NORTH DAKOTA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2017 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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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 NDDOT is programming about 2/3 of the HSIP funds towards low-cost systemic type projects over the next 4 years. During the past year NDDOT has developed systemic projects to address intersection and horizontal curve crashes on both the state system and local road system. In rural areas, low cost treatments typically include: enhanced signing/striping, destination lights, removal of overhead flashing beacons, and chevrons/delineators on horizontal curves. At urban (signalized) intersections, low-cost treatments typically include: confirmation lights, pedestrian countdown heads, leading pedestrian intervals, retroreflective backplates, and flashing yellow arrow signal heads.

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 NDDOT solicits state and local agencies to submit safety project applications each year. Potential projects are identified through the traditional "reactive" approach that address high crash locations, fatal crash locations or areas where road safety reviews took place. Projects are also developed using a "systemic" approach that apply low-cost treatments over a large area. The NDDOT central office reviews applications and selects and prioritizes projects based on the state's SHSP emphasis areas: lane departure, unbelted vehicle occupants, alcohol-related, excessive speed/aggressive driving, intersection, and "involving driver under 21".

Most HSIP projects primarily address the lane departure or intersection emphasis areas. After projects are programmed, they get designed and implemented with the same process as regular federally funded transportation projects. The NDDOT does not have a formal evaluation procedure for safety projects once complete, however some past projects have been evaluated with simple before-after crash comparisons.

Where is HSIP staff located within the State DOT?

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

The Office of Transportation Programs at NDDOT has HSIP staff within the "Programming" division.

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.

The NDDOT addresses safety on local roads through the Local Road Safety Program (LRSP). Local public agencies can also submit applications for non-LRSP safety projects each year during the solicitation period. Selection of local and tribal road projects use the same methodology as State roads.

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

Traffic Engineering/Safety
Design
Planning
Districts/Regions
Governors Highway Safety Office
Other-Safety Division, Local Government

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

Describe coordination with internal partners.

Design
The Design Division is included in the distribution of the high crash listings. All road safety reviews require at least one member of the Design Division. Their participation and review of at-risk locations helps in the development of potential project countermeasures.

Planning
The Planning Division provides data for the development of the HSIP. Roadway features are collected and maintained in the Planning Division include: traffic volume, truck volumes, traffic projections, roadway features, roadway viewer (for state highways) and mapping. The Planning Division is also included in the distribution of the high crash listings.

Safety Highway Safety Office (SHSO)
The SHSO is the lead entity for the State's Strategic Highway Safety Plan (SHSP) and involves law enforcement and other partners in the process. In North Dakota, the behavioral strategies in the SHSP are largely funded through the National Highway Traffic Safety Administration (NHTSA) funds with funding going to various traffic safety partners including law enforcement agencies statewide for overtime enforcement of traffic safety laws. The SHSP process drives HSIP project priorities. Infrastructure strategies in the North Dakota SHSP are largely funded through HSIP and deployed through the State's Local Road Safety Program (LRSP) and State Road Safety Program (SRSP). These programs identify proven, low-cost road safety strategies and prioritize the road safety strategies for implementation at identified at-risk locations on the local and state road systems.

Local Government
Members of the Local Government Division provide project development through city, county and tribal agencies. The local government assists in the solicitation of safety projects. They also participate in road safety reviews.

Identify which external partners are involved with HSIP planning.

2017 North Dakota Highway Safety Improvement Program
Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Local Technical Assistance Program
Local Government Agency
Tribal Agency
Law Enforcement Agency
Academia/University
FHWA
Other-and other traffic safety advocates/partners

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

Describe coordination with external partners.

All the entities are involved at SHSP at some level (Executive Leadership Team, SHSP Steering Committee, SHSP Implementation Team or general SHSP stakeholder).

Regional Planning Organizations: North Dakota has 3 MPO's that must approve any HSIP applications that are submitted by their respective cities. The MPO's were also included in the team that developed the ND Local Road Safety Program (LRSP).

Local Government Agency, Tribal Agency: The cities, counties, and tribal agencies are solicited each year for potential safety projects. They are encouraged to submit projects directly from the LRSP or at high crash locations.

Law Enforcement Agency: Law enforcement and HSIP personnel are extensively involved in North Dakota's SHSP process. The HSIP program director serves on the SHSP Steering Committee and as chairperson for two SHSP implementation teams (Lane Departure and Intersection implementation Teams). Law enforcement serve at all levels of the SHSP including the SHSP Executive Leadership Team, the SHSP Steering Committee and SHSP Implementation Teams.

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?

Yes

Describe other aspects of HSIP Administration on which the State would like to elaborate.
Schedule for HSIP requests:

- Fall - send out HSIP solicitation letter and high crash location lists/maps, HSIP application forms (SFN 59959) are due by the end of the year
- Winter - NDDOT analysis of HSIP requests and Draft HSIP project listing
- Spring - verify the construction year for previously approved projects
- Summer - finalize HSIP project listing, send responses out on approvals (or non-approvals) for the HSIP applications
- August 31st - Final HSIP project list due to FHWA, HSIP online reporting due

Program Methodology

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

No

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

Select the programs that are administered under the HSIP.

HSIP (no subprograms)

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

Program:	HSIP (no subprograms)
Date of Program Methodology:	3/1/2017

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

Addresses SHSP priority or emphasis area

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	Traffic	Horizontal curvature

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

Crash frequency
Other-Systemic

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Competitive application process
selection committee

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

Enter additional comments here to clarify your response for this question or add supporting information.
We rank or prioritize based on available funding.

What percentage of HSIP funds address systemic improvements?

10

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

Rumble Strips
Traffic Control Device Rehabilitation
Pavement/Shoulder Widening
Install/Improve Signing
Install/Improve Pavement Marking and/or Delineation
Install/Improve Lighting
Horizontal curve signs

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

2017 North Dakota Highway Safety Improvement Program
Road Safety Assessment
Crash data analysis
SHSP/Local road safety plan
Stakeholder input
Other-National Cooperative Highway Research Program (NCHRP) and other evidence-based practices

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?

No

Enter additional comments here to clarify your response for this question or add supporting information.
NDDOT is currently working on integrating the HSM into its HSIP process.

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?

No

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal 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)	$9,117,385	$7,788,893	85.43%
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	$0	$0	0%
Totals	$9,117,385	$7,788,893	85.43%

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

All amounts shown are Federal. Programmed from STIP Export of 2017 on 6/23/17 including one amendment (Burlington). Section 164 penalty funds ended in 2016 for ND. Obligated amount is from FMIS of 6/23/16. Obligated amount of projects not yet bid are from 2017 construction year spreadsheet as of 6/22/17. Did not assume State and Local funds were "match" dollars for the federal funds.

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

$3,508,000

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

$2,750,000

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?

$270,000

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

$270,000

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?

0%

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.

None

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**
GF Various Intersections - Pedestrian Heads	Pedestrians and bicyclists	Pedestrian signal - install new at intersection	18	Locations	$60000	$67000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	
Red River Bridge	Advanced technology and ITS	Advanced technology and ITS - other	1	Locations	$765000	$1921000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	0		State Highway Agency	Spot	Lane Departure	
Burke County Projects	Roadway signs and traffic control	Roadway signs and traffic control - other	0	Signs	$408000	$453000	HSIP (23 U.S.C. 148)	Rural Major Collector	0		County Highway Agency	Systemic	Lane Departure	
Intersection of ND 6 and 19th St SW	Lighting	Intersection lighting	1	Intersections	$511000	$568000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	
I-94 Interchange Lighting	Lighting	Site lighting - interchange	2	Interchanges	$300000	$333000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	0		State Highway Agency	Spot	Intersections	
ND 1804 & Washington, ND 1804 & 15th St NW, US 83 & 201st Ave NE	Lighting	Site lighting - intersection	3	Intersections	$45000	$50000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	0		State Highway Agency	Spot	Intersections	
Statewide Pavement Marking	Roadway delineation	Longitudinal pavement markings - remarking	0	Miles	$707000	$6284000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Lane Departure	
Districtwide Retroreflectivity	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	0	Locations	$237000	$264000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Older Drivers	
Various State Highways in Mountrail Cnty	Lighting	Site lighting - intersection	31	Intersections	$582000	$647000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	0		State Highway Agency	Systemic	Intersections	
US 2 Turn Lanes East of Devils Lake	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Intersections	$391000	$435000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	
Cass County School Zone Signing	Pedestrians and bicyclists	Pedestrian warning signs - add/modify flashers	3	Locations	$57000	$87000	HSIP (23 U.S.C. 148)	Urban Major Collector	0		County Highway Agency	Spot	Pedestrians	
US 52 & ND 36 in Pingree	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$560000	$622000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	
US 281 and 43rd St SE (Ypsilanti)	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$499000	$554000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	0		State Highway Agency	Spot	Intersections	
West Fargo - 9th St E & 13th Ave	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$1818000	$5477000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	0		City of Municipal Highway Agency	Spot	Intersections	
ND 24 - Family Dollar Store Turn Lanes	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$450000	$450000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	0		State Highway Agency	Spot	Intersections	
ND 6, 24 & 1806 on SRST	Lighting	Site lighting - intersection	10	Intersections	$107000	$107000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Intersections	

