for manual analyses of crashes to eliminate location ambiguities.

Provide a baseline measure for this specific and quantitative improvement:
The current version of the TLT does not provide required data or features

Project Objectives:
Add the following features to the TLT to improve location clarity and to provide additional information to the RP coding automation tool as well as other data processes that rely upon reliable crash location:

- Include the map version used for location in the XML transmitted to the DB.
- Indicate when Snap to Roadway was used when locating (and include in data sent)
- Provide both raw as well as the final (snapped to) location.
- Indicate the map area being viewed when the location was selected. This could be done by having the TLT provide the coordinates of the NW and SE or SW and NE corners of the map view when a location was made.
- When the TLT map is used for the drawing background provide the map and drawing coordinate pairs of this image.
- When location is done by measurement, provide the measurement parameters used for location (or if infeasible flag when location was done via measurement).
- Allow snap to filtering by specific roadway, roadway type or direction of travel. In other words, the user could indicate that the crash was on a named roadway or ramp, restricting the snapping to that roadway or roadway class.
- Indicate roadway centerlines on the map (perhaps only at a sufficiently close zoom level) to help the officer determine and understand where he or she is locating to.
- Provide the capability to locate two positions within the TLT, allowing for example the crash location and the intersection associated with the crash to be identified.

Itemized Budget: We are requesting $35K to pay for development services from the TraCS system vendor, TEG.

6. **Project Title:** Online Wisconsin Crash Report Manual and Data Definitions
    Organization Name: Crash Records Unit (CRU); Public Safety Technology Services Section; Bureau of Transportation Safety and Technical Services; Division of State Patrol of the Wisconsin Department of Transportation.
    Project Coordinator and Contact Information: Tejal Thakkar, Tejal.Thakkar@dot.wi.gov
    Michael Satteson (Supervisor), Michael.Satteson@dot.wi.gov
    Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

o	Crash	o	EMS or Injury Surveillance System
o	Citation or Adjudication	o	Roadway
o	Driver	o	Vehicle

    Proposed Attribute of Data to Improve (*choose only one*):

o	Accuracy	o	Uniformity
o	Completeness	o	Accessibility
o	Timeliness	o	Integration

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Problem Identification (Reference the Traffic Records Assessment, if applicable.):
The current crash data definitions, field-level documentation and descriptions of data quality checks and results reside in different systems. Only select crash data stakeholders have ready access. None of these data specific to crash data are accessible to the public or even to all close stakeholders of crash data. When this information is available, it is often cumbersome to access and more difficult to properly maintain. This lack of accessibility hampers collaboration between stakeholders and may distort the collection, processing and interpretation of crash data.

One real world example of a problem that this effort would address would be the requests that have been made by law enforcement for an accessible, up to date manual with data collection guidance for all of the fields in the DT4000 crash form. Being able to serve up this information for law enforcement and to have accessible for researchers would eliminate many questions as to how the data is collected and how it should be interpreted.

This proposal is to bring the crash data dictionary, data documentation (including the field level completion instructions provided to law enforcement) and the definitions and results of crash data edit checks together within a common data management system. This information would then be made available through a publicly accessible website that could have traffic directed to it from multiple locations. The Massachusetts TRCC funded [Massachusetts Law Enforcement Crash Report E-Manual](#) will serve as a model for how public access for Wisconsin could be provided.

Provide a baseline measure for this specific and quantitative improvement:
The crash data dictionary is currently online and accessible only to those with WisTransPortal credentials. The crash form field-level help resides within the Traffic and Criminal Software (TraCS) F2 Help system and is not easily accessible outside of TraCS. Crash data quality edit check definitions and results are currently maintained on internal CRU systems and UWTOPS Lab teams Box folders. As a baseline, public access to data held in these disparate locations could arguably be measured to at "0". Upon completion of the project, the measurable would be the quantity of and type of traffic seen at the newly created web address. Views and downloads of specific content types would put a finer point on what the demands of the users were. This would be in addition to potential efficiencies that a proper database management system could bring for those entities that currently maintain the various forms of crash related data.

Project Objectives:
To migrate the authoritative crash data definitions and documentation to a database management system and to make these data publicly available through a portal similar to the Massachusetts system. Emphasis will be given to providing data dictionary and field-level documentation. It would not be the expectation that extensive coverage of data quality measures would be available in the first year of operation, but this effort will establish the practice of doing so for key fields with the expectation of expanding coverage in this domain subsequent to this project.

Itemized Budget:
This grant request is for $60,000 to cover the cost of development by the WisDOT Bureau of Information Technology Services (BITS) Development Services for the crash data definition website, for the database management system, and to aid in the migration of these data from their current locations into the database management system.

7. **Project Title:** Crash Data Quality and Data Linkages Reporting System
Organization Name: Crash Records Unit (CRU); Public Safety Technology Services Section; Bureau of Transportation Safety and Technical Services; Division of State Patrol (DSP) of the Wisconsin Department of Transportation.
Project Coordinator and Contact Information: Mike Satteson, Michael.Satteson@dot.wi.gov
Mike Satteson (Supervisor), Michael.Satteson@dot.wi.gov (There is currently an IS Senior level vacancy within the CRU, the individual who fills this position will become the coordinator of this porject.)
Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

o Crash	o EMS or Injury Surveillance System
o Citation or Adjudication	o Roadway
o Driver	o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):

o Accuracy	o Uniformity
o Completeness	o Accessibility
o Timeliness	o Integration

Problem Identification (Reference the Traffic Records Assessment, if applicable.):
At the national level, an emphasis continues to be placed upon expanding the integration of crash data with other available data sources.
https://www.transportation.gov/SafetyDataInitiative
That being the case, the development of new data features and the linkage of new data sources to the production crash database must only be done in a careful and deliberate manner. As an alternative, steps toward the creation of an internal mirror to the crash database where linkages to department data and other data sources may be developed have been begun. This grant request will facilitate data linkage and completeness efforts by prototyping them against a non-public facing, non-production database. Using this system, data linkages can be first be prototyped, tested, and have their ease and effectiveness evaluated. The most beneficial linkages can then be considered for promotion to the production database. By improving the implementation of data linkages development, it is expected that adoption at the production database will be streamlined.

