WISCONSIN

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2018 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

Table of Contents

Disclaimer

Protection of Data from Discovery Admission into Evidence

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

The following report outlines the details of projects obligated in SFY2018 for Wisconsin's Highway Safety Improvement Program (HSIP). Also included are program methodologies, historical crash data and safety trends, information on subprograms, and project evaluation data.

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP Reporting Guidance dated December 29, 2016 and consists of five sections: program structure, progress in implementing highway safety improvement projects, progress in achieving safety outcomes and performance targets, effectiveness of the improvements and compliance assessment.

Program Structure

Program Administration

Describe the general structure of the HSIP in the State.

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. Projects are identified by state DOT regional safety engineers on the state-owned system and by local government staff on the local system. All candidate projects must compile crash data and develop a proposed treatment strategy as part of a competitive application process. The applications are considered through a peer review process that involves statewide and regional safety engineering staff, as well as HSIP program management staff.

Where is HSIP staff located within the State DOT?

Other-Programming

Enter additional comments here to clarify your response for this question or add supporting information.

How are HSIP funds allocated in a State?

Central Office via Statewide Competitive Application Process

Enter additional comments here to clarify your response for this question or add supporting information.

Describe how local and tribal roads are addressed as part of HSIP.

HSIP applications from local and tribal governments are solicited by the WisDOT Regions as part of the regular HSIP Program. All HSIP applications derived from local governments are selected and submitted voluntarily by local governments. Projects on the local system or sponsored by local or tribal governments must meet the same requirements and follow the same process as HSIP applications submitted by WisDOT Regions for improvements on the State Trunk Network.

In addition, Wisconsin has continued the High Risk Rural Roads Program (HRRRP) despite its formal elimination in MAP-21. Wisconsin has developed a statewide data analysis methodology which identifies county rural roads with run-off-road non-intersection crash issues. Counties with such corridors are offered a field review of the corridor that identifies potential treatments and are invited to apply for HSIP funding to implement some or all of the identified treatment options. A primary goal of the HRRRP is to install low-cost safety treatments on these roadways to mitigate KA crash rates as quickly as possible. It is unlikely these county trunk highways would receive federal investments outside of the HRRRP.

Identify which internal partners (e.g., State departments of transportation (DOTs) Bureaus, Divisions) are involved with HSIP planning.

Design
Planning
Operations
Other-Division of State Patrol
Other-Division of Motor Vehicles

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with internal partners.

The HSIP Program is managed by WisDOT's Division of Transportation Investment Management (DTIM) and the Bureau of State of Highway Programs (BSHP). DTIM/BSHP makes all final application approvals or denials and related project change or cost increase requests. However, DTIM/BSHP coordinates its efforts with several internal partners that both directly and indirectly influence the decision making process. Below is a summary of these partners and their role in the program.

- Division of Motor Vehicles (DMV): DMV receives, edits, and maintains all law enforcement crash report files.

- Traffic Safety Council (TSC): The TSC is comprised of representatives from Division of Transportation System Development (DTSD), DTIM, DMV, Division of State Patrol (DSP), and various Executive Offices within WisDOT. Among this group's responsibilities is developing and maintaining the Wisconsin Strategic Highway Safety Plan (SHSP), which helps guide the safety efforts of the HSIP Program.

- Safety Engineer Executive Group (SEEG): This is a high-level group comprised of representatives from DTSD and DTIM management. Its focus is to identify safety trends and issues to develop and offer direction and initiatives to both the HSIP Program and the TSC on important safety engineering issues throughout the state.

- Traffic Safety Engineering Workgroup (TSEWG): TSEWG is comprised of the State HSIP Coordinator, State Traffic Safety Engineer, and the Regional Traffic Safety Engineers. In some cases, the Regional HSIP Coordinators also participate. This group identifies and evaluates potential safety initiatives both within and outside of the HSIP Program, provides peer support, and reviews proposed HSIP projects. After a group evaluation, a recommendation to approve or not approve is forwarded to the State HSIP Coordinator for final review.

- State Project Oversight Engineers: The State Project Oversight Engineers are a critical component of the joint process with the TSEWG for application review and approval. The DTSD State Project Oversight Engineers, Regional Traffic Safety Engineers, the State Traffic Safety Engineer, and the State HSIP Coordinator provide a

consensus approval or disapproval of HSIP funding after a comprehensive in-person peer review. Each Region has one Project Oversight Engineer. State Project Oversight Engineers only review applications originating from the Region in which they are assigned. This consensus approval or disapproval is advisory to the DTIM/BSHP.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Local Government Agency
Academia/University
FHWA

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with external partners.

The HSIP is fully coordinated and integrated with the work of other organizations, associations, and stakeholders (e.g., law enforcement, academia, local governments, MPOs) that play a role in reducing fatalities and serious injuries. One of the basic foundations of the HSIP is the direct linkage between the data-driven priorities established in the Strategic Highway Safety Plan (SHSP) and the identification, development and implementation of HSIP projects. Local and regional governments alike which contribute towards achieving the goals and objectives of the SHSP help guide program decisions and project selections. More specifically, wh ere there are a high percentage of crashes that occur off the State system, WisDOT works with local jurisdictions to help them develop and implement HSIP projects that address priority safety issues on locally-owned roadways. This is either done by locals doing work as local forced accounts or they are let by WisDOT.

Have any program administration practices used to implement the HSIP changed since the last reporting period?

No

Are there any other aspects of HSIP Administration on which the State would like to elaborate?

No

Program Methodology

Does the State have an HSIP manual or similar that clearly describes HSIP planning, implementation and evaluation processes?

Yes

To upload a copy of the State processes, attach files below.

Select the programs that are administered under the HSIP.

Median Barrier

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Median Barrier
Date of Program Methodology:	1/1/2005

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
All crashes Other-All CMC	Other-Centerline miles	Functional classification

What project identification methodology was used for this program? [Check all that apply]

Crash frequency

Are local roads (non-state owned and operated) included or addressed in this program?

No

Are local road projects identified using the same methodology as state roads?

Describe the methodology used to identify local road projects as part of this program.

How are projects under this program advanced for implementation?

Other-Non-competitive application process

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Available funding : 1

What percentage of HSIP funds address systemic improvements?

28

HSIP funds are used to address which of the following systemic improvements? Please check all that apply.

Cable Median Barriers

Enter additional comments here to clarify your response for this question or add supporting information.

What process is used to identify potential countermeasures? [Check all that apply]

Engineering Study
Road Safety Assessment
Crash data analysis
Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
Other-County Traffic Safety Commission recommendations

Enter additional comments here to clarify your response for this question or add supporting information.

Does the State HSIP consider connected vehicles and ITS technologies?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Does the State use the Highway Safety Manual to support HSIP efforts?

Yes

Please describe how the State uses the HSM to support HSIP efforts.

HSIP Project Prioritization
Wisconsin evaluates potential HSIP projects by comparing the estimated crash reduction benefits expected from the project and the cost of that project. Crash reduction benefits are estimated by multiplying up to two crash modification factors (CMF) by 5-years of observed crash data. CMFs and target crashes are identified by the safety analyst and a spreadsheet tool is used to calculate the estimated crash reduction benefits. The spreadsheet tool incorporates the WisDOT CMF Table and logic described in our statewide policy described at the link below.

http://wisconsindot.gov/dtsdManuals/traffic-ops/manuals-and-standards/teops/12-03.pdf

HSIP Safety Effectiveness Evaluations
Wisconsin evaluates the effectiveness of all HSIP projects that were prioritized based on crash history. The Empirical-Bayes Before/After Safety Evaluation method, described in chapter 9 of the Highway Safety Manual, is used for these safety effectiveness evaluations. No evaluations are completed for systemic safety projects within our HSIP.

Have any program methodology practices used to implement the HSIP changed since the last reporting period?

No

Are there any other aspects of the HSIP methodology on which the State would like to elaborate?

Yes

Describe other aspects of the HSIP methodology on which the State would like to elaborate.

A key component in the development of the HSIP is the Project Evaluation Factor (PEF). The PEF is a measurement that is used to evaluate and compare proposed projects. It provides a comparison of the estimated crash reduction potential of a proposed improvement with the overall cost of the project. Although it has similarities to a benefit/cost analysis, it does not include all of the elements of a traditional benefit/cost analysis tool for ranking the relative merits of a group of projects, and should not be compared to a benefit/cost analysis.

An Excel-based program is used to perform a safety project analysis and computes the PEF. The following provides a general overview of several key elements of the PEF:

• All costs associated with the project (design, utilities, real estate, construction, etc.) must be included in the PEF calculation, regardless of whether HSIP funds are requested for all elements of the project. Cost estimates must be in current year dollars.

• The analysis requires crash data from the most recent 5-year period for which crash information is available. Ideally, the analysis would include crash data from the most recent calendar year. For example, an analysis submitted in 2016 would include crash information from the 2011-2015 period. However, given that: (a) it can take several months after the end of a calendar year for the Department to finalize crash information and integrate the crash information into departmental datasets; and (b) it can take several months for a safety

proposal to be developed and scoped, the use of an additional, older year of crash data is allowed. For example, an analysis submitted in calendar year 2016 may use crash data from either the 2011-2015 period or the 2010-2014 period.