2017 North Dakota Highway Safety Improvement Program

													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**
GF Columbia Rd and 17th Ave S	Intersection geometry	Auxiliary lanes - add right-turn lane	3	Approaches	$537000	$597000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	0		City of Municipal Highway Agency	Spot	Intersections	
Spirit Lake projects from LRSP	Lighting	Site lighting - intersection	4	Intersections	$60000	$60000	HSIP (23 U.S.C. 148)	Rural Local Road or Street	0		Indian Tribe Nation	Systemic	Intersections	
Various BIA Roads in Spirit Lake Reservation	Roadside	Roadside grading	0.19	Miles	$278000	$278000	HSIP (23 U.S.C. 148)	Rural Local Road or Street	0		Indian Tribe Nation	Spot	Roadway Departure	
Statewide Curve Evaluation Project	Roadway signs and traffic control	Curve-related warning signs and flashers	0	Curves	$450000	$500000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
Statewide crash report evaluation	Non-infrastructure	Data/traffic records	0	Numbers	$225000	$250000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Data	
Highway Safety Improvements	Non-infrastructure	Non-infrastructure - other	0	Numbers	$113000	$125000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Data	
SHSP Planning and Implementation	Non-infrastructure	Transportation safety planning	0	Numbers	$45000	$50000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Data	
Small Scale Improvements	Non-infrastructure	Non-infrastructure - other	0	Numbers	$100000	$111000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Data	

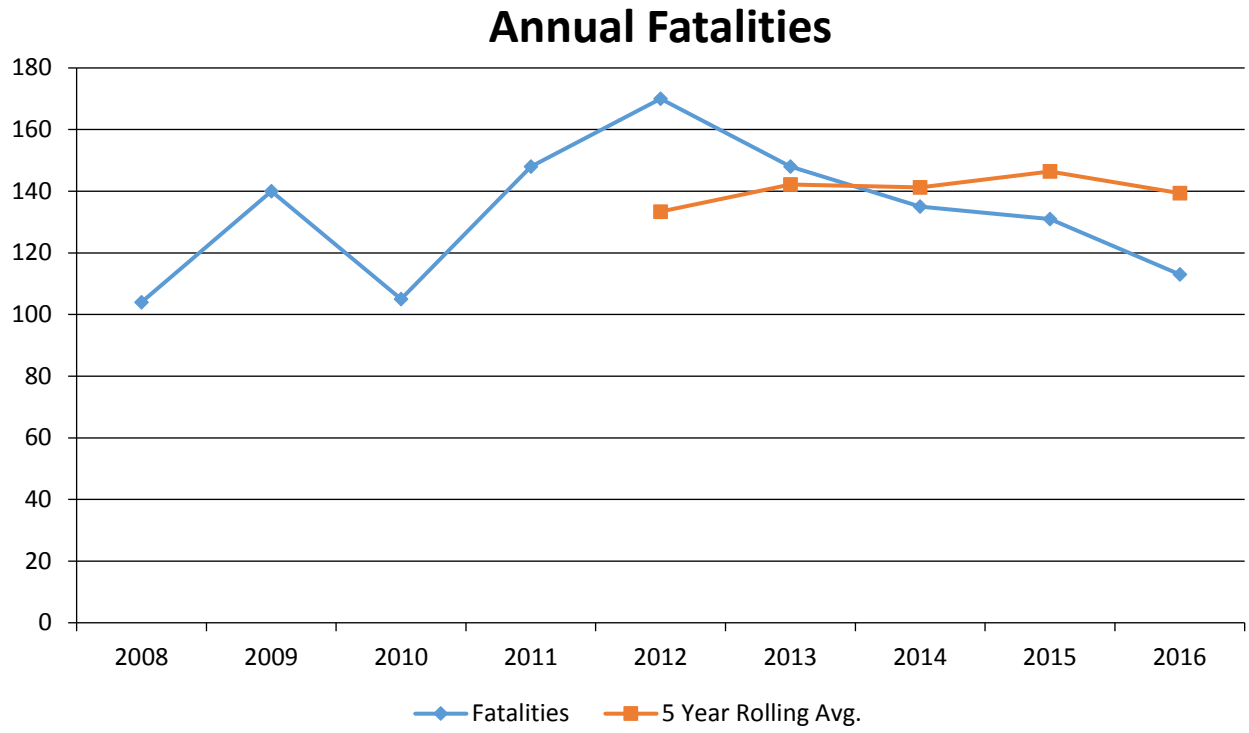
Enter additional comments here to clarify your response for this question or add supporting information.