This project is a follow-on to earlier TRCC projects that funded the preparation of DMV database data extract processes. The intent of this work was to develop the extract step of the extract, transform, and load (ETL) processes needed to mate selected and carefully curated DMV data to the crash data. In an additional step toward this goal, the Division of State Patrol (DSP) has put forth state funding, and is now installing the server hardware and database licenses needed to implement this database. This round of funding will support the transform and load steps needed to associate department data with mirrored crash data.

Grantees should expect to provide documentation that the grant has improved a core state safety database. Describe one specific and quantitative improvement to a core state traffic safety database that can be expected within one calendar year of grant approval:

This grant will fund the fruition of department data to crash data linkages that have been completed with previous grants. There are many aspects of crash, vehicle and person data that stand to benefit from this work, but the focus of this grant would be to concentrate upon several specific deliverables to be achieved within this grant cycle:

- Populate the driving license restriction report from the DMV driver database.
- Match crash form citation information against adjudicated citation in the DMV data.
- Retrieve the vehicle weight ratings for FMCSA reportable crashes, providing an edit check against the "Operating As" classification information recorded in the database.

Provide a baseline measure for this specific and quantitative improvement:
The baseline is that these data do not currently exist in the crash database and are unavailable in crash data extracts used for safety and policy analyses.

Project Objectives:
By the end of this project, the CRU expects to have implemented a non-production, data analytic, database server that mirrors the crash database and joins the crash data to other data sources both internal to and external to the department. This database will be used to create analysis data extracts having data that is unavailable to the crash database, foster data linkages to complete data unpopulated in the crash database and as a source for data queries to data in the crash database. Specific objectives include:
- Populate the driving license restriction report from the DMV driver database.
- Match crash form citation information against adjudicated citation in the DMV data.
- Retrieve the vehicle weight ratings for FMCSA reportable crashes, providing an edit check against the "Operating As" classification information recorded in the database.

These data will be available to department analysts in the form of enhanced data extracts. It will also be available for propagation to the main crash database, though this propagation process is beyond the scope of the current grant.

Itemized Budget:
This grant request is for $30,000 to fund the WisDOT Bureau of Information Technology Information Technology Development Services to assist the CRU with the DMV data model, identifying and tabulating key data fields to be used for the crash data quality and completeness work to be done with this system.

8. **Project Title:** Community Maps
   Organization Name: UW-Madison TOPS Lab
   Project Coordinator and Contact Information: Dr. Steven Parker sparker@engr.wisc.edu
   Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

o <u>Crash</u>	o EMS or Injury Surveillance System
o Citation or Adjudication	o Roadway
o Driver	o Vehicle

   Proposed Attribute of Data to Improve (*choose only one*):

o Accuracy	o Uniformity
o Completeness	o <u>Accessibility</u>
o Timeliness	o Integration

   Problem Identification (Reference the Traffic Records Assessment, if applicable.):
   Each year, thousands of Wisconsin residents are injured and killed in traffic crashes. In an effort to prevent these tragedies, the legislature has established a Traffic Safety Commission (TSC) in every county. These commissions are charged, per Wisconsin statute 83.013 (1), to maintain a map of traffic crashes within their county and to review those crashes on a quarterly basis for general awareness and to provide recommendations for corrective action, as appropriate. Because of the complexity of traffic crashes, the legislature required a breadth of expertise to serve on these commissions. TSC membership creates a

collaboration of stakeholders dedicated to reducing injuries and death on their roadways locally, regionally and statewide.

In support of the TSC mission, the Community Maps system was developed by the Wisconsin Department of Transportation (WisDOT) Bureau of Transportation Safety (BOTS) in partnership with the Wisconsin Traffic Operations and Safety (TOPS) Laboratory at the University of Wisconsin-Madison to provide an accessible and timely map of traffic crashes for each county. Community Maps is updated on a nightly basis from the WisDOT crash database management system and includes a record of all police reported crashes in Wisconsin for which geo-coded locations are available. Crash records that have not been geo-coded are included in the total number of crashes for a given jurisdiction but are not displayed on the map. The Community Maps system serves as an integral component of the County TSC quarterly meetings and as a vital information resource for ongoing collaborative efforts at all levels of government and within local communities to address traffic safety needs.

Provide a baseline measure for this specific and quantitative improvement:
Usage access patterns, derived from the Community Maps system logs, will serve as quantitative measure of improvement in data accessibility:
Methodology:
- The monthly average number of distinct users that log into Community Maps represents the overall utilization of the Advanced features statewide within the Traffic Safety Commissions and among safety stakeholders.
- The daily average number of website hits to Community Maps covers both public and advanced access and represents, more broadly, the utilization of the system by the general public and through directed outreach activities.

Baseline:
Distinct Logins
- Baseline: The monthly average number of distinct users that logged into Community Maps increased by 33% from 2018 to 2019, from 99 to 132 distinct users.
- The 2020 values are not available at this time.