For local projects, it is the responsibility of the project sponsor to compile and provide the required crash data to the regional office for the PEF evaluation.

• Although Wisconsin designs solutions to reduce all crashes, a number of targeted engineering, educational and enforcement efforts have been implemented with the defined goal of reducing crashes involving serious injuries and fatalities. Because of this focus on reducing serious injuries and fatalities, the PEF scoring mechanism assigns higher values to Type A and Fatal crashes.

• The current values used within the PEF tool to calculate the potential crash reduction benefits of a safety improvement are influenced by the Highway Safety Manual (HSM) developed by the American Association of State Highway and Transportation Officials (AASHTO).

• Standardized crash reduction factors are included in the Excel tool for a wide range of safety improvements. These factors are based on national safety research and are regularly updated as new research becomes available.

• Projects generally require a PEF of 1.0 or greater for approval. However, the HSIP Review Committee acknowledges the PEF contains many variables and that sometimes additional expense is needed to sufficiently address a safety issue. As such, the HSIP Review Committee may consider applications with a PEF greater than or equal to 0.9 for approval. Projects with a PEF less than 0.9 will not be approved.

• Projects treating locations identified on the annual "Locations of Interest Report" (LOIR) may be approved with a PEF of 0.50 or greater. LOIR locations with a PEF less than 0.5 will not be approved.

• The PEF requirement is generally waived for projects identified through a statewide safety analysis. The PEF requirement is currently waived for:

o High Risk Rural Roads Program projects

o Crossover Median Crash Initiative projects

o Bridge Friction Treatment Initiative projects

o Beam Guard Initiative projects

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

Enter additional comments here to clarify your response for this question or add supporting information.

Enter the programmed and obligated funding for each applicable funding category.

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$24,347,180	$24,347,180	100%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$2,705,242	$2,705,242	100%
Totals	$27,052,422	$27,052,422	100%

Enter additional comments here to clarify your response for this question or add supporting information.

How much funding is programmed to local (non-state owned and operated) or tribal safety projects?

$6,183,844

How much funding is obligated to local or tribal safety projects?

$6,183,844

Enter additional comments here to clarify your response for this question or add supporting information.

How much funding is programmed to non-infrastructure safety projects?

$461,632

How much funding is obligated to non-infrastructure safety projects?

$461,632

Enter additional comments here to clarify your response for this question or add supporting information.

How much funding was transferred in to the HSIP from other core program areas during the reporting period under 23 U.S.C. 126?

$0

How much funding was transferred out of the HSIP to other core program areas during the reporting period under 23 U.S.C. 126?

$21,180,942

Enter additional comments here to clarify your response for this question or add supporting information.

Discuss impediments to obligating HSIP funds and plans to overcome this challenge in the future.

Project delays can make it challenging to fully utilize HSIP funding. Such delays occur for a variety of reasons, including changes in project scope during t he design process (which triggers a required re-evaluation of the project), changes in associated projects that are linked to the HSIP project, and unforeseen issues arising during the project development process. WisDOT continues to work on developing a list of projects that could be advanced from later program years into earlier program years to ensure that HSIP funding is fully utilized even if projects are delayed or fall out of the program.

Does the State want to elaborate on any other aspects of it’s progress in implementing HSIP projects?

No

General Listing of Projects

List the projects obligated using HSIP funds for the reporting period.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
4538-05-71			3.274	Miles	$234377	$260418.89	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Roadway Departure	
5198-01-60			7.144	Miles	$243721.59	$270801.77	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Roadway Departure	
5808-00-02			8.1	Miles	$63142.2	$70158	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Roadway Departure	
5809-00-60			11.12	Miles	$494621.24	$549579.15	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Roadway Departure	
5817-00-60			8.144	Miles	$278431.53	$309368.37	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Roadway Departure	
7068-01-60			10.26	Miles	$501480.27	$557200.3	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Roadway Departure	
8938-01-72				Miles	$191651.04	$212945.6	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Roadway Departure	
1000-99-65				Miles	$90000	$100000	HSIP (23 U.S.C. 148)		0		State Highway Agency	SHSP Development	Data	
1000-99-71				Miles	$325468.8	$361632	HSIP (23 U.S.C. 148)		0		State Highway Agency	Data Mapping project	Data	
1010-02-85			3.718	Miles	$107818.98	$119798.87	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
1022-03-83			0	Miles	$76093.61	$84548.46	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1022-08-72			4.65	Miles	$315892.89	$350992.1	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
1023-06-64			0	Miles	$208598	$231775.56	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1050-00-07				Miles	$62573	$69525.56	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
1050-02-71			0.17	Miles	$308544.24	$342826.93	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Lane Departure	
1071-02-64			0	Miles	$183906	$204340	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1077-01-65			0	Miles	$468329	$520365.55	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1100-13-71			0	Miles	$122922.76	$136580.85	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1112-02-61			0	Miles	$422828.96	$469809.96	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
1130-49-71			0	Miles	$114988.97	$127765.52	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1150-68-71			8.812	Miles	$1626978.81	$1807754.23	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
1161-02-74			1.203	Miles	$1530000	$1700000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
1198-00-78			0.321	Miles	$694319	$771465.56	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
1223-17-71			6.27	Miles	$1387680.4	$1541867.11	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
1430-18-71			7.68	Miles	$438258	$486953.33	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1500-66-71			7.655	Miles	$490383	$544870	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1500-67-60			2.588	Miles	$189108	$210120	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1510-00-70			5.54	Miles	$2044085.86	$2271206.51	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
1510-00-71			3.59	Miles	$376374.34	$418193.71	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
1517-13-71			0	Miles	$97024.27	$107804.74	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1610-08-79			7.41	Miles	$244590.76	$271767.51	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
1610-08-82			7.41	Miles	$194621.86	$216246.51	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
2025-00-70			0.188	Miles	$431877.3	$479863.67	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Lane Departure	
2030-04-75			0.13	Miles	$1031760	$1146400	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Lane Departure	
2050-05-71				Miles	$683501	$759445.56	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Intersections	
2240-18-70			0.05	Miles	$834725.7	$927473	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
2290-08-71			0	Miles	$171719.07	$190798.97	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
2375-07-70			0.51	Miles	$332210.67	$369122.97	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Lane Departure	
2595-08-90				Miles	$362828	$403142.22	HSIP (23 U.S.C. 148)		0		City of Municipal Highway Agency	Spot	Intersections	
2753-01-70			0.09	Miles	$597248.08	$663608.98	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Lane Departure	

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
2762-00-70			0.11	Miles	$755255	$839172.22	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Intersections	
2774-01-70			0.05	Miles	$916727	$1018585.56	HSIP (23 U.S.C. 148)		0		County Highway Agency	Spot	Intersections	
2990-14-00			0.006	Miles	$63036	$70040	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
2998-06-00				Miles	$151881	$168756.67	HSIP (23 U.S.C. 148)		0		City of Municipal Highway Agency	Spot	Pedestrians	
3110-07-70			0.075	Miles	$131832.41	$146480.45	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
3887-01-02			0.042	Miles	$40500	$45000	HSIP (23 U.S.C. 148)		0		City of Municipal Highway Agency	Spot	Lane Departure	
4050-24-60			11.44	Miles	$383400	$426000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
5290-02-70			0.689	Miles	$1530000	$1700000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
6180-00-72			1.49	Miles	$51750	$57500	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
7130-00-76			7.32	Miles	$183015.49	$203350.54	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
7130-00-77			0.35	Miles	$181939	$202154.44	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Lane Departure	
8050-04-80			4.66	Miles	$276527.6	$307252.89	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
8120-04-74			0.051	Miles	$390695.14	$434105.71	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
8120-04-75			0.003	Miles	$196218.52	$218020.58	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
8510-02-76			0.32	Miles	$469624.5	$521805	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Roadway Departure	
9566-02-01			5.05	Miles	$50094.9	$55661	HSIP (23 U.S.C. 148)		0		Town or Township Highway Agency	Spot	Lane Departure	