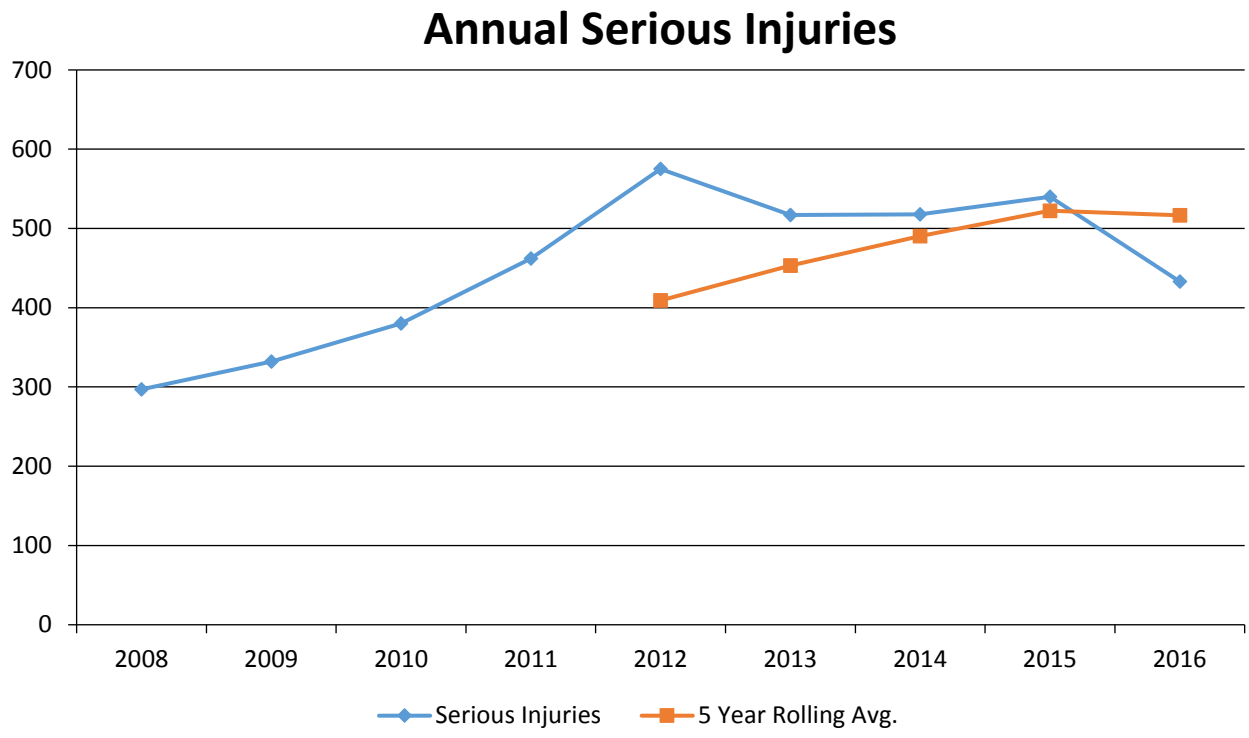
Safety Performance

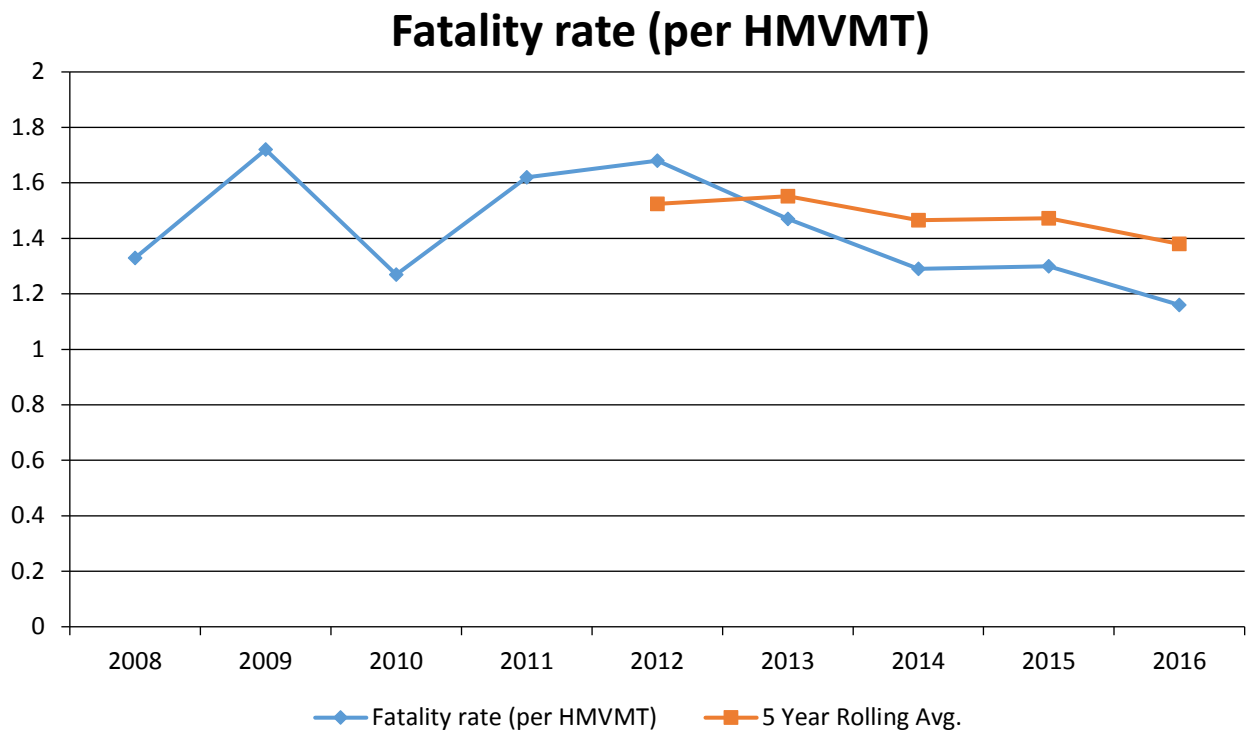
General Highway Safety Trends

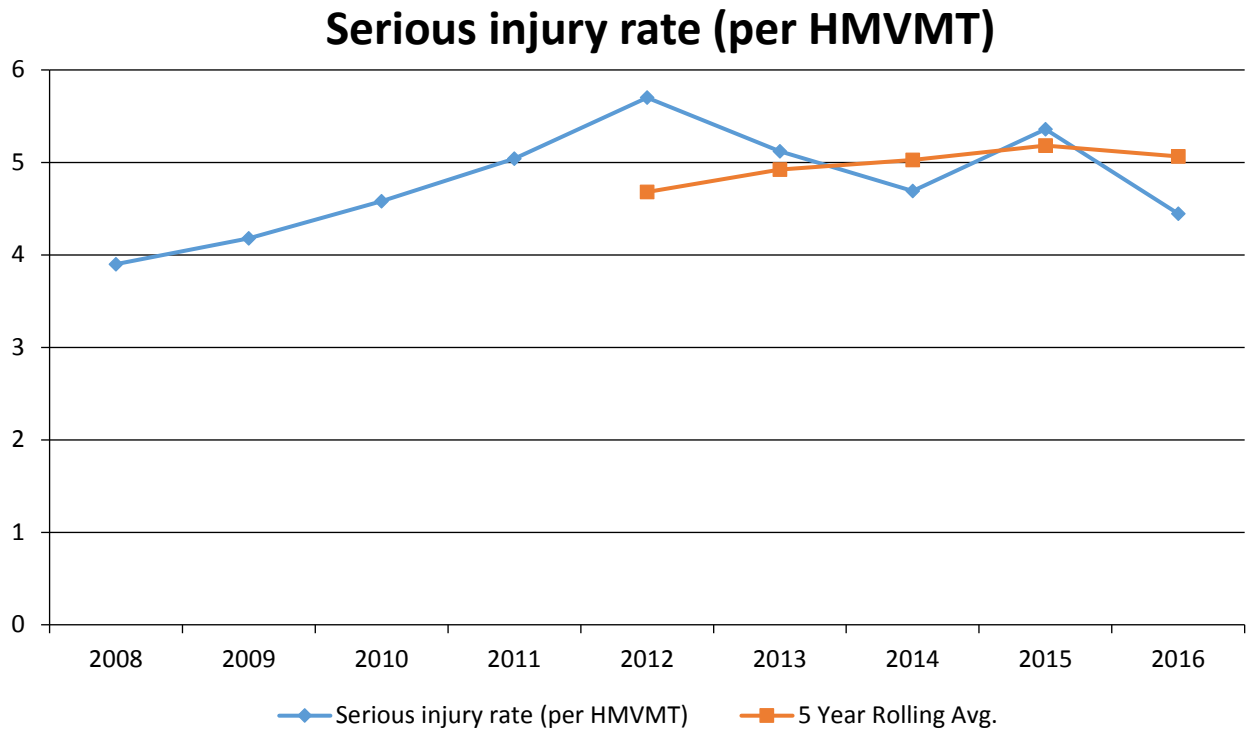
Present data showing the general highway safety trends in the State for the past five years.

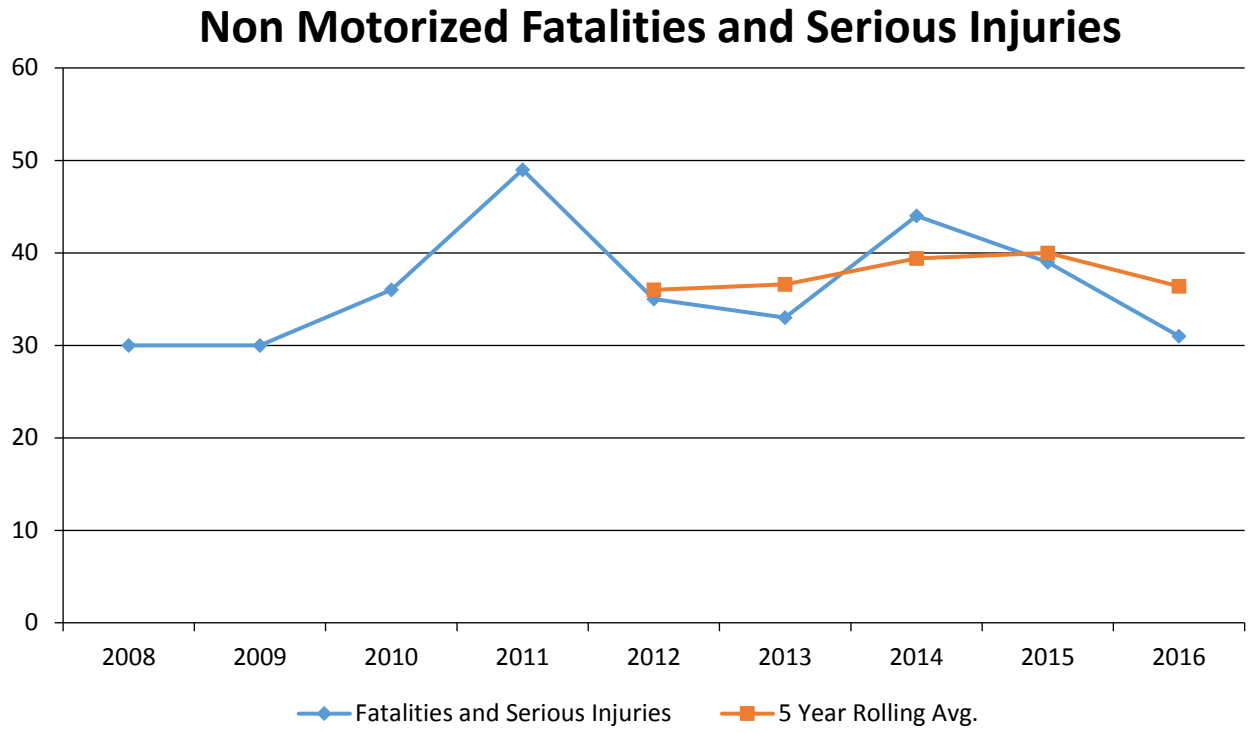
PERFORMANCE MEASURES	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fatalities	104	140	105	148	170	148	135	131	113
Serious Injuries	297	332	380	462	575	517	518	540	433
Fatality rate (per HMVMT)	1.330	1.720	1.270	1.620	1.680	1.470	1.290	1.300	1.160
Serious injury rate (per HMVMT)	3.900	4.180	4.580	5.040	5.700	5.120	4.690	5.360	4.446
Number non-motorized fatalities	8	5	9	10	10	3	12	8	10
Number of non-motorized serious injuries	22	25	27	39	25	30	32	31	21


Annual Fatalities
180
160
140
120
100
80
60
40
20
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
700
600
500
400
300
200
100
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
6
5
4
3
2
1
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



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

Describe fatality data source.

State Motor Vehicle Crash Database

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.