Website Hits
- Baseline: The daily average number of website hits to Community Maps increased by 100% from 2018 to 2019, from 431 to 862 daily hits.
- The 2020 values are not available at this time.

Project Objectives:
A major update to the Community Maps system was rolled out in January 2018 to integrate the WisTransPortal DT4000 crash data as the primary data source in Community Maps. This roll out was coordinated with a significant outreach effort to the County TSCs and Wisconsin State Patrol regional dispatch centers. Community Maps is now updated on a nightly basis and includes crash records for all crash severity levels. The DT4000 data source integration represented a significant update to Community Maps in terms of the quantity of crash data available through the system, as well as the size, frequency, and complexity of queries that were subsequently required by stakeholders. The 2019 and 2020 project years have been primarily focused on improvements to the Basic and Advanced Search interfaces to sustain overall performance and further enhance the analysis capabilities of Community Maps. The 2021 project will continue in this line, with additional focus on improvements to the "KMZ Layers" feature to support the ability to incorporate external datasets into the Community Maps visualization and analytics capabilities.

Itemized Budget: $90,000

9. **Project Title:** Crash Outcomes and Data Evaluation System
   Organization Name: University of Wisconsin Traffic Operations and Safety Lab
   Project Coordinator and Contact Information:
   Andi Bill   bill@wisc.edu   ✆608-890-3425

Wayne Bigelow   bigelow@wisc.edu   608-334-8228

Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

- o Crash
- o Citation or Adjudication
- o Driver
- o <u>EMS or Injury Surveillance System</u>
- o Roadway
- o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):

- o Accuracy
- X Completeness
- o Timeliness
- o Uniformity
- XXX Accessibility
- XXX Integration

Problem Identification (Reference the Traffic Records Assessment, if applicable.):
The availability of data which combines crash related information with health outcomes data is critical for the evaluation of the traffic safety related efforts by Federal and State transportation agencies, as well as for State and local public health and law enforcement officials. Without linked traffic/health outcomes data it is difficult, if not impossible, to fully evaluate the impact of motor vehicle crashes on the health and safety of communities, and the success of traffic safety projects and demonstrations.

Provide a baseline measure for this specific and quantitative improvement:
To integrate inpatient hospital and emergency department data with crash data for 2020.
It is expected that there will be 290,000 crash and 21000 Inpatient/ED records in the linkage.
To add MMUCC data for injury related elements for 2017 (22,500 cases), 2018 (21200 cases) and 2019 (est. 21000 cases)

Project Objectives:

- o To add 3 (linked) MMUCC data elements (injury area, injury diagnosis and injury severity (MAIS)), as well as estimated costs, to the information available to the public through TOPS and on Community Maps for 2017-2019.
- o Generate Passenger Vehicle, Motorcycle, Pedestrian and Bicycle Crash Reports for 2020.
- o Develop Motorcycle Helmet, Alcohol Use and Seat Belt Nonuse Cost/Injury Analyses for 2020.
- o Generate Community and County based Crash Reports for 2014-2018 Using Linked CODES Data.
- o Generate Community and County based Hospital/ED Injury Reports for 2020.
- o Develop injury severity information for inpatient and ED data for 2020.
- o Merge inpatient hospital and ED data with crash data for 2020.
- o Derive medical and other injury specific cost information for CODES data.
- o Organize a steering committee to best determine how to utilize linked crash/health care data for use by TSCs.   It is envisioned that the committee would include BOTS policy analysts, law enforcement liasons and TSC members.

Itemized Budget: $114,581

10. **Project Title:** WisTransPortal Safety Data Warehouse Data Linkage Prototype
    Organization Name: UW-Madison TOPS Lab
    Project Coordinator and Contact Information: Dr. Steven Parker & Andrea Bill
    Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

- o <u>Crash</u>
- o <u>Citation or Adjudication</u>
- o <u>Driver</u>
- o EMS or Injury Surveillance System
- o Roadway
- o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):

- o Accuracy
- o Completeness
- o Timeliness
- o Uniformity
- o Accessibility
- o <u>Integration</u>

Problem Identification (Reference the Traffic Records Assessment, if applicable.):
Recent improvements to crash data collection and management in Wisconsin have afforded the opportunity to develop linkages from the Wisconsin crash database to external data sources in

order to enhance overall safety analysis capabilities. The underlying conceptual model for these linkages forms the basis for an idealized Traffic Records System whereby crash data is at the center of a "honeycomb" of integrated or linked core datasets consisting of vehicle, driver, roadway, citation/adjudication, and EMS/injury surveillance data.

Realizing the full potential of this opportunity is a multiyear undertaking that will require planning, agency coordination, and iterative development. This project will build upon the 2020 technical planning process by linking citation/adjudication data, which represents an important first step towards building longer term traffic records data warehouse capabilities to support traffic safety analysis and research in Wisconsin.

Provide a baseline measure for this specific and quantitative improvement:
The total number of linked traffic records datasets available through the WisTransPortal will serve as a quantitative measure of data integration.
Methodology:
  o   This measure will count the number of linked traffic records datasets per the "honeycomb" model described above. This linkage is established for traffic safety analytics within a data warehousing environment. Operational linkages (e.g., to provide data for the DMV driver record) are not counted in this measure.
Baseline:
  o   No linkages have been established at this time. This project will develop the first linkage between crash and citation/adjudication data.

