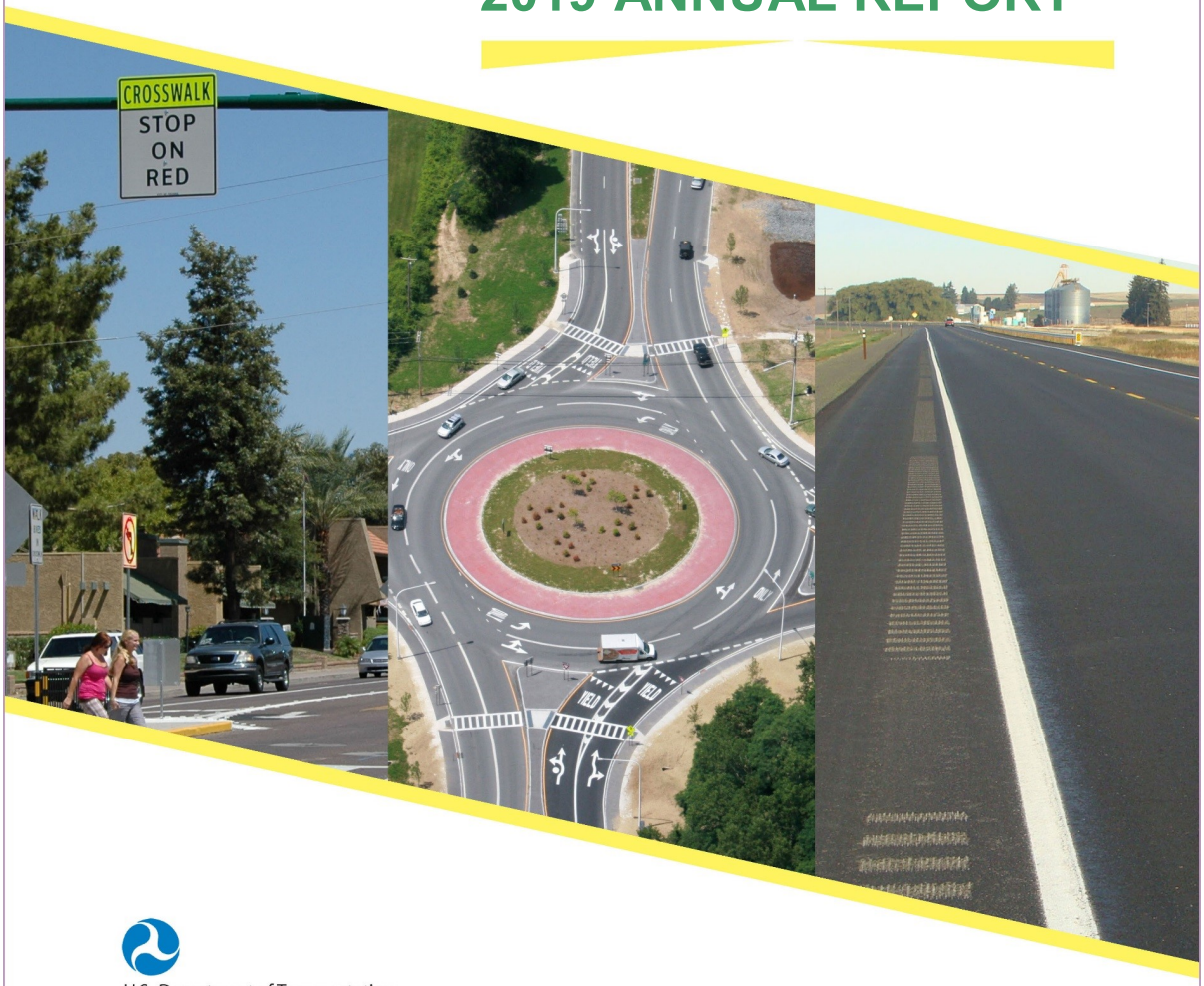
NEW MEXICO

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2019 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

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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 Highway Safety Improvement Program (HSIP) report is an annual update prepared by the Statewide Planning Bureau (SPB) of the New Mexico Department of Transportation (NMDOT) Asset Management and Planning Division (AMPD). The 2019 HSIP Annual Report is based on the best and most recent available transportation safety data and information, including projects contained in the Federal Fiscal Year (FFY) 2018 program. To facilitate a transparent stakeholder process, the NMDOT SPB, for infrastructure-related and non-infrastructure-related improvements, coordinates with internal and external safety partners in New Mexico through a comprehensive communication process. In the preparation of the Highway Safety Improvement Program (HSIP), the SPB is consistent with the Strategic Highway Safety Plan (SHSP), efforts related to the Highway Safety Plan (HSP), and the Commercial Vehicle Safety Plan (CVSP). This coordination helps to provide consistency of data presented in this report, integrated safety initiatives, consistent identification of performance trends, implementation of sound best safety practices, and facilitation of safety performance assessment. This coordinated safety planning effort allows NMDOT to allocate limited safety dollars to areas with the greatest safety needs and to effectively support NMDOT goals, safety strategies, and performance targets to reduce fatalities and serious injuries on the state transportation system.

Overall, in New Mexico, from 2014 to 2018 there was a 1.3 % increase in fatalities from 386 to 391. Suspected serious injuries (A) declined by 14.4% from 1,249 to 1,069 during the same reporting period.

With respect to the five-year rolling average for fatalities, from 2014 to 2018 there was a slight increase in the overall trend in fatalities. A comparison of annual values of the five-year rolling average indicates an increase of 5.5% in 2018 to 371.8 fatalities, compared to 352.4 fatalities in 2014. Suspected serious injuries (A) are on a downward trend in New Mexico for the past five years (2014 to 2018) with a reduction in the five-year rolling average from 1,563.6 to 1,186.6, a decrease of 24.1%.

Although the actual count of fatalities increased from 2014 to 2018, the rate of fatalities in New Mexico decreased in the same time period (preliminary estimate) from 1.520 to 1.413 fatalities per 100 million vehicle miles traveled (VMT), a reduction of 7.0%. Aiding this reduction is the increase in VMT when comparing 2014 to 2018. The five-year rolling average declined from 1.388 to 1.347 fatalities per 100M VMT, or a reduction of 3.0%.

The rate of serious injuries in New Mexico declined from 2014 to 2018 (preliminary estimate) from 4.298 to 3.863 serious injuries per 100M VMT, or a reduction of 10.1%. The five-year rolling average for serious injuries declined from 6.160 to 4.299 serious injuries per 100M VMT, or a reduction of 30.2%.

Non-motorized fatalities and suspected serious injuries increased between 2014 and 2018 (preliminary estimate) from 198 to 207, an increase of 4.5% and an increase in the five-year rolling average of 19.4% (169.2 to 202.0).

In FFY 2018, NMDOT continued to make significant progress in successfully programming and obligating HSIP funds, as well as continued implementation of a process for funding and eliminating a backlog of projects for future years. This included programming of the completed Road Safety Audit (RSA) projects and countermeasure recommendations for projects that are in the HSIP annual program. In addition, NMDOT initiated a network screening effort for urban and rural NMDOT maintained non-interstate highways in FFY2018 to identify candidate projects with a high crash risk. The network screening effort, completed in FFY2019, also identified candidate sites for High Risk Rural Roads (HRRR) which will be programmed in future years. NMDOT is in the process of developing a comprehensive HSIP Database to track historic, current and future HSIP projects from inception to completion.

The most recent update of the NM Strategic Highway Safety Plan (SHSP) was approved and distributed to safety stakeholders in March 2017.

In the summer of 2019, NMDOT completed an update of performance targets for each of the five core performance measures for fatalities (K), suspected serious injuries (A), fatality rate, suspected serious injury rate, and non-motorized fatalities and suspected serious injuries.

NMDOT is developing an HSIP Manual, scheduled for completion in late 2019. In 2017, NMDOT initiated a pilot effort to develop a Multi Objective Decision (MODA) Process for the prioritization of current HSIP projects. NMDOT anticipates refining this process for inclusion in the HSIP Manual under development.

To more effectively manage the NMDOT HSIP program in 2019, NMDOT continued to augment staff with consultant support.

Other accomplishments in FFY 2018 included continued improvements in crash data reporting and analysis, as evidenced by the improved level of detail and quality of data in this year's report. Over the past several years, NMDOT, through its contract with the University of New Mexico (UNM) Geospatial and Population Studies Traffic Research Unit, made progress in the location of crashes, an improved ability to identify crash occurrence by functional class and ownership, and an ability to calculate, on a statewide basis, crash rates to assess trends for safety performance targets.

Local safety road and tribal projects are a key component in the HSIP, with $6,097,356.50 obligated for the FFY 2018 reporting period. The NMDOT HSIP Safety Program includes a more detailed and extensive analysis of safety performance, Emphasis Areas, and strategies planned in HSIP projects. The intent of this is to effectively reduce fatalities and severe crashes on all roads in New Mexico.

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 NMDOT SPB continues to transition HSIP into a more data- and analysis-based program. In 2019, the SPB worked with consultants to complete a Highway Safety Manual (HSM)-based network screening analysis of the NMDOT maintained non-interstate rural and urban roadway network. The screening effort included a review of roadway segments, intersections, and pedestrian sites, in order to identify and rank sites with a statistically high need, based on the potential to reduce fatal and serious injury crashes. Working with NMDOT District stakeholders, the SPB identified sites with the highest potential need for safety improvements. Once the locations exhibiting this need are identified, an evidence-based diagnosis and countermeasure process will be followed. The SPB will work with NMDOT Districts and tribal and local public agencies to implement this process. The procedures to accomplish this will be included in the HSIP Manual that is under development. It is anticipated that this process will be fully online for FFY 2020.

The structure of the HSIP program is multidisciplinary and at various levels includes NMDOT, tribal and local agency stakeholders for those jurisdictions developing projects, with FHWA oversight as appropriate. The HSIP program is monitored by the NMDOT Safety Committee, which includes members from engineering, design, STIP, rail, and traffic from within NMDOT and the FHWA-NM Division office. The committee oversees project selection and allocation of funds to determine where the funds can be most efficiently utilized to optimize safety performance.

Where is HSIP staff located within the State DOT?

Other-Statewide Planning Bureau

The HSIP program is administered by the NMDOT Statewide Planning Bureau (SPB), which is located in Santa Fe.

How are HSIP funds allocated in a State?

- Other-General Office review and approval from the NMDOT Safety Committee

Over the past year, the NMDOT SPB made substantial efforts to allocate funds using a data-driven process to identify safety needs. Consistent with procedures outlined in Part B of the AASHTO Highway Safety Manual , the SPB is adopting a safety management process, with the first step to conduct network screening to identify

locations of safety concern. From the network screening process, identified candidate locations will be advanced for further study. If a site indicates a high safety need it can be developed as an HSIP funded project. If the HSIP is overprogrammed, NMDOT developed a Multi Objective Decision Analysis (MODA) process to more efficiently allocate funds and help investigate needs on a more comprehensive basis. This process includes quantitative and qualitative measures to support the prioritization of project locations that demonstrate a high safety need. To document the Safety Management Process, the SPB is also working on an HSIP Manual.