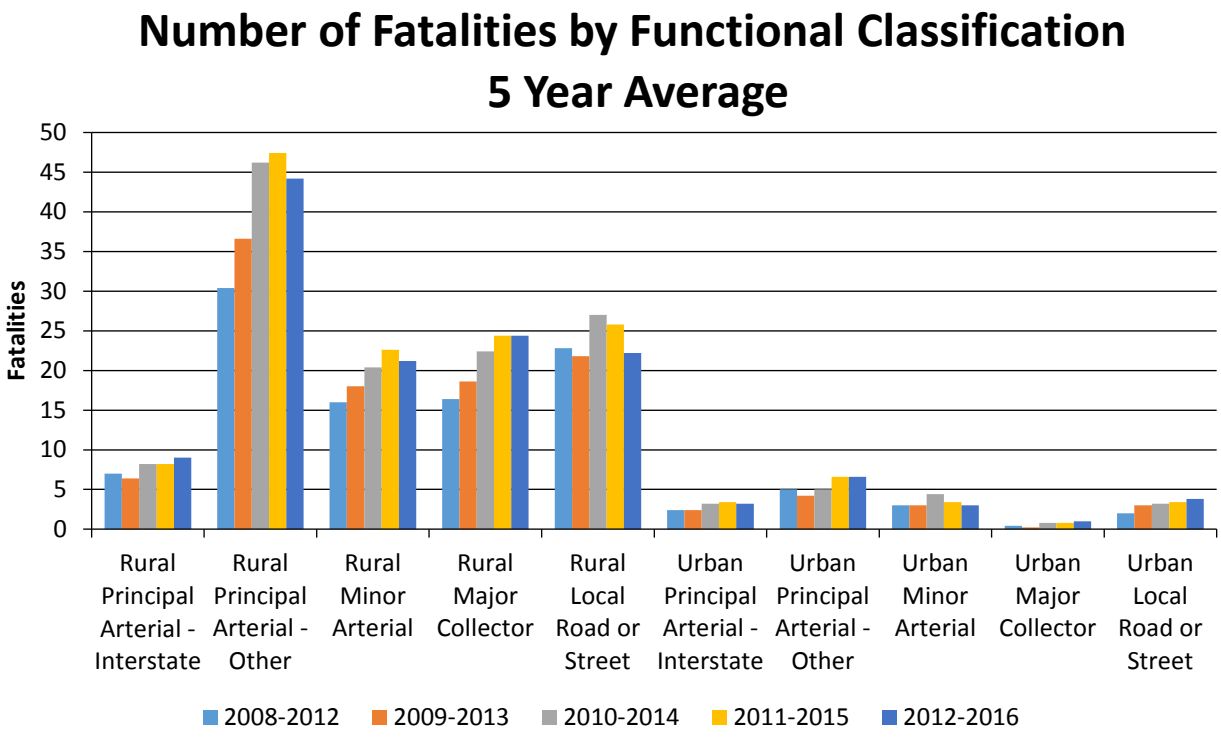
Year 2016

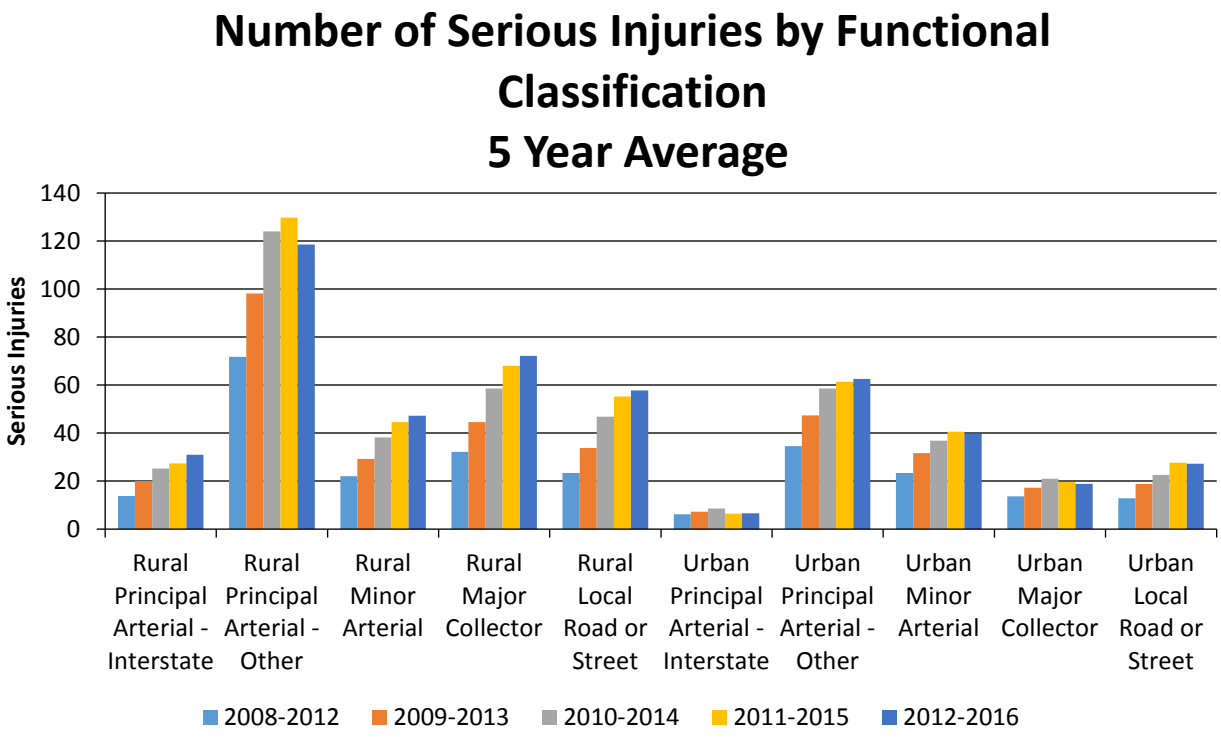
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Interstate	9	31	0.55	1.88
Rural Principal Arterial - Other Freeways and Expressways				
Rural Principal Arterial - Other	44.2	118.6	1.71	4.57
Rural Minor Arterial	21.2	47.2	2.43	5.4

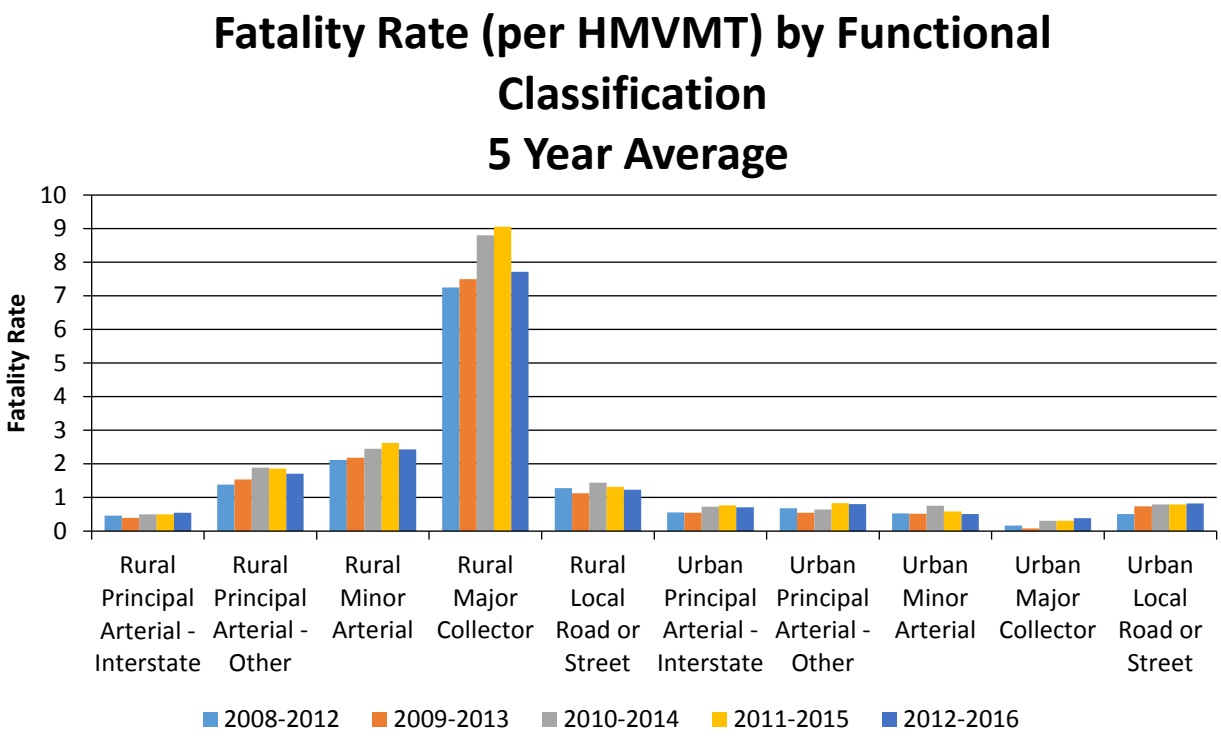
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Minor Collector				
Rural Major Collector	24.4	72.2	7.72	22.78
Rural Local Road or Street	22.2	57.8	1.23	3.11
Urban Principal Arterial - Interstate	3.2	6.6	0.71	1.43
Urban Principal Arterial - Other Freeways and Expressways				
Urban Principal Arterial - Other	6.6	62.6	0.81	7.64
Urban Minor Arterial	3	39.6	0.51	6.7
Urban Minor Collector				
Urban Major Collector	1	18.8	0.38	7.24
Urban Local Road or Street	3.8	27.2	0.82	5.94