Project Objectives:
This project will link a critical dataset (citation/adjudication data) to improve data driven safety research, analysis, and decision support on the WisTransPortal. It would also test the effectiveness of the architectural model to support a longer term build out of a crash data warehouse based on the NHTSA traffic safety information system "honeycomb" model for connected datasets, a fundamental long-term goal of the Wisconsin DT4000 crash database modernization project. It would also be able to outline what is need to link records from other external datasets identified in the WisDOT crash data pipeline project process, such as impaired driving test results from the Wisconsin State Lab of Hygiene.
Budget: $25,000

11. **Project Title:** WisTransPortal Predictive Crash Research & Development
Organization Name: UW-Madison TOPS Lab
Project Coordinator and Contact Information: Dr. Steven Parker sparker@engr.wisc.edu
Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

o <u>Crash</u>	o EMS or Injury Surveillance System
o Citation or Adjudication	o Roadway
o Driver	o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):

o Accuracy	o Uniformity
o Completeness	o <u>Accessibility</u>
o Timeliness	o Integration

Problem Identification (Reference the Traffic Records Assessment, if applicable.):
Recent advances in crash data collection and management in Wisconsin have afforded the opportunity to improve the effectiveness of traffic safety enforcement activities through data driven resource allocation. Initial "predictive analytics" decision support capabilities were developed and rolled out statewide during the 2017 project year in the form of a new heat map

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enabled crash analysis interface in the Community Maps system and as user selectable crash map layers in the Wisconsin State Patrol MACH system. Building upon this initial set of tools, an automated hot spot detection algorithm was developed during the 2018 project year and rolled into the Community Maps crash analysis interface in early 2019 to complement the heat map capability.

The heat map and hot spot detection algorithms are now used regularly by law enforcement agencies statewide and have been used to generate targeted enforcement areas for three predictive analytics pilots conducted by the Wisconsin State Patrol.   Important objectives going forward are to refine the detection algorithm and reporting capabilities based on user feedback and analysis from the pilot enforcement activities. Additionally, there is a need to demonstrate the effectiveness of the Predictive Analytics tools and program through quantitative and qualitative measures. When completed, this project will establish a critical feedback loop between crash reporting and LEAs. It will also allow LEAs to act more proactively to prevent crashes, rather than by responding to them.

Provide a baseline measure for this specific and quantitative improvement:

Usage access patterns, derived from the Community Maps system logs, will serve as quantitative measure of improvement in data accessibility:

Methodology:
- o The monthly average number of distinct users that log into Community Maps "Analyze" interface represents the overall utilization of the predictive analytics features statewide within law enforcement agencies and among safety stakeholders.

Baseline:
- o The monthly average number of distinct users that logged into the Community Maps "Analyze" interface increased by 28% from 2019 to 2020, from 46 to 59 distinct users.
- o The 2020 values are not available at this time.

Project Objectives:

This project will allow the UW TOPS Lab to continue developing best practices for predicting where and under what conditions crashes occur. This would allow LEAs—and the State Patrol in particular—to expend resources in the most efficient manner possible by being in place where and when crashes are most likely to occur. This visibility will lessen risky driver behaviors and may also allow for better crash outcomes by lessening response times. Specific objectives will include algorithmic improvements based on performance results from the new system and the integration of additional data overlays, such a traffic citation data.

Budget: $65,000

12. **Project Title:** Modernize the Fatality Analysis Reporting System (FARS) processes and Improve the Crash Data Finalization processes

Organization Name: UW-Madison TOPS Lab

Project Coordinator and Contact Information: Dr. Steven Parker sparker@engr.wisc.edu

Core State Safety Database to Improve (*choose only one, unless selecting integration below*):

o <u>Crash</u>	o EMS or Injury Surveillance System
o Citation or Adjudication	o Roadway
o Driver	o Vehicle

Proposed Attribute of Data to Improve (*choose only one*):

o Accuracy	o Uniformity
o Completeness	o Accessibility
o <u>Timeliness</u>	o Integration

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Problem Identification (Reference the Traffic Records Assessment, if applicable.):
1. Current FARS processes are designed around the accident system (prior to Jan 01, 2017). These activities are supported by an in-house developed Access Database (DB). There is currently no connection between this accident system and the new crash database and resolve system (from Jan 01, 2017). FARS workflows and reporting are managed entirely manually. This project would develop the crash database and resolve system features needed to modernize these processes so as to take full advantage of the new Crash Database and Resolve Systems. This project would eliminate the FARS manual processes, improving crash fatality data quality and timeliness.
2. After the new Crash Database and Resolve System go live on Jan 2017, we (TOPS, BOTS and BSS) had to put lot of effort to finalize the 2017 crash data. This effort took more than 6 months to release the annual crash data to all stakeholders. A list of consistency checks that were performed is managed by and available from the Crash Records Unit (CRU).

Provide a baseline measure for this specific and quantitative improvement:
This is an enhancements project to add new issue tracking and problem resolution features to the Crash Database and Resolve System. The percentage of FARS processes and data consistency checks tracked through the new system will serve as a quantitative measure of improvement in data timeliness. In subsequent years, these tools will enable the ability to measure improvements to the overall time from problem identification to resolution.
Baseline:
All FARS processes and data consistency checks are currently managed outside of the system through ad-hoc tracking tools. This measure will identify the percent of those cases that are subsequently managed formally through the new Resolve System issue tracking interfaces.