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

Under the NM HSIP program all public roadways are eligible for participation. For the HSIP program covered in this reporting period (FFY 2018), 17.3% of NM HSIP funds are obligated for local/tribal road projects, and 82.7% are obligated for Statewide DOT projects. The majority of the HSIP projects in the HSIP Program for FFY 2018 were approved by the Safety Committee based on applications and/or RSA reports.

In general, these applications were reviewed and, if approved, were prioritized by the NMDOT Safety Committee, independent of project jurisdiction - proposed HSIP projects on local and tribal maintained roadways were considered in the same manner as proposed projects on NMDOT roads.

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

- Design
- Governors Highway Safety Office
- Local Aid Programs Office/Division
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-NMDOT Districts
- Other-Statewide Planning Bureau

The primary policy decision-maker that oversees HSIP planning and policy development is the NMDOT Safety Committee. The committee is composed of voting members representing Design and Construction, Asset Management and Planning Division, the Modals Division, as well as advisory members from FHWA-NM, the Statewide Transportation Improvement Program Unit, relevant Technical Groups and Rail. The Safety Committee reviews all applications to ensure a proposed project is consistent with the SHSP and will contribute to achievement of NMDOT safety targets. Local stakeholders are required to verify their support for a project. An NMDOT district must verify that a proposed project meets the HSIP eligibility requirements and is consistent with the NMDOT STIP and scheduling considerations.

Describe coordination with internal partners.

The NMDOT Safety Committee meets monthly to review the HSIP, and confirm the program is meeting the goals and objectives of the NM SHSP and safety targets. The Safety Committee is composed of the following voting and advisory members:

Voting members:

- Design and Construction Director

- Asset Management and Planning Division Director
- Modals Division Director

Advisory members:

- HSIP Coordinator
- FHWA-NM Safety
- STIP Unit
- Technical Groups
- Rail Bureau Chief

The HSIP Coordinator also interacts closely with the three NMDOT Regional Design Centers to coordinate project tracking and oversight needs. In addition, the HSIP Coordinator, in overseeing the SHSP, liaisons closely with NMDOT Traffic Safety Division (in the Modals Division) which is responsible for the NMDOT Highway Safety Plan (HSP). The Modals Division Director is the NM representative to the Governor's Highway Safety Commission.

Identify which external partners are involved with HSIP planning.

- Academia/University
- FHWA
- Law Enforcement Agency
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Tribal Agency
- Other-Regional Transportation Planning Organizations

In the last several years, NMDOT has made efforts to engage local agencies such as Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Organizations (RTPOs), and tribal agencies in SHSP safety planning and development, and the setting of annual safety targets. The MPOs are involved in safety target setting and for the past two years, the MPOs have adopted the NMDOT safety targets.

Describe coordination with external partners.

All of the external partners listed in the previous question may be involved in the coordination process, particularly for conducting Road Safety Audits or Assessments (RSAs). Examples include data collection from local law enforcement, data management by academia such as the University of New Mexico. Typically, as a part of RSAs, local partners are also involved in identifying location specific phenomena, lending their expertise and insights to safety related issues, as well as development of safety diagnosis and countermeasures. NMDOT finds local expertise invaluable when considering safety issues and needs, the identification of lessons learned related to the implementation of countermeasures, and identification of context sensitive issues whether they are cultural or behavioral.

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

The NMDOT made significant progress in 2016-2019 to program and obligate HSIP funds and to provide a systematic process for funding a backlog of projects. This includes maintenance of a structured list of RSAs

planned and performed that will be used for future projects. As described above, the SPB implemented a comprehensive and organized process of communication with internal and external stakeholders.

Program Methodology

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

No

Currently, an HSIP Manual is under development with completion anticipated in late 2019. This manual will serve as a guide for the execution and conduct of the HSIP program in the coming years to ensure consistency with the SHSP, best practices, and other safety initiatives.

Select the programs that are administered under the HSIP.

- HRRR
- Roadway Departure
- Sign Replacement And Improvement

The programs listed are based on safety concerns identified in the SHSP and by stakeholders as a safety need.

Program: HRRR

Date of Program Methodology:9/30/2018

What is the justification for this program?

- FHWA focused approach to safety

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway	
Fatal crashes only	Traffic Volume	Functional Other-Rural area	classification

What project identification methodology was used for this program?

- Crash rate

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

How are projects under this program advanced for implementation?

- Other-NMDOT Safety 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).

Relative Weight in Scoring

Available funding:100
Total Relative Weight:100

This program addresses an SHSP priority to reduce the severity of high-risk rural road fatalities and serious injuries.

Program: Roadway Departure

Date of Program Methodology:9/30/2018

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic	Functional classification
Fatal and serious injury crashes only	Lane miles	Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Other-Crash severity

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

How are projects under this program advanced for implementation?

- Other-NMDOT 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).

Relative Weight in Scoring

Available funding:100
Total Relative Weight:100

This program addresses an SHSP Emphasis Area. This emphasis area had the highest ranking of all SHSP emphasis areas and largest frequency of fatal (F) and serious crashes (A). Projects in this program clearly address the SHSP and HSIP objective to reduce the frequency and severity of crashes.

Additional comment for the “How are projects under this program advanced for implementation” section:

For historical projects advanced for implementation and inclusion in the Roadway Departure program, NMDOT issues a call for projects to Districts. Based on responses, then a list of those projects is reviewed and compiled. NMDOT submits the list to the FHWA Division Office for review/approval. The projects approved by this process are advanced for implementation. Starting in 2019, NMDOT has adopted a network screening process to identify projects.

Program: Sign Replacement And Improvement

Date of Program Methodology:9/30/2018

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Other-Based on need to maintain minimum sign retroreflectivity for signs

What data types were used in the program methodology?

Crashes	Exposure	Roadway
Fatal and serious injury crashes only	Traffic	Functional classification

What project identification methodology was used for this program?

- Other-Reduction in total crashes

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?

How are projects under this program advanced for implementation?

- Other-NMDOT Safety 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).

Relative Weight in Scoring

Available funding:100
Total Relative Weight:100

In recent years with the retroreflectivity requirements for signs contained in the MUTCD, there has been an increased emphasis on maintaining signs to minimum levels of retroreflectivity to address driver visibility needs particularly at night and in inclement weather. Sign replacement and improvement leads to better conspicuity and legibility of information provided to drivers.

Additional comment for the “How are projects under this program advanced for implementation” section:

For projects advanced for implementation and inclusion in the Sign Replacement and Improvement program, NMDOT issues a call for projects to Districts. Based on responses, then a list of those projects is reviewed and compiled. NMDOT submits the list to the FHWA Division Office for review/approval. The projects approved by this process are advanced for implementation.

What percentage of HSIP funds address systemic improvements?

12.7

HSIP funds are used to address which of the following systemic improvements?

- Other-Pedestrian Safety

According to Fatality Analysis Reporting System (FARS), in 2017 pedestrians in New Mexico accounted for nearly 20% of all motor vehicle related fatalities, about 25% higher than national statistics. Preliminary 2018 data shows that New Mexico has a pedestrian fatality rate of 2.26 fatalities per 100,000 population, which is the highest of all states.

In 2016 through 2018, New Mexico pedestrian fatalities and serious injuries continued an upward trend compared to prior years. Due to the high number of injuries and fatalities, FHWA designated the State of New Mexico and the City of Albuquerque as a Pedestrian Focus State and Focus City, respectfully.

What process is used to identify potential countermeasures?

- Crash data analysis
- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan
- Stakeholder input

To support the process of identifying sites as an initial step of the crash analysis process, NMDOT completed a network screening process to identify high crash locations for the state maintained non-interstate system. This effort, using Highway Safety Manual Part B, Chapter 4 performance measures, provides a list of sites based on several screening methods: Excess Expected Average Crash Frequency with Empirical Bayes (EB) Adjustments for segments and crash frequency for intersections and pedestrian segments. Using these screening methods facilitates a more focused, efficient location of sites with the greatest potential to reduce fatalities and serious injuries. This approach supports the diagnosis of crash patterns, countermeasure development, and ultimately the development of projects using a data driven approach based on crash data.

The pedestrian safety projects in the FFY 2018 HSIP program focus on countermeasures related to network screening to identify high pedestrian crash sites. These projects include improving training of law enforcement officers related to crash reporting, improvement of crash system management, system planning, and intersection improvements that enhance pedestrian safety.

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

Describe how the State HSIP considers connected vehicles and ITS technologies.

The NMDOT HSIP includes five ITS projects in the FFY 2018 program. The HSIP funds obligated for these projects is $6,754,764.66.

At this time the HSIP program does not consider safety initiatives related to connected vehicle technologies.

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.

HSM methods are used to develop an enhanced safety analysis process consistent with approaches outlined in Part B. The network screening effort completed to-date identifies high-risk segments, intersections, and pedestrian crash sites for the entire NMDOT non-interstate state roadway network in rural and urban areas. The network screening method used was the sliding window approach. Safety performance functions were developed for groups for roadway geometries and Empirical Bayes (EB) methods were applied to calculate the expected crash frequency as part of the screening analysis. For roadway segments, sites will then be ranked

based on the difference between the expected and predicted average crash frequency. The product from this ranking is a list of high crash sites that can be used to develop HSIP projects in future years. A similar list of high crash intersections and pedestrian sites have been prepared based on HSM Part B methods using a frequency-based method as the performance measure.

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

NMDOT is currently working on the development of an HSIP Guide which is scheduled to be completed late in late 2019. Over the past year there has been internal discussions on the design and conduct of the HSIP program which has helped create an awareness of safety needs and long-term goals.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

FFY 2018

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$55,450,547	$27,943,137	50.39%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$3,729,366	$2,169,230	58.17%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$5,457,797	$5,045,569	92.45%
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	$64,637,710	$35,157,936	54.39%

Notes:
1. Funding categories that have $0 inputs had no funds programmed or obligated.
2. In some years, it is possible for some funding categories to have an obligated amount that is higher than the programmed amount. This is partially due to the fact that a project obligated in a prior fiscal year required a bid or letting adjustment in the following FFY, thus additional funds could have been obligated in the following FFY.
3. Source: 2018 HSIP projects list XLS file received dated 7/9/2019 - includes changes made to 6 of the project's obligated/programmed amounts that were made on 9/23/2019.

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

$10,417,821

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

$6,097,356

None

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

$2,544,805

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

$2,098,177

The five projects identified as non-infrastructure projects that are funded with HSIP funds are related to: Traffic Records Coordination, training of law enforcement officers to improve crash reporting and investigation, continued implementation of the E-Citation use, statewide traffic count data, and continued development/execution of statewide safety planning efforts.

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%

No transfers made.

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

In some instances, project development and delivery took longer than originally anticipated which affected timing for obligation of funds for projects. It is anticipated that improvements in project scoping can help mitigate this issue.

Describe any other aspects of the State's progress in implementing HSIP projects on which the State would like to elaborate.

To augment efforts for the HSIP program and annual report preparation, NMDOT continues to add consultant support.