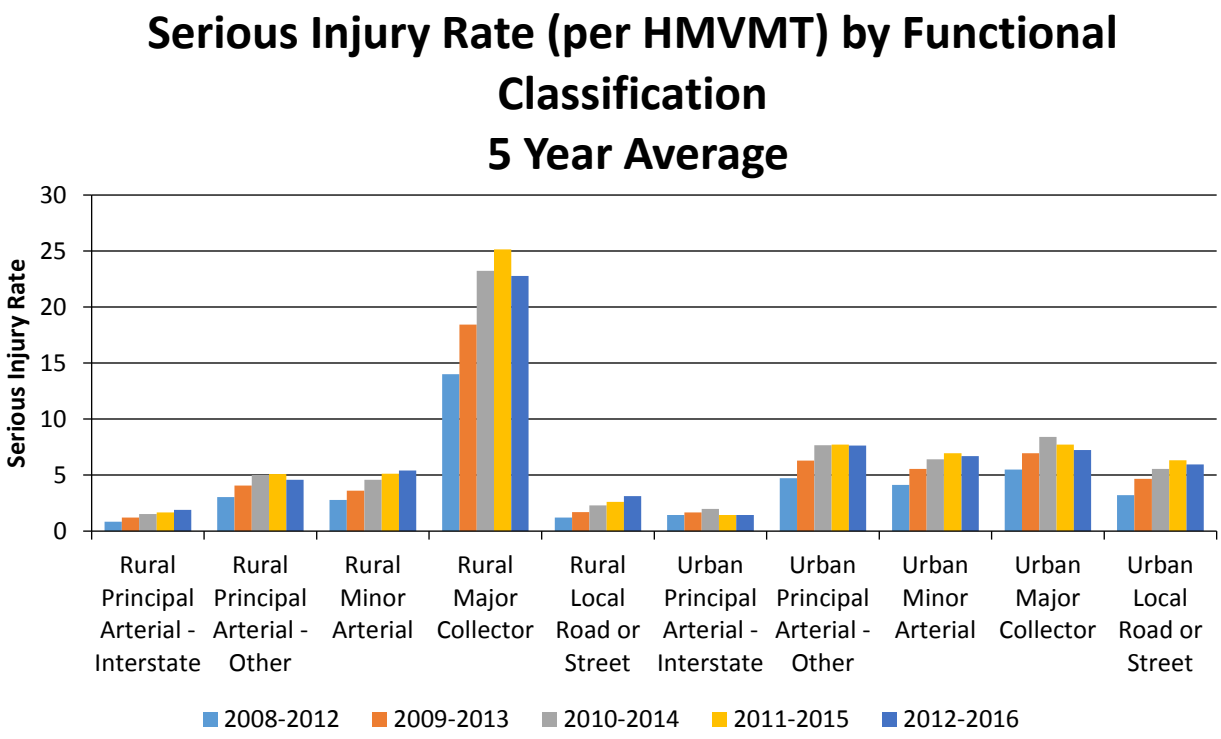
Year 2016

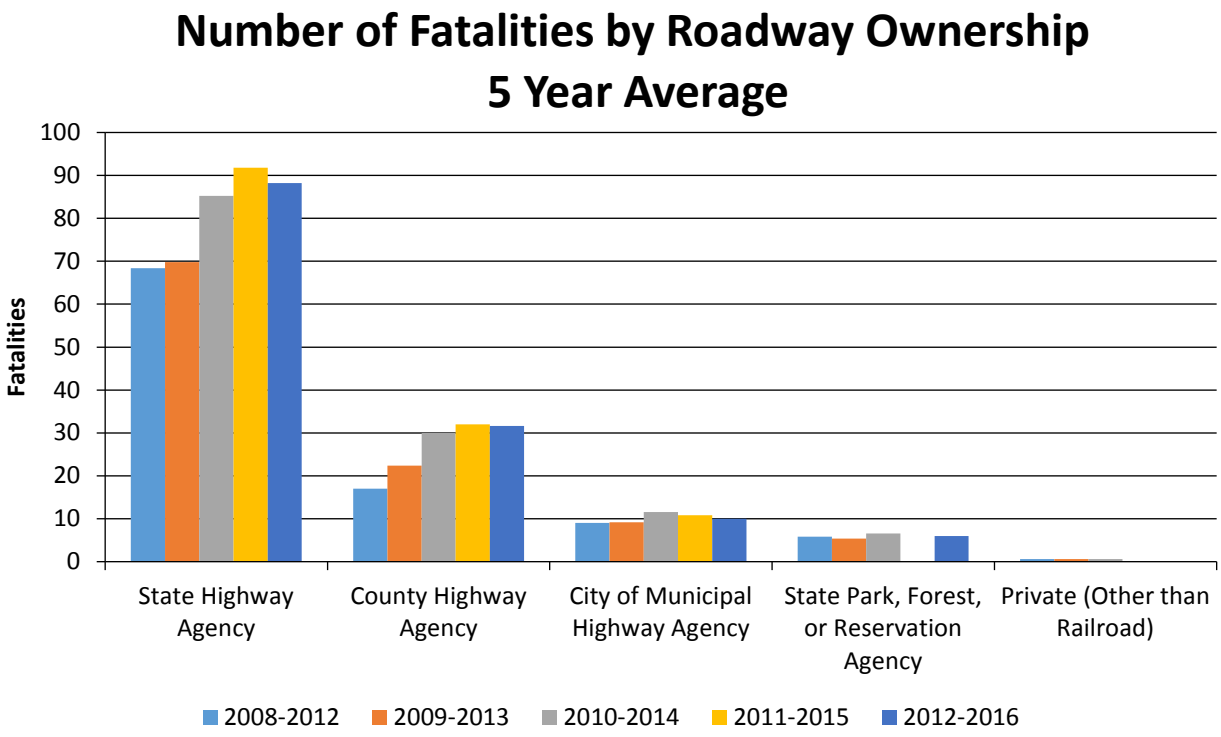
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	88.2	279.2	1.01	3.18
County Highway Agency	31.6	109.6	1.26	4.21
Town or Township Highway Agency				
City of Municipal Highway Agency	10	90.4	1.06	10.5
State Park, Forest, or Reservation Agency	6	2.2	0	0
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				

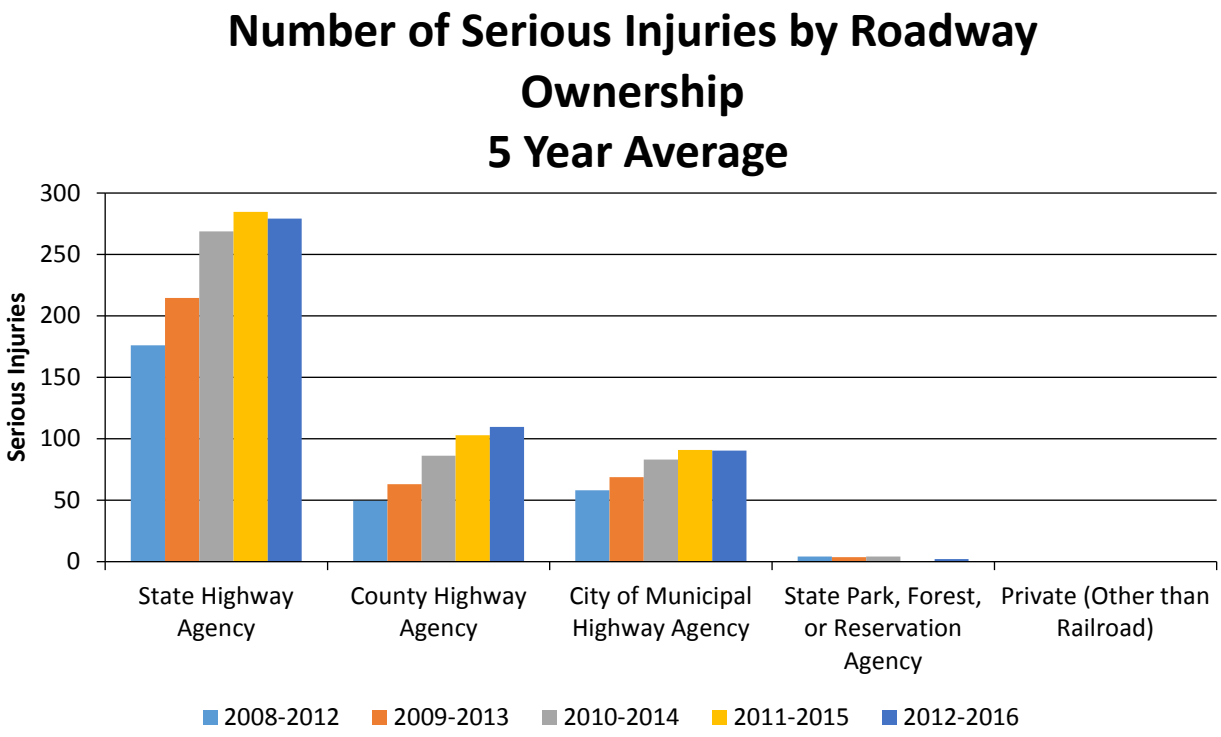

Number of Fatalities by Functional Classification
5 Year Average
Fatalities
50
45
40
35
30
25
20
15
10
5
0
Rural Principal Arterial - Interstate
Rural Principal Arterial - Other
Rural Minor Arterial
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial - Interstate
Urban Principal Arterial - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016