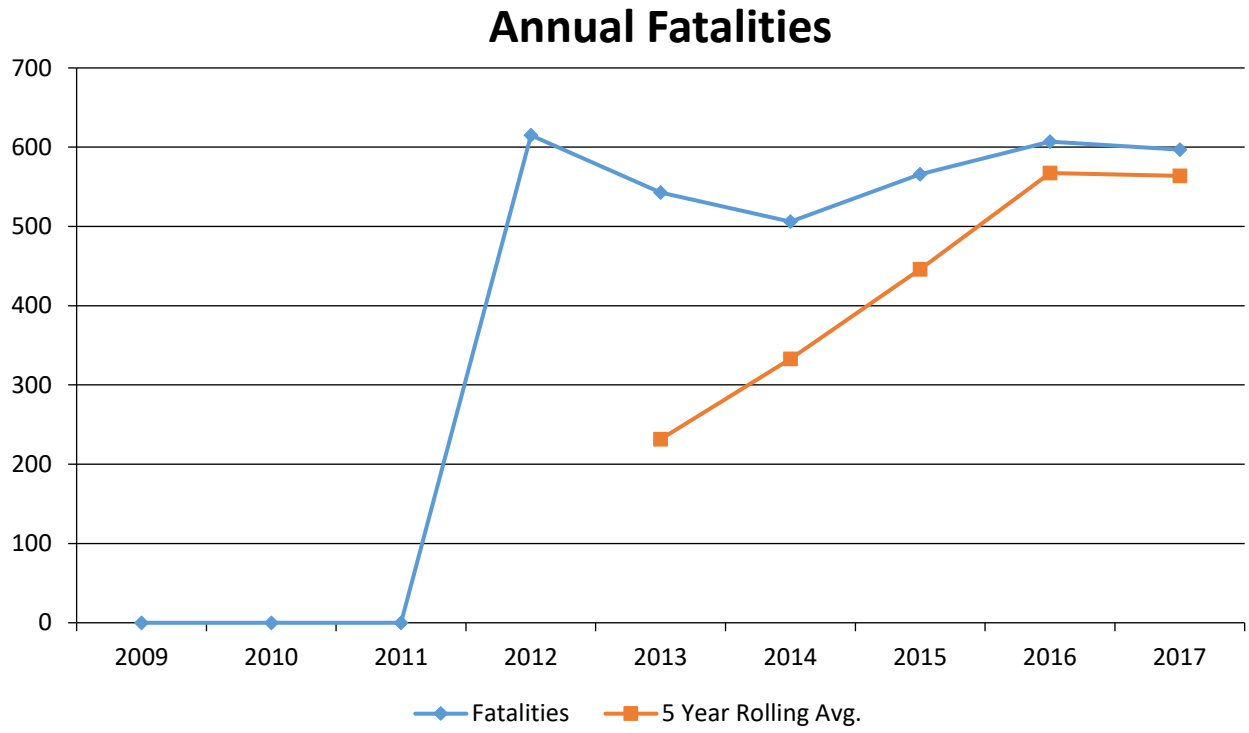
Enter additional comments here to clarify your response for this question or add supporting information.