Project Objectives:
1. Improve the FARS processes by taking advantage of the capabilities of the crash database and resolve system, eliminating a significant burden of manual (and often paper based) data processing and reconciliation. These process improvements will improve all aspects of fatal crash data. The quality factors most improved will be Timeliness, Accuracy, Completeness and Accessibility.
2. Improve all aspects of crash data quality by implementing a near real time system of data consistency checks backed by prompt and systematic data queries. As crash data quality improves in response to this systematic approach and system improvements that it inspires (e.g. crash form enhancements, better training and documentation and adoption of agency best practices), more refined checks can be implemented within this framework to facilitate continuous data quality improvements.

Budget: $117,000
13. **Project Title:** Wisconsin Ignition Interlock Devices (IID) Data Dictionary
Organization Name: TOPS Laboratory, University of Wisconsin – Madison
Project Coordinator and Contact Information
Dr. David Noyce, Professor and Executive Associate Dean
TOPS Laboratory, Department of Civil and Environmental Engineering, University of Wisconsin-
2205 Engineering Hall, Madison, WI 53706
Core State Safety Database to Improve (*choose only one, unless selecting integration below*)

☐Crash	☒Driver
☐Citation or Adjudication	☐EMS or Injury Surveillance System

☐Roadway   ☐Vehicle

Proposed Attribute of Data to Improve (*choose only one*)

☐Accuracy   ☒Uniformity

☐Completeness   ☐Accessibility

☐Timeliness   ☐Integration

Problem Identification

Ignition Interlock Devices (IID) are intended to reduce the recurrence of impaired driving on Wisconsin roadways. There is increasing interest in the potential benefits of IID; however, there is limited data available to monitor and quantify the effectiveness of the program in Wisconsin. There are currently four IID models certified for use in Wisconsin and installation is carried out by service centers throughout the state. Since certified IID models are from different manufacturers, data is not reported in the same format. Thus, there are not consistent definitions and data dictionary.

Provide a baseline measure for this specific and quantitative improvement

Consistency / Uniformity.

Project Objectives

As part of this project, the development of uniform definitions and standardized IID data dictionary will be conducted. The research team will collaborate with the WisDOT Bureau of Transportation Safety Chemical Test Section, vendors, and other stakeholders. The evaluation plan will consist of identifying existing IID programs, definitions, and data dictionaries from other states. Currently, there is not an IID data repository, and the development of standardized definitions and data dictionary will contribute with future efforts to assemble a database for the program in Wisconsin.

Itemized Budget

The estimated budget for this project is $ 50,000 including:

Principal Investigator – 1% effort over project duration

TOPS Assistant Researcher – 4.5 months effort over project duration

Signature

The undersigned individual acknowledges that the Traffic Records Coordinating Committee has approved the <u>State of Wisconsin's Traffic Safety Information System Improvements Strategic Plan, 2020</u>, which supports the State's application for federal funds. The members of the committee will commit the resources of their organizations to its success, as witnessed by the signature on this document as of this date: _____ July 2020.

State of Wisconsin Traffic Safety Information System Improvements Strategic Plan, 2021.

_____

David Pabst, Director
Bureau of Transportation Safety
Wisconsin Department of Transportation
State Highway Safety Coordinator

1. Traffic Records Coordination Contact Information

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1415 Engineering Dr
Madison, WI 53706

608.354.4010
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APPENDICES

1. TRCC Policy Group Members and Affiliation
2. TRCC Technical Group Members, File, Function and Affiliation
3. Wisconsin's Existing Data Sources and Questionnaire (Filled out by TRCC Members on 3-2-2017
4. Sample Worksheet (Filled out by TRCC Members on 4-5-2017)

APPENDIX 1
TRCC Policy Group Members and Affiliation

Craig Thompson
Secretary of the Department of Transportation
Governor's Representative for Highway Safety
(Roadway, Crash, Driver, Citation/Conviction, Vehicle Files)

David Pabst, Director
WisDOT Bureau of Transportation Safety
State Highway Safety Coordinator

Andrea Palm
Secretary of the Department of Health Services
State Health Officer and Administrator
(Injury Files – Ambulance Run, Emergency Department, Hospital Discharge, Trauma Registry)

Brian O'Keefe
Department of Justice, Division of Criminal Investigation

Randy R Koschnick
Director of State Courts Office

David Cagigal
Chief Information Officer, Administrator
Department of Administration, Division of Enterprise Technology

Major General Donald P. Dunbar, Administrator
Department of Military Affairs, Division of Emergency Government

APPENDIX 2

Member Organizations	Representative		Database Representation
2020 TRCC MEMBERS			
	DOT		
SHSO Co-Chair (Tie vote)	Vande Hey	Laura	Crash
UW TOPS Lab Co-Chair	Bill	Andrea	Crash
OPFI	Gilchrist	John	
WSP -	Harvey	Dave	Citation or Adjudication
WSP - TraCS (alt)			Citation or Adjudication
WSP BDS	Schwartz	Darlene	Driver
DMV/BVS (alt)	Galbraith	Timothy	Vehicle
DTIM/BSHP (alt)	Schieldt	Kelly	Roadway
DBM/BITS - GIS	Moline	Mitch	Crash
DTSD/BHO	Adams	Angela	Roadway
DTSD/BHO	Szymkowski	Rebecca	Roadway
DTSD/BHO (alt)	Porter	Brian	Roadway
BOTS	Corsi	Larry	Crash
DSPS	Satteson	Mike	Crash
BOTS	Barkholtz	Heather	Citation or Adjudication
DOT	Murkve	Jeff	Vehicle
	State Agencies and Organizations		
DOJ/CIB TIME	Doberstein	Courtney	Citation or Adjudication
DOJ	Fortunato	Dennis	Citation or Adjudication
OSC-CCAP	Olson	Andrea	Citation or Adjudication
OSC-CCAP (alt)	Hicks	Kim	Citation or Adjudication
DHS/DPH-EMS			EMS/Injury Surveillance
DHS/DPH/BHIP	Garcia-Lago	Erica	EMS/Injury Surveillance
DOJ	Jenswold	Tara	Citation or Adjudication
Menominee Tribal PD	Warrington	Warren	
DPI	Dean	Brian	Driver
	UW		
UW CHSRA-CODES	Bigelow	Wayne	EMS/Injury Surveillance
UW TOPS Lab (alt)	Parker	Steven	Crash
CIREN Center Milwaukee	Halloway	Dale	EMS/Injury Surveillance
	Local Agencies & Organizations		
AAA	Jarmusz	Nick	
Jefferson County	Udovich	Brian	
Onalaska PD	Berg	Tim	
Dane County SO	Larsh	Chris	
Madison PD	Fiore	Tony	afiore@cityofmadison.com
Madison PD (Alt)	Reilly	Deanna	
	Federal Partners		
NHTSA	Wray	Kaci	
FHWA/WI Division	Jolicoeur	David	
FMCSA/WI Division	Oesterle	Mark	
FMCSA/WI Division	Gessler	Mark	