General Listing of Projects

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

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
SEC 164	Non-infrastructure	Data/traffic records		Traffic Records	$355151	$400000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0		State Highway Agency	Data-related	Data	
US54 (TUCUMCARI) PROJECT 1	Roadway	Roadway - other	1.47000000000003	Miles	$26100	$26100	Penalty Funds (23 U.S.C. 164)	N/A	Principal Arterial-Other	12,313	40	State Highway Agency	Spot	Roadway Reconstruction	
RATON PASS PROJECT 2	Roadway	Roadway - other	6.55000000000001	Miles	$3092737	$3092737	Penalty Funds (23 U.S.C. 164)	N/A	Principal Arterial-Interstate	10,333	65	State Highway Agency	Spot	Roadway Reconstruction	
SAFETY SERVICES	Non-infrastructure	Data/traffic records		Data Analysis	$264127.47	$294805	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0		State Highway Agency	Data-related	Data	
UCR TRAINING	Non-infrastructure	Enforcement		Training for enforcement	$27000	$30000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0		State Highway Agency	Data-related	Data	
I-40 over Manuelito Canyon	Roadway	Roadway - other	1	Bridge	$138155	$138155	Penalty Funds (23 U.S.C. 164)	N/A	Principal Arterial-Interstate	19,863	75	State Highway Agency	Spot	Unknown	
STATEWIDE	Non-infrastructure	Data/traffic records		Training for enforcement	$1001898.6	$1320000	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0		State Highway Agency	Data-related	Data	
NM 170	Roadway	Pavement surface - miscellaneous	6	Miles	$140400	$156000	Penalty Funds (23 U.S.C. 164)	N/A	Principal Arterial-Other	3,646	55	State Highway Agency	Spot	Unknown	
NM 117	Roadway	Pavement surface - high friction surface	6	Miles	$378048.5	$1086040	HRRR Special Rule (23 U.S.C. 148(g)(1))	N/A	Major Collector	273	55	State Highway Agency	Spot	Roadway Departure	
NM 173 Safety Improvements			1.5	Miles	$57550.86	$70000	HRRR Special Rule (23 U.S.C. 148(g)(1))	N/A	Major Collector	1,654	55	State Highway Agency	Spot	Unknown	
CHERRY LANE RR CROSSING #020014M	Railroad grade crossings		0.1	Miles	$65993	$73326	HRRR Special Rule (23 U.S.C. 148(g)(1))	N/A	Local Road or Street	471	30	County Highway Agency	Spot	Unknown	
NM 434 Signing/Guardrail Project	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	17.2	Miles	$1321574.84	$2000000	HRRR Special Rule (23 U.S.C. 148(g)(1))	N/A	Major Collector	1,172	45	State Highway Agency	Spot	Roadway Departure	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
N. Roosevelt Rd Rail Crossing	Railroad grade crossings	Railroad grade crossing gates	0.01	Intersections	$346063.5	$500000	HRRR Special Rule (23 U.S.C. 148(g)(1))	N/A	Local Road or Street	92		County Highway Agency	Spot	Railroad	
Exit 85 Interchange Lighting-Deming	Lighting	Site lighting - interchange	1	Miles	$542219.03	$800000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	2,890	35	State Highway Agency	Spot	Intersections	
NM 333 & PATRICIO GARCIA SHOULDER CROSSING IMPROVEMENTS - FROM PATRICIO GARCIA RD @ CAMINO MUNICIPAL	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Pedestrian Walkway	$70200	$78000	HSIP (23 U.S.C. 148)	N/A	Major Collector	9,093	50	State Highway Agency	Spot	Pedestrians	
RACETRACK DRIVE TO ROSS ROAD	Roadway	Roadway widening - add lane(s) along segment	2.3	Miles	$244759.31	$0	HSIP (23 U.S.C. 148)	N/A	Minor Arterial	9,335	40	State Highway Agency	Spot	Turning, Pedestrians	
RIO GRANDE BLVD INTERSECTION IMPROVEMENTS	Intersection geometry	Intersection geometry - other	1	Intersections	$1584000	$1760000	HSIP (23 U.S.C. 148)	N/A	Minor Arterial	14,732	35	City or Municipal Highway Agency	Spot	Intersections	
COMMUTER RAIL: Phase II ISLETA PUEBLO QUIET ZONE - NM 314 Widening at NM 147	Roadway	Roadway widening - add lane(s) along segment	1	Intersections	$855000	$1184495	HSIP (23 U.S.C. 148)	N/A	Minor Arterial	4,761	50	Indian Tribe Nation	Spot	Railroad	
TRAFFIC COUNT DATA COLLECTION	Non-infrastructure	Data/traffic records	1	Traffic Count Data	$450000	$500000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Data-related	Data	
ZUNI RD IMPROVEMENTS	Pedestrians and bicyclists	Modify existing crosswalk	1	Intersections	$2700000	$3643000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	15,274	30	City or Municipal Highway Agency	Spot	Pedestrians	
NM 68 - Taos Urban	Roadway	Roadway - other	1.08	Miles	$3497393	$24236301	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	20,057	35	State Highway Agency	Spot	Unknown	
SUNSET RD SW ROADWAY AND SAFETY IMPROVEMENTS	Pedestrians and bicyclists	Install sidewalk		Miles	$450000	$3150000	HSIP (23 U.S.C. 148)	N/A	Major Collector	5,206	25	City or Municipal Highway Agency	Spot	Pedestrians	

2019 New Mexico Highway Safety Improvement Program

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
I-40	Roadside	Barrier- metal	91.4	Miles	$601906.8	$677000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Interstate	0		State Highway Agency	Spot	Roadway Departure	
Agua Fria St./Cottonwood Drive Intersection	Intersection geometry	Intersection geometry - other		Intersections	$96300	$107000	HSIP (23 U.S.C. 148)	N/A	Minor Arterial	4,706		City or Municipal Highway Agency	Spot	Intersections	
I-10 Corridor Pavement Preservation: BETWEEN DEMING AND LAS CRUCES	Roadside	Barrier- metal	24.8	Miles	$587197.66	$877840	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Interstate	22,422	75	State Highway Agency	Spot	Roadway Departure	
PROJECT IS LOCATED JUST SOUTH OF CUBA, NM ON US 550.	Roadside	Fencing	4.5	Miles	$1478488.13	$400000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	5,244	70	State Highway Agency	Spot	Animals	
Dust Storm Project Phase II	Shoulder treatments	Widen shoulder - paved or other	20	Miles	$1196699.74	$2000000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Interstate	14,505	75	State Highway Agency	Spot	Roadway Departure	
NM 314 & COURTHOUSE RD INTERSECTION IMPROVEMENTS	Intersection geometry	Intersection geometry - other	0.6	Miles	$508197.46	$600000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	11,737	35	State Highway Agency	Spot	Turning	
Guardrail Upgrades on US 70	Roadside	Barrier- metal	12	Miles	$657064.58	$800000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	14,770	75	State Highway Agency	Spot	Roadway Departure	
Guardrail Upgrade Safety Project	Roadside	Barrier- metal	55.9	Miles	$3355904	$3728783	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	6,122	70	State Highway Agency	Spot	Roadway Departure	
Dust Storm project-ITS portion	Advanced technology and ITS	Advanced technology and ITS - other	25	Miles	$2689076.79	$3000000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Interstate	14,505	75	State Highway Agency	Spot	Unknown	
I-10 Seed Project	Roadway	Roadway - other	134	Miles	$40500	$45000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Interstate	0	75	State Highway Agency	Spot	Unknown	
NM 599 & Intersection with Via Veteranos	Intersection geometry	Intersection geometry - other	1	Intersections	$425863.39	$500000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	14,727	55	State Highway Agency	Spot	Intersections	
Cannon AFB Turn Lane Project	Intersection geometry	Auxiliary lanes - add acceleration lane	1.40000000000003	Miles	$3635977.92	$4395000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	3,093	65	State Highway Agency	Spot	Intersections	

2019 New Mexico Highway Safety Improvement Program

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Sign Replacement US 380	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	40	Miles	$282600	$314000	HSIP (23 U.S.C. 148)	N/A	Minor Arterial	2,199	65	State Highway Agency	Spot	Unknown	
Panel Sign Replacement	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	20.5	Miles	$53421.54	$103806	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Interstate	38,471	75	State Highway Agency	Spot	Unknown	
US 60 Sign and Post Replacement	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	22	Miles	$121401	$134890	HSIP (23 U.S.C. 148)	N/A	Minor Arterial	2,583	55	State Highway Agency	Spot	Unknown	
US 60/84 Sign Replacement	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	51	Miles	$102578	$300432	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Other	3,924	65	State Highway Agency	Spot	Unknown	
ITS Bureau Fiber Network	Advanced technology and ITS	Advanced technology and ITS - other	21	Miles	$1350000	$1500000	HSIP (23 U.S.C. 148)	N/A	Multiple/Varies	0		State Highway Agency	Spot	Unknown	
I-25/SOCORRO INTERCHANGE LIGHTING	Lighting	Site lighting - interchange	0.899999999999977	Miles	$366389.59	$615000	HSIP (23 U.S.C. 148)	N/A	Principal Arterial-Interstate	8,089	75	State Highway Agency	Spot	Intersections	

1. Speed Limit, AADT, Functional Class data are based on the best available information.

2. In the case that a project included multiple routes, which can lead to multiple functional classes, the higher functional class was applied, assuming the data was provided.

3. Programmed costs from 2018 were inserted into the “Total Project Cost ($)” column. This was done because the template for Q29 does not distinguish between programmed and obligated.

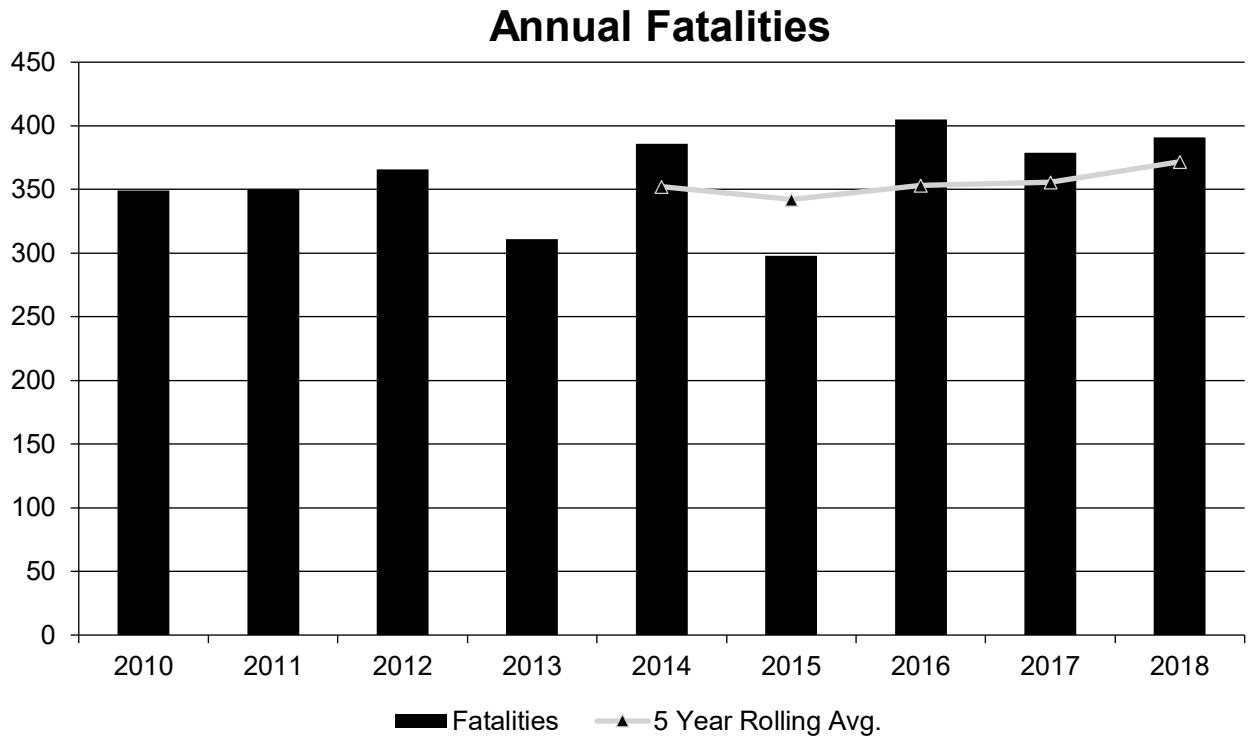
4. The Online Reporting Tool will not accept answers of "NA" or "Varies". Some columns (Speed Limit, AADT, Functional Class) have inputs that vary. A corridor or systemic project can have these types of features change throughout the project. Since the ORT will not accept these 'umbrella' answers, the cells were left blank on purpose.

