NEW JERSEY

2020 Strategic Highway Safety Plan

Driving Toward ZERO Deaths

August 2020

Message from the Commissioner

Safety is a priority in so many aspects of our lives. It is the number 1 priority at the New Jersey Department of Transportation and its sister agencies: New Jersey Transit; the New Jersey Turnpike Authority; and the South Jersey Transportation Authority. Moving towards zero deaths on all public roads is the responsibility of planners, engineers, contractors, law enforcement, emergency responders, and educators, but most importantly, those who travel them.

New Jersey's 2020 Strategic Highway Safety Plan is a collaborative effort of a broad group of safety stakeholders that includes state, county and municipal governments, academia, non-profit agencies, advocacy groups, and private sector partners. This plan will guide safety infrastructure priorities, education and training enhancements, enforcement improvements, as well as improvements in emergency response.

This plan prioritizes equity in highway safety. To this end, and for the first time, we have created an emphasis area team that is dedicated to ensuring that all strategies and activities emanating from this plan fairly and equitably consider all users and communities, particularly those that are historically disadvantaged, such as minority populations, economically depressed communities, and those that are differently abled.

While the development of the plan is a great effort, its success will be measured by the implementation of its strategies and ultimately the number of fatalities and serious injuries on our roads. The work is not done. This is just the start. It is imperative that the partnerships made and strengthened through the NJ 2020 SHSP update are carried forward to drive implementation over the next five years. All safety stakeholders will have a role to play in successful implementation of the plan. It will take hard work and dedication to make this plan a success, but we owe it to those who have lost their lives or have been impacted by the death or injury of a family member.

I am so proud to live and work in our beautiful state. New Jersey has so much to offer. We are a hub of business and a home to culturally diverse communities. Let us also stand as the state that provides the safest transportation network. The loss of even one life on our roads is one too many. While it is a challenge, I believe we can achieve the goals set forth in the NJ 2020 SHSP, if we commit ourselves to be examples of safe practices in all that we do.

Join me in this call to action to move towards zero fatalities and serious injuries on our roads. If we all do our part, we can get to zero.

Diane Gutierrez-Scaccetti

Commissioner of Transportation

Executive Committee

Zero deaths and zero serious injuries on all of New Jersey's public roads is our collective goal and can be achieved. The Executive Committee Members are committed to implementing the safety strategies outlined in the New Jersey 2020 Strategic Highway Safety Plan to drive down fatalities and serious injuries in our state.

Diane Gutierrez-Scaccetti, Commissioner
New Jersey Department of Transportation

Eric Heitmann, Director
Division of Highway Traffic Safety,
New Jersey Department of Law and Public Safety

Robert Clark, Division Administrator, NJ Division
Federal Highway Administration

Richard Simon, Region 2 Administrator
National Highway Traffic Safety Administration

B. Sue Fulton, Chair and Chief Administrator
New Jersey Motor Vehicle Commission

Colonel Patrick A. Callahan, Superintendent
New Jersey State Police

Judith M. Persichilli, Commissioner
New Jersey Department of Health

Kevin Dehmer, Interim Commissioner
New Jersey Department of Education

E. Marie Hayes, President
New Jersey Association of Counties

James J. Perry, President
New Jersey State League of Municipalities

Christopher M. Leusner, President
New Jersey State Association of Chiefs of Police

Vinn White, Senior Transportation Advisor
New Jersey Governor's Office

Christopher Rotondo, Division Administrator
Federal Motor Carrier Safety Administration

Steering Committee

The Steering Committee members provided valuable insight and guidance on the process and work products during development of the NJ 2020 SHSP. The Steering Committee will continue in its advisory role during the implementation phase.

State

- NJ Department of Transportation
- NJ Department of Law and Public Safety
  - NJ Division of Highway Traffic Safety
  - NJ State Police
- NJ Motor Vehicle Commission
- NJ Department of Health
- NJ Department of Education
- NJ Department of Banking and Insurance
- NJ Transit
- NJ Turnpike Authority

County/Regional

- Cumberland County
- Monmouth County
- Somerset County
- Delaware Valley Regional Planning Commission
- North Jersey Transportation Planning Authority
- South Jersey Transportation Planning Organization
- South Jersey Transportation Authority

Municipal

- City of Jersey City
- City of Linden
- City of Newark
- City of Vineland

Federal

- Federal Highway Administration
- National Highway Traffic Safety Administration
- Federal Motor Carrier Safety Administration

Non-Profit

- AAA Mid-Atlantic
- American Association of Retired Persons
- Brain Injury Alliance of New Jersey
- Bicycle Coalition of Greater Philadelphia
- NJ Bicycle and Pedestrian Advisory Council
- NJ Bike and Walk Coalition
- NJ Police Traffic Officers Association
- Transportation Management Association Council of NJ

Contents

Executive Summary

Mission, Vision, and Goal

New Jersey's 2020 Strategic Highway Safety Plan (NJ 2020 SHSP) is a comprehensive five-year plan to reduce fatalities and serious injuries on all of New Jersey's public roads, with an emphasis on those areas that provide the greatest opportunity for a positive impact on safety. The SHSP establishes goals, objectives, and strategies that consider Education and public awareness, Enforcement, Emergency response, as well as Engineering, often referred to as the 4 "E's." The NJ 2020 SHSP will also place an emphasis on a fifth "E" for all its safety investments - Equity. An emphasis on Equity ensures that the NJ 2020 SHSP considers the needs of vulnerable members of our communities, including low income residents, minorities, those with limited English proficiency, persons with disabilities, children, and older adults. The NJ 2020 SHSP will build on a foundation of the best data available and will make every effort to ensure a safe highway network for all users.

"The NJ 2020 SHSP is an opportunity for all of New Jersey to further develop a culture of safety and move towards zero deaths on our roadways. With your help, we can get there!"

Commissioner Diane Gutierrez-Scaccetti,
New Jersey Department of Transportation

The NJ 2020 SHSP is the result of a collaborative effort of numerous safety stakeholders that include state, federal, county, and municipal governments, regional planning organizations, safety advocacy groups, private sector transportation organizations, as well as the academic community.

The NJ 2020 SHSP is driven by a belief that no deaths on New Jersey's roads are acceptable. The New Jersey 2020 SHSP slogan, "Driving Toward Zero Deaths" reflects this shared vision. The NJ 2020 SHSP's overarching performance goals were established in consideration of current crash trends, laws and technology. In the coming years, we expect that advancements in technology will likely yield improvements in safety that will move New Jersey closer towards zero deaths. As past studies suggest, over 90% of crashes are the result of human error, and it is envisioned that technology offers opportunities to reduce human error significantly, making zero deaths an aspirational, but achievable goal in the future.

New Jersey will reduce fatalities and serious injuries using all of the 5 E's: Education, Enforcement, Engineering, Emergency Response, and Equity.

Moving towards zero deaths is an achievable vision through the integration of safety countermeasures, advancements in technology and a positive safety culture.

For each of the following categories – fatalities, serious injuries and total injuries – reduce occurrences by

14%*

over the next five years. This amounts to a 3% per year reduction.

* A total 14% reduction over the five-year period is calculated using a 3%/year reduction rate, compounded annually over five years.

New Jersey completed its last SHSP update in 2015. Since its completion, New Jersey's safety stakeholders have been working diligently on many fronts to improve safety education, enforcement, infrastructure, and emergency response. Examples of some of these accomplishments include centerline and edgeline rumble strip installation, pedestrian and bicycle safety improvements in the vicinity of grade schools, and community traffic safety programs. Additional examples of these accomplishments are provided in this report.

The NJ 2015 SHSP set a goal of reducing the five-year rolling average of fatalities and serious injuries by 2.5% per year.[i-1] As illustrated in the Figure 1.1, New Jersey saw significant progress through 2016. The reduction in fatalities and serious injuries leveled off in 2017, with a rise in 2018. The figure also shows the fatalities and serious injuries goal for the NJ 2020 SHSP.

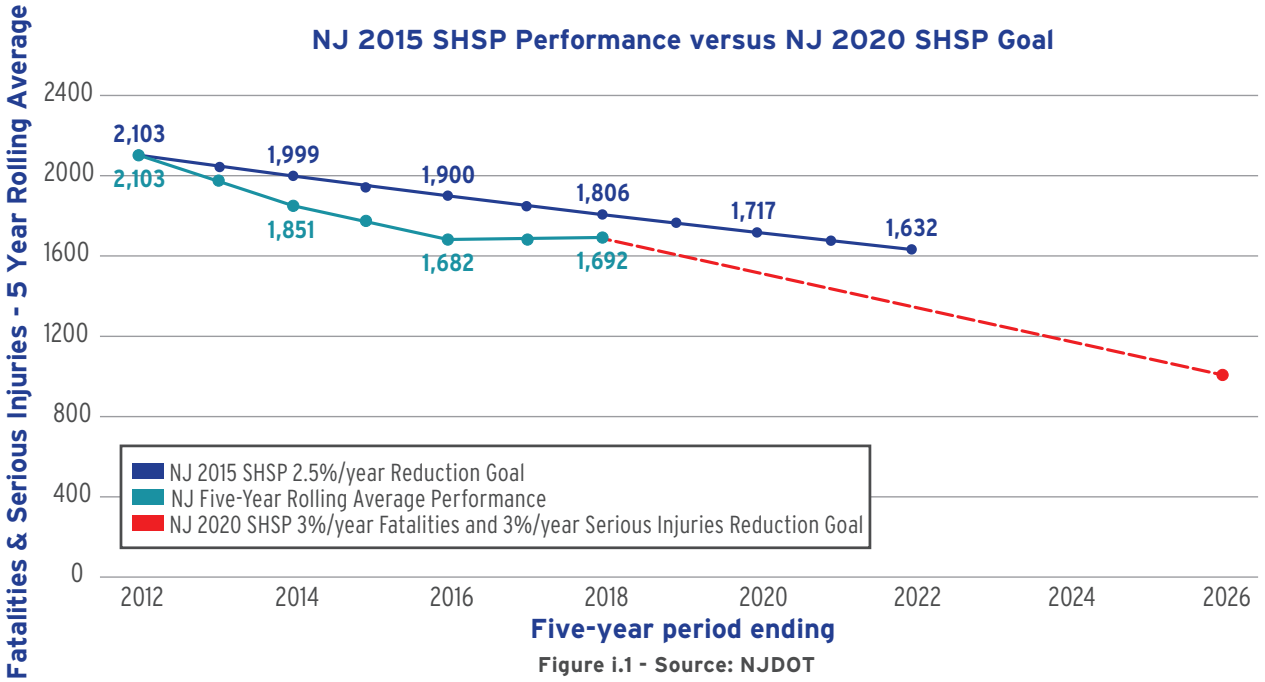


Figure i.1 - Source: NJDOT

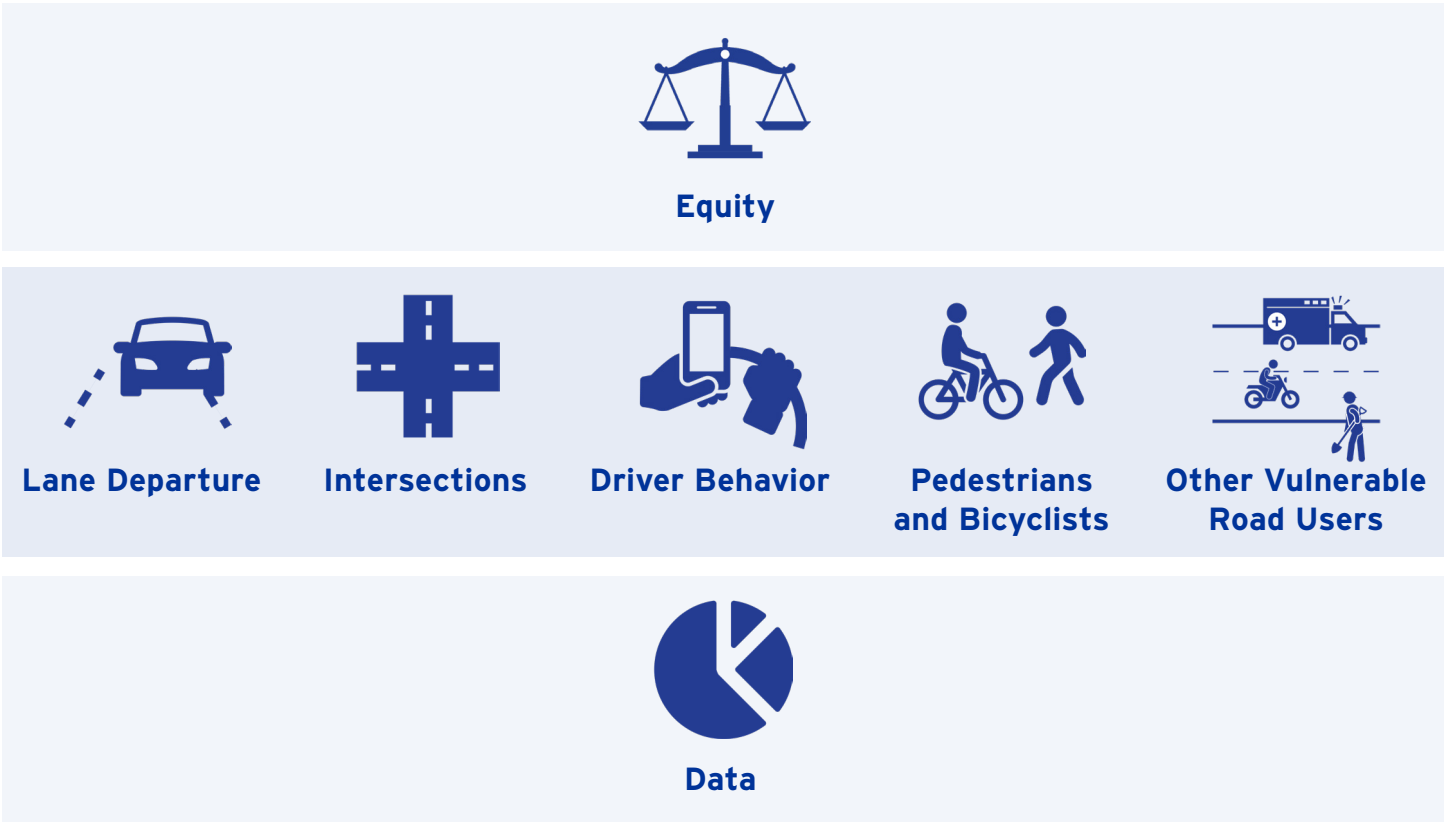
The NJ 2020 SHSP overall goal selection process was based on an assessment of year-to-year changes in the five-year rolling average. This approach led to the selection of achievable goals that significantly reduce the number of fatalities and serious injuries. Beginning in 2019, New Jersey updated the police crash report to be consistent with the federally required injury classifications (Killed, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury). As a result of this change, injuries not previously attributed to the serious injury classification are now included in this number. This significant increase creates a challenge in predicting anticipated totals for future years. In terms of goal setting, the serious injuries goal matches the total injuries goal because the serious injury data is unstable at this time. New Jersey expects the five-year rolling average to increase over the next few years until the data stabilizes.

[i-1] To illustrate what is meant by a five-year rolling average, the five-year average ending in 2015 would average the annual total fatalities and serious injuries in years 2011 through 2015. The five-year average ending in 2016 would average the annual total fatalities and serious injuries in years 2012 through 2016. The five-year average changes from year to year, therefore it is considered a rolling average.

Leadership, Consultation, and Emphasis Areas

New Jersey's approach to updating the NJ 2020 SHSP included goals to increase stakeholder participation, improve coordination and integration with other agency plans, and most importantly, increase focus on implementation. New Jersey established a multi-agency Executive Committee and Steering Committee to provide guidance and oversight throughout the process. The Executive Committee provided final approval of work products. The Steering Committee, comprised of a a broad group of safety stakeholders, served in an advisory capacity. In addition, multiple opportunities were provided for stakeholder participation. Stakeholder input opportunities included three Safety Summits as well as Emphasis Area Teams where stakeholders could participate in the development of the specific SHSP goals, objectives, and strategies. This process has resulted in a robust plan and improved collaboration between stakeholder groups providing all interested parties an opportunity to work in a coordinated manner. The NJ 2020 SHSP includes seven emphasis areas that are illustrated below.[i-2]

The SHSP development process also established goals and performance objectives for each of the Emphasis Areas. Emphasis Areas and goals are summarized below:



[i-2] The Driver Behavior Emphasis Area encompasses Drowsy and Distracted Drivers, Aggressive Drivers, Impaired Drivers, Unlicensed Drivers, Unbelted Drivers and Occupants, and Heavy Vehicle Drivers and Owner Behavior. The Other Vulnerable Road Users Emphasis Area includes Mature Drivers, Younger Drivers, Motorcyclists, Work Zone Workers, and Other Road Workers that include school crossing guards, emergency responders, maintenance workers, etc.

- **Equity** - Ensure highway safety investment is inclusive of the interests of traditionally underserved populations and is considered more deliberately.
- **Lane Departure** - Keep vehicles in the lane, provide for safe recovery, and reduce crash severity.
- **Intersection** - Eliminate all fatalities and serious injuries at intersections for all road users through engineering, education, and enforcement.
- **Driver Behavior** - New Jersey will encourage positive driving behavior.
- **Pedestrian and Bicyclists** - Eliminate pedestrian and bicyclist and fatalities and serious injuries.
- **Other Vulnerable Road Users** - Eliminate other vulnerable road user fatalities and serious injuries.
- **Data** - Improve quality, integration, dissemination, and inventory content of data.