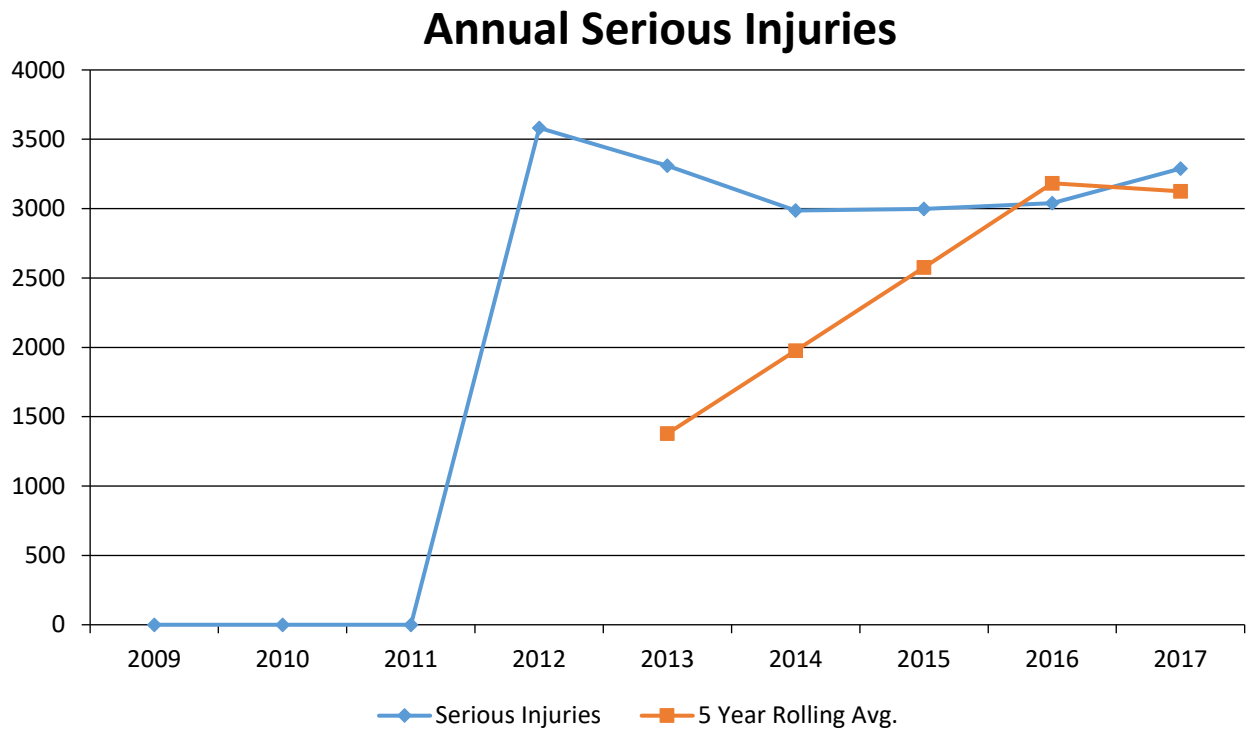
Safety Performance

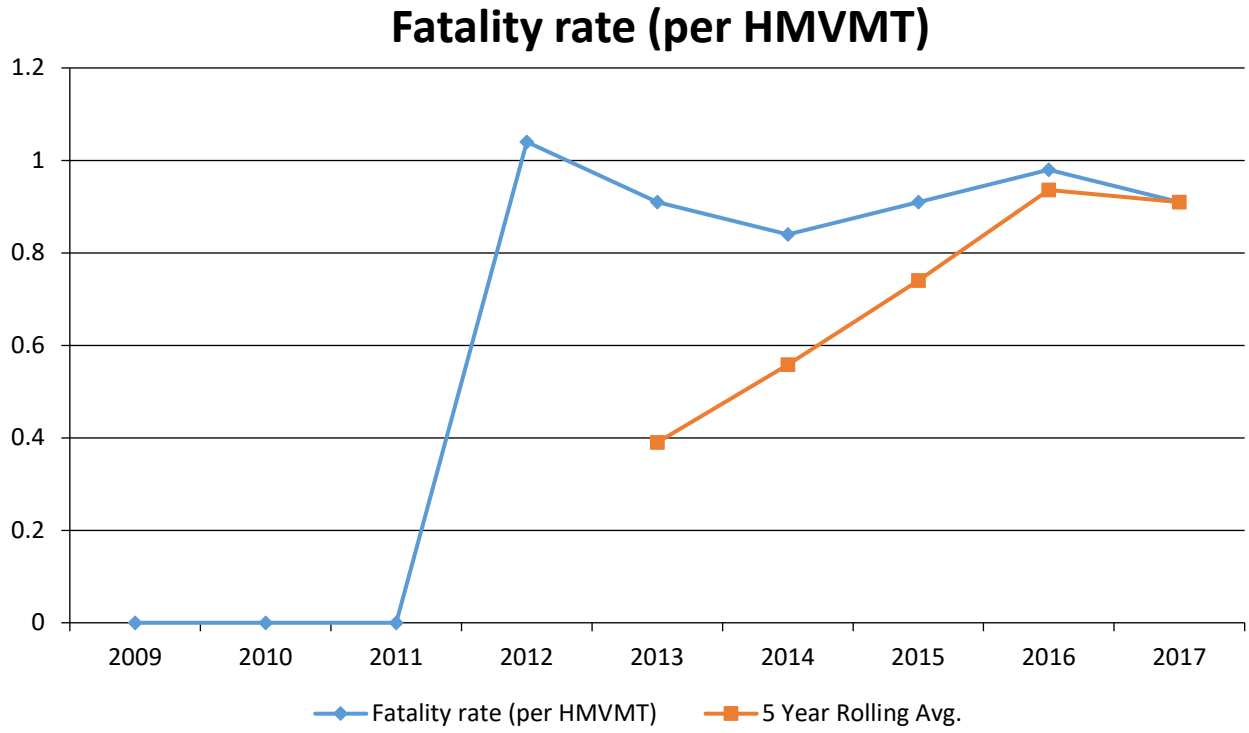
General Highway Safety Trends

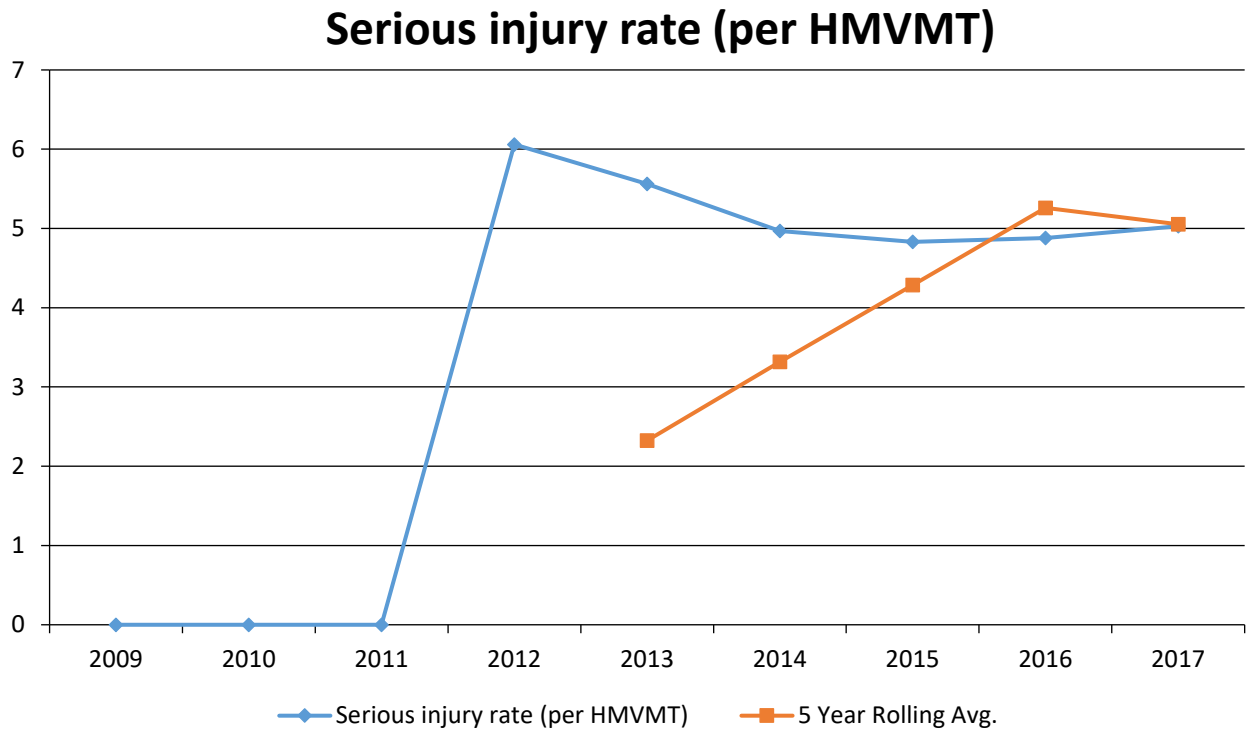
Present data showing the general highway safety trends in the State for the past five years.

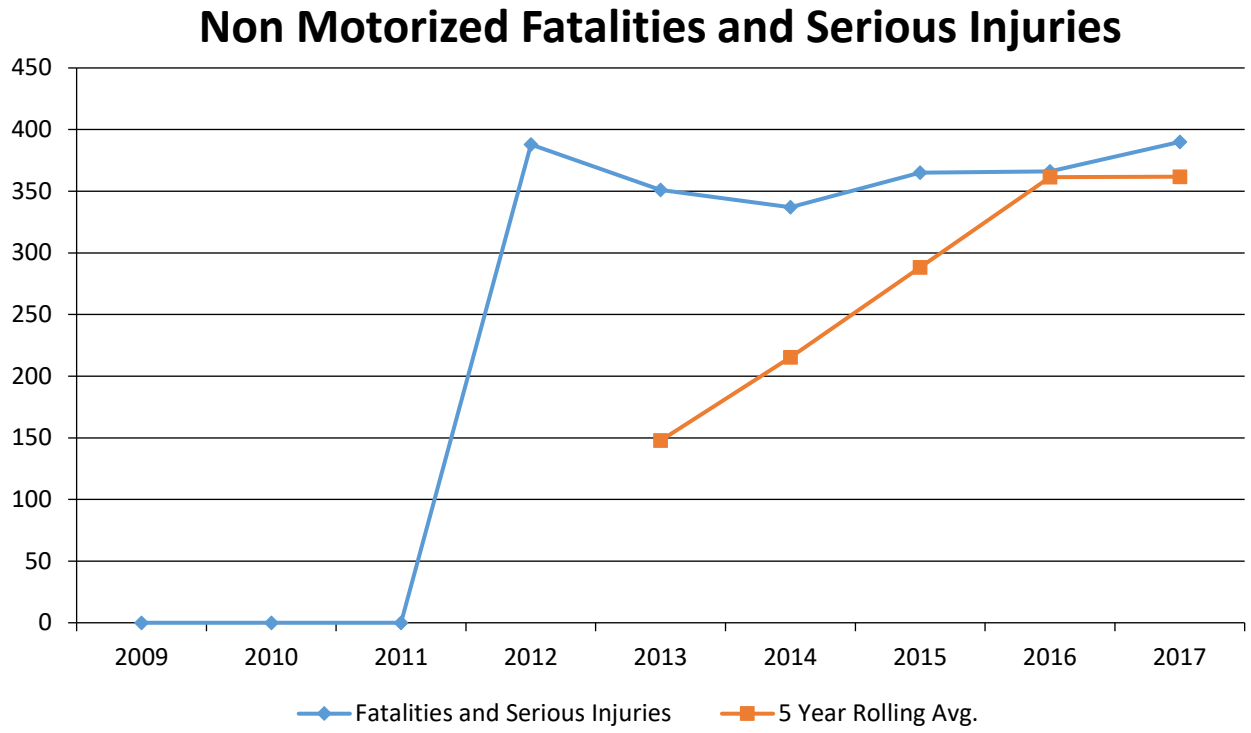
PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	0	0	0	615	543	506	566	607	597
Serious Injuries	0	0	0	3,582	3,309	2,986	2,999	3,039	3,288
Fatality rate (per HMVMT)	0.000	0.000	0.000	1.040	0.910	0.840	0.910	0.980	0.910
Serious injury rate (per HMVMT)	0.000	0.000	0.000	6.060	5.560	4.970	4.830	4.880	5.030
Number non-motorized fatalities	0	0	0	388	351	337	365	366	390
Number of non-motorized serious injuries	0	0	0	0	0	0	0	0	0


Annual Fatalities
700
600
500
400
300
200
100
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
4000
3500
3000
2500
2000
1500
1000
500
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.2
1
0.8
0.6
0.4
0.2
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
7
6
5
4
3
2
1
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Enter additional comments here to clarify your response for this question or add supporting information.

Non-motorized fatalities and serious injuries are reported as a single number

Describe fatality data source.

FARS

Enter additional comments here to clarify your response for this question or add supporting information.

To the maximum extent possible, present this data by functional classification and ownership.

Year 2017

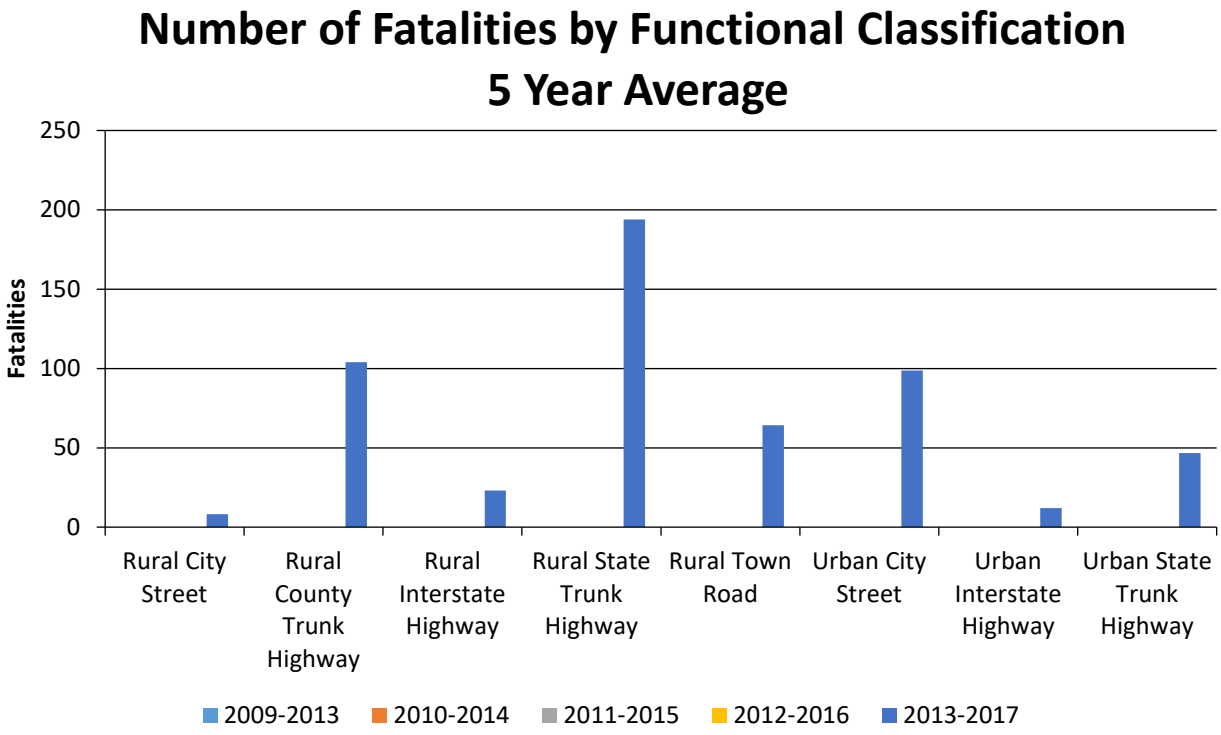
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate				
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other				
Rural Minor Arterial				