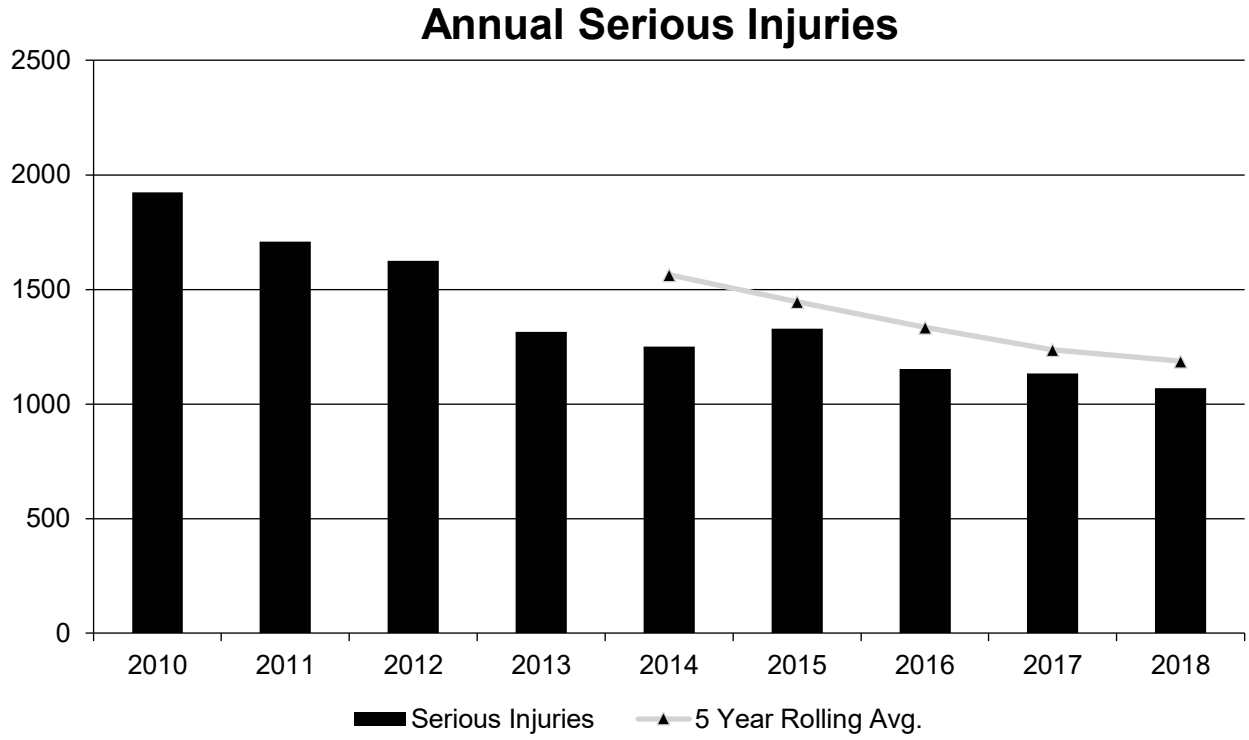
Safety Performance

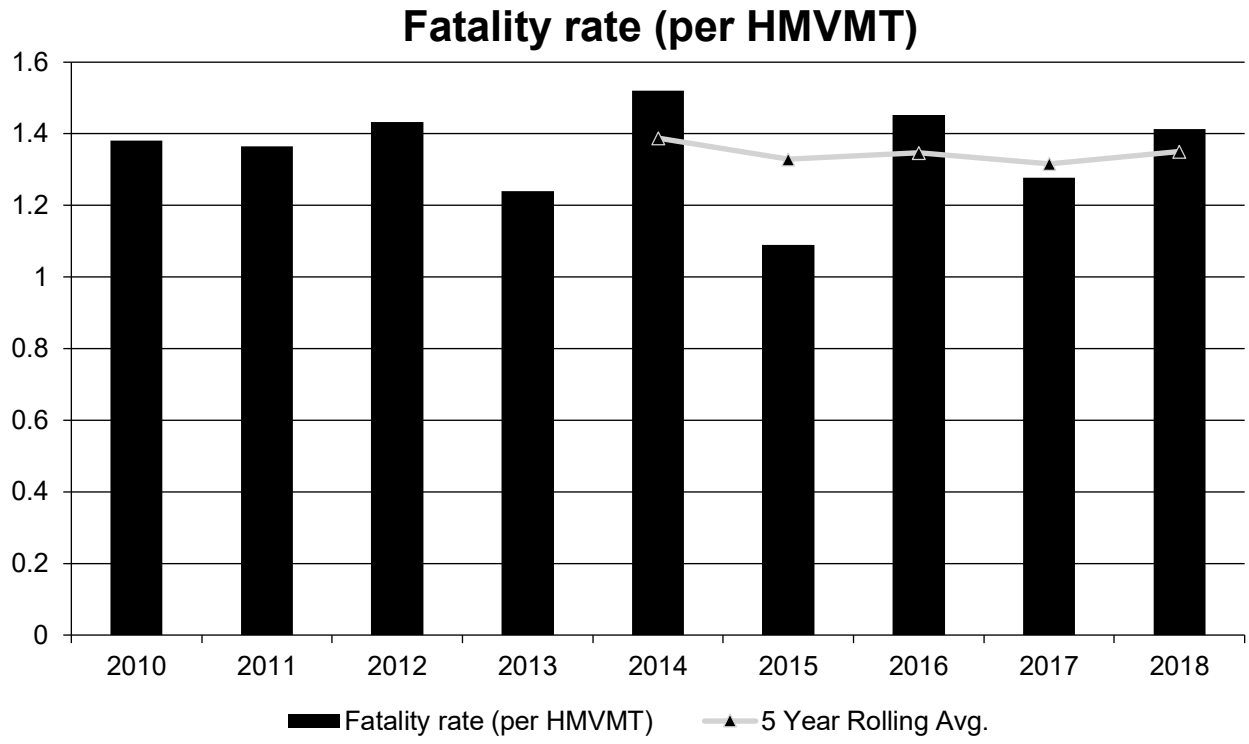
General Highway Safety Trends

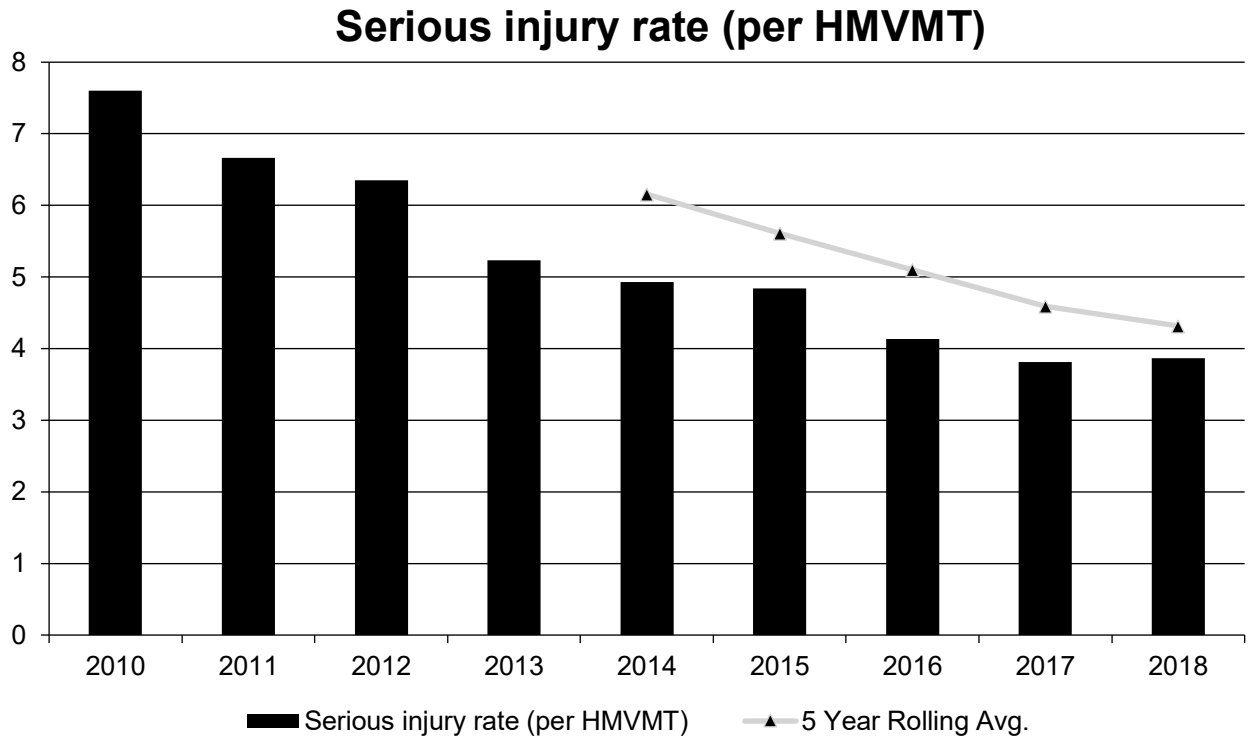
Present data showing the general highway safety trends in the State for the past five years.