The NJ 2020 SHSP update process began in September 2019 with a goal of completion by August 2020. The update process major milestones are depicted below in Figure i.2.

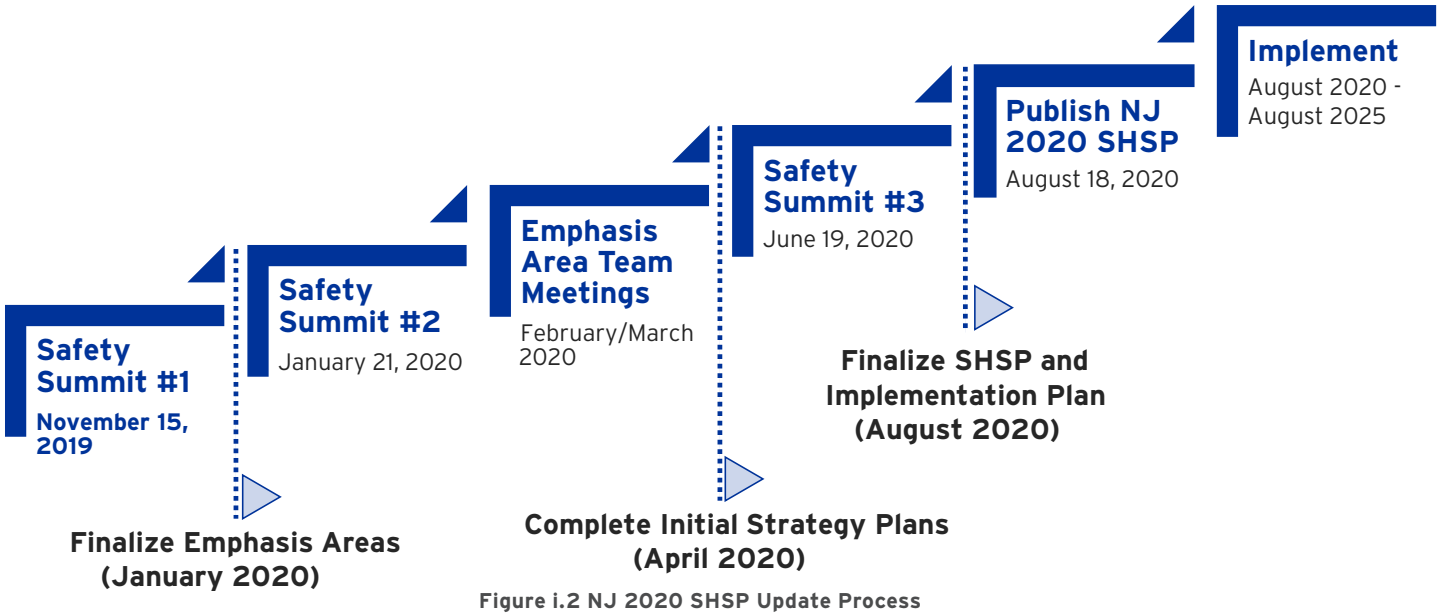


Figure i.2 NJ 2020 SHSP Update Process

1: Introduction and Background

Mission

New Jersey will reduce fatalities and serious injuries using all of the 5 E's: Education, Enforcement, Engineering, Emergency Response, and Equity.

Vision

Moving towards zero deaths is an achievable vision through the integration of safety countermeasures, advancements in technology and a positive safety culture.

Goal

For each of the following categories – fatalities, serious injuries and total injuries – reduce occurrences by 14% over the next five years. This amounts to a 3% per year reduction. (Details on the goal decision-making process are outlined in Chapter 3.)

Toward Zero Deaths

Zero deaths is achievable with a shared vision and a cooperative effort of all safety stakeholders, including those that use the roads. Creating a safety culture is an essential element to success — one where good safety behaviors are expected from all road users. An example of a safety culture change is the use of seat belts. Through enforcement and comprehensive, continuous education, there has been a positive and sustained behavior change.

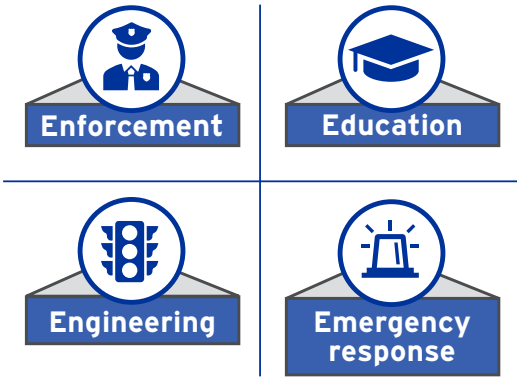
Toward Zero Deaths (TZD) is a national strategy to create a unified traffic safety culture across the country on all public roads. New Jersey has pledged its support of the TZD vision. The NJ 2020 SHSP will serve as a guide for state, county, and municipal safety-related investments. The NJ 2020 SHSP also recognizes the value and incorporates best practices of other zero fatality initiatives, such as Vision Zero and Road to Zero, which share a similar vision. Vision Zero is a city-focused effort to eliminate fatalities and serious injuries while increasing mobility. Jersey City and Hoboken have adopted Vision Zero. Road to Zero is a coalition of nearly 1,000-member organizations that is led by the National Safety Coalition. Road to Zero has three interrelated approaches to achieve zero deaths: Double Down on What Works, Accelerate Advanced Technology, and Prioritize Safety. Toward Zero Deaths and Vision Zero are members of the Road to Zero coalition.

All three of these "zero" deaths initiatives are based on a "Safe Systems" approach. The Safe Systems approach is built on the principles of not accepting the loss of any life, designing a transportation system that accounts for human fallibility, and prioritizing safety over other transportation system goals.

What is a Strategic Highway Safety Plan?

A State Strategic Highway Safety Plan (SHSP) is a five-year plan to reduce fatalities and serious injuries on all public roads. It is data-driven and performance-based, utilizing the best available data and best practices from all sources. While the development of a SHSP is a requirement to use federal Highway Safety Improvement Program (HSIP) funds, New Jersey recognizes that a SHSP is much more.

The NJ 2020 SHSP is a comprehensive strategic plan establishing a framework of Emphasis Areas (EAs). EAs are data-driven focus areas for investment categories that guide subsequent goals, objectives, and strategies, ultimately moving toward zero deaths. Each consider Enforcement, Education, Engineering, and Emergency response, often referred to as the 4 "Es." New Jersey places a special focus on a fifth "E" for all investments – Equity.



The NJ 2020 SHSP development and implementation process is a collaborative effort of safety stakeholders representing all levels of government, non-profit organizations, private sector stakeholders, and the general public. Through ongoing stakeholder dialogue, the NJ 2020 SHSP will be influenced by other safety initiatives and plans within the state, and conversely, other safety initiatives and plans will influence the SHSP. Examples of other plans and programs that the SHSP will coordinate with include the New Jersey Highway Safety Plan, the New Jersey Commercial Vehicle Safety Plan, regional, county and local transportation plans, regional Transportation Improvement Programs (TIP), state health and education plans, the Long Range Transportation Plan (LRTP), and the Statewide Transportation Improvement Program (STIP).

Previous Strategic Highway Safety Plans

The NJ 2020 SHSP is New Jersey's second SHSP update. New Jersey completed its initial SHSP in 2007. The first update to the plan was in 2015. The SHSP continues to evolve over time. The NJ 2015 SHSP increased focus on a data-driven, performance-based approach, and made an effort to increase consideration of county and municipal roads. The NJ 2015 SHSP included the following 16 Safety EAs: Lane Departure, Drowsy and Distracted Driving, Aggressive Driving (including speeding), Intersections, Pedestrians and Bicyclists, Impaired Driving, Mature Drivers, Unbelted Vehicle Occupants, Teen Drivers, Motorcycles, Heavy Vehicles, Unlicensed Drivers, Work Zones, Train-Vehicle Collisions, Driver Safety Awareness, and Improved data analysis. These sixteen total EAs were prioritized into three tiers. First priority EAs included:

2015 SHSP First Priority EAs	2015 Recommendations Included:
» **Lane Departure** » **Drowsy and Distracted Driving** » **Aggressive Driving** » **Intersections** » **Pedestrians and Bicyclists** » **Mature Drivers**	» Improving alignment of safety investments with crash data. » Making infrastructure safety investments that focus on lane departure, intersections, and pedestrian safety. » Advancing systemic safety improvements. » Providing funding to municipalities to provide educational programs, enforcement campaigns, and pedestrian safety training for children and mature adults.

Table 1.1 NJ 2015 SHSP First Priority EAs and Recommendations

Accomplishments

Since the completion of the NJ 2015 SHSP, many safety partners worked together to make the recommendations a reality. As a result, New Jersey achieved an extensive list of notable accomplishments.

Engineering/Infrastructure

- Centerline and Edgeline Rumble strips on state and county roads to reduce lane departure risk
- High Friction Surface Treatments at high-risk curves on state and county roads to reduce lane departure risk
- Road Diets on state and local roads to reduce conflicts between vehicles, pedestrians, and cyclists
- Back Plates with Retroreflective Borders on signals to improve visibility at intersections
- Intersection Improvements
- Pedestrian and Bicycle Safety Improvements in the vicinity of grade schools
- ADA Sidewalk and Crossing Improvements on state, county, and municipal networks
- Complete Streets Policies adopted by state, county, and municipal governments (169 municipalities and eight (8) county policies adopted as of June 2020)[1-6]
- "Complete Streets Design Guide" published in 2017
- "Complete & Green Streets for All, Model Policy & Guide" published in July 2019

Quick Facts

New Jersey

signed on as a Toward Zero Deaths Partner during the NJ 2015 SHSP update.

Quick Facts

Engineering/ Infrastructure

Implemented a Pilot Roundabout program for local roads to encourage the use of this proven safety countermeasure.

13

roundabout projects implemented or advancing under this program.[1-1]

- Rail Highway Grade Crossing Improvements to reduce risk of train-vehicle crashes
- Relocated Utility Poles away from the edge of the road to reduce lane departure crashes
- Road Safety Audits to assess risks and develop plans for high-risk road segments
- Installed or upgraded guide rail to reduce lane departure risk

Public Education/Awareness

- Community Traffic Safety Program
- Impaired Driving College Campus Initiative
- Motorcycle Safety Training and Awareness – More than 7,000 trained each year since 2015[1-7]
- Child Passenger Safety Education
- Elementary-age Child Bicyclist Training by Transportation Management Associations
- Crossing Guard Training – Reached 75% of municipalities that employ crossing guards[1-8]
- School Travel Plans – Over 90 completed statewide[1-9]
- Senior Mobility Workshops
- Carrier Safety Seminars – Conduct approximately 25 per year[1-10]
- Novice Driver Education programs mandated to have classroom periods that focus on alcohol safety and drug abuse awareness, defensive driving, motorcycle awareness, and organ/tissue donation[1-11]
- Share the Keys Program for parents/guardians of teen drivers implemented statewide as both a voluntary and mandatory school program[1-12]
- Work Zone Safety Training for DOT, Public Works, County, and Municipal Employees – approximately 2,000 persons trained per year through NJ Division of Highway Traffic Safety (DHTS), DOT, Rutgers Center for Advanced Infrastructure and Transportation (CAIT)[1-13]
- Annual Work Zone Safety Partnership Conference – Approximately 250 persons[1-14]
- AAA Car Fit Program for Mature Drivers

Quick Facts

Public Education/ Awareness

Click it or Ticket Seat Belt Usage Campaign

U Text You Drive You Pay Campaign

Drive Sober or Get Pulled Over Campaign

Street Smart Pedestrian Safety Campaign (North Jersey Transportation Planning Authority)

140+

communities have participated since 2013[1-2]

Enforcement

- Graduated Driver's License Program and Enforcement
- Underage Enforcement
- Drug Recognition Expert Program – Approximately 100 law enforcement officers trained annually since 2018[1-15]
- Driving While Intoxicated Enforcement Mobilization
- U Drive U Text U Pay Distracted Driving Crackdown, April 1 – 21, 2019. 15,105 Cell Phone Use/Texting Citations[1-16]
- Seat Belt Enforcement – 2018 usage rate 94%. Over 3% increase from 2015.[1-17]
- Crash Investigation Training – Over 400 law enforcement officers trained annually[1-18]
- Commercial Vehicle Enforcement Stops with an Inspection – Average over 3,200 per year[1-19]
- New Entrant Carrier Safety Audits Program – Average over 1,400 per year[1-20]
- Work Zone safety for police officers – approximately 150 officers/year[1-21]

Emergency Response

- Training of Emergency Medical Technicians and Mobile Intensive Care Paramedics

Data

- Revised the NJ Police Crash Investigation Report Form (NJTR-1) to better classify injuries
- Provided NJTR-1 training to law enforcement agencies - Approximately 300 law enforcement officers trained each year[1-22]
- Reduced the use of paper crash reports

Quick Facts

Enforcement

Commercial Vehicle Roadside Driver and Vehicle Inspections – Average

35,000+

per year[1-3]

Advanced Roadside Impairment Driving Enforcement (ARIDE) Training. Nearly

1,000

law enforcement officers trained in 2019[1-4]

Quick Facts

Emergency Response

Traffic Incident Management Responder Training - Approximately

120

first responders trained each year. [1-5]

Safety Trends

Total fatalities and serious injuries, fatality and serious injury rates, and total non-motorized fatalities and serious injuries are five (5) Safety Performance Measures used by the FHWA and the National Highway Transportation Safety Administration (NHTSA). These measures are used for establishing targets and federal reporting.[1-23]

NJ 2015 Goal Performance, Total Fatalities and Serious Injuries

The NJ 2015 SHSP set a performance goal of 2.5% per year reduction in total fatalities and serious injuries based on a five-year rolling average. Figure 1.1 illustrates the trend in fatalities and serious injuries against the goal. This chart illustrates that New Jersey exceeded the performance goal through 2018. However, the five-year rolling average for period ending 2018 indicates an increase since the five-year period ending in 2017. A breakdown of fatalities and serious injuries is provided in Figures 1.2 and 1.3.

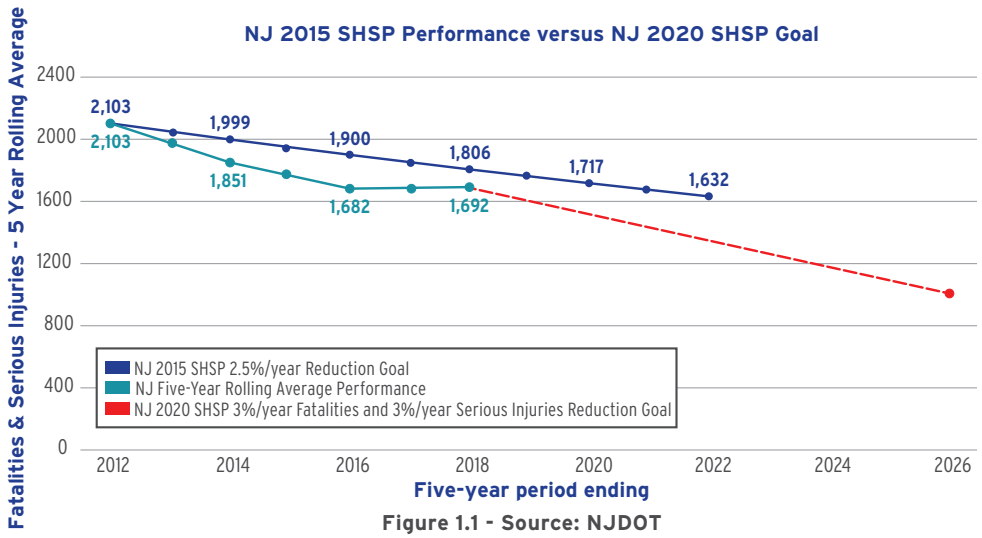


Figure 1.1 - Source: NJDOT

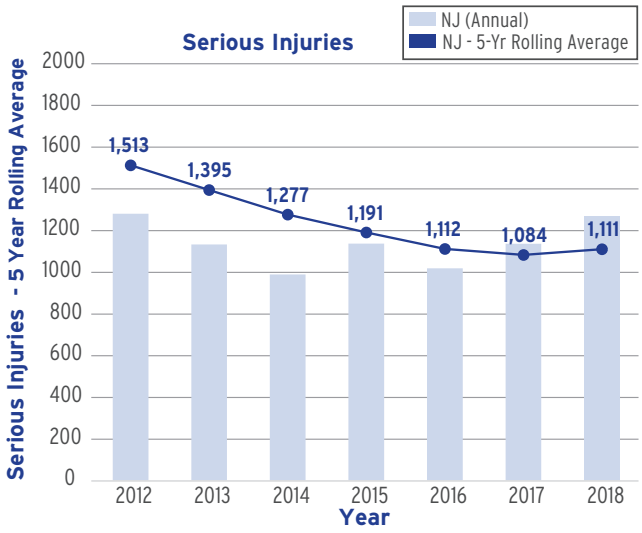


Figure 1.2 Serious Injuries - Annual and Five-Year Rolling Average Totals - Source: NJDOT

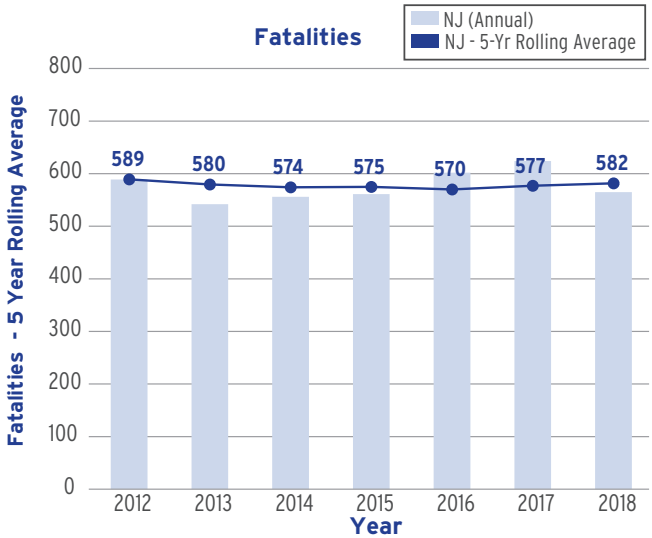


Figure 1.3 Fatalities - Annual and Five-Year Rolling Average Totals - Source: NJDOT

Fatality and Serious Injury Rates

States and federal agencies use fatality and serious injury rates to compare performance between states because rates consider the volume of traffic in each state, not just the total number of fatalities and serious injuries. The rate is given as fatalities and serious injuries per 100 million vehicle miles traveled. Figures 1.4 and 1.5 illustrate the fatalities and serious injuries rates in New Jersey.