Wisconsin's Existing Data Sources and Questionnaire (Filled out by TRCC Members on 3-2-2017)

CRASHES	• DT4000 (either in the DB2 or w/in TransPortal) • Large Truck and Bus Crash File (within the DSP Motor Carrier and Inspection Section) • Motor Carrier Management Information System (within the DSP Motor Carrier and Inspection Section) • SafetyNet (commercial vehicle crashes) (stored at DTIM)
EXPOSURE	• TRADAS (DTIM/Bureau of State Highway Programs) • Statewide Traffic Operations Center Volume, Speed, and Occupancy Data/VSPOC (stored at DTSD Southeast Region) • VMT data from the Forecasting Division
ROADWAY	• Highway Performance Monitoring System (HPMS) • State Trunk Network (GIS database of centerline files) (DTIM) • Local Control Management Database • State Deficiency File • Bridge Information System • TRADAS (DTIM) • Wisconsin Information System for Local Roads (WISLR) (stored at DTIM)
CITATION OR ADJUDICATION	• State Citation File (stored at DMV) • Alcohol and Drug Tests (DOT and State Hygiene Lab) • Alcohol Breath Test Data (DSP/BOTS Chemical Test Section) • Wisconsin Incident-Based Reporting System (WIBRS) (stored at Office of Justice Assistance Statistical Analysis Center) • WI District Attorney's Information Technology and Prosecutor Technology for Case Tracking (PROTECT) (Department of Administration) • Consolidated Court Automation Project (CCAP) (State Courts Office) • Court-Ordered Withdrawal System (COWS) (DMV/Bureau of Driver Services) • Wisconsin Law Enforcement Network (WILENET) (DOJ) • Transaction Information for Management of Enforcement (TIME) system (located at the WI DOJ/Crime Information Bureau)
VEHICLE	• Vehicle Registration Information (DMV/Bureau of Vehicle Services) • Commercial Registration Information (International Registration Program) (DMV) • International Fuel Tax Association (DMV)
DRIVER	• State Driver Record File • Problem Driver Pointer System (DMV/Bureau of Driver Services) • Motor Carrier Management Information Systems (WSP/Motor Carrier and Inspection Section) • SAFETYNET (WSP/Motor Carrier and Inspection Section)
INJURY CONTROL/EMS	• Wisconsin Ambulance Run Data System (WARDS) (DHS) • Wisconsin Emergency Department Visit Data (through Richard Miller DHS/DPH) • Wisconsin Hospital Inpatient Discharge Data (Richard Miller Department of Health Service /Department of Public Health) • State Trauma Care System Registry • CasePoint Coroner Data System(Department of Health Services, Division of Public Health, Bureau of Community Health Promotion) • Crash Outcome Data Evaluation System (CODES) (housed at Center for Health Systems Research and Analysis, College of Engineering at UW-Madison)

ACCESSIBILITY

1.) Are the above data sources as accessible as they can be for the following recipients? Some of the records are confidential, and not intended for certain groups. Place names of data sources next to the recipients below:

    a. Staff at DOT

       _____
       _____

    b. Outside government entities (including UW)

       _____
       _____

    c. The public

       _____
       _____

    d. The media

       _____
       _____

    e. Other relevant groups?

       _____
       _____

2.) Are there certain limitations on the data access i.e (for reasons of privacy), that are no longer necessary? Conversely, are there fields within the data that are open to certain groups (i.e. the public) that should be restricted?

_____
_____
_____

3.) For each of the data sources and each of the recipients, think of the procedures for accessing the data. Is the data pull done manually or is it automatic? If done manually, are there strategies that could be utilized to make this process more automatic? Think of the people/groups you would need to talk to in order to make this happen.

_____
_____
_____

4.) Think of the web portals used to access the data. What are some examples of portals that are unclear/confusing and which could be simplified? List below.

_____
_____
_____

INTEGRATION

1.) Is each data source linkable with others (think specifically about specific data sets as much as possible)? Have you recently tried to link data sheets together, but lacked a common field? Please write down specific examples here.

_____
_____
_____

2.) If the data *is* linked, how is it linked (automatic or manually)? Is it time-intensive to perform these linkages? What are ways that you and your group can think of to ease and improve linkages?

_____
_____
_____

3.) Is the data geo-coded or inherently geographic? This could help with GIS analysis. Think of databases you have looked at that were not geo-coded but which could have been. Please list below.