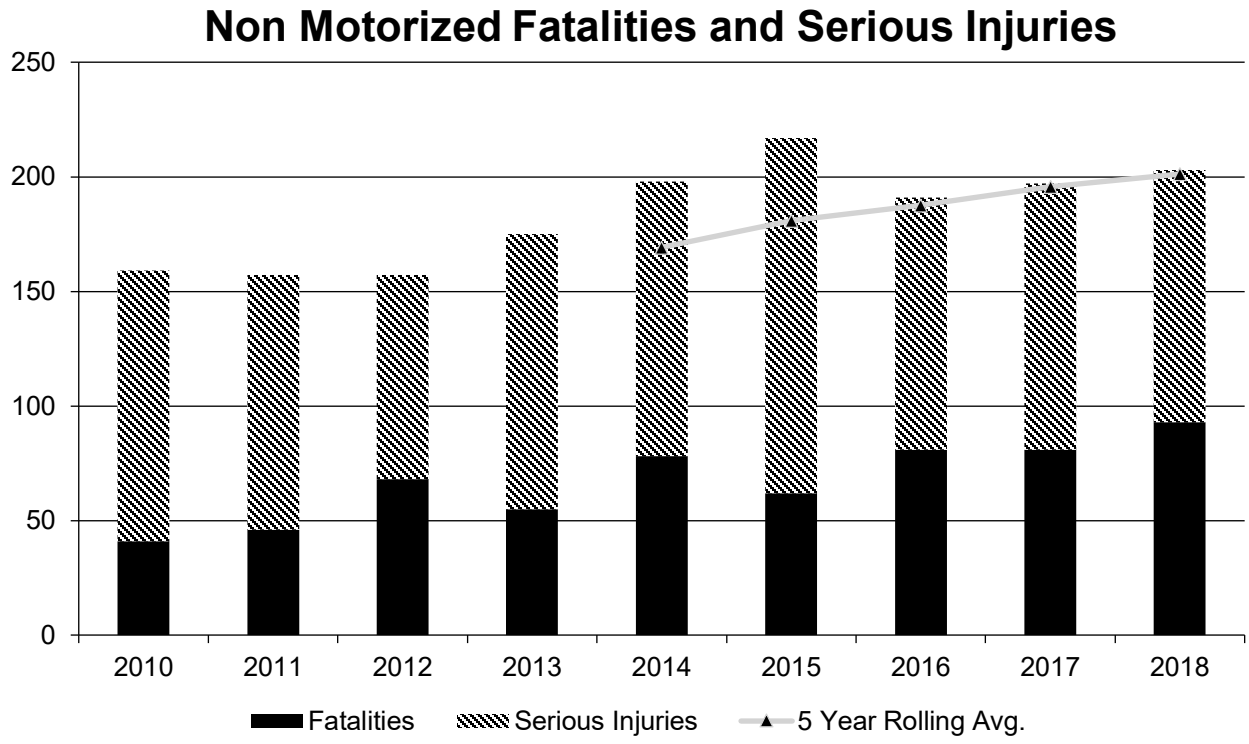
PERFORMANCE MEASURES	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fatalities	349	350	366	311	386	298	405	379	391
Serious Injuries	1,922	1,709	1,624	1,314	1,249	1,329	1,153	1,133	1,069
Fatality rate (per HMVMT)	1.381	1.365	1.432	1.240	1.520	1.090	1.452	1.277	1.413
Serious injury rate (per HMVMT)	7.605	6.663	6.353	5.238	4.928	4.844	4.135	3.817	3.863
Number non-motorized fatalities	41	46	68	55	78	62	81	81	93
Number of non-motorized serious injuries	118	111	89	120	120	155	110	116	110
non-motorized fatalities and serious injuries	159	157	157	175	198	217	191	197	207

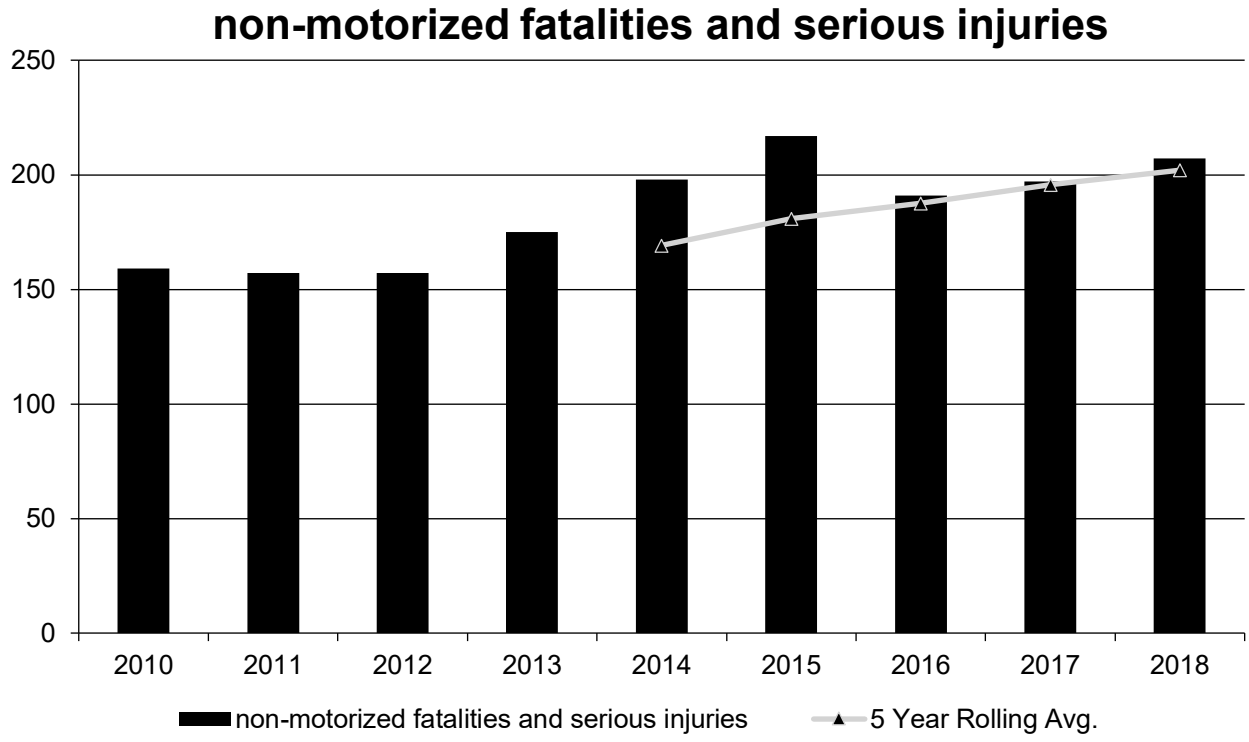

Annual Fatalities
450
400
350
300
250
200
150
100
50
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
2500
2000
1500
1000
500
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
8
7
6
5
4
3
2
1
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious injury rate (per HMVMT)
5 Year Rolling Avg.





Fatalities Data Source (2009-2017): FARS Query using Person Type: All and Injury Severity: (4) Fatal Injury

Fatalities Data Source (2018): Performance Measure (PM) Target Report – PM 1 2020 Safety Targets; dated August 15, 2019; received from Jessica Griffin/NMDOT. This is a different data source for fatalities because FARS does not have 2018 values listed at the time of filling out the report.

A-Injury Data Source (2009-2018): Performance Measure (PM) Target Report – PM 1 2020 Safety Targets; dated August 15, 2019; received from Jessica Griffin/NMDOT

Non-motorized Fatalities Data Source (2009-2017): FARS Query using Person Type: (5) Pedestrian, (6) Bicyclist, (7) Other cyclist, and (8) Persons on Personal Conveyances.

Non-motorized Fatalities Data Source (2018): NMDOT highway crash database.

Non-motorized A-injuries Data Source (2009-2018): NMDOT state motor vehicle crash database.

Describe fatality data source.

FARS

Depending on the particular fatality data characteristics needed, the fatality data for 2018 is from the NMDOT motor vehicle crash database or the Performance Measure (PM) Target Report. The FARS database could not be used because FARS did not have 2018 values listed when this report was prepared.

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

Year 2018

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	53.4	77.8	1.12	1.63
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	56.8	83.2	1.26	1.85
Rural Minor Arterial	26.6	50.2	1.13	2.12
Rural Minor Collector	8.4	10	1.41	1.66
Rural Major Collector	35.8	63.4	2.02	3.58
Rural Local Road or Street	24.8	45.8	0.54	0.99
Urban Principal Arterial (UPA) - Interstate	31.6	113.8	1.16	4.17
Urban Principal Arterial (UPA) - Other Freeways and Expressways	0.8	4.6	0.59	3.53

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 Principal Arterial (UPA) - Other	86.2	444.6	2.77	14.28
Urban Minor Arterial	21.4	137.4	1.54	9.86
Urban Minor Collector	2	11	0.93	5.15
Urban Major Collector	12	65.6	1.31	7.18
Urban Local Road or Street	9.6	75	1.42	11.09

Year 2018

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	265.8	647	1.59	3.88
County Highway Agency	39.4	127.2	1.03	3.41
Town or Township Highway Agency	0	0	0	0
City or Municipal Highway Agency	61	405	1.14	7.57
State Park, Forest, or Reservation Agency	0	0	0	0
Local Park, Forest or Reservation Agency	0	0	0	0
Other State Agency	0	0	0	0
Other Local Agency	0	0	0	0
Private (Other than Railroad)	0.2	0.4	0	0
Railroad	0	0	0	0
State Toll Authority	0	0	0	0
Local Toll Authority	0	0	0	0
Other Public Instrumentality (e.g. Airport, School, University)	0	0	0	0
Indian Tribe Nation				
Indian Tribe Nation/Bureau of Indian Affairs	2.6	1.8	0.4	0.28
BIA/Tribal				

In the 2019 FHWA Annual Report, the 2018 preliminary crash data was used.

Differing entries exist for Functional Class in FARS, HPMS, and NMDOT crash data. This leads to inconsistencies in comparison and analysis of data.

An input of zero in all four performance measure columns is assigned to any ownership or functional class category not used.

Note for the 'Ownership' inputs: Federal Agency is not reported due to the following: National Park Service does not report any crashes to NMDOT, and neither US Forest Service nor NMDOT Game and Fish has a data base for crashes.

Provide additional discussion related to general highway safety trends.

See inputs in the comments section for each performance target.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2020 Targets *

Number of Fatalities:401.9

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

Although five-year average fatalities rose by a moderate 2.4 percent between 2013 and 2017, preliminary and projected data indicate that fatalities will increase by about 13 percent between 2017 and 2020. Fatalities involving SUVs, pickup trucks and pedestrians are increasing and in 2018, accounted for 51.4 percent of all crash fatalities. Given the prevalence of SUV and pickup truck ownership, and projected increase in fatalities overall, the five-year average projection of 401.9 is determined to be the 2020 target.

Number of Serious Injuries:1074.2

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

Five-year average serious injuries are projected to fall by about 7.5 percent between 2017 and 2019, and the State anticipates a continued reduction in serious injuries in 2020. The five-year average projection of 1,074.2 is the 2020 target.

Fatality Rate:1.429

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

Although five-year average fatalities are expected to increase in 2020 from 2017, VMT is also expected to rise, thus the projected five-year average of 1.429 is the 2020 target.

Serious Injury Rate:3.820

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

Five-year average serious injury rates are projected to continue falling, thus the five-year average projection of 3.820 is the 2020 target.

Total Number of Non-Motorized Fatalities and Serious Injuries:204.0

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

Five-year average non-motorized fatalities and serious injuries are projected to rise by about 5 percent over the next three years. The five-year average projection of 204.0 is the 2020 target.

The New Mexico Department of Transportation (NMDOT) Statewide Planning Bureau (SPB) is responsible for coordinating the setting of Performance Measure targets.

The NMDOT undertook a coordinated effort with the Metropolitan Planning Organizations (MPOs), the HSP team and other stakeholders to set the targets.
1. Numerous internal meetings took place in winter of 2019 between the NMDOT Statewide Planning Bureau (SPB) and Traffic Safety Division, which is responsible for the HSP, to review and analyze crash data and trends. NMDOT contracts with the University of New Mexico (UNM) to maintain the state's crash database.
2. On May 21, 2019, the NMDOT Safety Division held a meeting to discuss and adopt the targets required in the HSP.
3. On June 7, 2019, SPB staff emailed a draft of this report, outlining the adopted state PM1 targets, to the MPOs for review and comments. Santa Fe, El Paso and Mid Region MPOs responded that they supported the targets. The other MPOs did not submit a response.
4. On July 19, 2019, the NMDOT Safety Committee reviewed and approved the 2020 Safety Targets as outlined in this report. These targets will be reported in the 2019 HSIP Annual Report.
5. The MPOs have until February 27, 2020 to adopt the NMDOT PM 1 targets or set their own quantifiable targets.