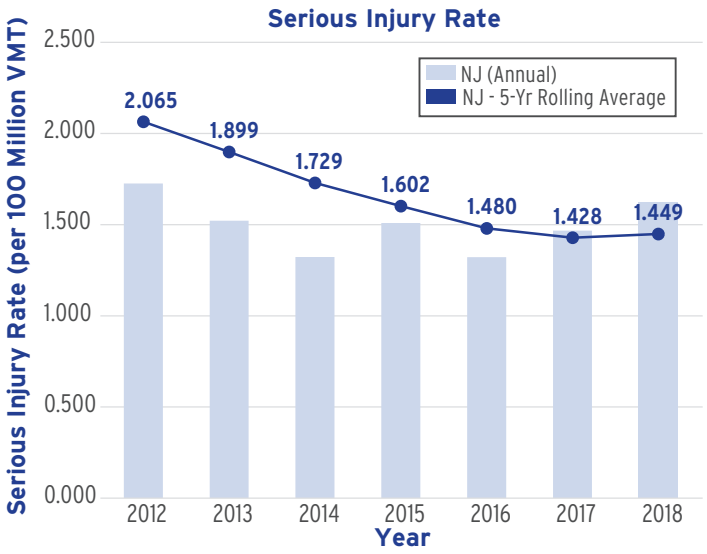


Figure 1.4 Serious Injury Rate – Annual and 5 Year Rolling Average
Source: NJDOT

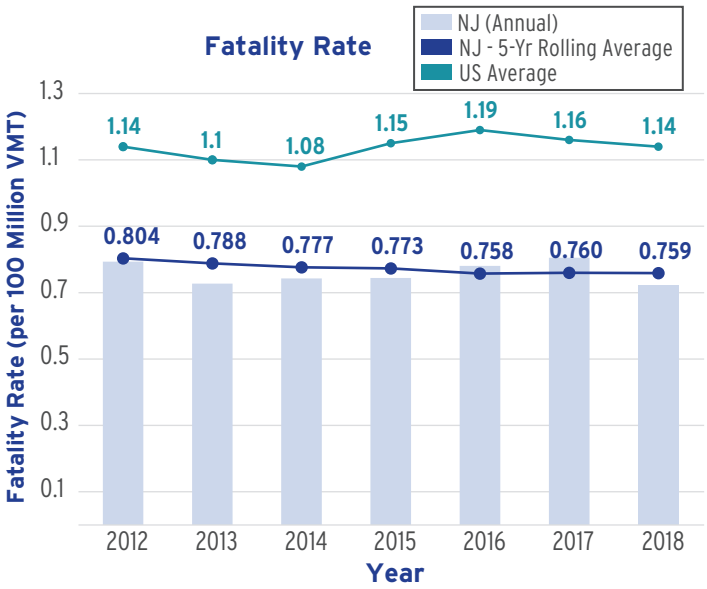


Figure 1.5 Fatality Rate – Annual and 5 Year Rolling Average
Source: NJDOT

The national five-year rolling average fatality rate for the period of 2013 - 2018 was 1.14 fatalities per 100 million vehicle miles traveled. New Jersey's fatality rate is consistently below the national average and continues to trend in a positive direction. Serious injury rates cannot easily be compared to other states because states differ on their criteria for what constitutes a serious injury. New Jersey's serious injury rate curve using a five-year rolling average has trended up slightly since 2017.

Non-motorized Fatalities and Serious Injuries

Non-motorized Fatalities and Serious Injuries impact road users not in a car, truck, bus, motorcycle, or other motorized vehicle. Typically, non-motorized users include pedestrians, bicyclists, those in wheelchairs or on scooters or skateboards. Figure 1.6 illustrates the trend in fatalities and serious injury crashes. Since 2017 non-motorized fatalities and serious injuries have been trending upward.

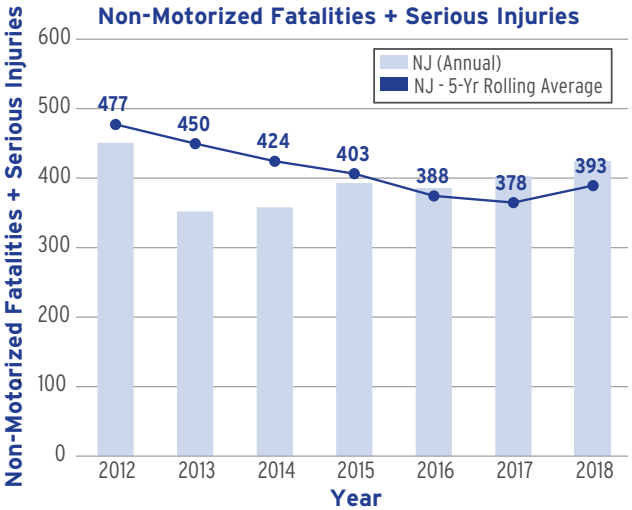


Figure 1.6 Non-Motorized Fatalities and Serious Injuries
Source: NJDOT

Cost of Hospitalization due to Crashes[1-24]

The New Jersey Department of Health (NJDOH) estimates the average cost of hospitalization due to a roadway crash for non-fatal injuries at $146,000. NJDOH estimates that the cost of an in-hospital death resulting from a roadway crash averages approximately $292,000. In 2018, there were a total of approximately 3,460 nonfatal hospitalized injuries and 88 in-hospital deaths related to roadway crashes. The highest number of hospitalizations was for males in the age group 25-34 years. The highest hospitalization rate is for males aged 75 and older where the hospitalization rate is 78.8 per 100,000 population.

Equity in Highway Safety Investment

New Jersey Executive Order No. 23 recognizes that "Environmental Justice" includes, at a minimum, ensuring that residents of all communities receive fair and equitable treatment in decision-making that affects their environment, communities, homes, and health.

The Americans with Disabilities Act of 1990 (ADA), Title VI of the Civil Rights Act of 1964 as well as other non-discrimination statutes; and Presidential Executive Orders related to Environmental Justice in 1994 and Improving Access to Services for Persons with Limited English Proficiency in 2000, all contribute to an equitable transportation network. The goal of Environmental Justice, when applied, is to identify and address disproportionately high and adverse human health or environmental effects on minority or low-income populations. Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs receiving Federal assistance. Other non-discrimination statutes are more inclusive than the Title VI statute as they cover additional classes of individuals and pertain to other civil rights laws with which funding recipients must comply. Together, they protect diverse segments of the population which may be at risk of being unduly impacted by, or which have been historically underrepresented within the transportation decision-making process.

Equity in transportation seeks fairness in mobility and accessibility needs of all community members. It includes evaluating circumstances that impact a community's mobility, connectivity, and safety in determining the measures needed to develop an equitable network. Further, it recognizes the importance to provide residents in traditionally underserved communities access to opportunities.

The NJ 2020 SHSP recognizes the need to create an equitably "safe" transportation network. To that end, the NJ 2020 SHSP places special focus on equity in highway safety investment, which will consider traditionally underserved populations in the development of strategies to improve infrastructure, increase education, carry out law enforcement, as well as provide reliable emergency response.

High Risk Rural Roads

Federal rules require that states define High Risk Rural Roads (HRRR) in conjunction with the NJ 2020 SHSP. Safety improvements on roads that meet the state's definition of a HRRR may be eligible for federal HRRR Program funds. First, to be eligible as a HRRR, the road segment must have a functional classification as either a rural major collector, a rural minor collector, or a rural local road. In addition to the classification, to qualify for HRRR funds, a data-driven analysis must identify the road segment as having significant safety risks. The FHWA directs that each state develop its own methodology for identifying segments with significant safety risks with FHWA approval.

New Jersey's approved methodology for identifying a road segment as a HRRR is that the rural road segment must demonstrate fatal and incapacitating injury crashes per mile higher than the average for the segment on rural roadways with similar geometric features.[1-25] Rural major or minor collector segments and local road segments with similar roadway geometric features are referred to as peer groups. The number of fatal and incapacitating injuries for a particular segment are compared to the average number of fatal and incapacitating injuries for peer group segments within the same metropolitan planning organization boundary to determine if the segment in question exceeds the average for the peer group. Segments that exceed the average for the peer group are classified as having a significant safety risk and thus, a HRRR segment.

High risk locations may also be identified through means such as field reviews, safety assessments, Road Safety Audits, and local knowledge and experience. Using information from observations in the field can identify high risk locations that may not be identified through data analysis or by identifying roadway characteristics. High risk rural roadway characteristics that are correlated with specific severe crash types such as cross-section width, lack of shoulders, substandard alignment, and hazardous roadside may be considered for systemic improvements across multiple HRRR segments. Systemic treatments generally involve the widespread implementation of low-cost safety countermeasures such as rumble strips, high friction surface treatment on high risk curves, and back plates with retroreflective borders on traffic signals to increase visibility. NJDOT assessed 5,704 individual rural road segments in 2018. Of those, 41 segments were identified as HRRR in the South Jersey Transportation Planning Organization Region across Atlantic, Cape May, Cumberland, and Salem counties; 54 HRRR segments were identified in the North Jersey Transportation Planning Authority region across Hunterdon, Monmouth, Morris, Ocean, Somerset, Sussex, and Warren counties; and 17 HRRR segments were identified in the Delaware Valley Regional Planning Commission region across Burlington, Gloucester, Mercer, and Camden counties.

[1-25] Also known as homogeneous segments, defined based on a variety of factors, such as functional class, speed limit, two-lane versus multilane, etc.

2: Update Process

The process to update the NJ 2020 SHSP began in September 2019 with a completion goal of August 2020. The major milestones are depicted below in Figure 2.1.

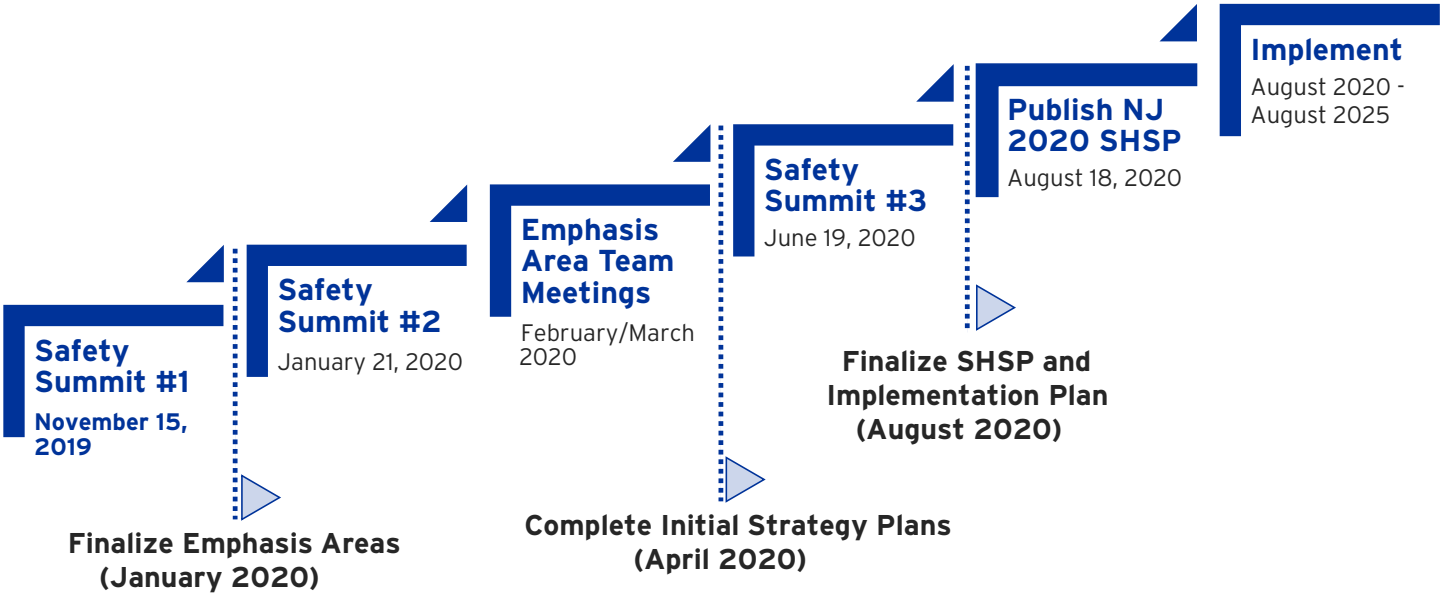


Figure 2.1 NJ 2020 SHSP Update Process

Priorities for the NJ 2020 SHSP

With these goals in mind, a strategic approach was developed to identify and engage a large stakeholder group and provide ample opportunities for them to participate in the development and implementation of the NJ 2020 SHSP.

- Increase county and municipal participation in the process
- Improve coordination and integration with all related agencies
- Increase focus on implementation

Diverse stakeholder teams were established to develop and implement strategies for each Emphasis Area (EA).

Organizational Structure

New Jersey established a strong management structure to accomplish the objectives of the NJ 2020 SHSP. Figure 2.2 illustrates the organizational structure for the NJ 2020 SHSP update. Each organizational element, as explained below, was established to accomplish the objectives of the NJ 2020 plan. Executive Committee and Steering Committee membership is noted in the beginning of this report.

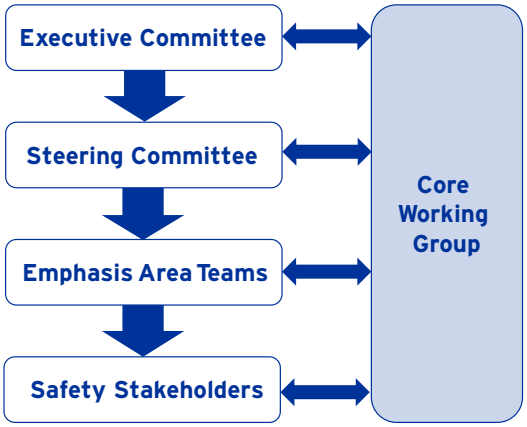


Figure 2.2 NJ 2020 SHSP Organizational Structure

The Core Working Group consisted of the New Jersey Department of Transportation (NJDOT), the New Jersey Division of Highway Traffic Safety (NJDHTS), and the Federal Highway Administration (FHWA), with support from a consultant team. It was tasked with overall management and coordination of the NJ 2020 SHSP Program.

The Steering Committee represents a broad group of safety stakeholders, established to provide input and advice on decisions and work products as the plan progressed and to improve coordination with other plans.

The Executive Committee provided top level leadership to the NJ 2020 SHSP development program. The Executive Committee provided approval of EAs, the Implementation and Evaluation Plans, and the final report. The Executive Committee will monitor the progress of the implementation of the NJ 2020 SHSP, and will provide approval of any significant changes.

Emphasis Area Teams (EATs) were established for each of the seven EAs and a team leader was selected for each. Through facilitated meetings, the EATs developed goals, objectives, and strategies for each EA. The EATs will continue to champion progress throughout the implementation period. EAT participation was open to any safety stakeholders that had an interest in a particular EA.

Commissioner, Diane Gutierrez-Scaccetti, providing remarks at NJ 2020 SHSP Summit #1

Consultation and Coordination

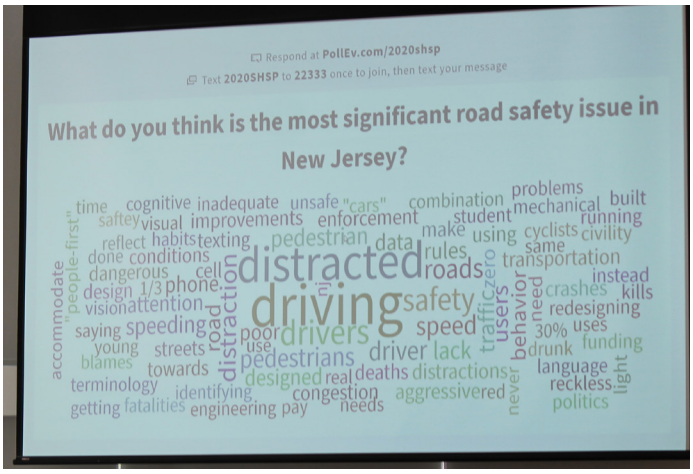
The NJ 2020 SHSP update process included several opportunities to engage a broad group of safety stakeholders throughout New Jersey. These opportunities included three (3) Safety Summits conducted on November 15, 2019, January 21, 2020 and June 19, 2020. Each summit was attended by approximately 200 people.

Safety Summit #1 was an introductory summit to acquaint stakeholders with the NJ 2020 SHSP, share data, and to obtain initial input on important roadway safety issues. This information was used in the selection of EAs.