_____
_____
_____

TIMELINESS

1.) How current is the data (after an event)? If digital or oral requests for data need to be made, what is the lag time for this and does this seriously impede analysis?

_____
_____
_____

2.) How often is relevant data updated? Is this done automatically or an ad-hoc basis?

_____
_____
_____

3.) If the data needs to be changed, who is responsible for changing it, how long does that process take, and is there a lag time to when that data is updated for all users? How many approvals are required to change data and are there ways to reduce the number of necessary approvals, while still maintaining data accuracy?

_____
_____
_____

4.) Are there ways to speed up the timeliness of your work group's data? What resources would be needed to accomplish this? Think specifically of bottlenecks in the reporting process here.

_____
_____
_____

COMPLETENESS

1. Are data sources complete internally (i.e: Are data sheets containing all the fields and rows that they should be)? Think of specific data sheets that have impeded your analysis by missing certain fields/columns/rows.

_____
_____
_____

2. Are data sources externally complete (i.e: Are data sources missing entire sheets that may be helpful to your group)? Pinpoint, as much as possible, the individual, or at least general office division that you would need to talk to about this.

_____
_____
_____

3.) Does the data geographically cover the necessary area? If sampling is done, is it representative of the sampling frame? Is the data temporally complete?

_____
_____
_____

CONSISTENCY/UNIFORMITY

1. Is relevant data adhering to national and state standards? How often do staff review possible changes in standards?

_____
_____
_____

ACCURACY/LACK OF ERRORS

1. Is relevant data entered manually or automatically? If entered manually, what steps must your group have in place to validate the accuracy of data internally (within your division, for example)? How often is this done and do you think that this frequency is adequate? If done automatically, are there automatic validation procedures in place?

_____
_____
_____

2. What validation processes do you have to verify the accuracy of data sources that arrive from outside divisions or even outside the DOT? If no validation procedures are currently being used, think about simple validation procedures that could efficiently put in place. How you could make other relevant members of your division aware of these best practices?

_____
_____
_____

3.) Are data sources generally precise enough (either for your own usage or to hit Federal/State/internal requirements)?

_____
_____
_____

Appendix 4	
Motorcycles Registerd By County (2019)	
	Cycle
Ashland	836
Barron	3,169
Bayfield	1,197
Brown	14,523
Chippewa	4,421
Columbia	3,897
Dane	20,878
Dodge	6,451
Door	3,476
Douglas	2,440
Eau Claire	4,951
Fond Du Lac	6,974
Grant	3,502
Green	2,966
Kenosha	8,815
La Crosse	5,796
Langlade	1,353
Lincoln	2,387
Manitowoc	7,077
Marathon	8,576
Milwaukee	26,143
Monroe	3,284
Oneida	3,048
Outagamie	12,451
Ozaukee	5,515
Rock	9,134
Sauk	4,222
Shawano	2,865
Sheboygan	9,308
St. Croix	6,138
Taylor	1,440
Vernon	1,847
Washington	9,728
Waukesha	22,869
Winnebago	10,061
Wood	5,400
Unknown	850
Total Population Covered	247,988
Total Registrations	331,356
Percent	74.84%

Appendix 5:
Partners, Committees, and Organizations (*not an exhaustive list*)

AAA
https://www.aaafoundation.org/

AARP www.aarp.org

AT&T-It Can Wait Program
http://www.itcanwait.com/appsand-tools

Alcohol and Other Drug Abuse Program
http://dpi.wi.gov/sspw/aodaprog.html

Children's Hospital of Wisconsin
http://www.chw.org/

Federal Highway Administration
www.fhwa.dot.gov

Ford Driving Skills for Life
www.drivingskillsforlife.com

Fox47 – MSG2TEENS
http://fox47.com/sections/contests/msg2teens/

Green Bay Packers
http://www.packers.com/

Governors Highway Safety Association
http://www.ghsa.org/

Governor's Bicycle Coordinating Council

Governor's Council on Highway Safety

HSP stakeholder input:
May 2016

La Crosse OWI Treatment Court
http://www.co.lacrosse.wi.us/humanservices/js/owi.htm

Law Enforcement Agencies
MADD
www.madd.org

Marshfield Clinic – Center for Community Outreach
www.marshfieldclinic.org/patients/?page=cco

Medical College of Wisconsin – Injury Research Center
http://www.mcw.edu/Injury-Research-Center.htm

National Highway Traffic Safety Administration
www.nhtsa.dot.gov

Office of Juvenile Justice and Delinquency Prevention
http://ojjdp.ncjrs.org

Operation Click
http://operationclick.com/

Operation Lifesaver
http://oli.org/

Pacific Institute for Research and Evaluation
www.pire.org

Rural Mutual Insurance
http://www.ruralins.com/

Safe Kids-Southeast Wisconsin
http://www.safekidswi.org/SafeKidsWisconsinSoutheastWisconsin.asp

Safe Routes to School
http://www.dot.wisconsin.gov/localgov/aid/saferoutes.htm

State Council on Alcohol and other Drug Abuse
www.scaoda.state.wi.us

Statewide Impaired Driving Work Group

Substance Abuse and Mental Health Services Administration
www.samhsa.gov/

Tavern League of Wisconsin
www.tlw.org

Traffic Records Coordinating Committee

Traffic Safety Commissions (72 county organizations)

University of Wisconsin System Administration
WE Bike, etc. www.webike.org

Wisconsin Association of Women

Highway Safety Leaders
Wisconsin Badgers
http://www.uwbadgers.com/

Wisconsin Bike Fed
http://www.bfw.org/

Wisconsin Chiefs of Police Association (WCPA)
http://www.wichiefs.org/

Wisconsin Department of Health Services
http://dhs.wisconsin.gov

Wisconsin Department of Children and Families
http://dcf.wi.gov/

Wisconsin Department of Justice
http://www.doj.state.wi.us/

Wisconsin Department of Natural Resources
http://dnr.wi.gov/

Wisconsin Department of Tourism
www.travelwisconsin.com

WisDOT- Division of Motor Vehicles

WisDOT- Planning

Wisconsin Interscholastic Athletic Association
http://www.wiaawi.org/

Wisconsin Juvenile Officers Association
www.wjoa.com.