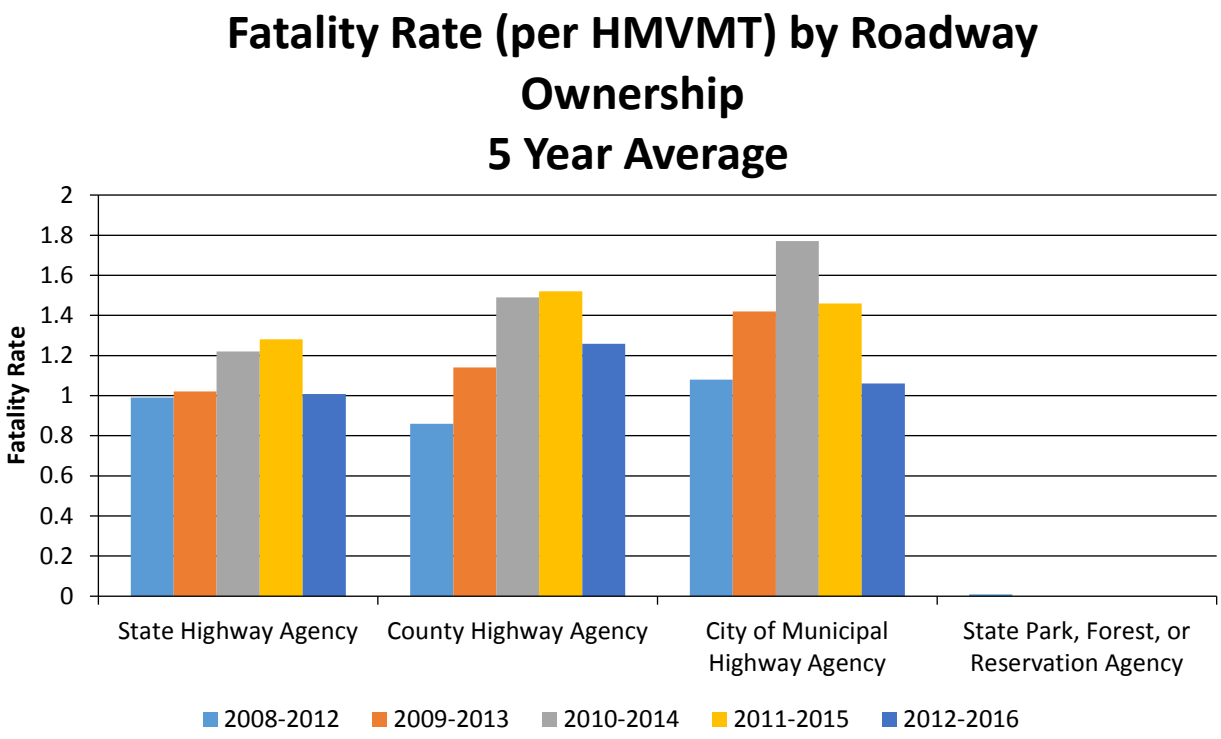

Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
140
120
100
80
60
40
20
0
Rural Principal Arterial - Interstate
Rural Principal Arterial - Other
Rural Minor Arterial
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial - Interstate
Urban Principal Arterial - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016

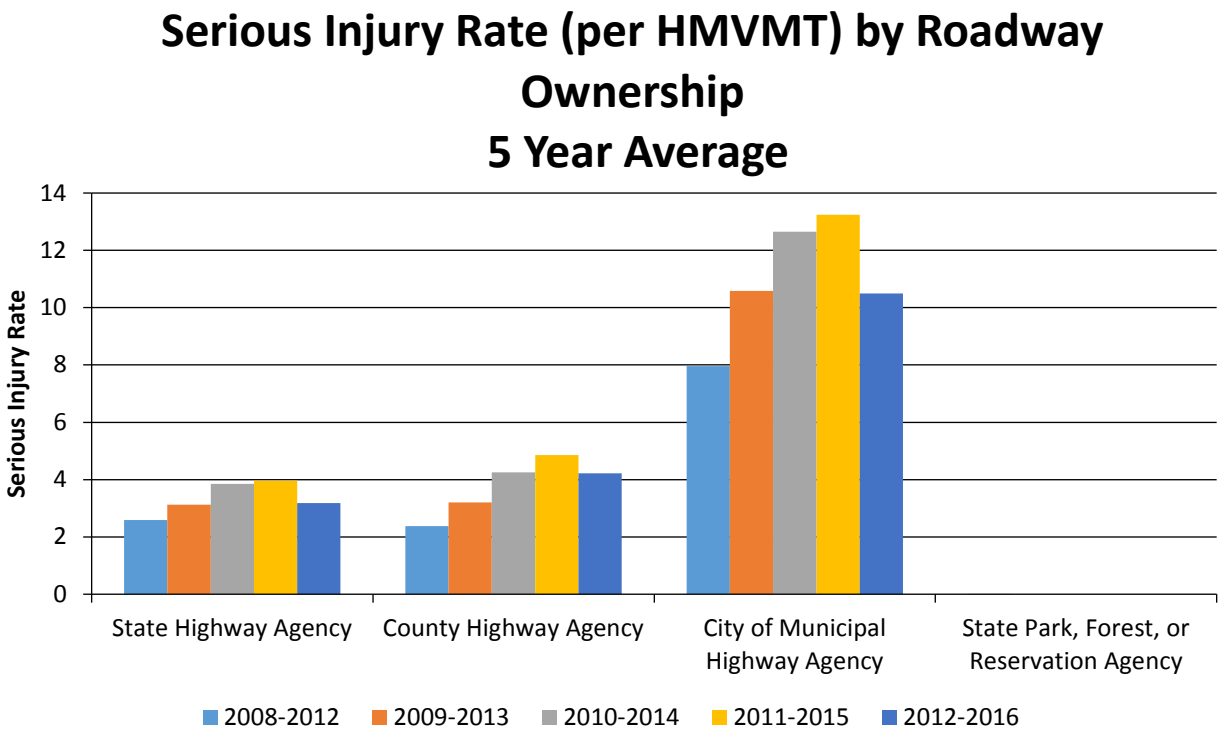

Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
10
9
8
7
6
5
4
3
2
1
0
Rural Principal Arterial - Interstate
Rural Principal Arterial - Other
Rural Minor Arterial
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial - Interstate
Urban Principal Arterial - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Serious Injury Rate (per HMVMT) by Functional Classification
5 Year Average
Serious Injury Rate
30
25
20
15
10
5
0
Rural Principal Arterial - Interstate
Rural Principal Arterial - Other
Rural Minor Arterial
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial - Interstate
Urban Principal Arterial - Other
Urban Minor Arterial
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Fatalities by Roadway Ownership
5 Year Average
Fatalities
100
90
80
70
60
50
40
30
20
10
0
State Highway Agency
County Highway Agency
City of Municipal Highway Agency
State Park, Forest, or Reservation Agency
Private (Other than Railroad)
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries by Roadway Ownership
5 Year Average
Serious Injuries
300
250
200
150
100
50
0
State Highway Agency
County Highway Agency
City of Municipal Highway Agency
State Park, Forest, or Reservation Agency
Private (Other than Railroad)
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Fatality Rate (per HMVMT) by Roadway Ownership
5 Year Average
Fatality Rate
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
State Highway Agency
County Highway Agency
City of Municipal Highway Agency
State Park, Forest, or Reservation Agency
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016



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 2018 Targets *

Number of Fatalities 138.0

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

Review of historical data and expert group input

Number of Serious Injuries 516.0

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

Review of historical data and expert group input

Fatality Rate	1.366

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

Review of historical data and expert group input

Serious Injury Rate	5.088

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

Review of historical data and expert group input

Total Number of Non-Motorized Fatalities and Serious Injuries	34.8

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

Review of historical data and expert group input

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

The long-term goal of the North Dakota SHSP is to move toward zero deaths. Targets were established with consideration of this long term goal but also considering SMART objectives. The targets were considered specific, measurable, achievable, relevant and time-oriented.

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

The State Highway Safety Office (SHSO) resides in the NDDOT. The SHSO (i.e., the NDDOT Safety Division) and other NDDOT Divisions including Local Government, Programming and Planning/Asset Management review performance measure data and define the method to set the targets. Proposed targets are then shared by the NDDOT at a regular meeting between NDDOT and the MPOs. Safety performance targets will be shared with SHSP stakeholders at regional workshops scheduled for 2017-2018. Feedback obtained from those workshops will be used to inform subsequent target setting strategies.

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.