Safety Summit #2 was a full-day workshop that included two (2) breakout sessions for each EA. During these sessions, stakeholders were given an opportunity to share their ideas on strategies that could be employed to reduce fatalities and serious injuries for a specific EA. Stakeholders also had an opportunity to vote on strategies they believed to be the most effective.

Safety Summit #3 was deployed in a webinar format due to the COVID-19 pandemic. The presentation included a high-level summary of the goals, objectives, and strategies developed for each EA and outlined the approach for plan implementation over the next five years.

In addition to the Safety Summits, public outreach included the creation of a website, SafeRoadsForAllNJ.com, to share information and provide a forum for stakeholders to submit questions and comments. Safety Summit proceedings were recorded and posted on the website for public viewing.



Interactive word-cloud created by audience when asked, "What is most significant safety issue?" at NJ 2020 SHSP Summit #1

Coordination with Other Plans and Programs

Effective SHSP implementation leverages the resources of other transportation planning documents to align high-level goals, performance measures, strategies, and objectives. The advancement of the NJ 2020 SHSP will be coordinated with other plans - including the NJ Division of Highway Traffic Safety's Highway Safety Plan (HSP), Commercial Vehicle Safety Plan (CVSP), the Statewide Transportation Improvement Plan (STIP), and other regional and/or local plans. In addition, federal Highway Safety Improvement Program (HSIP) funds will be programmed to be consistent with the mission, goals, objectives, and strategies of the NJ 2020 SHSP.

The NJ 2020 SHSP will impact other plans and programs and the other plans and programs will play a role in implementing the NJ 2020 SHSP. Any federally funded efforts, particularly those using HSIP funds, will need to be implemented through the statewide transportation planning and programming investment process, as documented in the Long Range Transportation Plan (LRTP) and STIP. HSIP funded projects will have to demonstrate consistency with NJ 2020 SHSP priorities. NJDOT and the MPOs will provide oversight to ensure consistency with the STIP and regional Transportation Improvement Program (TIP) requirements.


NJ 2020 SHSP Summit #1

Data-driven Emphasis Areas and Strategies

EAs represent the key factors contributing to crashes. The EAs were identified using a data-driven approach with input from the MPOs on the crash record database queries. The primary data source was the NJDOT crash records database, which consists of detailed information on all crashes obtained through the police crash investigation report form (NJTR-1). The Core Working Group used the data query definitions to establish the five-year totals of fatalities and serious injuries for fourteen (14) of the NJ 2015 SHSP EAs. The results are illustrated in Figure 2.3. These query definitions were also used to develop the proposed EAs for the NJ 2020 SHSP.

While most of the 2015 EAs warranted consideration in the NJ 2020 SHSP, the Core Working Group recommended a smaller number of EAs to reduce duplication of resources and strategies. The Core working Group proposed six (6) EAs and presented them to the Steering Committee for discussion as listed below. Of note, the Driver Behavior and Other Vulnerable Road Users EAs incorporate several of the NJ 2015 SHSP EAs.

- Intersection
- Lane Departure
- Pedestrians and Bicyclists
- Driver Behavior
- Other Vulnerable Road Users
- Data

The data sources are documented in Appendix B.

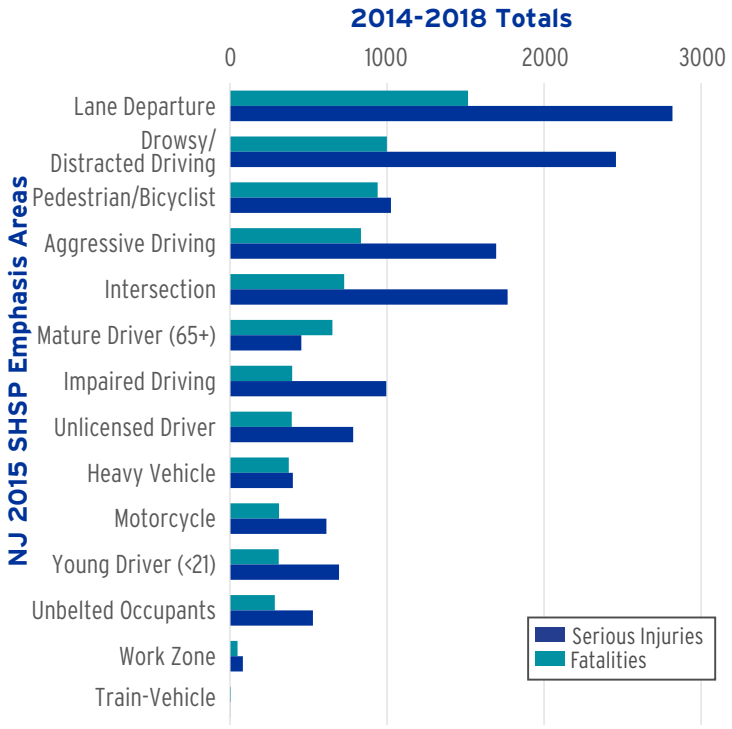


Figure 2.3 Fatality and Serious Injury Totals for the NJ 2015 SHSP EAs

Performance-based Approach

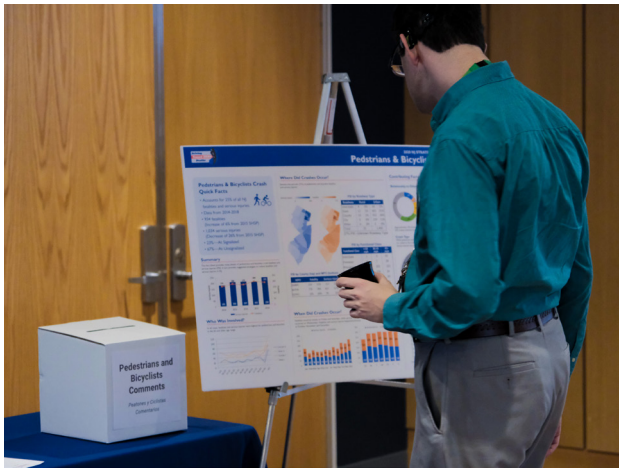
A performance-based approach provides the greatest opportunity to reduce fatalities and serious injuries. Performance data was assessed related to the NJ 2015 SHSP goal and coordinated with the NJDOT's Safety Performance Targets, required as part of the FHWA HSIP and NHTSA HSP. The Steering Committee recommended that an overarching goal for reduction of fatalities and serious injuries not be set until performance objectives were set for each of the EAs.

Once each EAT established goals and initial performance objectives, the team set performance measures and metrics to reduce fatalities and serious injuries (with the exception of the Data EA). As metric data was assessed, it was noted that beginning in 2019, New Jersey updated the police crash reporting form to reflect the federally

Intersection Breakout Session, Safety Summit #2, The College of New Jersey

required injury classifications (Killed, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury). As a result of this change, injuries not previously attributed to the serious injury classification are now included in this number. For example, a crash victim with a broken arm that would have previously been classified as a Moderate injury, is now classified as Suspected Serious Injury.

Therefore, it is expected that the number of serious injuries will be significantly higher than the 2018 baseline year over the next five years and that the 2018 figures may not be a good baseline for serious injuries moving forward. To account for this change, the performance of the NJ 2020 SHSP will be measured using three performance metrics: fatalities, serious injuries and total injuries against the baseline year of 2018. The total injuries will serve as a surrogate for serious injuries until the data normalizes.



Lobby Data Posters, Safety Summit #2, The College of New Jersey

While NJ 2020 SHSP overall goal selection began as a bottom-up approach, the performance metric analysis results led to very conservative goals. Therefore, the overall goal selection process moved to an assessment of year-to-year changes in the five-year rolling average. This approach led to the selection of goals that are aspirational, yet achievable, as the reduction levels selected were achieved in previous years. It is important to note that the serious injuries goal was selected simply by matching the total injuries goal because the serious injury data is inconclusive at this time. A performance-based approach will also be used to monitor NJ 2020 SHSP progress during the implementation phase.

Strategy Selection

Safety Summit #2 played a major role in the identification of potential strategies for each EA. At the conclusion of both break-out sessions, strategies identified included existing strategies from the NJ 2015 SHSP as well as potential new strategies from other sources such as FHWA guidance, and best practices in other states and countries.

Driver Behavior Breakout Session, Safety Summit #2, The College of New Jersey

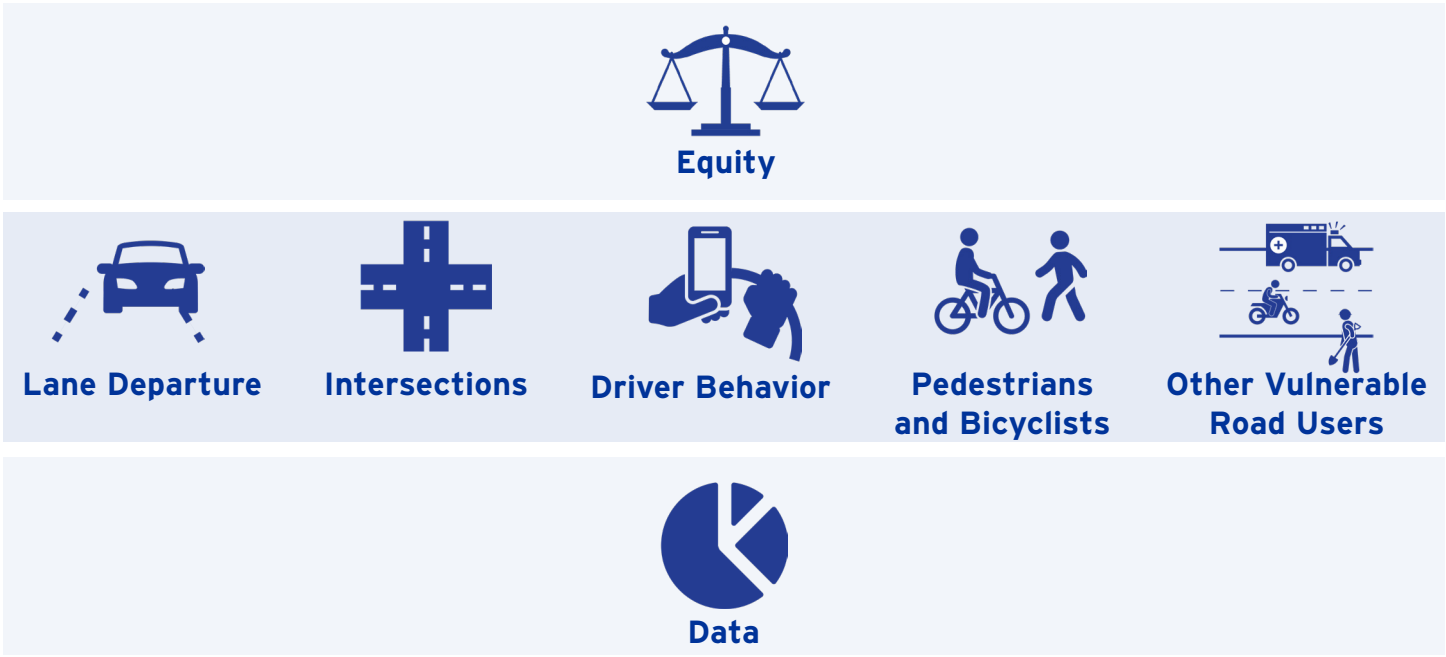
Using the lists of strategies developed during Summit #2, EATs developed goals, objectives, and priority strategies. Teams were asked to consider all four "Es:" Engineering, Enforcement, Education and Emergency response, and to consider Equity in strategy development. Maps were created for each EA to correlate equity with safety – see Section 3 for additional information.

After the initial EAT Meetings, the Executive Committee decided that Equity considerations related to safety required a greater focus throughout all levels of the NJ 2020 SHSP organizational structure. To achieve this, the Executive Committee established a new Equity EAT and decided to include appropriate representatives on the Executive Committee, Steering Committee and Core Working Group. The Equity EAT will participate in each of the six existing EATs to ensure highway safety equity issues are being addressed and identify mapping alternatives related to safety for underserved populations. They will also establish Equity EA resources, goals, objectives, and strategies.

City of Jersey City, New Jersey

3: Emphasis Areas

The NJ 2020 SHSP focuses on seven (7) EAs (Equity, Lane Departure, Intersections, Driver Behavior, Other Vulnerable Road Users, Pedestrians and Bicyclists, and Data). Crash data for the five-year period from 2014 to 2018 was analyzed to identify the highest crash contributing factors causing fatalities and serious injuries (FSI) in New Jersey. The EAs were selected based on the highest crash contributing factors that present the greatest potential to reduce FSI over the next five years. Specific strategies were initially developed for each of these EAs considering the four "Es" – Engineering, Enforcement, Education, and Emergency response. Equity was considered throughout the process and subsequently added as a fifth "E".



Risky driving behaviors such as drowsy and distracted driving, aggressive driving, impaired driving, unlicensed driving, and unbelted drivers and occupants were grouped into one EA. Similarly, Vulnerable Road Users were combined into one EA — encompassing mature drivers, younger drivers, motorcyclists, work zone workers and other road workers. Pedestrians and bicyclists are also recognized as Vulnerable Road Users. However, considering that one-third of New Jersey FSI involve pedestrians and bicyclists, this group was selected as its own EA. Understanding the factors contributing to crashes, the accurate location of crashes, and driver involvement in crashes is critical in determining effective EAs. Complete, accurate, accessible, uniform and integrated data is the foundation of any analysis and strategy selection. Crash data will help to measure and evaluate the progress of all initiatives and strategies outlined in this plan. As a result, a Data EA has been included in the NJ 2020 SHSP.

EAs help determine prioritization of investments and the most effective allocation of resources and efforts. Goals, objectives, performance measures, and strategies were developed for each of the EAs. Total investment in safety also includes programs like the Rail-Highway Grade Crossing Program, systemic programs, and STIP projects that may use HSIP funds consistent with the SHSP.

Equity

The NJ 2020 SHSP places special focus on creating an equitable safety investment , which will consider traditionally underserved populations. Like the Data EA, Equity is a cross-cutting consideration that relates to all other EAs. The Equity EA approach includes an independent team providing oversight and guidance to the other EAs to ensure Equity is given full consideration in strategy development and implementation. To that end, an Equity EAT, comprised of representatives of government, regional planning organizations, academic institutions, and advocacy groups was established. Equity EAT members were assigned to each of the other EAs to ensure that there is clear coordination between teams. The Equity EAT identified priority strategies to improve infrastructure, facilitate education and awareness, and provide reliable emergency response in addition to enforcement to underserved communities.

As with all EAs, efforts related to Equity will be based on data, with a performance-based approach.

Age-Adjusted Death Rate by Race/Ethnicity

Figure 3.1 below indicates that while there has been a slow decline across all races, the motor-vehicle age-adjusted death rate[3-1] has consistently been higher for the Black population. In 2016, the rate of deaths for Blacks was 8.5 per 100,000 versus Whites at 6.6 per 100,000, Hispanics at 6.5 per 100,000, and Asians at 3.5 per 100,000.

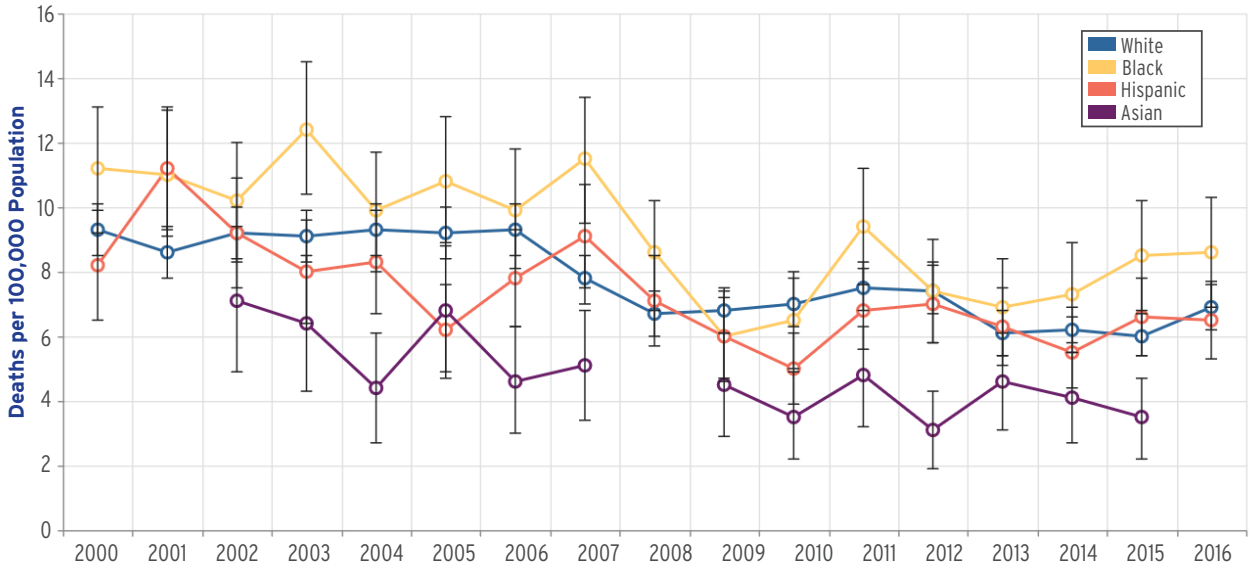


Figure 3.1 Motor Vehicle Related Age-Adjusted Death Rate by Race/Ethnicity

[3-1] 1)Motor vehicle-related deaths include motor vehicle and motorcycle drivers and passengers, pedestrians, and bicyclists struck by motor vehicles both on roadways in traffic and in other areas such as parking lots and driveways. Age-adjusted Death Rate is a death rate that controls for the effects of differences in population age distributions. When comparing across geographic areas, some method of age-adjusting is typically used to control for the influence that different population age distributions might have on health event rates. 2) The data does not track American Indian and Alaskan Native or Native Hawaiian or Pacific Islander, which are part of the USDOT Environmental Justice Order (Order 5610.2(a)) minority definition. Data for White, Black, and Asian are all Non-Hispanic. Hispanic ethnicity includes all races. Missing data points are due to too few deaths to calculate a reliable rate.