In setting the FFY2019 safety performance targets, NMDOT and stakeholders did not rely solely on the data projections, but used the data in combination with their discussions regarding other relevant factors and their assessment of the potential safety impacts of various strategies and projects. NMDOT worked with UNM to determine methodologies and assumptions required to set the targets. These are as follows:
• NMDOT uses Excel to plot a linear best fit line based on 5-years of actual data to project for future years.
NMDOT 2020 PM 1 Targets Report – 7/19/19 FINAL Page 2 of 4
• Vehicle Miles Travelled (VMT) - The Annual VMT for 2017 is from the FHWA Highway Statistics Series (https://www.fhwa.dot.gov/policyinformation/statistics/2017/pdf/vm2.pdf). The preliminary Annual VMT for 2018 is provided by the NMDOT Asset Management and Planning Division, Data Management Bureau. Please note that the VMT includes all interstate ramps.
• Crash Data - 2017 is finalized, 2018 is preliminary.

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

As part of the process of establishing safety performance targets, in 2019 there was a half-day workshop presenting relevant considerations such as past performance, current trends -nationally/statewide/locally, and anticipated future trends in safety performance related to the five performance measures. These were discussed in detail and stakeholders discussed their experiences related to the process to determine the safety targets for 2020.

Does the State want to report additional optional targets?

No

Consistent with the SHSP, the NMDOT will continue to focus on reducing fatalities and serious injuries in New Mexico, with consideration of guidance provided by the FHWA, and federal legislation.

Describe progress toward meeting the State's 2018 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

NMDOT's safety targets were established based on a series of meetings with the SPB and Traffic Safety Bureau. The state set annual targets for five performance measures and they were formally adopted on August 1, 2017:

1. Number of Total Fatalities

2. Number of Serious Injuries

3. Fatalities per 100 million vehicle miles travelled (VMT) or fatality rate

4. Serious Injuries per 100 million VMT or serious injury rate

5. Number of Non-motorized Fatalities and Serious Injuries

Progress in terms of meeting the forecasted targets is described. The measure used to describe progress is the Five-Year Moving Average.

1. Number of Total Fatalities. The 2018 forecast target for fatalities was 364.1 and the actual Five-Year Moving Average for 2018 (based on preliminary NMDOT data) was 371.8. The actual 2018 value compared to the forecast target in 2017 was an increase of 2.1 percent. A sizable amount of this increase can likely be attributed to an increase in travel, which has occurred statewide. NMDOT uses a linear best fit model of crash data as the primary tool to plot data for future years and this does not consider travel changes.

2. Number of Serious Injuries. The 2018 forecast target for total serious injuries was 1,219.4 and the actual Five-Year Moving Average for 2018 (based on preliminary NMDOT data) was 1,186.6. The actual value for 2018 compared to the forecast target in 2017 was a decrease of 2.7 percent. This decrease represents a very positive trend that continues for decreases in total Serious Injures in New Mexico.

3. Fatalities per 100 million vehicle miles travelled (VMT) or fatality rate. The 2018 forecast target for the rate of fatalities was 1.330 and the actual Five-Year Moving Average for 2018 (based on preliminary NMDOT data) was 1.347. The actual value for 2018 compared to the forecast target in 2017 was an increase of 1.3 percent. This increase is minimal (an increase in 0.017 fatalities per 100 million VMT) and the lesser increase in the rate of fatalities compared to fatalities confirms, to some extent, the effect of increased travel.

4. Serious Injuries per 100 million VMT or serious injury rate. The 2018 forecast target for the rate of serious injuries was 4.456 and the actual Five-Year Moving Average for 2018 (based on preliminary NMDOT data) was 4.299. The actual value for 2018 compared to the forecast target in 2017 was a decrease of 3.5 percent. This decrease in serious injury performance targets again represents a very positive trend that continues for total Serious Injures in New Mexico.

5. Number of Non-motorized Fatalities and Serious Injuries. The 2018 forecast target for number of non-motorized fatalities and serious injuries was 228 and the actual Five-Year Moving Average for 2018 (based on preliminary NMDOT data) was 202. The actual value for 2018 compared to the forecast target in 2017 was an increase of 12.9 percent. This is a large increase. To address this NMDOT has agreed to become a Pedestrian Focus State, has designated both pedestrian and bicycle crashes as SHSP Emphasis Areas, and recently conducted network screening of pedestrian crashes to identify high risk locations. In addition, NMDOT is the process of initiating a statewide pedestrian safety plan.

Since the setting of the 2018 Performance Targets several years ago, NMDOT has exceeded both targets relating to serious injuries and has made measurable progress with respect to meeting the target for the fatality rate. As described in this annual report, NMDOT is improving safety performance using data driven approaches as outlined in the AASHTO HSM which will enhance the selection of safety projects/initiatives and use of limited safety funds.

Applicability of Special Rules

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

As directed by the FHWA, "...States triggers the HRRR Special Rule if the fatality rate on the rural roads in the State increases over the most recent 2-year period for which data is available."

The two most recent and available years of data for New Mexico are 2017 (source: FARS) and 2018 (source: NMDOT state database). Also, the guidelines provided by FHWA indicates that "...HRRRs are limited to the functional classifications of rural major and minor collectors and rural local roads...". The source for both of these statements can found in the following link: https://safety.fhwa.dot.gov/hsip/hrrr/

After considering this info, the High-Risk Rural Road (HRRR) calculations for the State of New Mexico are listed below (note: this is for the 2019 reporting period).

For 2017:
Fatalities on Rural, Minor Collector: 13
Fatalities on Rural, Major Collector: 27
Fatalities on Rural, Local Road or Street: 27
Sum of fatalities on these three Functional Classes: 67

HMVMT on Rural, Minor Collector: 2.313
HMVMT on Rural, Major Collector: 1.552
HMVMT on Rural, Local Road or Street: 0.479
Sum of HMVMT on these three Functional Classes: 70.049

2017 HRRR fatality rate: 67 / 70.049 = 0.956

For 2018:
Fatalities on Rural, Minor Collector: 7
Fatalities on Rural, Major Collector: 46
Fatalities on Rural, Local Road or Street: 29
Sum of fatalities on these three Functional Classes: 82

HMVMT on Rural, Minor Collector: 5.578
HMVMT on Rural, Major Collector: 16.774

HMVMT on Rural, Local Road or Street: 46.614
Sum of HMVMT on these three Functional Classes: 68.966

2018 HRRR fatality rate: 82 / 68.966 = 1.189

After observing the calculations above, it is determined that New Mexico is subject to complying with the (HRRR) Special Rule beginning with the 2018 reporting cycle and continuing in the 2019 cycle.

Consistent with the federal criteria for development of a project that addresses the HRRR special rule, NMDOT programmed and obligated a project which incorporates multiple safety countermeasures on NM 117 (CN 6101080) which is classified as a Rural Major Collector for $1,086,040. This project will address a number of safety risks particularly related to road departure crashes which is consistent with the Road Departure HSIP program defined earlier. Following FHWA recommended approaches, countermeasures were incorporated, such as rumble strips, application of a high friction surface treatment at key locations, and improvements to culvert end treatments, and other fixed object hazard mitigations. This project is included in the list of HSIP projects for FFY 2017 and FFY 2018. Effectiveness evaluation is not possible in the first two years due to data limitations and crash data not being available.

A total of five projects had $3,729,366.00 programmed dollars with $2,169,230.70 being obligated in the FFY 2018.

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	35	50	30	29	29	44	45
Number of Older Driver and Pedestrian Serious Injuries	102	98	104	108	80	83	101

Older driver and older pedestrian data query process and sources:

1. Older driver fatalities were obtained from FARS; K Injury = Severity, Age 65+ (excluding 998 and 999), Person Type: Driver of motorized transport
2. Older pedestrian fatalities were obtained from FARS: K Injury = Severity, Age 65+ (excluding 998 and 999), Person Type: Pedestrian
3. Older driver/older pedestrian serious (A) injuries were obtained from the NM State Crash Data - Vehicle level which has the person information of all units involved in the crash. Vehicle Data is filtered by vehicle type ('TypeV' = 1,2,3,4,5,6,7,8) and Age (65 less than='Age' less than=99). Then the filtered data is aggregated for A-injuries using the 'ClassA' field.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries

Safety performance effectiveness is measured based on a review of the five PM 1 targets (measures). This review is conducted annually with a coordinated effort including MPOs, Traffic Safety Division, and the SPB.

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

Assessment of safety performance effectiveness for the 2019 HSIP Annual Report was based on a comprehensive review of crash data and trends using the state's crash data and VMT data. Overall, based on current data, fatalities are on a moderate upward trend and NMDOT set a target to limit the increase from 2016 through 2020 to 13.8 percent. The number of serious injuries, the fatality rate, and serious injury rate are anticipated to decline from 2016 through 2020. The number of non-motorized fatalities and serious injuries are on an upward trend and NMDOT has set an objective to limit the increase to 204.0 in 2020 (from 187.6 in 2016).

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

- HSIP Obligations
- Increased awareness of safety and data-driven process
- Policy change
- Other-Development of improved HSIP internal and external procedures

For FFY 2018, NMDOT continues to successfully obligate all HSIP funds. There has been an increased focus on development and obligation of projects related to the mitigation of road departure crashes, which is consistent with SHSP objectives, and that road departure fatalities were ranked the highest of all identified Emphasis Areas. In 2018 NMDOT initiated efforts to develop an HSIP Manual and to develop a data-driven process for network screening and identification of high-risk sites, both of which are based on HSM guidance. In 2019, NMDOT began the process of developing a comprehensive HSIP database which will facilitate the tracking, management, and ultimately, the evaluation of HSIP efforts.