Applicability of Special Rules

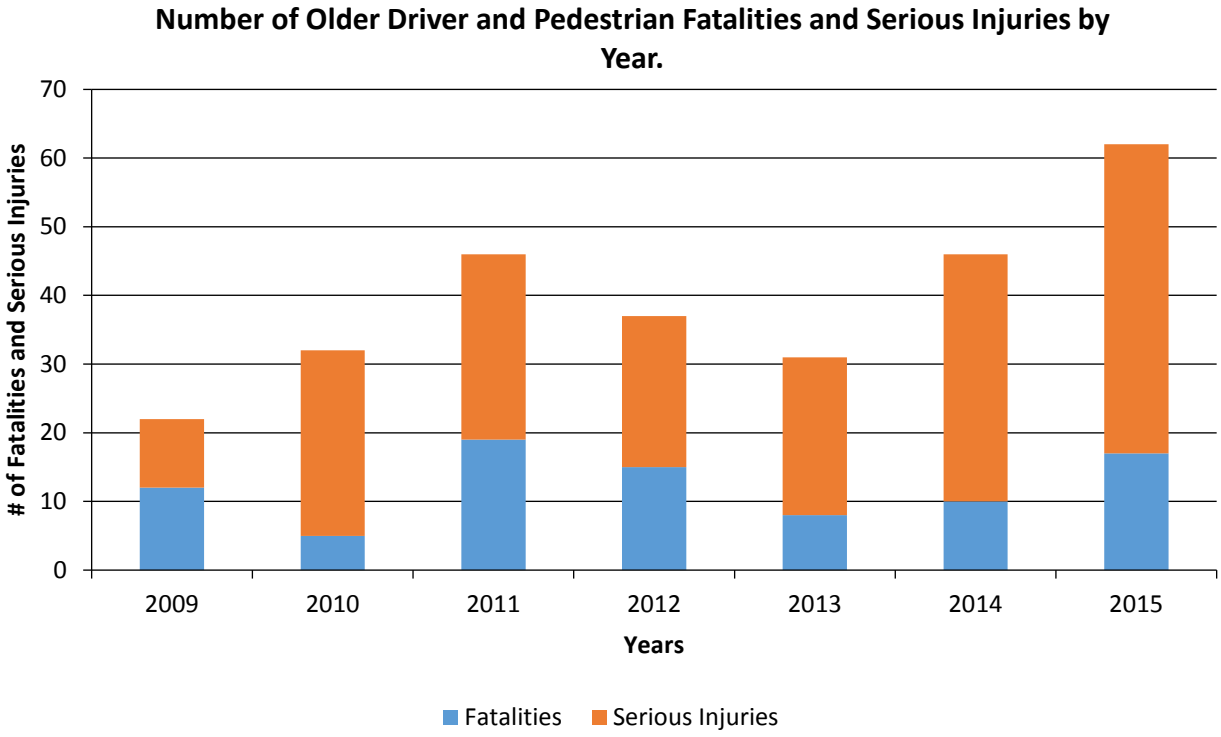
Does the HRRR special rule apply to the State for this reporting period?

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 for the past seven years.

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015
Number of Older Driver and Pedestrian Fatalities	12	5	19	15	8	10	17
Number of Older Driver and Pedestrian Serious Injuries	10	27	27	22	23	36	45



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

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries

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

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

Both fatal injuries and serious injuries have decreased from 2015 to 2016. The rates have also decreased. The NDDOT sees this as an encouraging trend. Individual project evaluations are being conducted comparing HSIP projects that were built during the 2013 construction season. This year was chosen since 3 years of crash data is available for both before and after periods. The individual project evaluations will be reported to FHWA next year.

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

More systemic programs

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

Each year more projects are being implemented that are a result of systemic analysis. The increase in these projects is encouraging because more and more local entities and other stakeholders are realizing the benefits of low-cost countermeasures applied over a large area. The NDDOT sees this "buy-in" as an important aspect of the overall safety program.

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

No

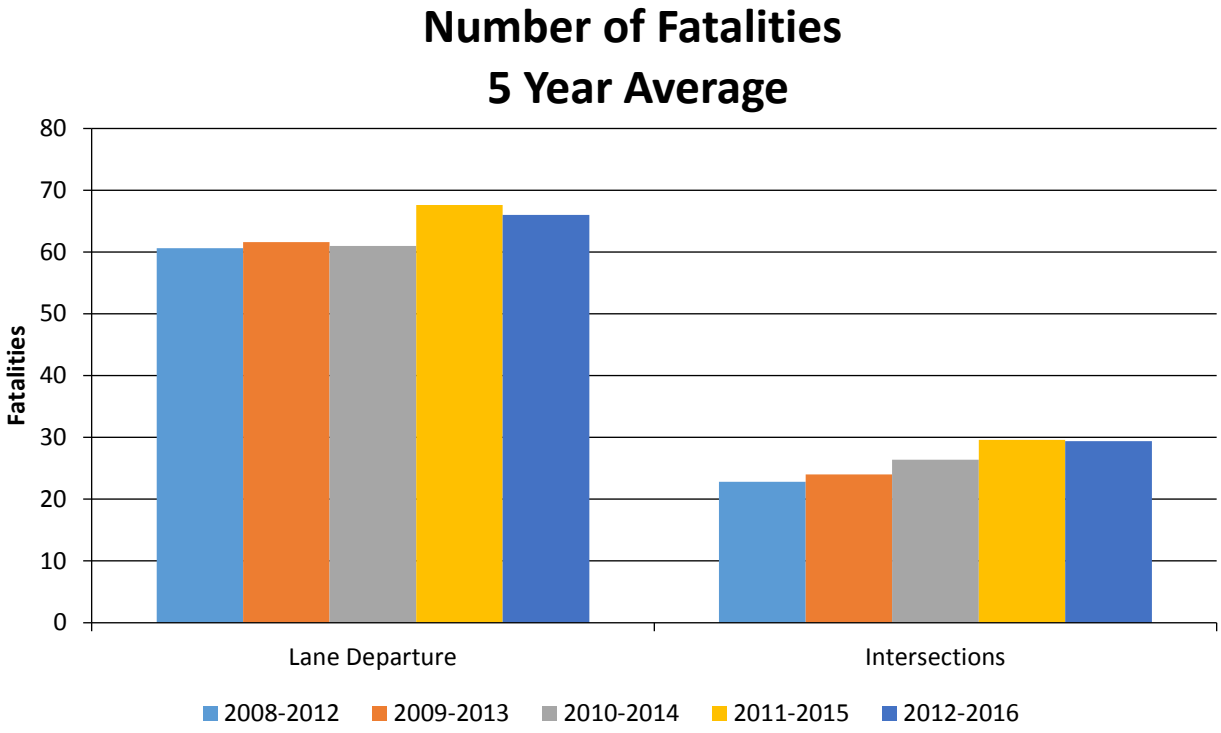
Effectiveness of Groupings or Similar Types of Improvements

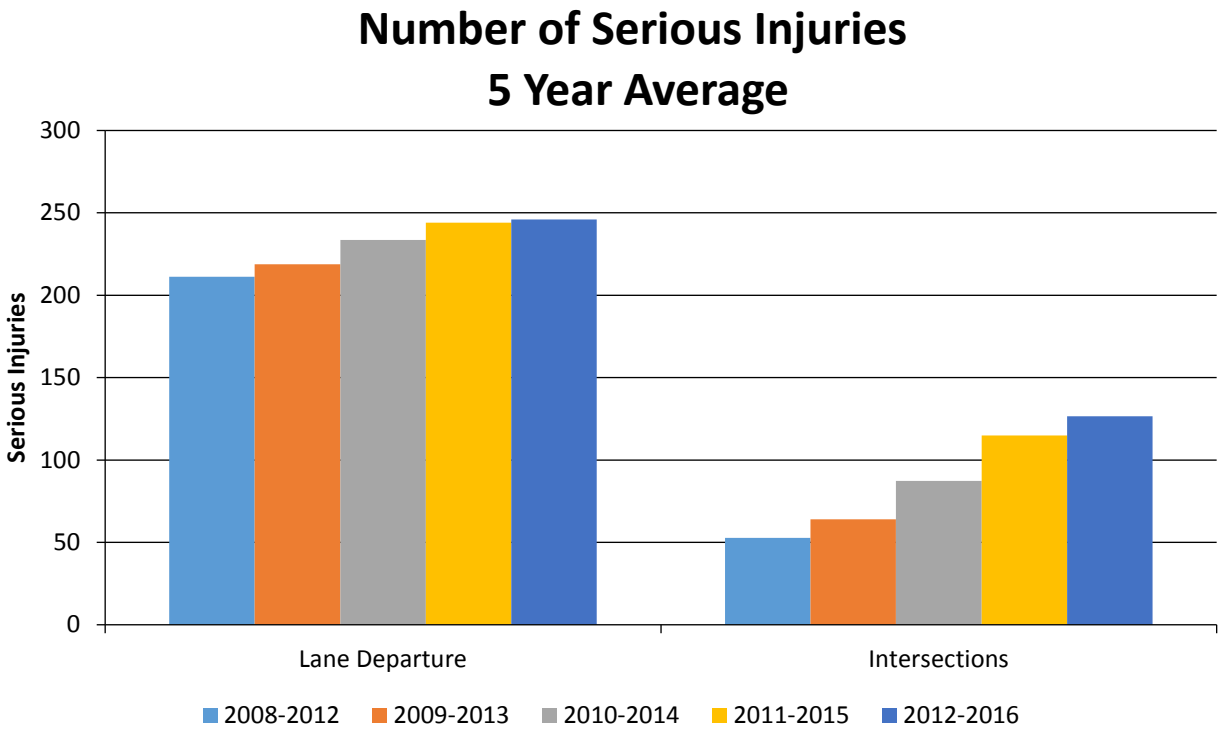
Present and describe trends in SHSP emphasis area performance measures.