Census Tract Maps

For each EA, statewide census tract maps were prepared that compare fatality and serious injury data to the percentage of minority households. Figure 4.2 provides an example of one of these maps as it relates to driver behavior.

Similar to above, for each EA, statewide census tract maps were also prepared that compare FSI data to the percentage of households that live below the poverty level. Figure 4.3 provides an example of one of these maps as it relates to pedestrians and bicyclists.

The total number of FSI for the years 2014 to 2018 were used as the basis for each map, with green representing a low incidence of crashes and red representing a high incidence of crashes within a census tract. In addition, the total percentage of minority population and the percentage of households below poverty level within each census tract were used to create extrusions for the census tracts. Higher extrusions indicate higher levels of underserved populations. Higher concentrations of minority populations, as well as concentrations of households below the poverty level, were prominent in census tracts in Bergen, Hudson, Essex, Camden, Burlington, Mercer, and Monmouth counties.

These maps were presented to each EAT for their review, input and consideration throughout the development of their strategies. A review of this data indicated that no relationship could be inferred between FSI and minority populations or between FSI and poverty levels. It is anticipated, with the establishment of the Equity EAT, that additional investigation on the relationship between FSI and underserved communities will occur.

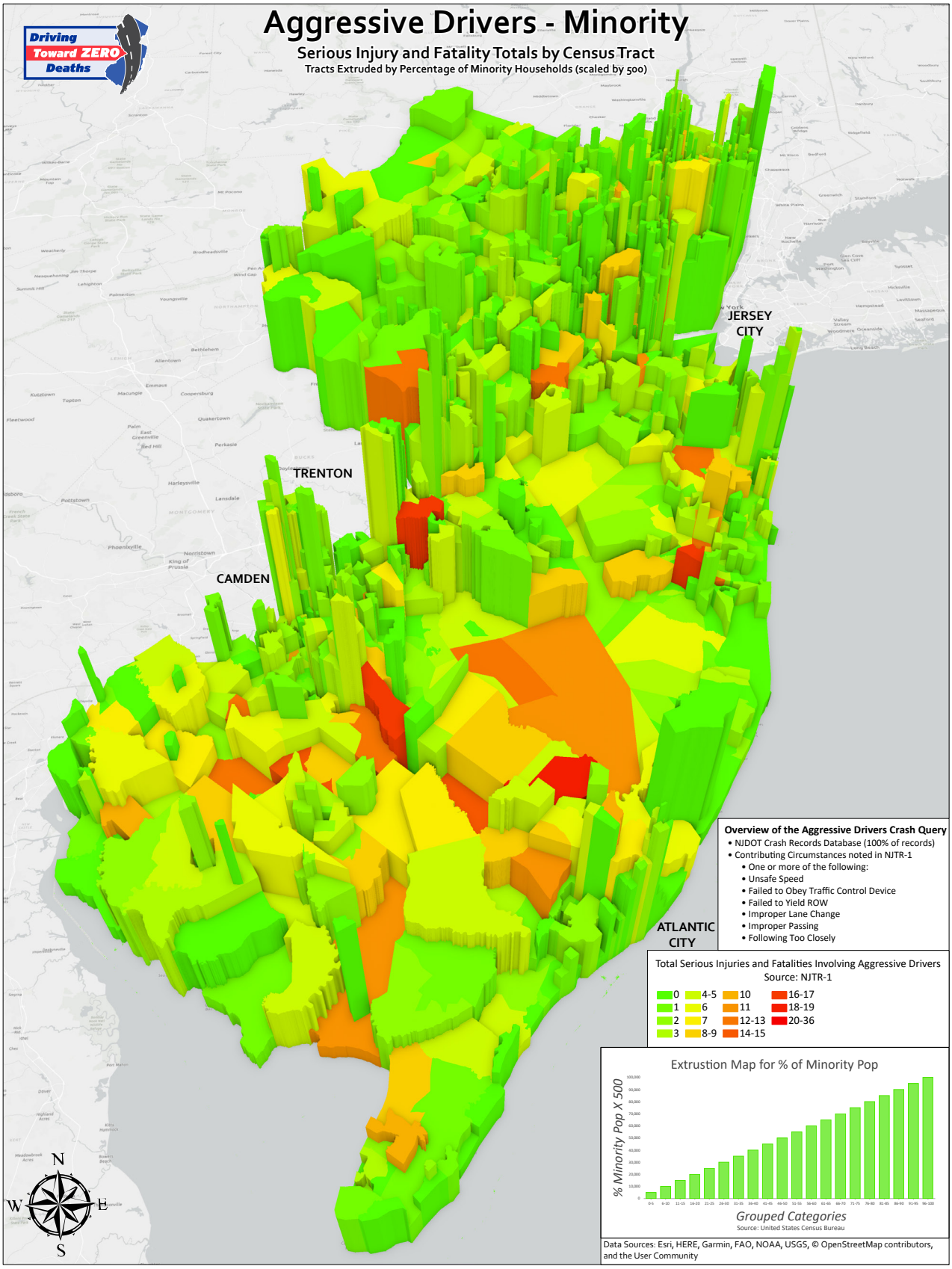


Figure 3.2 Fatalities, Serious Injuries, and Minority Populations by Census Tract

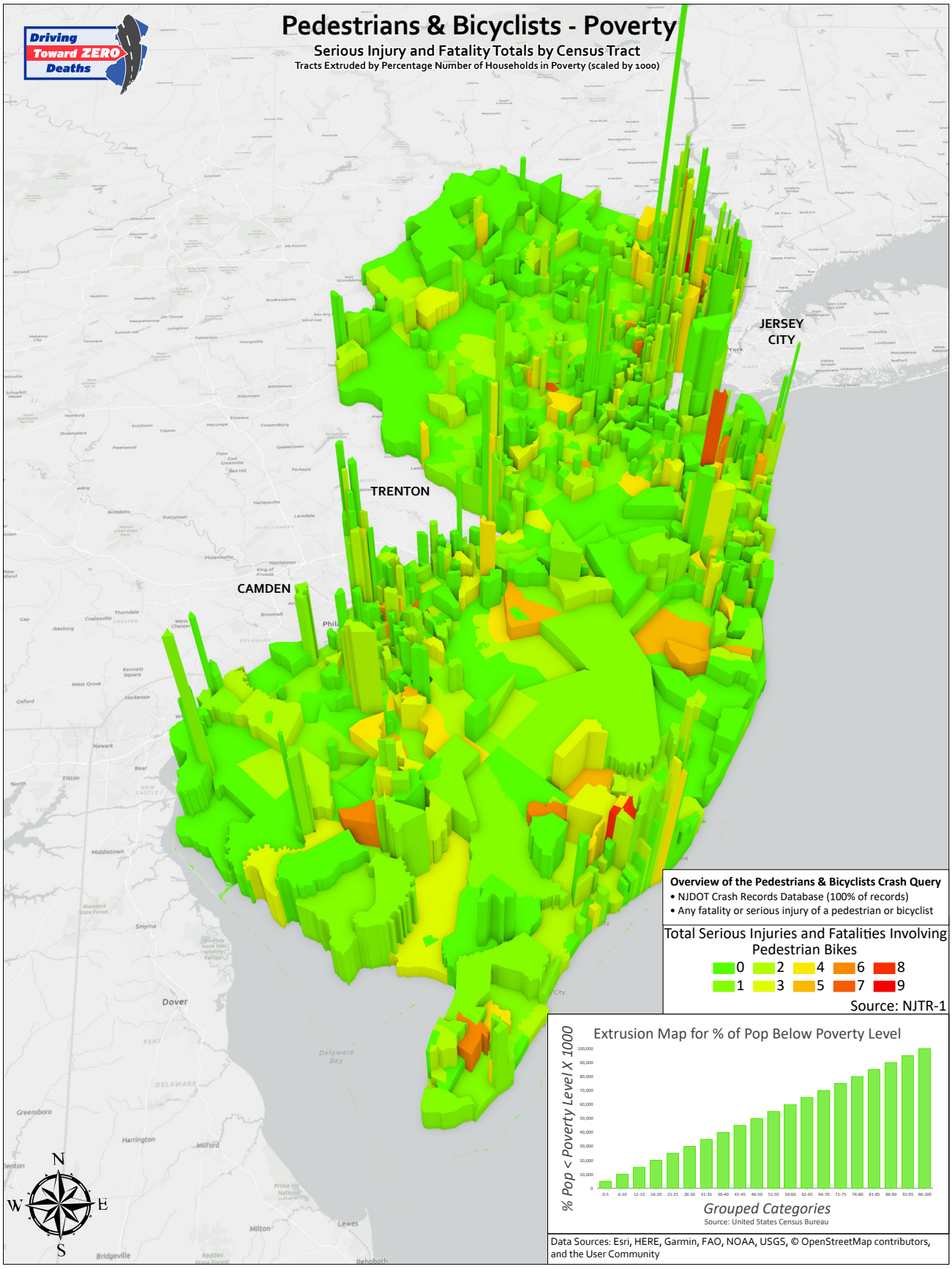


Figure 3.3 Fatalities, Serious Injuries, and Poverty Level by Census Tract

Equity Emphasis Area Goal, Objective and Strategies

Goal:
Ensure highway safety investment is inclusive of the interests of traditionally underserved populations and is considered more deliberately.

Objective

Develop alternate methods to assess equity demographic indicators related to crashes.

Objective Performance Metric

Alternate tools to screen potential impacts to underserved populations.

Strategies:

Lane Departure

- Map lane departure fatalities and serious injury crashes to identify locations with recurring crash trends, particularly locations in areas with underserved populations, and assess any significant contributing factors at these locations such as age, speed, weather, and drowsy or distracted driving.
- Make recommendations for improvements to communicate seasonal reminders and situational awareness in multiple languages.

Intersections

- Supplement local network screening lists with additional context data on priority locations within underserved communities – including but not limited to, proximity to community destinations such as schools, recreation centers, employment centers and places of worship.
- Perform an analysis of investment typology by roadway functional classification for historic and potential investments in underserved communities.
- Map household income and crash areas to see if more crashes are occurring in underserved communities.

Driver Behavior

- Promote an awareness campaign to provide publicly-available materials related to driver behavior that needs to be corrected. Materials will be translated into multiple languages and will be printed as well as provided online. Technical publications and data will be made graphically-rich and more user-friendly to increase accessibility within underserved populations.
- Deploy a local demonstration pilot project, using best practices, to change safety culture in underserved communities with residents and community leaders as the change catalyst.

Other Vulnerable Road Users

- Populate a centralized repository of resources (available in multiple languages) within a Safety Resource Center for speed mitigation techniques, advanced traffic monitoring, signage, signalization, lane markings, dynamic warning systems, lighting and other proven counter measures to protect other vulnerable road users.
- Engage trusted local advocates on getting the message out in underserved communities about how to gain technical assistance and resource investment.

Pedestrians and Bicyclists

- Establish a methodology for identifying priority locations in areas of transportation inequity that require pedestrian and bicycle accommodation upgrades.
- Identify resources for infrastructure improvement or upgrades and technical assistance opportunities in underserved communities.
- Research ways to modify the HSIP benefit-cost ratio formula to encourage more spending on bicycle and pedestrian infrastructure in underserved communities.

Data

- Update mapping and analysis with data points and threshold screens specifically to increase safety investment in underserved communities.
- Supplement safety analyses with Title VI, Environmental Justice, Limited English Proficiency, Disability, and health outcome data and trauma data as well as database of Community-Based Organizations/Local Champions.

Lane Departure

Lane departure crashes involve a vehicle (or vehicles) unintentionally leaving the travel lane (to the left or right), crossing the median/centerline, hitting a fixed object, encroaching into opposing lanes resulting in crashes with an oncoming vehicle, and collisions with a parked vehicle.

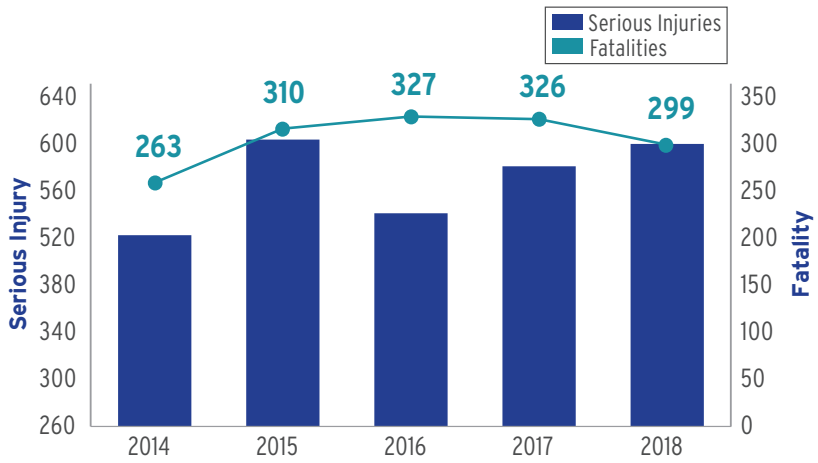


Figure 3.4 Lane Departure Annual Fatalities and Serious Injuries

Quick Facts

51%
of all NJ fatalities and serious injuries.

1,525
Total fatalities - increase of 3% from NJ 2015 SHSP

2,832
Total serious injuries - decrease of 12% from NJ 2015 SHSP

Who Was Involved?

Between 2014 and 2018, male drivers aged 21-25 years old were involved in the most lane departure FSI. During this same time period, female drivers aged 66 or older were involved in the most lane departure FSI. Majority of lane departure crashes were a result of aggressive driving behavior.

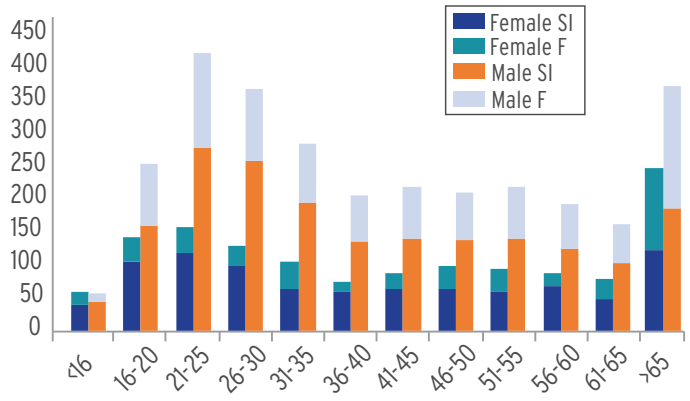


Figure 3.5 Lane Departure Crashes by Gender and Age Group
Crash data trends for years 2014 -2018

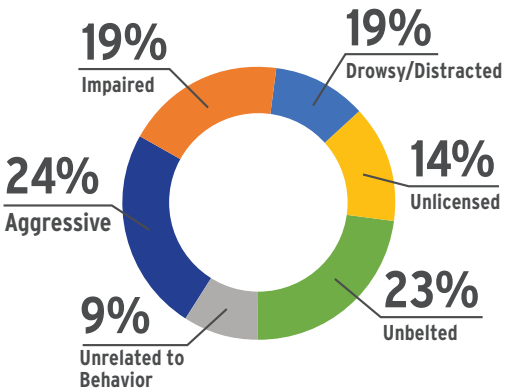


Figure 3.6 Lane Departure Related Behavior

Where Did Crashes Occur?

The majority of lane departure FSI crashes occurred in the North region and on urban state and county roadways. The North region includes Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren counties in New Jersey.

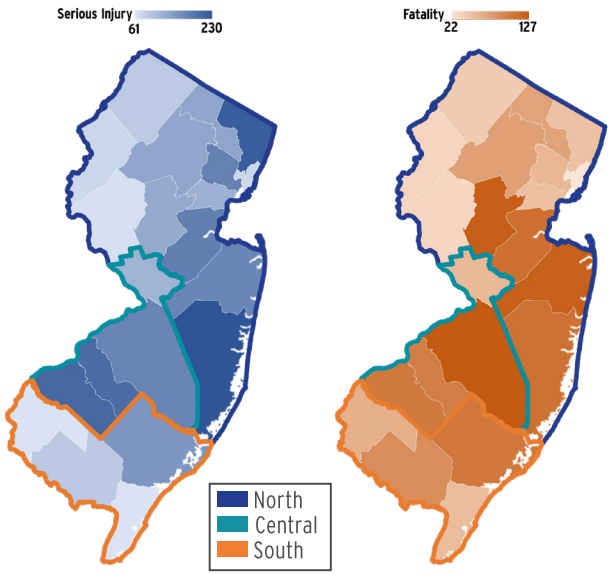


Figure 3.7 Lane Departure Crash Occurrence by County

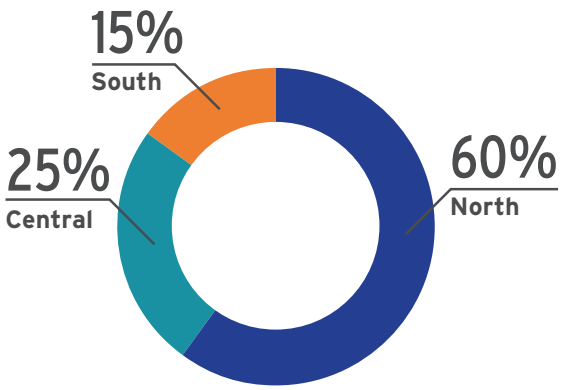


Figure 3.8 Lane Departure Crash Occurrence by Region

Ocean, Gloucester, Camden, and Burlington counties had a higher incidence of lane departure related FSI relative to other counties in the state. 27% of lane departure FSI occurred on urban state roadways, and 24% of crashes occurred on urban county roadways. Principal Arterials with speed limits greater than 30 miles per hour (mph) accounted for 20% of the lane departure FSI.