Wisconsin Highway Safety Coordinators Association

Wisconsin Partnership for Activity and Nutrition (WI PAN)

Wisconsin Safety Patrol Congress
Wisconsin Safety Patrols, Inc.
http://www.wisconsinsafetypatrol.com/

Wisconsin State Laboratory of Hygiene
www.slh.wisc.edu

Wisconsin State Patrol Alumni Association
http://wspalumni.org/

Wisconsin Technical College System
http://www.wtcsystem.edu/

Wisconsin Traffic Operations and
Safety Laboratory
http://www.topslab.wisc.edu/

Wisconsin Traffic Safety Officer's
Association
http://wtsoa.org/siteFiles/

Appendix 6

				Fed ID	Amount	Description
			PA	2021-10-01-PA	$320,000.00	Planning and Admin
			OP	2021-20-01-OP	$85,000.00	OP Manager
PA	$320,000.00		OP	2021-20-05-OP	$1,577,000.00	TSEP
OP	$2,250,000.00		OP	2021-20-06-OP	$400,000.00	Mobilization
AL	$1,095,000.00		OP	2021-20-06-OP	$188,000.00	Seats
PT	$1,000,000.00		M2	2021-25-02-M2	$200,000.00	PI&E Occupant
PS	$420,000.00		M2	2021-25-03-M2	$230,000.00	CPS Tech, Training
EM	$100,000.00		M2	2021-25-05-M2	$400,000.00	TSEP
TR	$260,000.00		M2	2021-25-06-M2	$54,000.00	Seats
CP	$1,395,000.00		M2	2021-25-09-M2	$81,000.00	Survey
MC	$350,000.00		AL	2021-30-03-AL	$350,000.00	TSRP
PM	$500,000.00		AL	2021-30-04-AL	$120,000.00	Festival Grants
Total 402	$7,690,000.00		AL	2021-30-06-AL	$600,000.00	Drive Sober
			AL	2021-30-09-AL	$25,000.00	Survey
405b	$965,000.00		M5	2021-31-01-M5	$85,000.00	AL Manager
405c	$1,172,492.00		M5	2021-31-02-M5	$250,000.00	PI&E Impaired
405d	$3,599,000.00		M5	2021-31-03-M5	$442,000.00	DRE
405f	$90,000.00		M5	2021-31-03-M5	$75,000.00	JOL
Total 405	$5,826,492.00		M5	2021-31-03-M5	$20,000.00	DWI Courts
			M5	2021-31-04-M5	$70,000.00	24/7
All Funds	$13,516,492.00		M5	2021-31-05-M5	$2,347,000.00	TSEP
			M5	2021-31-07-M5	$250,000.00	Paid Media Impaired
			M5	2021-31-09-M5	$60,000.00	Roadside Drugs
			State	2021-39-04-WI	$900,000.00	Tavern League
			PT	2021-40-05-PT	$1,000,000.00	TSEP
			TR	2021-50-01-TR	$260,000.00	Analysts
			M3	2021-58-03-M3	$1,107,492.00	TRCC Projects
			M3	2021-58-06-M3	$65,000.00	Laptops
			EM	2021-60-02-EM	$50,000.00	PI&E EMS
			EM	2021-60-03-EM	$50,000.00	Training
			MC	2021-70-04-MC	$200,000.00	Training Awareness
			MC	2021-70-05-MC	$70,000.00	Enforcement
			MC	2021-70-07-MC	$50,000.00	Media MC
			MC	2021-70-09-MC	$30,000.00	Awareness
			405f	2021-72-04-M9	$30,000.00	Training
			405f	2021-72-06-M9	$60,000.00	Equipment
		535		2021-79-01-WI	$85,000.00	Program Manager
		535		2021-79-04-WI	$463,000.00	Training
		535		2021-79-07-WI	$180,000.00	Awareness
			PS	2021-80-02-PS	$20,000.00	PI&E PS
			PS	2021-80-03-PS	$10,000.00	Safe Bicycling
			PS	2021-80-03-PS	$30,000.00	

			PS	2021-80-03-PS	$35,000.00	LEA Training
			PS	2021-80-04-PS	$10,000.00	Zone
			PS	2021-80-04-PS	$30,000.00	MilWalkee
			PS	2021-80-05-PS	$260,000.00	TSEP
			PS	2021-80-06-PS	$5,000.00	Rodeos
			PS	2021-80-09-PS	$20,000.00	Pilot
		562		2021-89-01-WI	$87,000.00	Program Manager
			CP	2021-90-01-CP	$450,000.00	LELs/RPMs
			CP	2021-90-02-CP	$480,000.00	PI&E CP
			CP	2021-90-04-CP	$90,000.00	WIse-Grants
			CP	2021-90-06-CP	$375,000.00	GCHS
			PM	2021-90-07-PM	$500,000.00	Paid Media CP