Effectiveness of Groupings or Similar Types of Improvements

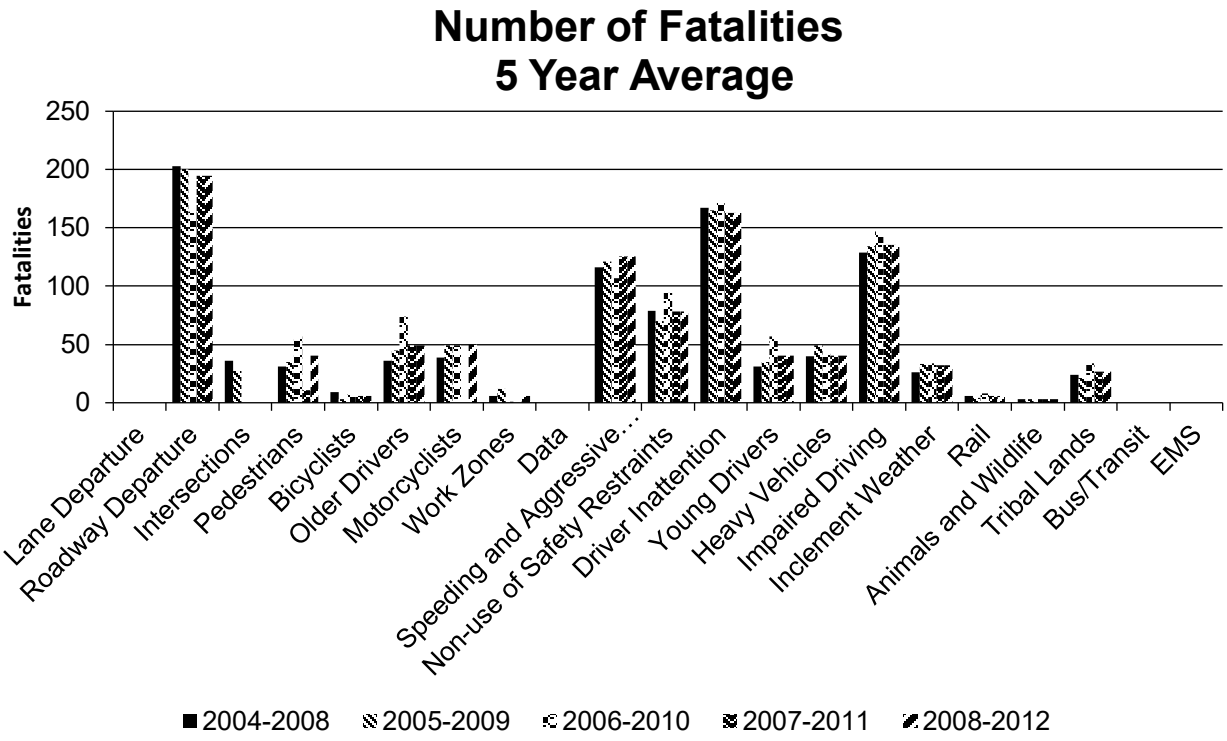
Present and describe trends in SHSP emphasis area performance measures.

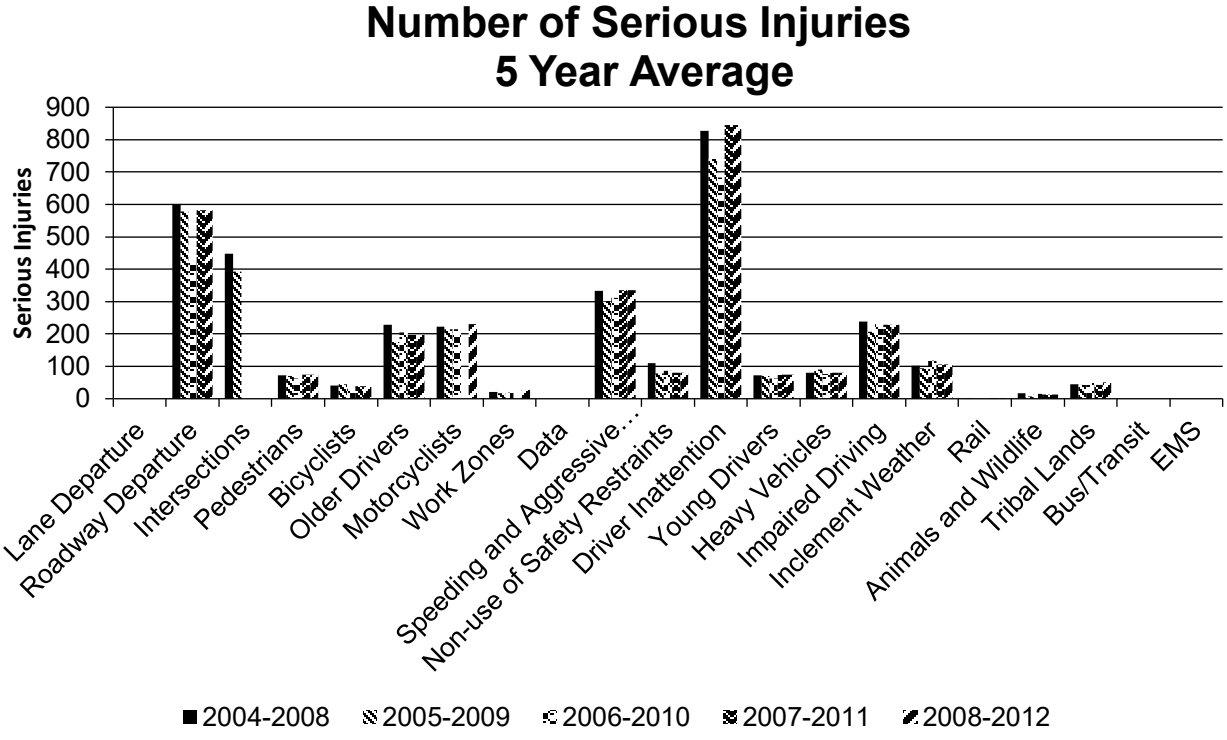
Year 2012

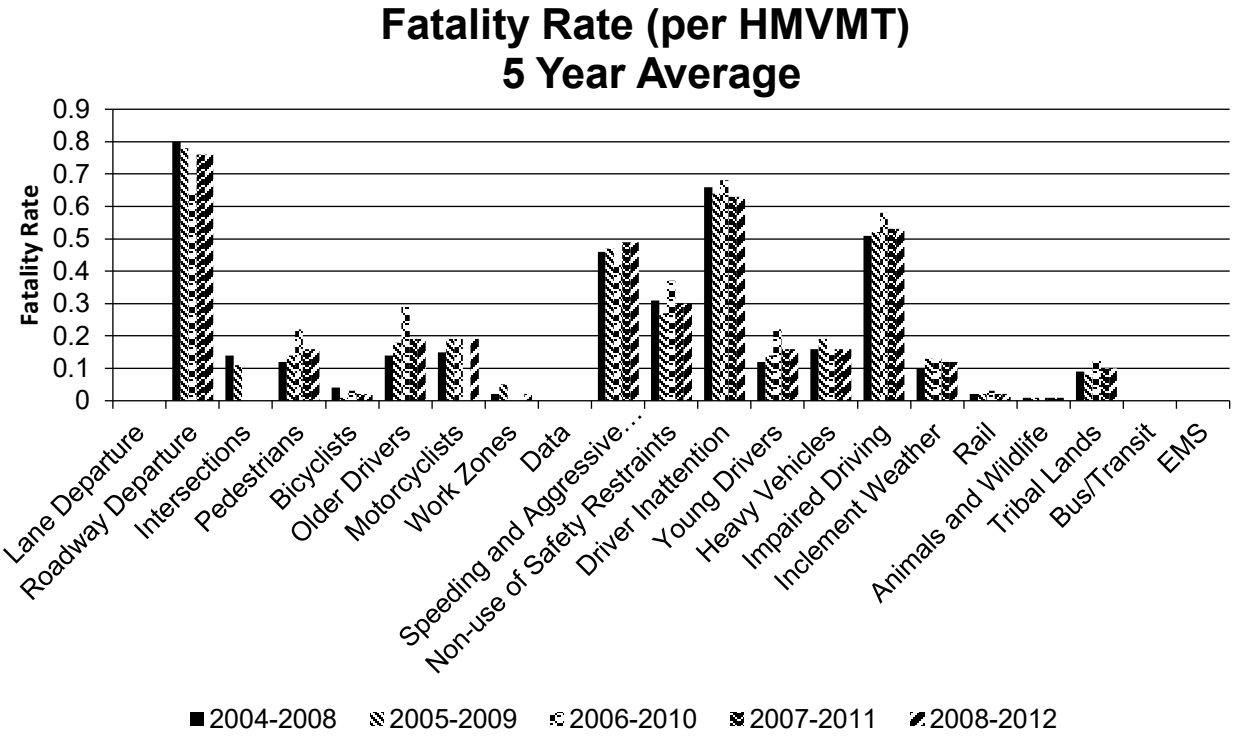
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Lane Departure					

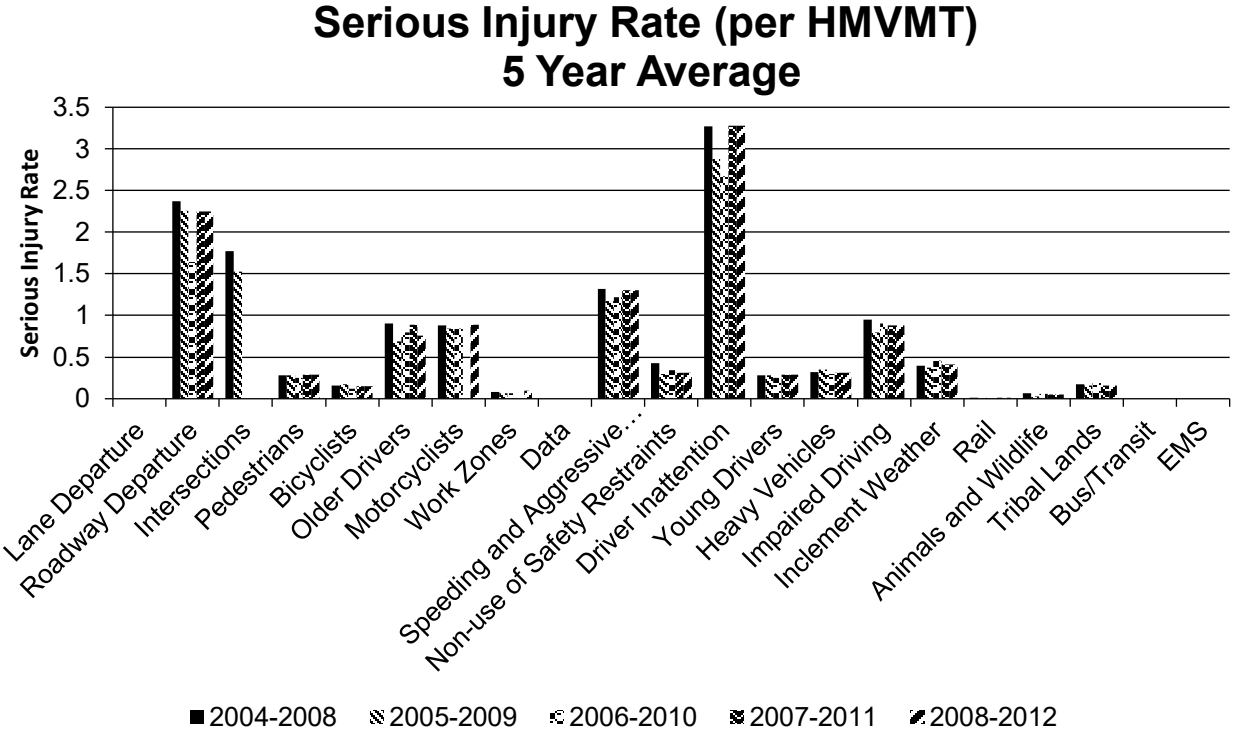
2019 New Mexico Highway Safety Improvement Program