Crash Type

Fixed object crashes (50%) and head-on crashes (15%) made up the largest portion of lane departure crash types. Appropriate road safety hardware and low-cost safety countermeasures, implemented as a hot-spot or systemic approach, help reduce crash severity in cases of vehicle leaving the roadway. Treatment examples are noted in the strategies.

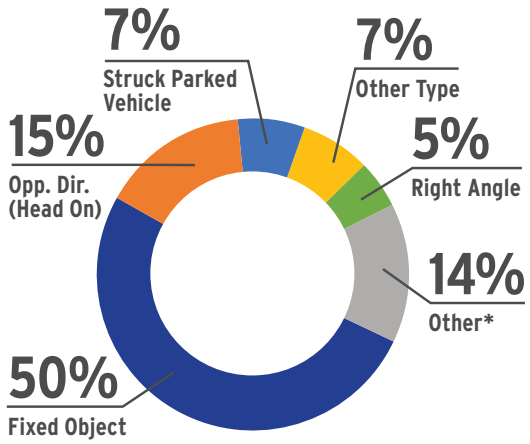


Figure 3.9 - Lane Departure Crash Type
*Includes overturned, sideswipes, pedestrian, non-fixed object, and left/u-turn

Lane Departure Emphasis Area Goal, Objective, Strategies

Goal:
Keep vehicles in the lane, provide for safe recovery, and reduce crash severity.

Objective[3-2]

Reduce the five-year rolling average of lane departure related fatalities by 10%, serious injuries by 5%, and total injuries by 5%, over the period from 2018 to 2023.

Objective Performance Metric

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

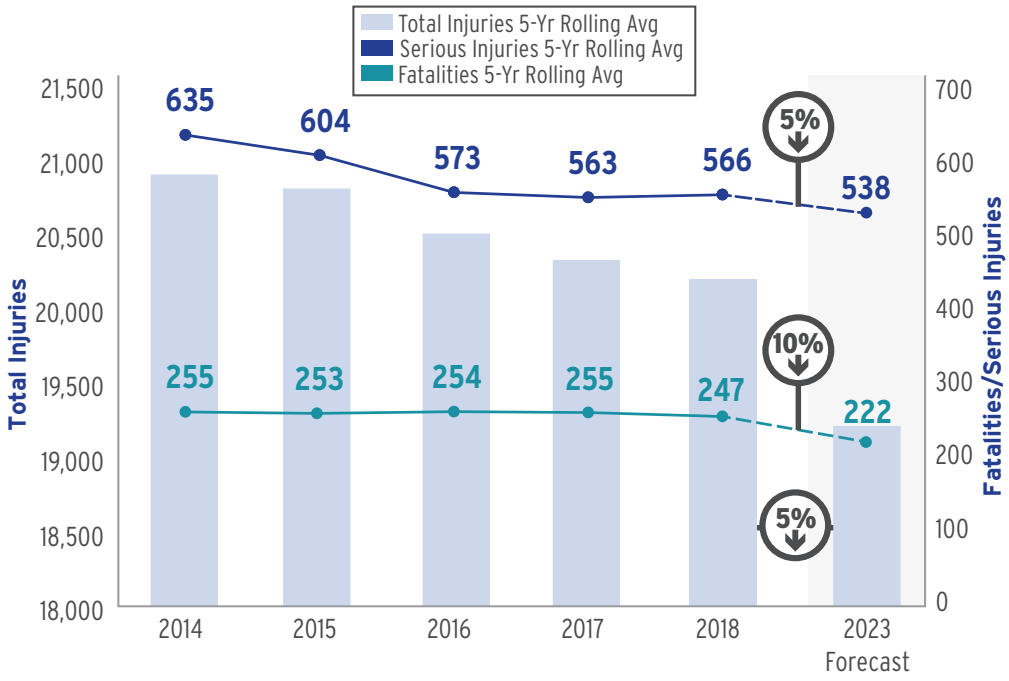


Figure 3.10 Lane Departure 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-2] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Strategies:

- Identify measures to ensure that roadway safety and design professionals are fully coordinated with automobile manufacturers in the development of new standards that facilitate vehicle to infrastructure communication.
- Enhance mapping of high-risk run-off-the-road locations, improve awareness and sharing of crash data with road owners, and assist road owners in implementing countermeasures and the latest safety hardware such as guide rails, crash cushions, signage, pavement markings, etc.
- Improve data inventory of fixed objects adjacent to roadways such as utility poles, sign structures, and trees. This data is essential to prioritizing lane departure infrastructure investments on state, county and municipal roads and may lead to a systemic improvement program.
- Develop a peer exchange program to share best lane departure crash reduction practices between all state, regional, and local agencies. Develop a plan to make specifications and details for lane departure mitigation infrastructure available to all road owners, possibly through a web-based resource.
- Develop a strategy for prioritizing and implementing safety improvements on high crash rural roads utilizing mapped information to identify locations.
- Review and identify opportunities to strengthen existing speed enforcement programs in high-risk lane departure locations.
- Develop recommendations to strengthen driver education related to lane departure, such as a safe driving refresher education program for those 18 to 25 years of age, and continuing education requirements related to driver license and insurance renewals. Communicate seasonal reminders for deer and other animal risks in multiple languages.

Intersections

Intersections are locations that present potential conflicts between different roadway users. FHWA recognizes New Jersey as an Intersections focus state since intersection fatality rates are higher than the expected fatality rate based on vehicle miles traveled, population, and center line miles of roadway.

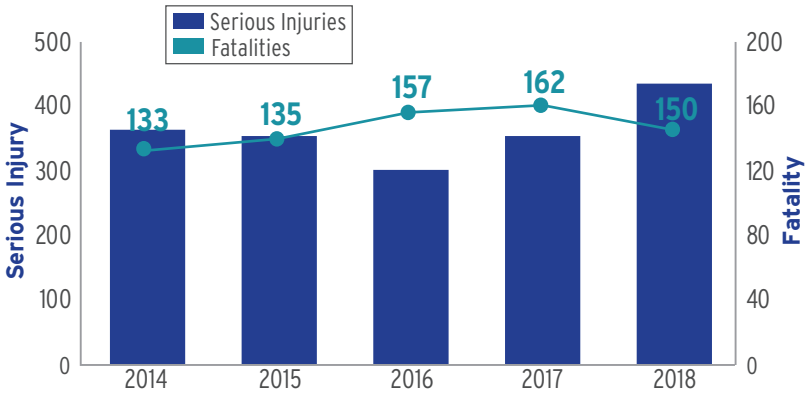


Figure 3.11 Intersections Annual Fatalities and Serious Injuries

Quick Facts

30%
of all NJ fatalities and serious injuries.

737
Total fatalities - Increase of 1% from NJ 2015 SHSP

1,787
Total serious injuries - Decrease of 23% from NJ 2015 SHSP

Who Was Involved?

Male drivers aged 21 to 25 years old represented the greatest number of serious injuries at intersections, compared to all other studied gender and age groups. Notably, both male and female drivers aged 66 and older represented the greatest number of fatalities at intersections. Approximately 23% of intersection crashes were a result of aggressive driving behavior.

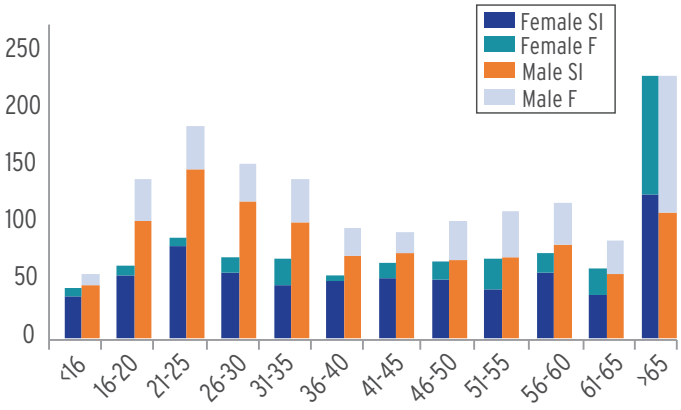


Figure 3.12 Intersections Crashes by Gender and Age Group - Crash data trends for years 2014 -2018

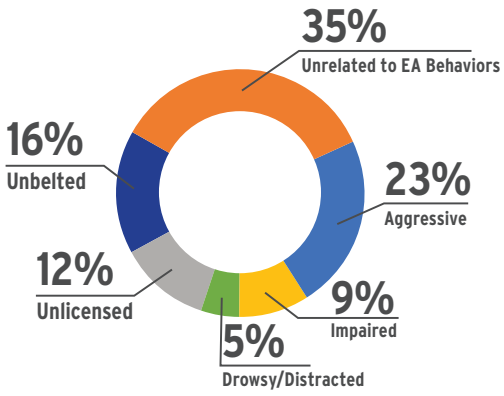


Figure 3.13 Intersections Related Behavior

Where Did Crashes Occur?

A majority of intersection FSI occurred in the north region and on urban state and county roadways where the frequency of intersections is greater than that in the rural areas. The North region includes Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren counties in New Jersey.

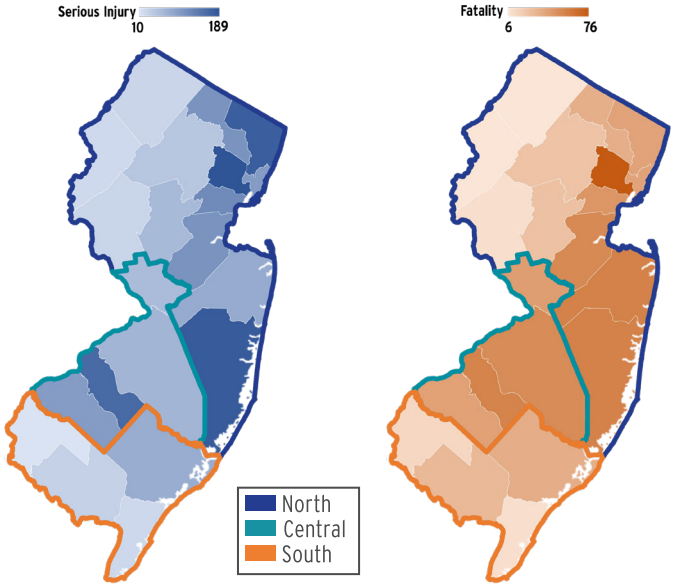


Figure 3.14 Intersection Crash Occurrence by County

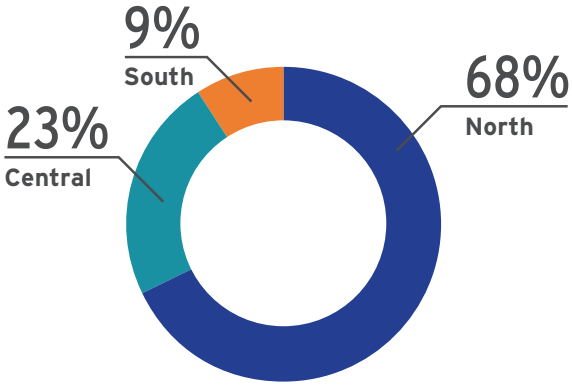


Figure 3.15 Intersections Crash Occurrence by Region

Essex, Ocean, Camden, and Bergen counties had a higher incidence of intersection related FSI relative to other counties in the state. 36% of intersection FSI occurred on urban county roadways, and 29% of crashes occurred on urban state roadways. Principal Arterials and Minor Arterials with speed limits between 30mph and 45mph accounted for more than 30% of the intersection fatalities and serious injuries.

Crash Type

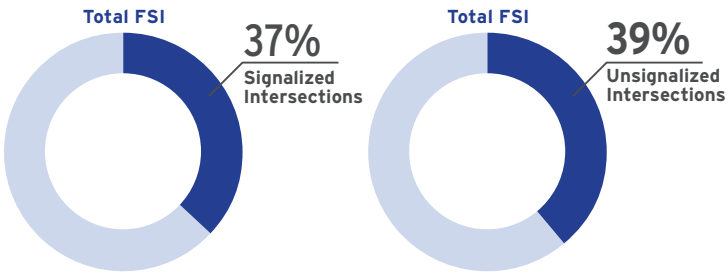


Figure 3.16 - Intersection Crash Frequency: Signalized and Unsignalized Intersections

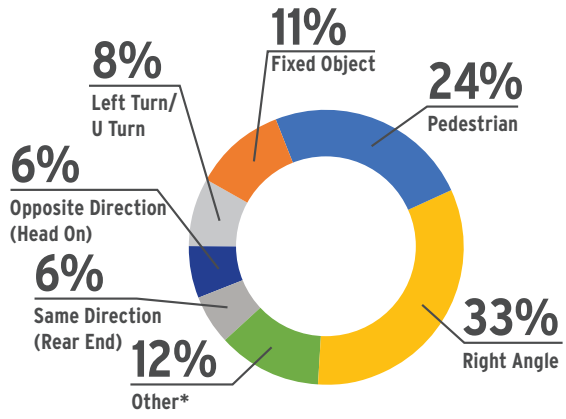


Figure 3.17 - Intersections Crash Type
*Includes cyclists, same direction-side swipe, opposite direction-side swipe, overturned, struck parked vehicle, other

Intersection Emphasis Area Goal, Objective, Strategies

Objective[3-3]

Reduce the five-year rolling average of intersection related fatalities by 14%, serious injuries by 14%, and total injuries by 14%, over the period from 2018 to 2023.

Objective Performance Metric

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

Goal:
Eliminate all fatalities and serious injuries at intersections for all road users through engineering, education, and enforcement.

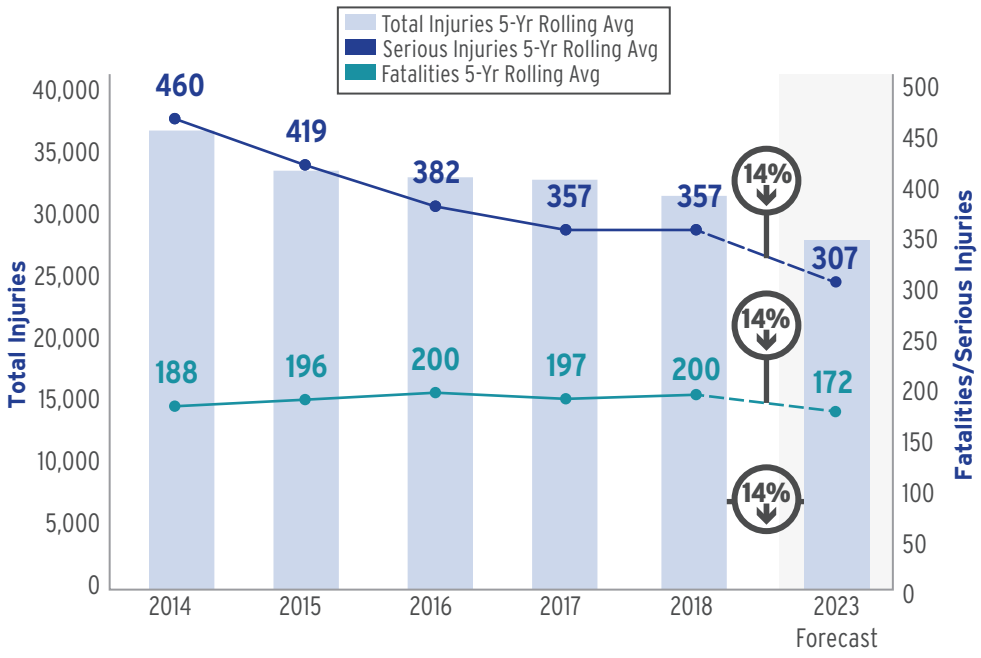


Figure 3.18 Intersections 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-3] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Strategies:

- Focus efforts to improve safety at signalized and unsignalized intersections on the county and municipal networks. Develop recommendations on how to encourage and create county and municipal Local Safety Plans. Recommend improvements for identification, mapping and prioritization of high-risk intersection locations on county and municipal roads in underserved communities. Provide recommendations for implementation of road safety audits on county and municipal roads in underserved communities.
- Develop an education campaign to share the benefits of road safety audits, and other intersection safety best practices with municipalities. Develop intersection proven safety countermeasures guidance documents, including Intersection Control Evaluation (ICE), for reference and use by municipalities.
- Improve signalized and unsignalized intersections that are at high risk for pedestrian fatalities and serious injuries. Recommend improvements for identification, mapping, and prioritization of intersections on all roads with a high risk of pedestrian fatalities and serious injuries.
- Provide recommendations to improve prioritization of traffic control and operational improvements such as Leading Pedestrian Interval (LPI), pedestrian hybrid beacons, pedestrian crossing islands, bike boxes ICE, and other improvements at locations related with high pedestrian and bicyclist safety risks.
- Focus efforts to reduce right angle and left turn crashes at high-risk signalized and unsignalized intersections on all roads. Identify high-risk locations and develop a strategy to advance improvements such as roundabouts, multiphase signal operation, yellow change intervals, restricting or eliminating turning maneuvers, providing dedicated and/or channelized turn lanes, and coordinating signals.
- Consider laws, regulations and policies to improve safety at signalized intersections and ensure consistency of application across agencies. Establish a task force to consider automated enforcement measures.
- Review agency manuals, policies and other documents and make recommendations to align them with the latest intersection control standards and practices.
- Identify access management best practices pertaining to intersections and identify intersections on state, county and municipal roadways where access management improvements may be beneficial. Identify best practices to maintain sight distance and compliance with traffic laws and regulations at or near intersections.