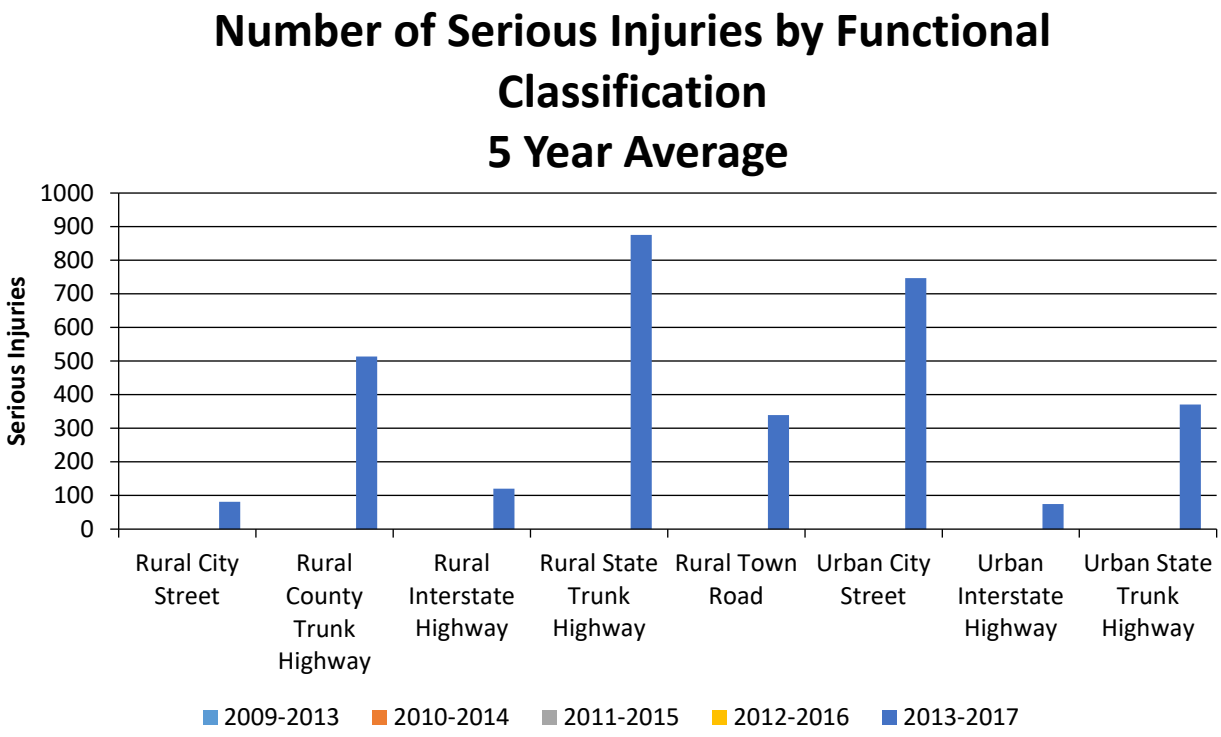
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Minor Collector				
Rural Major Collector				
Rural Local Road or Street				
Urban Principal Arterial (UPA) - Interstate				
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other				
Urban Minor Arterial				
Urban Minor Collector				
Urban Major Collector				
Urban Local Road or Street				
Rural City Street	8.2	81.1		
Rural County Trunk Highway	104	513.4		
Rural Interstate Highway	23	120		
Rural State Trunk Highway	194	875.8		
Rural Town Road	64.2	339.4		
Urban City Street	98.8	746.8		
Urban Interstate Highway	12	74.6		
Urban State Trunk Highway	46.6	370.4		
Rural City Street				
Rural County Trunk Highway				
Rural Interstate Highway				
Rural State Trunk Highway				
Rural Town Road				
Urban City Street				

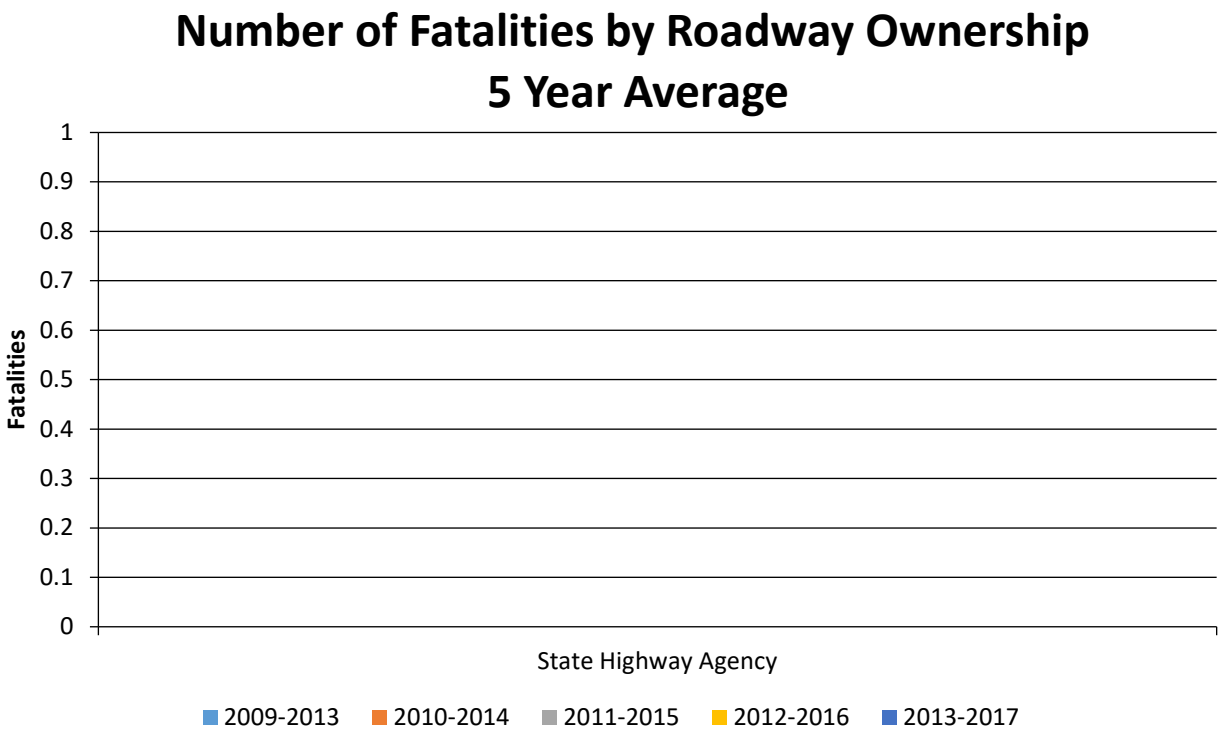
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Urban Interstate Highway				
Urban State Trunk Highway				

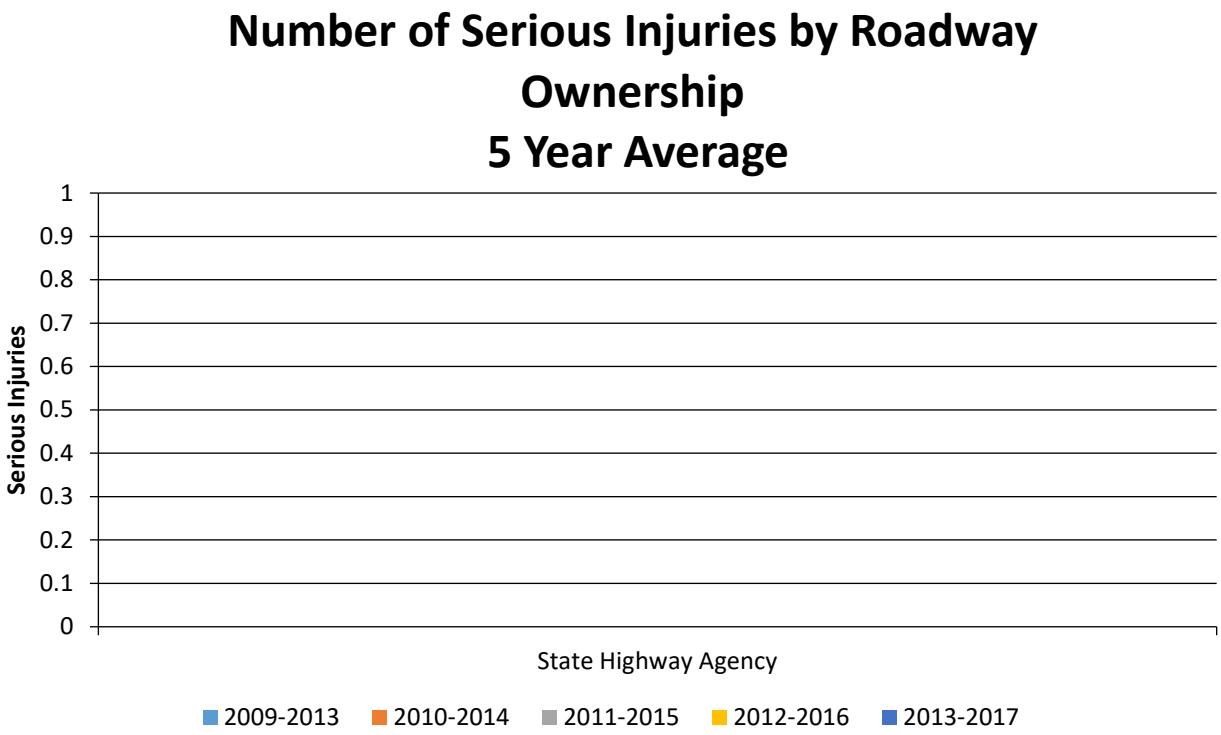
Year 2013

Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	0	0		
County Highway Agency				
Town or Township Highway Agency				
City of Municipal Highway Agency				
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				