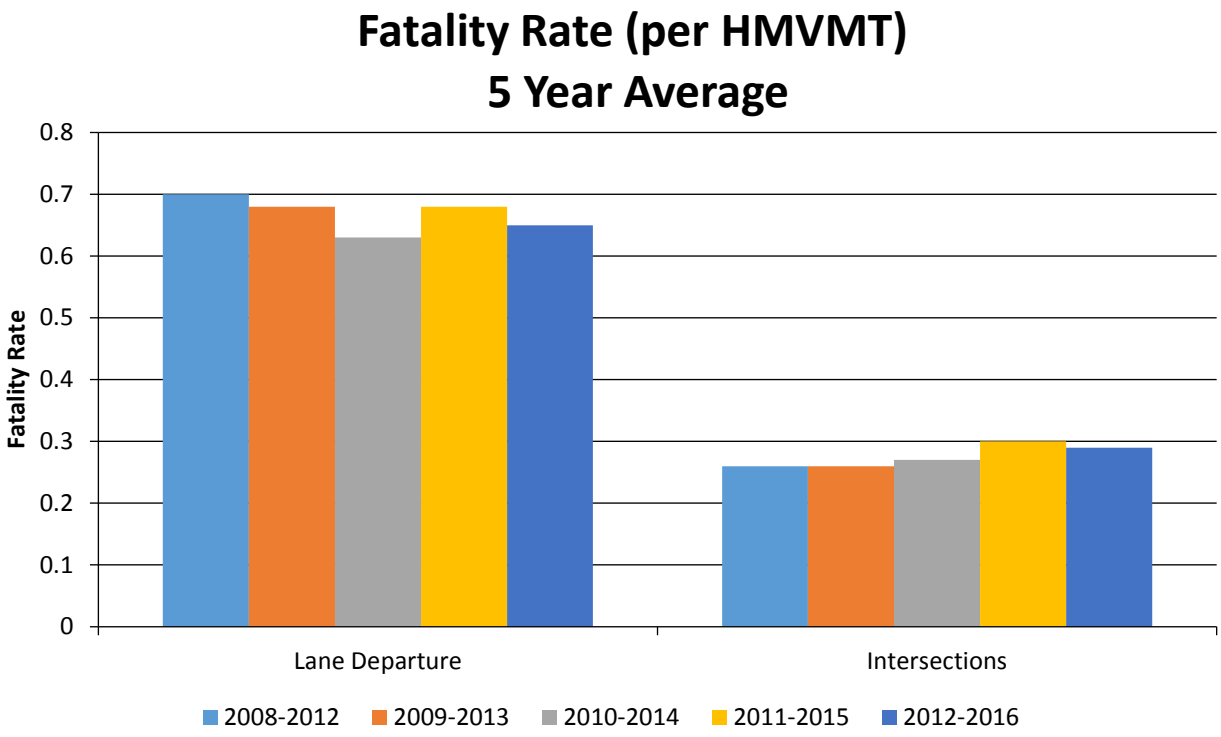
Year 2016

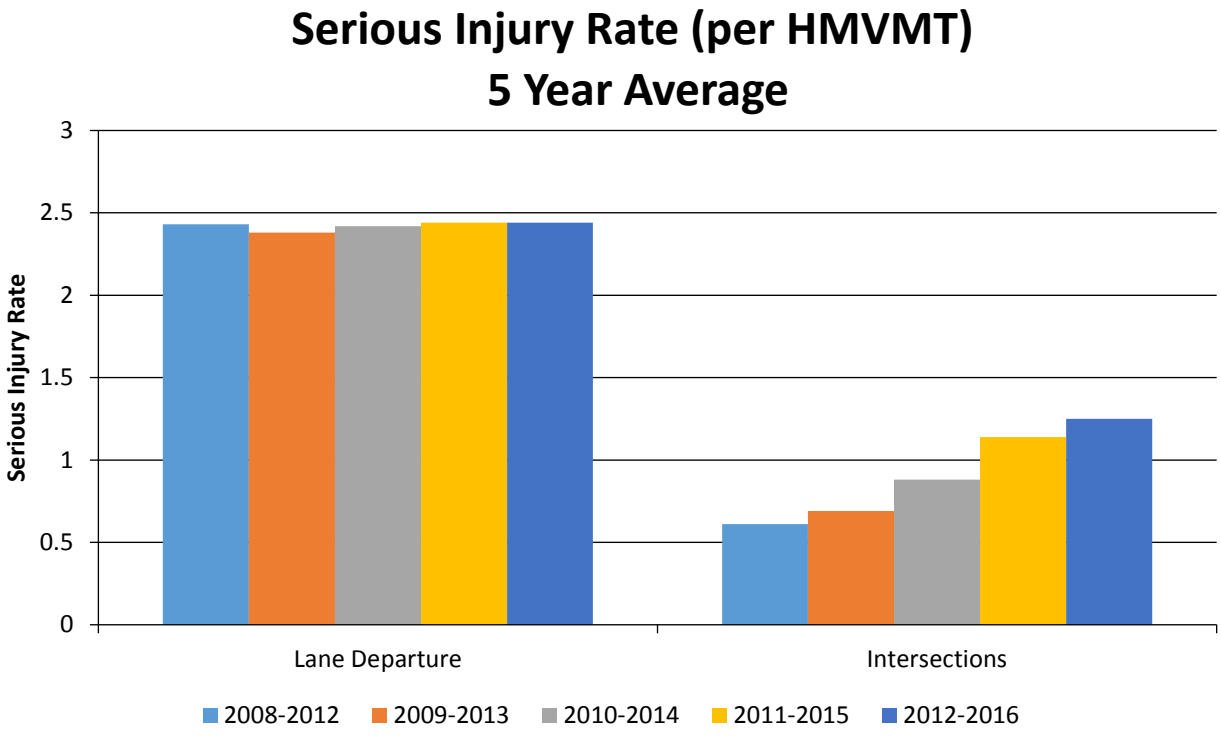
2017 North Dakota Highway Safety Improvement Program

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)	Other 1	Other 2	Other 3
Lane Departure		66	246	0.65	2.44			
Intersections		29.4	126.6	0.29	1.25			


Number of Fatalities
5 Year Average
Fatalities
80
70
60
50
40
30
20
10
0
Lane Departure
Intersections
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries
5 Year Average
Serious Injuries
300
250
200
150
100
50
0
Lane Departure
Intersections
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016





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

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

2017 North Dakota Highway Safety Improvement Program

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.

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

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

No

Compliance Assessment

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

10/02/2013

What are the years being covered by the current SHSP?

From: 2013 To: 2018

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

2018

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

North Dakota anticipates completing its next SHSP update by September 1, 2018.

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)	0	0					0	0	0	0
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)	0	0					0	0	0	0
End Point Segment Descritor (11)	100	100					100	100	100	100
Segment Length (13)	100	100								
Direction of Inventory (18)	0	0								
Functional Class (19)	100	100					100	100	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
Median Type (54)	0	0								
Access Control (22)	100	100								
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	100					100	100		
Average Annual Daily Traffic (79)	100	100					100	100		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	100					100	100	100	100
INTERSECTION										
Unique Junction Identifier (120)			0	0						
Location Identifier for Road 1 Crossing Point (122)			0	0						
Location Identifier for Road 2 Crossing Point (123)			0	0						
Intersection/Junction Geometry (126)			0	0						
Intersection/Junction Traffic Control (131)			0	0						
AADT for Each Intersecting Road (79)			0	0						
AADT Year (80)			0	0						
Unique Approach Identifier (139)			0	0						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					0	0				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					0	0				
Location Identifier for Roadway at Ending Ramp Terminal (201)					0	0				
Ramp Length (187)					0	0				

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
Roadway Type at Beginning of Ramp Terminal (195)					0	0				
Roadway Type at End Ramp Terminal (199)					0	0				
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)					0	0				
Totals (Average Percent Complete):	**83.33**	**83.33**	**0.00**	**0.00**	**27.27**	**27.27**	**88.89**	**88.89**	**80.00**	**80.00**

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.

All MIRE FDE elements not collected through established HPMS requirements will be considered and evaluated through the Department's Data Governance program development.

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	2=Suspected Serious Injury/Incapacitating	Yes	N/A	Yes	N/A	Yes
Crash Report Form Instruction Manual	2. Suspected Serious Injury/Incapacitating	Yes	A suspected serious injury is any injury other than fatal which results in one or more of the following:	Yes	a. Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood. b. Broken or distorted extremity (arm or leg) c. Crush injuries d. Suspected skull, chest or abdominal injury other than bruises or minor lacerations e. Significant burns (second or third degree burns over 10 percent or more of the body) f. Unconsciousness when taken from the crash scene g. Paralysis	Yes
Crash Database	Occ_Injury_Class	Yes	N/A	Yes	N/A	Yes
Crash Database Data Dictionary	Occ_Injury_Class	Yes	N/A	Yes	N/A	Yes

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.

2020

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

NDDOT is currently updating its SHSP which may result in a new HSIP Implementation Plan. Once these documents are adopted, an HSIP program assessment will be completed (estimated year 2020).

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.