Driver Behavior

Driver behavior is a key contributing factor in a majority of New Jersey's fatal and serious injury crashes. Advancements in technology have helped in reducing frequency and severity of driver behavior related crashes in recent years; however, behavior related crashes continue to be a major contributor to New Jersey's fatalities and serious injuries.

The Driver Behavior EA combines the groups of high-risk driver behaviors such as drowsy/distracted drivers, impaired drivers, aggressive drivers, unbelted drivers and occupants, unlicensed drivers, and heavy vehicle drivers and owners. Strategies for encouraging positive driver behavior, evaluating approaches for modification, and improving roadway design are recommended.

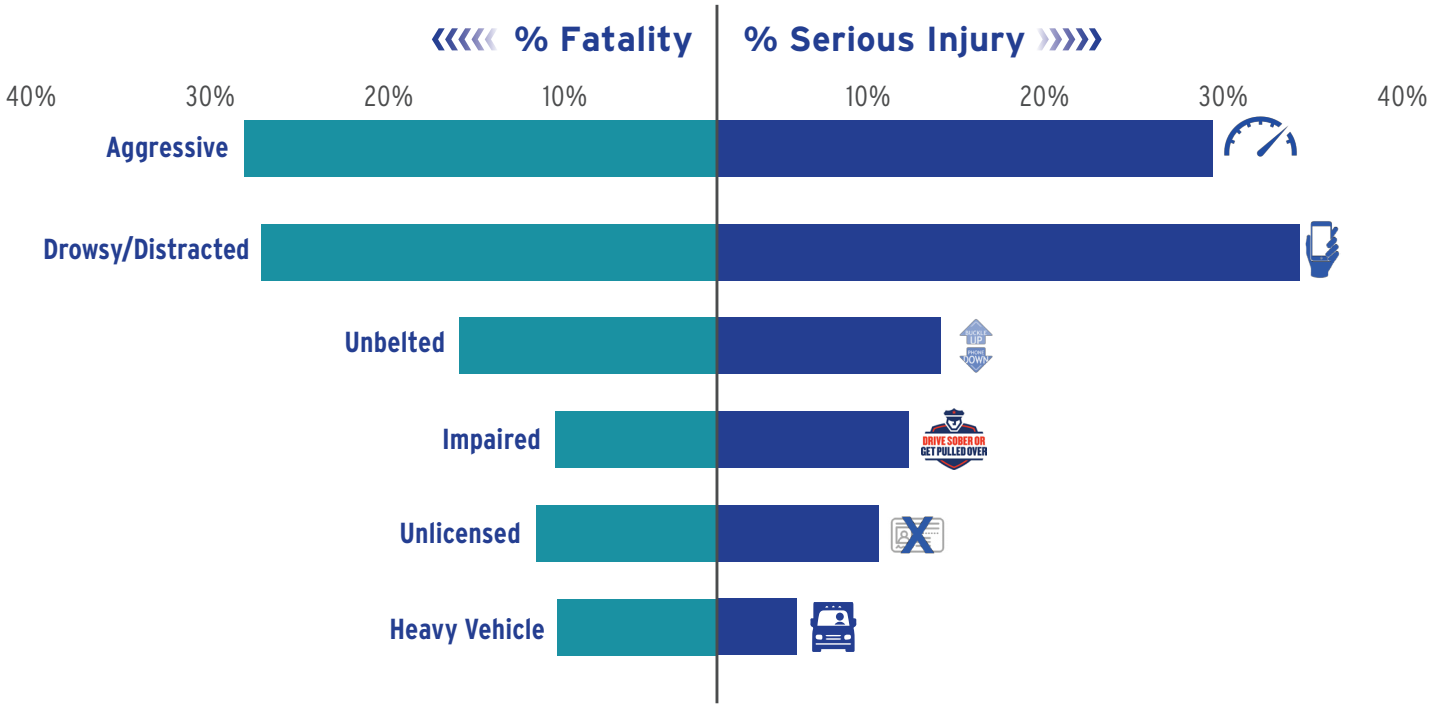


Figure 3.19 - Driver Behavior Breakdown[3-4]

[3-4]Percentage based on primary contributing factor; fatalities and serious injuries may be the result of multiple factors and overlap is possible.

Aggressive Drivers

Aggressive driver crashes occur when contributing circumstances include unsafe speed, failure to obey a traffic control device, failure to yield right of way, improper lane change, improper passing, or following too closely. Unsafe speed was the primary contributor and constituted 59% of all aggressive driving FSI in New Jersey for the years 2014 to 2018. Speeding reduces the reaction time, increases the distance to stop a vehicle once a hazard is noticed, and increases the injury severity in the event of a crash.

Drowsy/Distracted Drivers

Drowsy/distracted driver crashes involve crashes where the contributing circumstance is driver inattention, distraction, fatigue, or falling asleep. Driving is a complex task and requires attention to the roadway and visual environment. Inability to provide complete attention to the driving task can result in reduced safety for drivers as well as vulnerable roadway users.

Unbelted Drivers and Occupants

Unbelted driver and occupant crashes occur when no safety equipment (seatbelts, restraints, helmets, safety vests, lap belt, harness, etc.) is used by drivers and/or passengers. These types of crashes also include instances where an airbag was deployed making it difficult to infer whether occupant protection was utilized. Seatbelts and restraints are the most effective ways of reducing the severity of injury in a crash.

Impaired Drivers

Impaired driver crashes involve the abilities of a driver being affected by the use of alcohol, illicit drugs, and/or medication. Impairment can dull the senses, decrease reaction time, and hamper judgement, vision and alertness in a driver creating unsafe conditions for themselves as well as others on the roadway. New Jersey has stringent laws and penalties for driving while impaired. Penalties include monetary fines, license suspension, imprisonment, mandated community service, surcharge in automobile insurance, and so on.

Unlicensed Drivers

Unlicensed driver crashes occur when a driver involved in a crash is unlicensed, has a suspended drivers license or the age of the driver is 15 years or less.

Heavy Vehicle Drivers and Owners

Heavy vehicle crashes occur when the vehicle involved in a crash is a truck, tractor, or truck tractor. The size and weight of a heavy vehicle has a significant impact on the injury severity when involved in a crash. While heavy vehicles are not included as an EA for this plan, strategies for heavy vehicle driver and owner safety are recommended in coordination with the Commercial Vehicle Safety Plan.

Driver Behavior Emphasis Area Goals, Objectives, Strategies

Goal 1:
New Jersey will encourage positive driving behavior.

Objective 1[3-5]

Reduce the five-year rolling average of drowsy/distracted driving related fatalities by 10%, serious injuries by 5%, and total injuries by 5%, over the period from 2018 to 2023.

Objective Performance Metric 1

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

Objective 2[3-6]

Reduce the five-year rolling average of impaired driving related fatalities by 27%, serious injuries by 18%, and total injuries by 18%, over the period from 2018 to 2023.

Objective Performance Metric 2

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

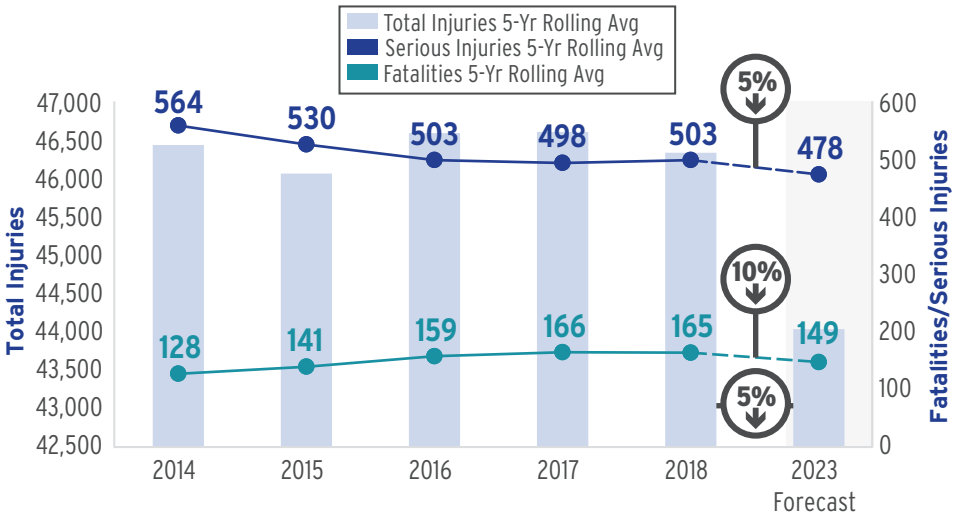


Figure 3.20 Drowsy/Distracted Drivers 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

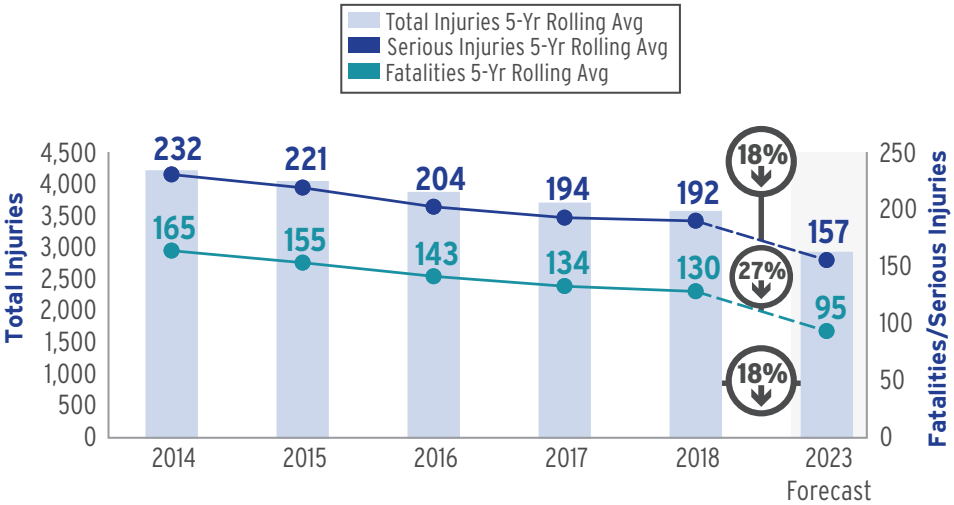


Figure 3.21 Impaired Drivers 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-5] [3-6] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Objective 3[3-7]

Reduce the five-year rolling average of aggressive driving related fatalities by 10%, serious injuries by 5%, and total injuries by 5%, over the period from 2018 to 2023.

Objective Performance Metric 3

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

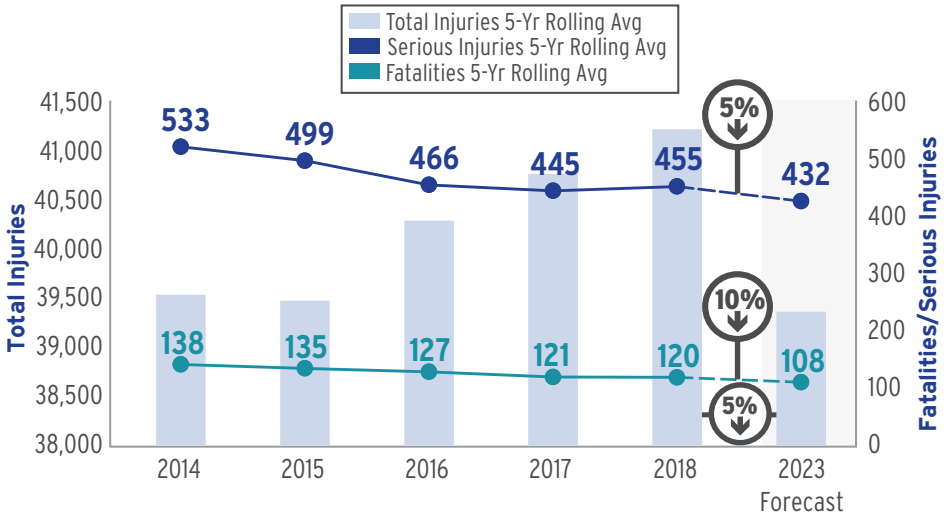


Figure 3.22 Aggressive Drivers 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

Objective 4[3-8]

Reduce the five-year rolling average of unbelted driver and occupants fatalities by 23%, serious injuries by 18%, and total injuries by 18%, over the period from 2018 to 2023.

Objective Performance Metric 4

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

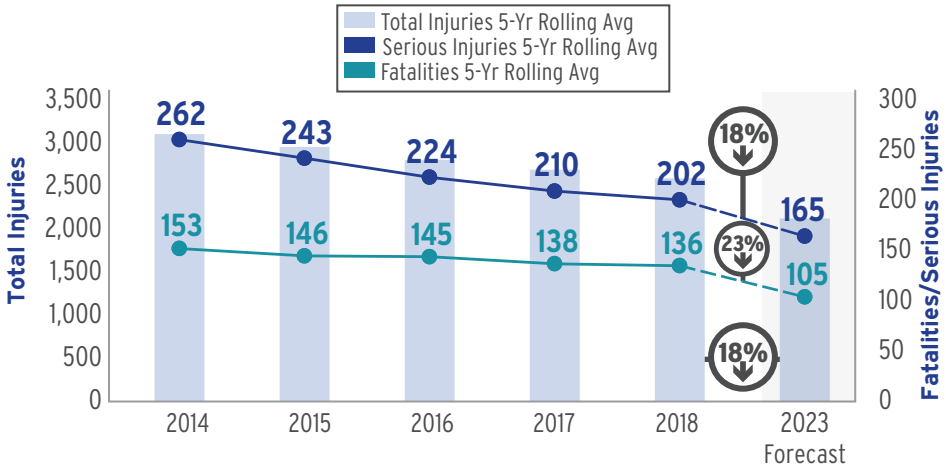


Figure 3.23 Unbelted Drivers and Occupants 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-7] [3-8] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

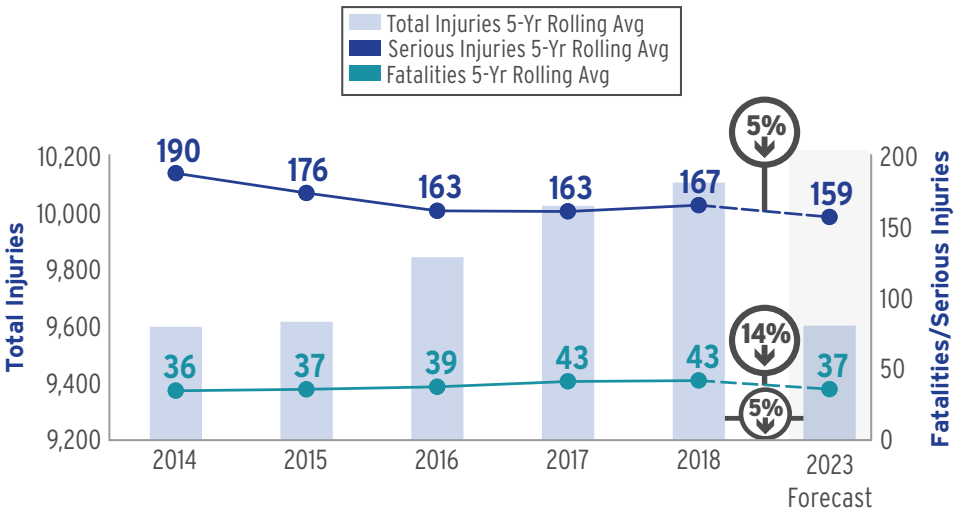


Figure 3.24 Unlicensed Drivers 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

Objective 5[3-9]

Reduce the five-year rolling average of unlicensed/suspended license driver related fatalities by 14%, serious injuries by 5%, and total injuries by 5%, over the period from 2018 to 2023.

Objective Performance Metric 5

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

Objective 6[3-10]

Reduce the five-year rolling average of heavy vehicle related fatalities by 14%, serious injuries by 5%, and total injuries by 5%, over the period from 2018 to 2023.

Objective Performance Metric 6

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

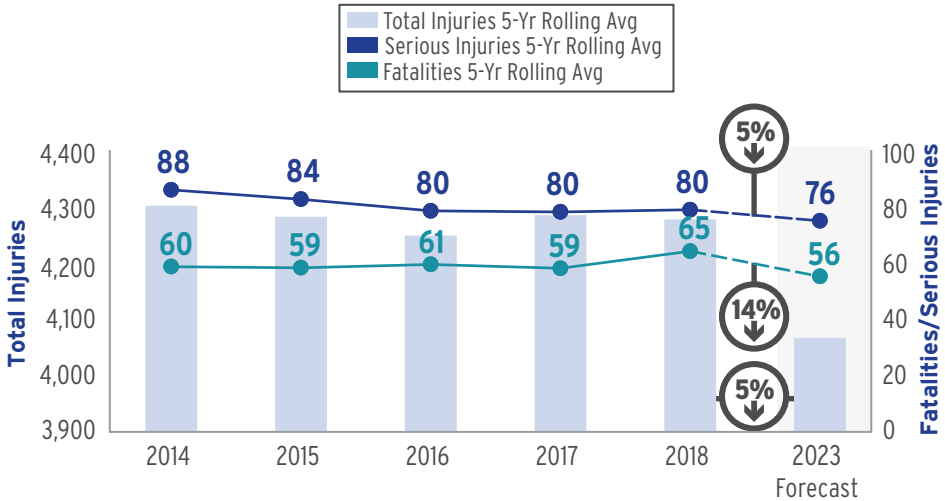


Figure 3.25 Heavy Vehicles 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-9] [3-10] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Goal 2:
Law enforcement and judiciary will encourage positive safety culture in New Jersey road systems.