Number of Fatalities by Functional Classification
5 Year Average
Fatalities
250
200
150
100
50
0
Rural City Street
Rural County Trunk Highway
Rural Interstate Highway
Rural State Trunk Highway
Rural Town Road
Urban City Street
Urban Interstate Highway
Urban State Trunk Highway
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
1000
900
800
700
600
500
400
300
200
100
0
Rural City Street
Rural County Trunk Highway
Rural Interstate Highway
Rural State Trunk Highway
Rural Town Road
Urban City Street
Urban Interstate Highway
Urban State Trunk Highway
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Fatalities by Roadway Ownership
5 Year Average
Fatalities
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
State Highway Agency
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017



Enter additional comments here to clarify your response for this question or add supporting information.

Are there any other aspects of the general highway safety trends on which the State would like to elaborate?

No

Safety Performance Targets

Safety Performance Targets

Calendar Year 2019 Targets *

Number of Fatalities 555.7

Describe the basis for established target, including how it supports SHSP goals.

The 2% reduction in traffic fatalities is supported by the stated goals and actions steps of the SHSP.

Number of Serious Injuries 2967.6

Describe the basis for established target, including how it supports SHSP goals.

The 5% reduction in number of serious injuries is supported by the stated goals and action steps of the SHSP.

Fatality Rate 0.915

Describe the basis for established target, including how it supports SHSP goals.

The 2% reduction in traffic fatalities is supported by the stated goals and actions steps of the SHSP.

Serious Injury Rate 4.785

Describe the basis for established target, including how it supports SHSP goals.

The 5% reduction in number of serious injuries is supported by the stated goals and action steps of the SHSP.

Total Number of Non-Motorized Fatalities and Serious Injuries 342.0

Describe the basis for established target, including how it supports SHSP goals.

The 5% reduction in number of serious injuries is supported by the stated goals and action steps of the SHSP.

Enter additional comments here to clarify your response for this question or add supporting information.

Describe efforts to coordinate with other stakeholders (e.g. MPOs, SHSO) to establish safety performance targets.

The HSIP is fully coordinated and integrated with the work of other organizations, associations, and stakeholders (e.g., law enforcement, academia, local governments, MPOs) that play a role in reducing fatalities and serious injuries. One of the basic foundations of the HSIP is the direct linkage between the data-driven priorities established in the Strategic Highway Safety Plan (SHSP) and the identification, development and implementation of HSIP projects. Local and regional governments alike which contribute towards achieving the goals and objectives of the SHSP help guide program decisions and project selections. More specifically, where there are a high percentage of crashes that occur off the State system, WisDOT works with local jurisdictions to help them develop and implement HSIP projects that address priority safety issues on locally-owned roadways. This is either done by locals doing work as local forced accounts or they are let by WisDOT. Stakeholders will continue to contribute to and support the goals established in the SHSP. This in turn encourages safety projects that meet established safety performance targets.

Does the State want to report additional optional targets?

No

Enter additional comments here to clarify your response for this question or add supporting information.

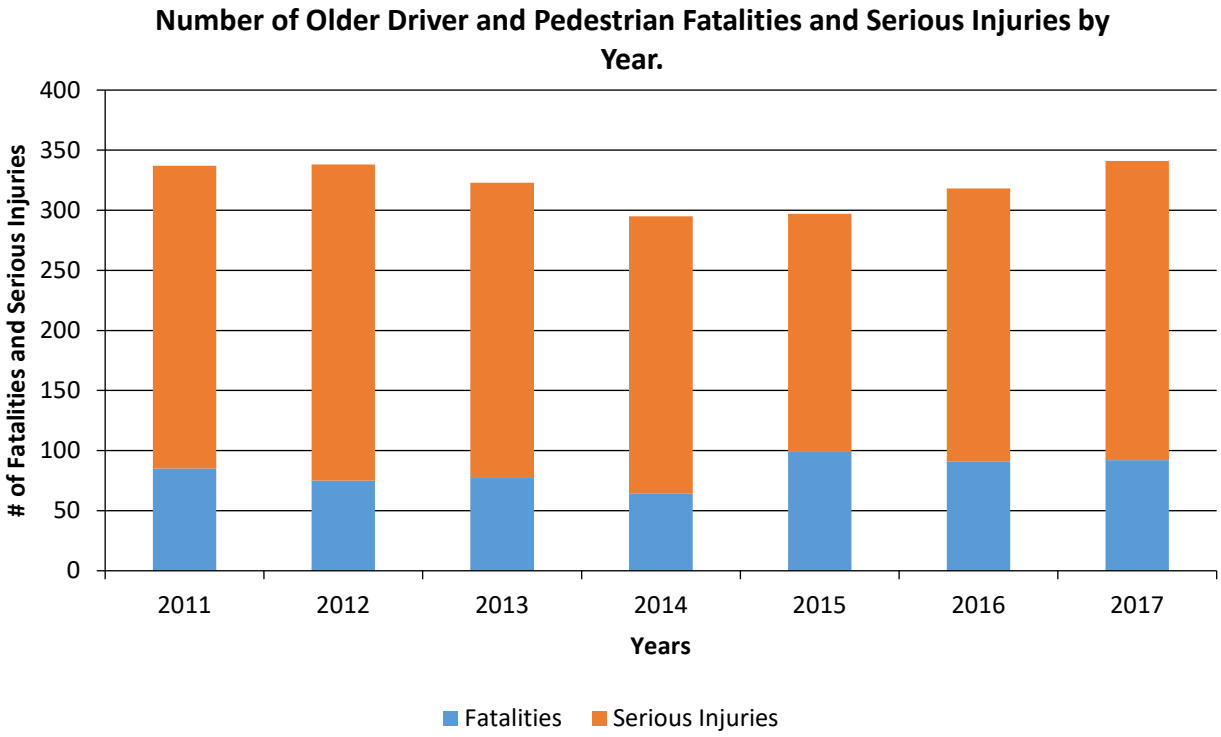
Does the HRRR special rule apply to the State for this reporting period?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.

PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017
Number of Older Driver and Pedestrian Fatalities	85	75	78	64	99	91	92
Number of Older Driver and Pedestrian Serious Injuries	252	263	245	231	198	227	249



Enter additional comments here to clarify your response for this question or add supporting information.

Years were incorrectly reported in the 2017 report. All years have been updated for the 2018 report.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries
Benefit/Cost Ratio

Enter additional comments here to clarify your response for this question or add supporting information.

While a simple change in fatal and serious injury crashes is overall indicator of the effectiveness of the safety culture in the state, it's influenced by many other factors outside the scope of normal HSIP projects. For this reason we rely on a "before and after" Empirical Bayes Analysis of HSIP project to determine their performance.

Based on the measures of effectiveness selected previously, describe the results of the State's program level evaluations.

An annual program effectiveness evaluation has not been completed at this time.

What other indicators of success does the State use to demonstrate effectiveness and success of the Highway Safety Improvement Program?

miles improved by HSIP
Increased awareness of safety and data-driven process
HSIP Obligations

Enter additional comments here to clarify your response for this question or add supporting information.

Are there any significant programmatic changes that have occurred since the last reporting period?