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)
Roadway Departure	All	194.8	581.2	0.76	2.25
Intersections					
Pedestrians	Vehicle/pedestrian	40.2	73.8	0.16	0.29
Bicyclists	Vehicle/bicycle	5.8	38.6	0.02	0.15
Older Drivers	All	49.4	196.8	0.19	0.76
Motorcyclists	All	49.6	230	0.19	0.89
Work Zones	All	5.8	26.2	0.02	0.1
Data					
Speeding and Aggressive Driving	All	125.4	335.2	0.49	1.3
Non-use of Safety Restraints	All	78.4	80.4	0.3	0.31
Driver Inattention	All	163	845.6	0.63	3.28
Young Drivers	All	40.2	73.8	0.16	0.29
Heavy Vehicles	All	40.4	80.6	0.16	0.31
Impaired Driving	All	135.6	227.8	0.53	0.88
Inclement Weather	All	32	105.6	0.12	0.41
Rail	Crossings and Train-Pedestrians	5.8	1.6	0.02	0.01
Animals and Wildlife	Vehicle/animal	3	13	0.01	0.05
Tribal Lands	All	26.6	51	0.1	0.16
Bus/Transit					
EMS					


Number of Fatalities
5 Year Average
Fatalities
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
Speeding and Aggressive…
Non-use of Safety Restraints
Driver Inattention
Young Drivers
Heavy Vehicles
Impaired Driving
Inclement Weather
Rail
Animals and Wildlife
Tribal Lands
Bus/Transit
EMS
2004-2008
2005-2009
2006-2010
2007-2011
2008-2012


Number of Serious Injuries
5 Year Average
Serious Injuries
900
800
700
600
500
400
300
200
100
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
Speeding and Aggressive…
Non-use of Safety Restraints
Driver Inattention
Young Drivers
Heavy Vehicles
Impaired Driving
Inclement Weather
Rail
Animals and Wildlife
Tribal Lands
Bus/Transit
EMS
2004-2008
2005-2009
2006-2010
2007-2011
2008-2012





NMDOT will not evaluate the emphasis area groups for the 2019 Annual Report. Instead, it is anticipated that this will be evaluated in the Fall 2020 as part of the 2021 Strategic Highway Safety Plan.

Source: New Mexico Strategic Highway Safety Plan (SHSP) (March 2017)
Data are shown as five-year rolling averages.
Data are reported for Years 2008-2012.

2019 New Mexico Highway Safety Improvement Program
Data shown are fatal and serious injury crashes (class A).
The Driver Inattention emphasis area includes distracted driving and sleepy/fatigued driving crashes.
The data for emphasis areas will be updated in conjunction with the preparation of the next Strategic Highway Safety Plan.

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

No

For the reporting period, NMDOT focused on improvement of essential data that can be used to more effectively identify sites of concern such as better roadway attribute data, travel data, and crash data refinements. The improvement of these key data attributes will improve the ability to identify sites of concern and projects, develop improved safety programs, and incorporate effective systemic initiatives. This will lead to the implementation of more effective and proven safety countermeasures/initiatives that can be evaluated and are anticipated to provide positive results when evaluated.

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)
None evaluated														

No projects evaluated.

Compliance Assessment

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

03/01/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2021

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

2021

Preliminary plans are to have the next update of the New Mexico SHSP started in mid-2020 and completed in 2021.

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

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
ROADWAY SEGMENT	Segment Identifier (12)	1	1					1	0.5	1	0.5
	Route Number (8)	1	0.75								
	Route/Street Name (9)	0.99	0.1								
	Federal Aid/Route Type (21)	1	1								
	Rural/Urban Designation (20)	1	1					1	1		
	Surface Type (23)	0.95	0.95					0.95			
	Begin Point Segment Descriptor (10)	1	1					1	0.5	0.99	0.5
	End Point Segment Descriptor (11)	1	1					1	0.5	0.99	0.5
	Segment Length (13)	1	1								
	Direction of Inventory (18)	1	1								
	Functional Class (19)	1	1					1	1	1	1
	Median Type (54)	0.8	0.5								

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	Access Control (22)	1	1								
	One/Two Way Operations (91)	0.99	0.99								
	Number of Through Lanes (31)	0.9	0.9					0.99	0.85		
	Average Annual Daily Traffic (79)	1	1					1	1		
	AADT Year (80)	1	1								
	Type of Governmental Ownership (4)	1	0.8					1	0.2	1	0.2
INTERSECTION	Unique Junction Identifier (120)										
	Location Identifier for Road 1 Crossing Point (122)										
	Location Identifier for Road 2 Crossing Point (123)										
	Intersection/Junction Geometry (126)										
	Intersection/Junction Traffic Control (131)										
	AADT for Each Intersecting Road (79)			0.8	0.8						
	AADT Year (80)			1	1						
	Unique Approach Identifier (139)										
INTERCHANGE/RAMP	Unique Interchange Identifier (178)					1	1				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197)					1	1				
	Location Identifier for Roadway at Ending Ramp Terminal (201)					1	1				

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	Ramp Length (187)					1	1				
	Roadway Type at Beginning of Ramp Terminal (195)					1	1				
	Roadway Type at End Ramp Terminal (199)					1	1				
	Interchange Type (182)										
	Ramp AADT (191)					1	1				
	Year of Ramp AADT (192)					1	1				
	Functional Class (19)					1	1				
	Type of Governmental Ownership (4)					1	1				
Totals (Average Percent Complete):		**0.98**	**0.89**	**0.23**	**0.23**	**0.91**	**0.91**	**0.99**	**0.62**	**1.00**	**0.54**

*Based on Functional Classification

None.

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.

FY18 Performance Measure: Integration
ALL Roads Network of Linear Referenced Data (ARNOLD) Phase 2 project includes the development of the NMDOT Roadway Inventory System. The system houses the Roadway Data Attributes are spatially represented. The Linear Referencing system is able to locate and display the roadway data attributes on a map. The Phase 2 project entailed full integration and implementation of the ESRI Roads and Highways including the migration of data from NMDOT's existing Transportation Information Management System (TIMS) into the ESRI Roads and Highways Data Model. Completion date was August 2018.

Achievement: The ARNOLD Phase I project encompassed the development of the Geo Spatial representation of the NMDOT Linear Reference System to include the National Highway System, State Owned and Maintained Roads, Local Roads, and Federal Roads. NMDOT now has geo spatial representation on 77,204.708 miles of roadway.

Model Inventory of Roadway Elements (MIRE) Fundamental Data Elements
The NMDOT Data Management Bureau has developed the NMDOT Roadway Inventory System and the Transportation Data Management System. These two databases include the tables that will house the MIRE Fundamental data element attributes. The Roadway Inventory System completion date was August 30, 2018 and completion date for the Transportation Data Management System was December 30, 2017. A number of the MIRE elements are currently collected for the annual HPMS report. Once the databases are fully developed NMDOT will develop a second phase for the MIRE project. The third phase will include a plan for the data collection that is required.

Current Status of MIRE Fundamental Data Element Collection:

- MIRE Data Fundamental Data Elements (FDE) Table 1 currently collected:
  - FDE Roadway Segment: all listed FDEs are collected on Functional System 1-6U.

- FDE Intersection: MIRE Elements 131, 79, 80, are currently collected on Functional System 1-6U. The following MIRE elements are not collected: 120,122, 123, 126, and 139. The Data Management Bureau is currently developing a plan to build an intersection application. Funding will be required.
- Interchange/Ramp FDE MIRE elements currently collected on Functional System 1-6U: 178, 197, 201, 187, 191, 192, 19, 4
- Not collected: 195, 199, 182

- MIRE Data Fundamental Data Elements (FDE) Table 2 currently collected:
  - FDEs in Table 2 are based on Functional System 6R -7. Place holders for these data items exist in the Roadway Inventory System. A plan for data collection will need to be discussed and funding for associated data collection will need to be considered.
- Which office(s) in the state DOT collect, receive, and maintain the MIRE Fundamental data elements. How are they stored and managed?
  - The Data Management Bureau within the Asset Management and Planning Division is currently developing the Roadway Inventory System that will house the collected MIRE FDEs.
- Who can access the MIRE FDE for safety analyses, and what steps are necessary to access the data? Are systems planned or already implemented to facilitate access to the data, e.g. online portals?
  - The ARNOLD Phase 2 project is currently developing the Roadway Inventory System to house the MIRE FDE. The ARNOLD phase 3 project will be the next step in data integration between systems and will provide accessibility to end users.
- Which agency/ office/ individual/ committee(s) have authority and responsible for determining the improvements needed to achieve compliance with the MIRE FDE requirements?
  - The Asset Management and Planning Division Data Management Bureau and the NMDOT Safety Committee.

Coordination with Other Agencies

For MIRE fundamental data elements that are NOT currently being collected:

- Who owns the roads where the elements are not being collected (e.g., State, local government agencies, Tribal Governments, Federal land Management Agencies, etc.)?
  - The NMDOT ARNOLD Phase 1 network developed the Linear Referencing System to include all roads. A plan to reconcile the ownership of the roadways will need to be established by the Roadway Inventory Program. This will verify the ownership of the roadways that are not owned or maintained by NMDOT.
- Do the agencies that own those roads collect any of the MIRE fundamental data elements?
  - The Metropolitan Planning Organizations collect Traffic Data Elements associated with the MIRE FDE.
- What Mechanisms are needed to share data among those agencies that collect, store, and maintain and use the MIRE FDE.
  - A primary key that will link data between systems and data collection standards.

Prioritization criteria for collecting MIRE Fundamental Data Elements on All Public Roads

For additional data that need to be collected to meet the MIRE Fundamental data element requirement:

- What data elements will be collected in the short (1-3 years), medium (4-6 years), and long (7-9 year) terms?
  - If the FDE has a one to one HPMS relationship it is collected on the 1 to 3-year cycle.
  - A plan will need to be established for the FDEs that are not collected with annual HPMS data collection.
- What collection technologies and/or methodologies are anticipated to be used?
  - NMDOT currently utilizes a LIDAR data collection methodology. NMDOT also has a photo log of all Federal Aid System roads.
- Who is responsible for collecting the data?
  - The Asset Management and Planning Division.
- What will be an update cycle for the data collection of the data?
  - A plan for data collection will be developed in the future.

Costs and Resources for Data Collection

- What are the estimated cost, staffing and other resource requirements to collect and maintain the MIRE Fundamental Data Elements?
  - NMDOT will have to establish a plan associated with the cost, staffing and other resources to collect and maintain the MIRE FDE.
- Who will incur those costs?
  - NMDOT will have to establish a plan and seek funding in order to collect and maintain the data.

MIRE Data Collection Guidebook U.S. DOT FHWA Report No. FHWA-SA-13-009

NHSTA 2016 Traffic Records Assessment Roadway Recommendations:

- Improve the data dictionary for the Roadway data systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

- NMDOT is currently using the Roadway Inventory System to meet best practices and will include the data dictionary schema.

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

The NMDOT Data Management Bureau has developed a new roadway inventory system that applies validation rules and conflict avoidance. The system includes an HPMS tool box that ensures data compliance per FHWA standards regarding consistency and cross validations. The data reviewer which is a COT QA/QC tool is used to identify geometry and database errors. The new system's straight-line diagram tool identifies gaps and overlaps and helps with consistency of roadway inventory items. ESRI Roads and Highways also has built in QA/QC checks for validating the network.

Did the State conduct an HSIP program assessment during the reporting period?

No

The State does not currently have any plans to complete its next HSIP program assessment. At this time, the State is focused on using good techniques to identify projects and corresponding countermeasures that are appropriate which results in reduction of fatalities and serious injuries.

When does the State plan to complete its next HSIP program assessment.

2019

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.