No

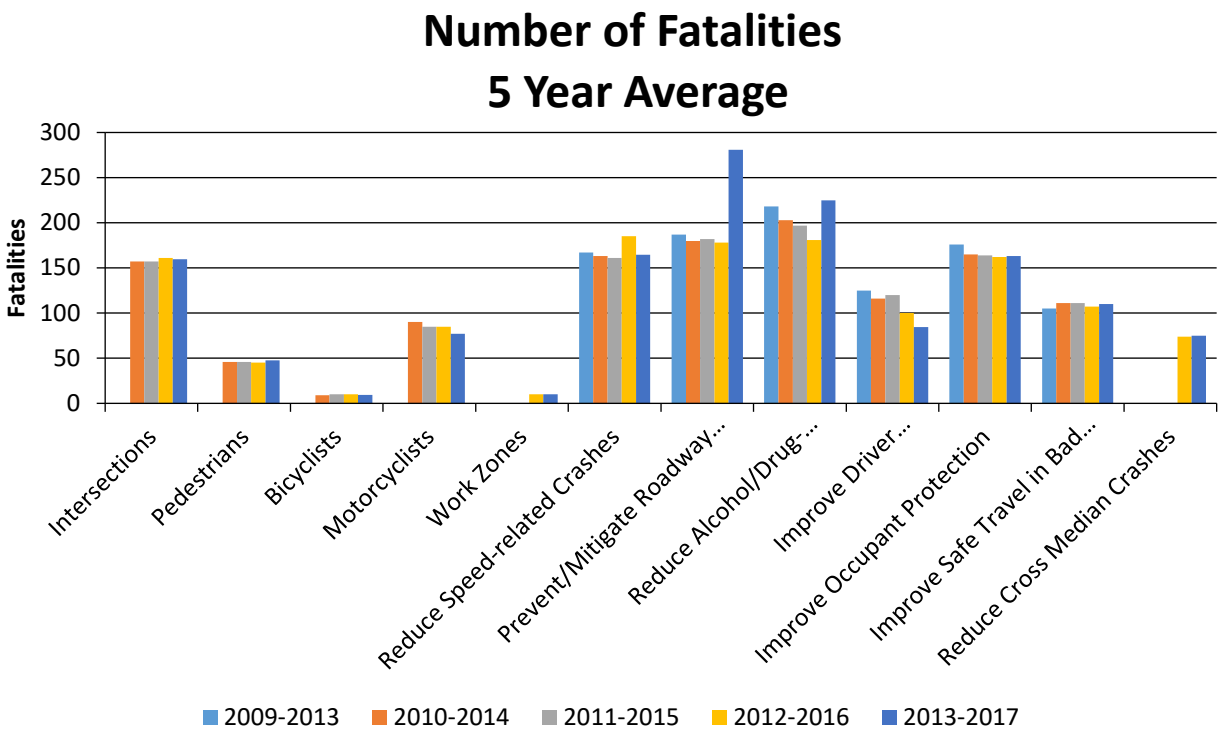
Effectiveness of Groupings or Similar Types of Improvements

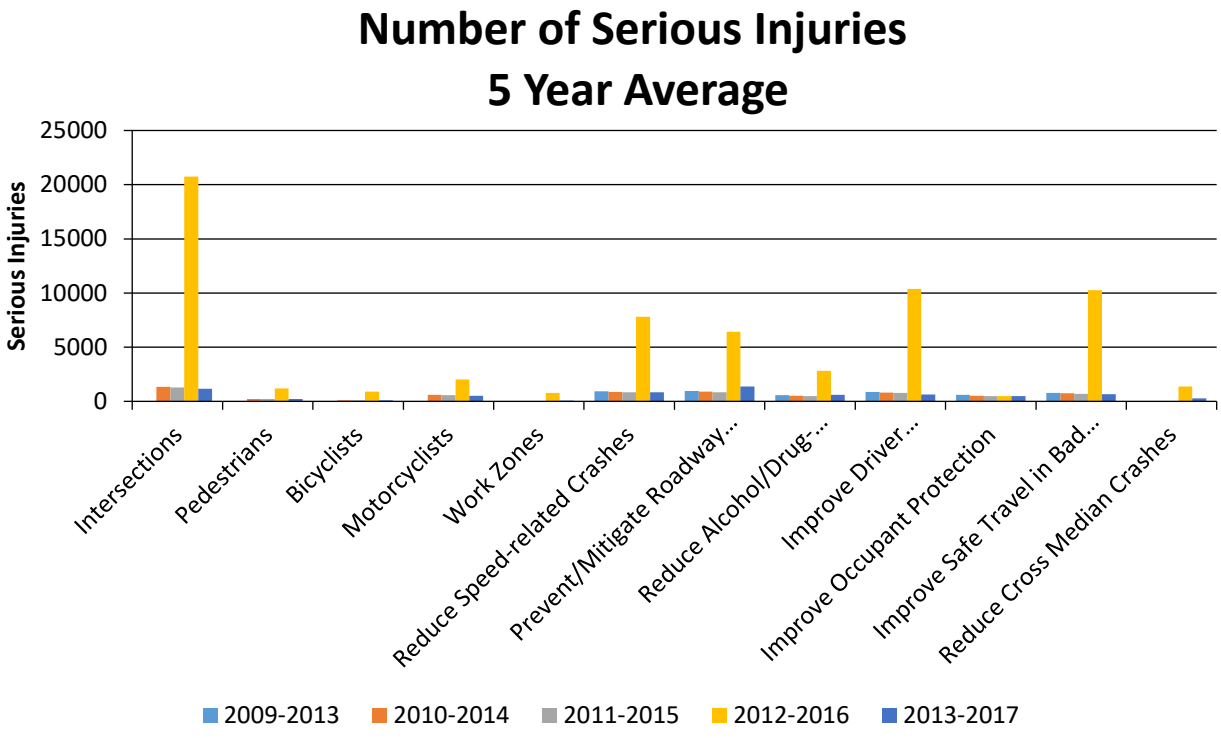
Present and describe trends in SHSP emphasis area performance measures.

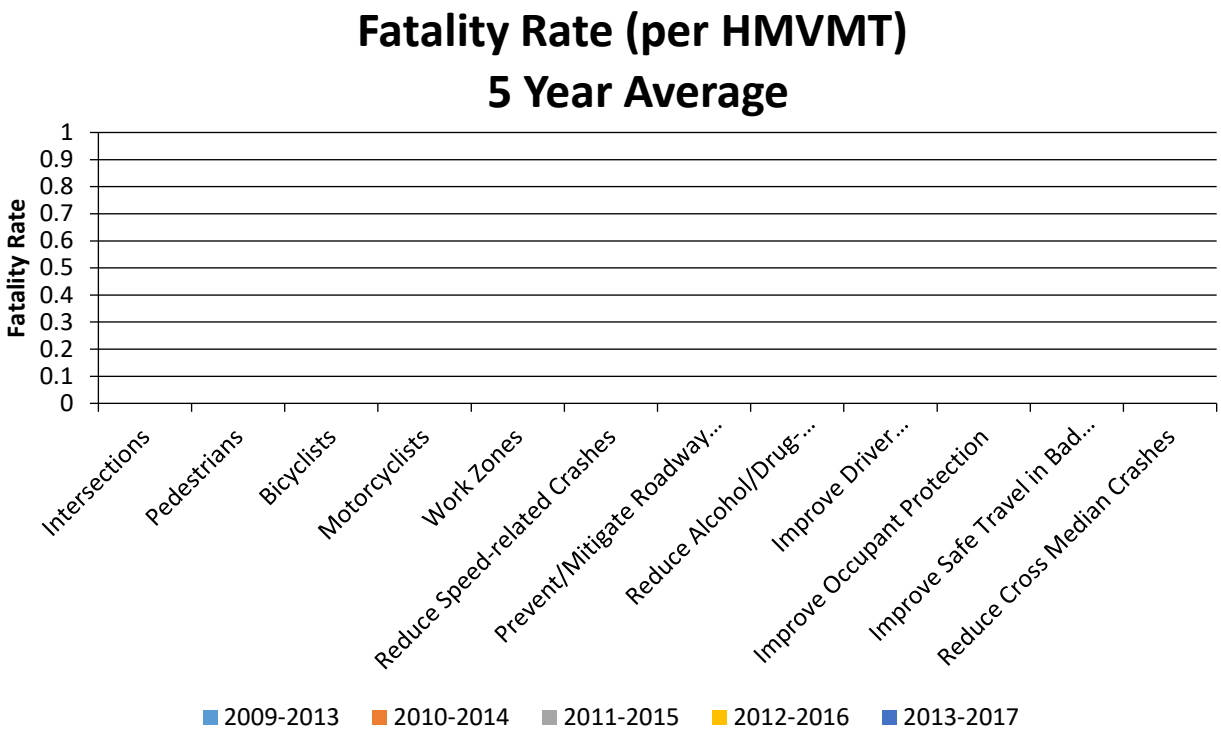
Year 2017

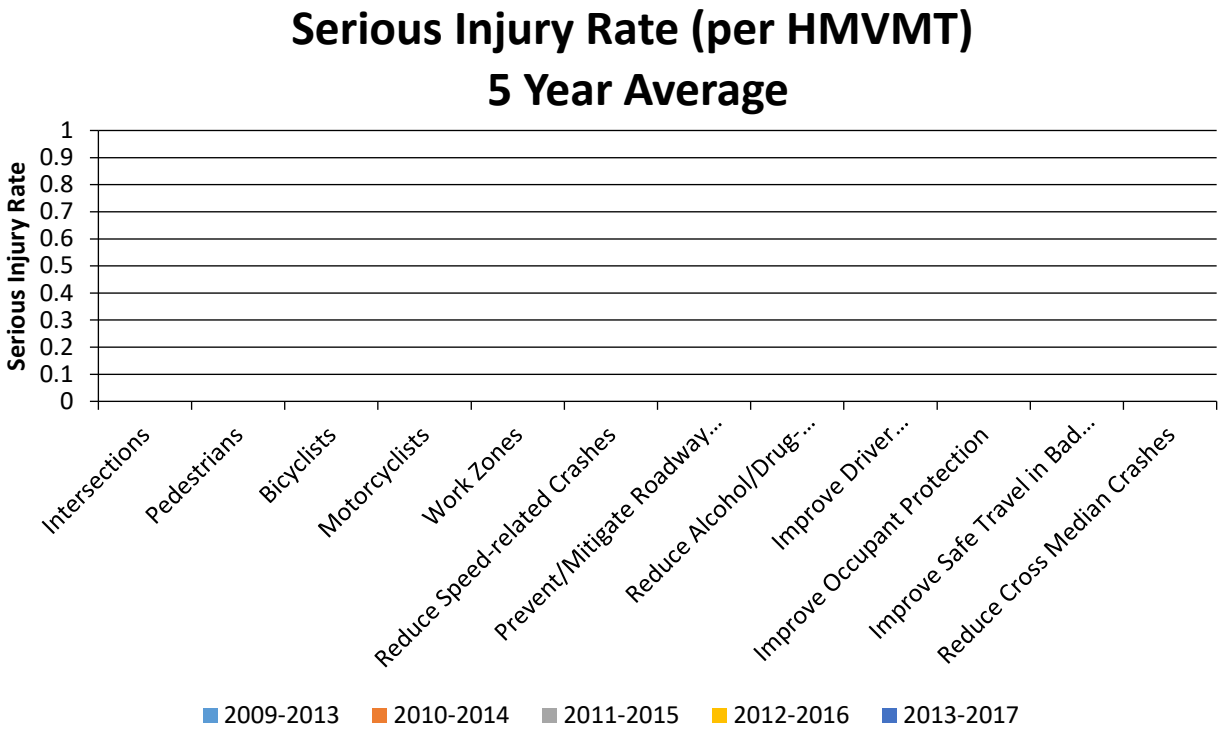
2018 Wisconsin Highway Safety Improvement Program

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Intersections		159.8	1,174		
Pedestrians		47.8	214.8		
Bicyclists		9.4	85.8		
Motorcyclists		77.2	518		
Work Zones		10	56.8		
Reduce Speed-related Crashes		164.6	834.2		
Prevent/Mitigate Roadway Departure Crashes		281	1,356.8		
Reduce Alcohol/Drug-impaired Driving		225	591		
Improve Driver Alertness/Reduce Driver Distraction		84.6	639.6		
Improve Occupant Protection		163	478.8		
Improve Safe Travel in Bad Weather		110	649.2		
Reduce Cross Median Crashes		74.8	269.2		


Number of Fatalities
5 Year Average
Fatalities
300
250
200
150
100
50
0
Intersections
Pedestrians
Bicyclists
Motorcyclists
Work Zones
Reduce Speed-related Crashes
Prevent/Mitigate Roadway...
Reduce Alcohol/Drug-...
Improve Driver ...
Improve Occupant Protection
Improve Safe Travel in Bad...
Reduce Cross Median Crashes
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries
5 Year Average
Serious Injuries
25000
20000
15000
10000
5000
0
Intersections
Pedestrians
Bicyclists
Motorcyclists
Work Zones
Reduce Speed-related Crashes
Prevent/Mitigate Roadway...
Reduce Alcohol/Drug-...
Improve Driver ...
Improve Occupant Protection
Improve Safe Travel in Bad...
Reduce Cross Median Crashes
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017





Enter additional comments here to clarify your response for this question or add supporting information.

The 2017 HSIP report numbers for this question included all injuries in the Serious Injury column. This has been corrected in the 2018 report. The 2018 report now includes both alcohol and drug-impaired crashes, rather than just alcohol.

Has the State completed any countermeasure effectiveness evaluations during the reporting period?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Project Effectiveness

Provide the following information for previously implemented projects that the State evaluated this reporting period.

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
x														

Enter additional comments here to clarify your response for this question or add supporting information.

Evaluation planned for 2019

Are there any other aspects of the overall HSIP effectiveness on which the State would like to elaborate?

Yes

Describe any other aspects of HSIP effectiveness on which the State would like to elaborate.

The Transportation Safety Engineers Work Group (TSEWG) is a committee, comprised mainly of regional WisDOT traffic safety engineers as well as an FHWA safety engineer, that meets approximately every two months to discuss the overall HSIP effectiveness and other safety-related issues. In addition, they are primarily responsible for forwarding/developing and evaluating eligible HSIP projects. These work group members frequently conduct project and program evaluations and share insights with other TSEWG members.

Compliance Assessment

What date was the State's current SHSP approved by the Governor or designated State representative?

11/07/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2020

When does the State anticipate completing it's next SHSP update?

2020

Enter additional comments here to clarify your response for this question or add supporting information.

Provide the current status (percent complete) of MIRE fundamental data elements collection efforts using the table below.

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					100	100	100	100
Route Number (8)	100	100								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100	100								
Rural/Urban Designation (20)	100	100					100	100		
Surface Type (23)	100	100					100	100		
Begin Point Segment Descriptor (10)	100	100					100	100	100	100
End Point Segment Descriptor (11)	100	100					100	100	100	100
Segment Length (13)	100	100								
Direction of Inventory (18)	100	100								
Functional Class (19)	100	100					100	100	100	100
Median Type (54)	100	7								
Access Control (22)	100	100								

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	100					100	100		
Average Annual Daily Traffic (79)	100	65					100	1		
AADT Year (80)	0	0								
Type of Governmental Ownership (4)	0	0					0	0	0	0
INTERSECTION										
Unique Junction Identifier (120)			80	0						
Location Identifier for Road 1 Crossing Point (122)			80	0						
Location Identifier for Road 2 Crossing Point (123)			80	0						
Intersection/Junction Geometry (126)			80	0						
Intersection/Junction Traffic Control (131)			80	0						
AADT for Each Intersecting Road (79)			80	0						
AADT Year (80)			80	0						
Unique Approach Identifier (139)			80	0						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	100				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	100				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	100				
Ramp Length (187)					100	100				
Roadway Type at Beginning of Ramp Terminal (195)					100	100				
Roadway Type at End Ramp Terminal (199)					100	100				

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Interchange Type (182)					0	0				
Ramp AADT (191)					100	100				
Year of Ramp AADT (192)					100	100				
Functional Class (19)					100	100				
Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):	**88.89**	**81.78**	**80.00**	**0.00**	**90.91**	**90.91**	**88.89**	**77.89**	**80.00**	**80.00**

*Based on Functional Classification

Enter additional comments here to clarify your response for this question or add supporting information.

Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.

Wisconsin already collects most of the MIRE FDEs. The department plans to begin a project to evaluate gaps in the collection of MIRE FDEs. The outcome of this analysis will be incorporated into a more encompassing effort to assess corporate data needs (e.g. ARNOLD). The expectation is to have an implementation plan for addressing FDE gaps by 2020.

Provide the suspected serious injury identifier, definition and attributes used by the State for both the crash report form and the crash database using the table below. Please also indicate whether or not these elements are compliant with the MMUCC 4th edition criteria for data element P5. Injury Status, suspected serious injury.

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
Crash Report Form	Suspected Serious Injury	Yes	N/A	Yes	N/A	Yes
Crash Report Form Instruction Manual	Suspected Serious Injury	Yes	An injury other than fatal which results in one or more of the following: Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood, broken or distorted extremity (arm or leg), crush injuries, suspected skull, chest or abdominal injury other than bruises or minor lacerations, significant burns (second and third degree burns over 10% or more of body), unconsciousness when taken from the crash scene, or paralysis.	Yes	An injury other than fatal which results in one or more of the following: Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood, broken or distorted extremity (arm or leg), crush injuries, suspected skull, chest or abdominal injury other than bruises or minor lacerations, significant burns (second and third degree burns over 10% or more of body), unconsciousness when taken from the crash scene, or paralysis.	Yes
Crash Database	Suspected Serious Injury	Yes	N/A	Yes	N/A	Yes
Crash Database Data Dictionary	Suspected Serious Injury	Yes	An injury other than fatal which results in one or more of the following:	Yes	An injury other than fatal which results in one or more of the following:	Yes

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
			Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood, broken or distorted extremity (arm or leg), crush injuries, suspected skull, chest or abdominal injury other than bruises or minor lacerations, significant burns (second and third degree burns over 10% or more of body), unconsciousness when taken from the crash scene, or paralysis.		Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood, broken or distorted extremity (arm or leg), crush injuries, suspected skull, chest or abdominal injury other than bruises or minor lacerations, significant burns (second and third degree burns over 10% or more of body), unconsciousness when taken from the crash scene, or paralysis.	

Enter additional comments here to clarify your response for this question or add supporting information.

Did the State conduct an HSIP program assessment during the reporting period?
No

When does the State plan to complete it’s next HSIP program assessment.

2019

Enter additional comments here to clarify your response for this question or add supporting information.

Optional Attachments

Program Structure:

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

Glossary

5 year rolling average	means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).
Emphasis area	means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.
Highway safety improvement project	means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.
HMVMT	means hundred million vehicle miles traveled.
Non-infrastructure projects	are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.
Older driver special rule	applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.
Performance measure	means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.
Programmed funds	mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.
Roadway Functional Classification	means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.
Strategic Highway Safety Plan (SHSP)	means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.
Systematic	refers to an approach where an agency deploys countermeasures at all locations across a system.
Systemic safety improvement	means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.
Transfer	means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.