Objective

Law enforcement will be fully trained in sensitivity and safety culture.

Objective 1

Install safety countermeasures in response to drowsy/ distracted and impaired driver behavior, prioritizing high risk locations on state and local roads.

Objective 2

Install safety countermeasures in response to speeding and aggressive driver behavior, prioritizing high risk locations on state and local roads.

Goal 3:
New Jersey will have a road system that is designed to encourage safe driving behavior.

Goal 4:
Driver Behavior EA goals, objectives, and strategies will consider all populations (race, gender, ethnicity, economic status) equitably in development and implementation.

Objective

Equity will be included in the development and messaging of the NJ 2020 SHSP.

Strategies:

- Recommend law enforcement training enhancements to strengthen driver behavior. Review police recruit training program for potential enhancements.
- Review New Jersey Statutes Annotated Title 39 (Motor Vehicles and Traffic Regulation) and recommend changes to strengthen language related to driver behavior.
- Review the Safe Corridors Program and make recommendations to improve effectiveness. Monitor aggressive and distracted driving of commercial vehicles in high risk locations in accordance with the New Jersey Commercial Vehicle Safety Plan (CVSP). Conduct commercial vehicle roadside inspections in accordance with the New Jersey (CVSP).
- Strengthen police crash investigation report form (NJTR-1) training for law enforcement, particularly how the information is used and why it is important to complete it correctly.
- Create a Safety Culture in New Jersey by reviewing existing education programs led by government, schools, insurance industry, health industry and non-profit advocacy organizations. Make recommendations to strengthen partnering and messaging to reach target audiences such as younger drivers and mature drivers. Research best practices worldwide to measure changes in positive driving behavior. Assess current media campaigns to reduce aggressive driving and make recommendations. Conduct commercial carrier safety seminars. Perform New Entrant Safety Audits of new carriers.
- Review rear occupant seat belt compliance education and enforcement efforts and make recommendations for improvements. Research best practices in surveying rear seat belt usage compliance and make recommendations. Review current child and infant restraint compliance enforcement and education efforts and make recommendations for improvements. Review teen driver seat belt education efforts and make recommendations.
- Research driver's license compliance best practices worldwide and make recommendations. Assess current license suspension rates and identify any required analyses.
- Initiate a study to evaluate the efficacy of various driver behavior modification approaches.
- Discuss (with the Traffic Safety Resource Prosecutor) opportunities to provide highway safety education to prosecutors.
- Discuss opportunities with the Administrative Office of the Courts for increasing consistent, timely DUI adjudication, enhancing the utilization of DUI treatment programs, and exploring alternative penalty measures.
- Discuss opportunities with the Administrative Office of the Courts to limit plea bargaining for aggressive, drowsy and distracted driving.
- Research and recommend best practices in safety culture and sensitivity training for law enforcement officers.

- Implement infrastructure improvements to reduce the injury and severity of distracted driving and aggressive driving crashes; specifically run-off-road and intersection type crashes.
- Review existing materials and develop a plan to provide driver behavior education materials that better meet the needs of all users.
- Identify underserved communities with an overrepresentation of fatalities and serious injuries and develop a driver behavior education strategy for these communities.

Pedestrians and Bicyclists

Pedestrian and bicyclist crashes involve a person reported as a pedestrian or bicyclist. According to United States Census Bureau, approximately 4% of population in New Jersey choose walking and/or biking as their primary mode of transportation. This percentage increases in more urban areas, escalating the opportunity for conflict between vehicles and pedestrians and bicyclists. Pedestrians and bicyclists are the most vulnerable roadway users and are more susceptible to suffering serious injuries and fatalities when involved in a crash. FHWA recognizes New Jersey as a pedestrian and bicyclist focus state due to the large number of pedestrian/bicyclist fatalities.

Quick Facts

25%
of all NJ fatalities and serious injuries.

934
Total fatalities - Increase of 6% from NJ 2015 SHSP

1,034
Total serious injuries - Decrease of 26% from NJ 2015 SHSP

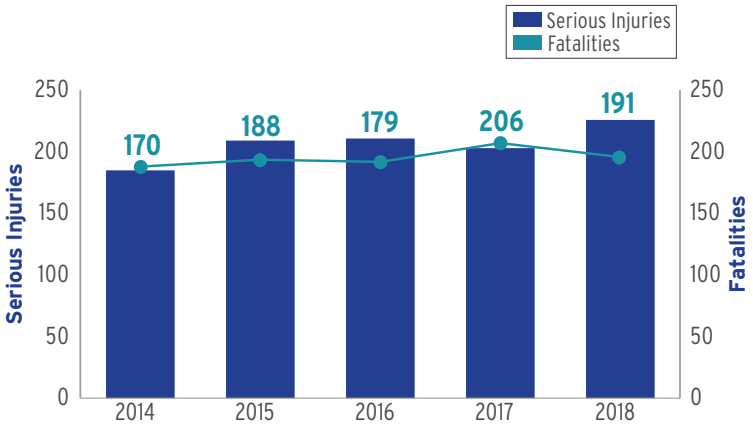


Figure 3.26 Pedestrian and Bicyclists Annual Fatalities and Serious Injuries

Who Was Involved?

In all cases, FSI were highest for pedestrians and bicyclists in the 65 and older age range.

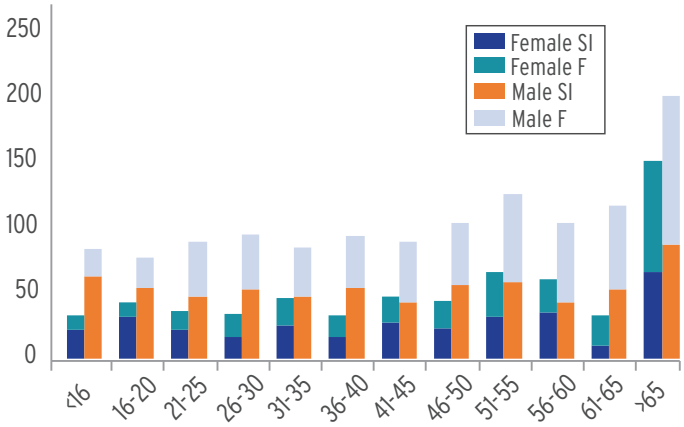


Figure 3.27 Pedestrian and Bicyclists Crashes by Gender and Age Group - Crash data trends for years 2014 -2018

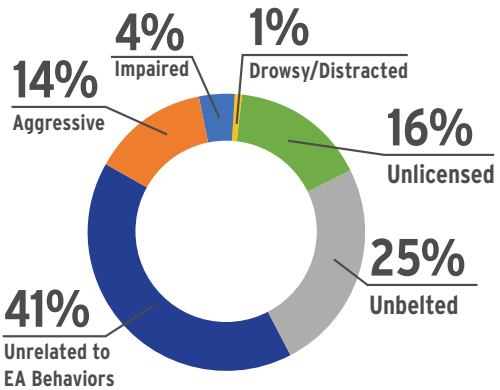


Figure 3.28 Pedestrian and Bicyclists Related Behavior

Where Did Crashes Occur?

A majority of pedestrian and bicyclist FSI crashes occurred in the North region and on urban state and county roadways. The North region includes Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren counties in New Jersey.

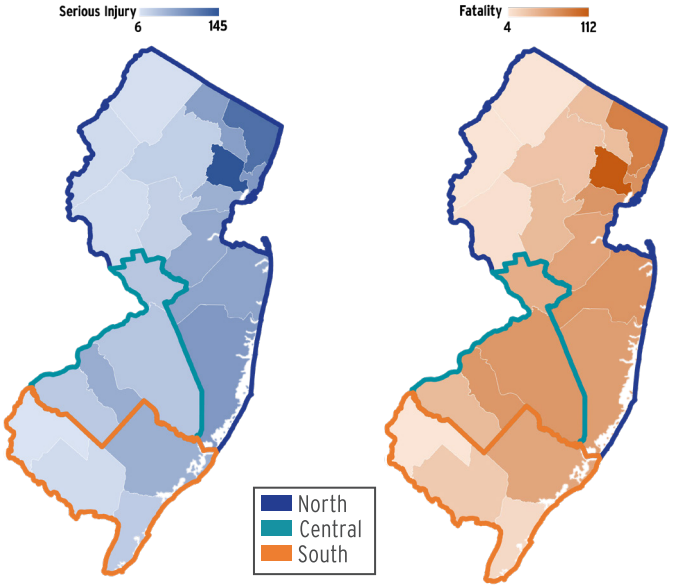


Figure 3.29 Pedestrian and Bicyclists Crash Occurrence by County

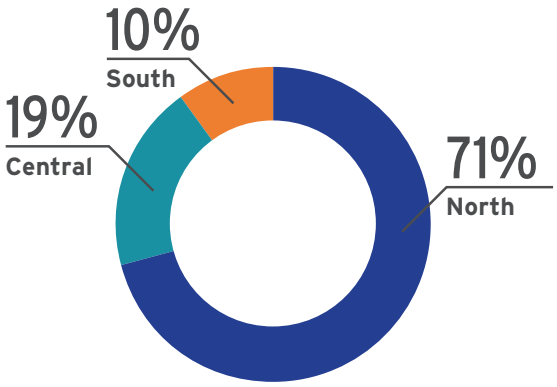


Figure 3.30 Pedestrian and Bicyclists Crash Occurrence by Region

Essex, Bergen, Hudson, Ocean, and Monmouth counties had a higher incidence of pedestrian and bicyclist FSI relative to other counties in the state. 31% of pedestrian and bicyclist FSI occurred on urban state roadways, and 28% of crashes occurred on urban county roadways. Principal Arterials with speed limits between 30mph and 45mph accounted for 17% of the FSI.

Crash Type

Crash data analysis demonstrates that approximately 12% of pedestrian and bicyclist FSI were hit and run crashes. Approximately 23% of pedestrian and bicyclist crashes occurred at signalized intersections. 21% of the FSI involved pedestrians crossing at either marked or unmarked crosswalks at signalized/unsignalized intersections. 20% of the FSI involved pedestrians crossing between intersections at unmarked locations.

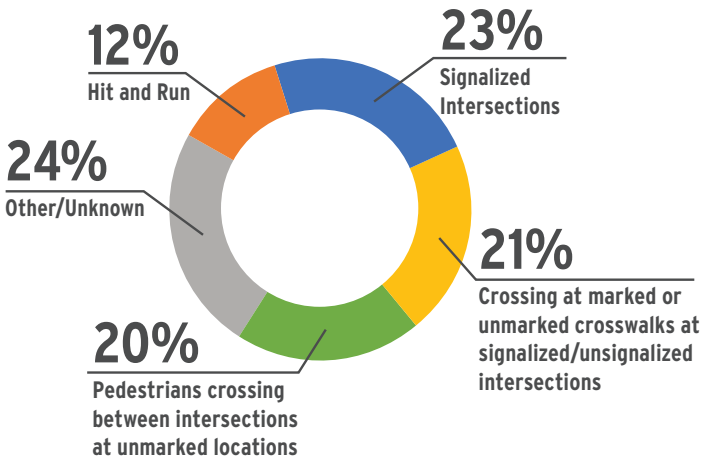


Figure 3.31 - Pedestrian and Bicyclists Crash Type

Pedestrian and Bicyclists Emphasis Area Goal, Objective, Strategies

Objective[3-11]

Reduce the five-year rolling average of pedestrian and bicyclist fatalities by 10%, serious injuries by 5%, and total injuries by 5%, over the period from 2018 to 2023.

Objectives Performance Metric

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

Goal:
Eliminate pedestrian and bicyclist fatalities and serious injuries on all public roads.

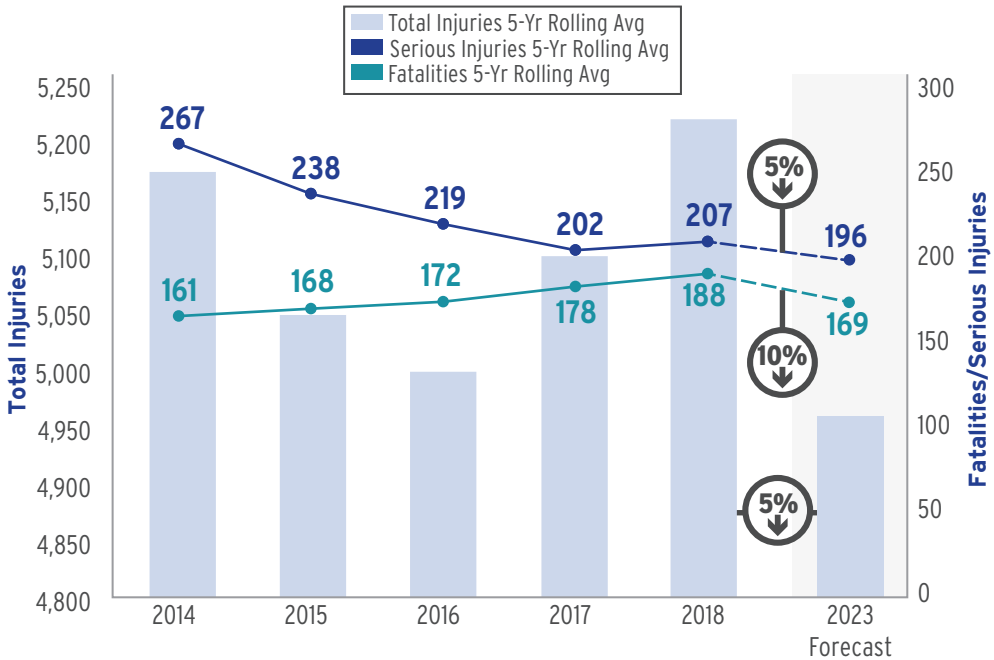


Figure 3.32 Pedestrian and Bicyclists 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-11] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Strategies:

- Strengthen Complete Streets Implementation by state, county, and municipal governments. Hold a peer exchange with other state transportation agencies to gather best practices. Establish a Complete Streets Task Force to improve complete streets integration on state, county, and municipal projects, assess implementation by municipalities, gather lessons learned, and share best practices.
- Convene a group to develop strategies to facilitate ADA implementation by all agencies.
- Work with legislators, advocates and other safety stakeholders on legislation, regulations, policy and programs to improve safety for bicyclists and pedestrians. Assess current practices nationally and provide recommendations for automated speed enforcement in school and work zones as well as vulnerable road user laws.
- Establish a task team to develop a strategy for updating Residential Site Improvement Standards. Review the state highway access code and identify opportunities to strengthen it to provide greater pedestrian and bicycle safety. Review the Municipal Land Use Law and provide recommendations to strengthen it to enhance pedestrian and bicycle safety.
- Update the 2009 NJ Trails Plan to include midblock trail crossings.
- Improve design practices to support pedestrian and bicycle safety on all roads by establishing a task team to improve design guidance related increasing visibility at intersections, improving street crossings, considerations within school zones, consistency of signing, conflicts with buses and heavy vehicles, and standards for design speed on arterial roadways.
- Provide comprehensive pedestrian and bicyclist safety education for students (K-12 and higher education) who walk or bike to school or bus stop. Review the Safe Routes to School Non-Infrastructure Program and provide recommendations for improvement. Working with the Trauma Center Council, discuss opportunities to develop a safety culture education program for higher education students who walk or bike to school. Implement a comprehensive traffic safety curriculum in elementary schools. Working with the Trauma Center Council, develop pedestrian and bicyclist educational programs focused on teachers, parents, and volunteers at elementary schools, middle schools, and high schools.
- Work with the NJ Motor Vehicle Commission to improve driver education and testing related to pedestrian, bicyclists and scooters.
- Provide recommendations to improve local governments awareness of pedestrian and bicyclist infrastructure grant opportunities.
- Provide recommendations to enhance and expand the StreetSmart Pedestrian Safety Awareness Program to additional municipalities in the state.
- Provide recommendations for a program to perform quick-response road safety audits immediately following pedestrian and bicyclist crashes.

- Develop a plan to improve integration of pedestrian and bicyclist safety concerns in the NJDHTS Highway Safety Plan.
- Assess current methods for the public to report pedestrian and bicyclist infrastructure issues on state, county, and municipal facilities and provide recommendations to improve reporting methods or increase the awareness of available reporting methods.
- Incorporate best practices to incorporate pedestrian and bicycle infrastructure improvements in developer projects impacting state, county, and municipal roads.
- Increase pedestrian and bicyclist safety enforcement in school zones or high-volume crosswalk locations with recurring crash trends. Review existing enforcement at locations with recurring crash trends and provide recommendations. Review current education campaigns related to stopping at crosswalks and recommend enhancements. Review existing school zone speed enforcement program and recommend enhancements.
- Consider equity issues related to pedestrian and bicycle crashes. Research equity-related crash analyses and program approaches in other states and countries to identify alternate means to performing crash analyses and program development. Develop an approach for identifying and assessing high-risk pedestrian and bicyclist safety locations in underserved communities. Develop a methodology to identify transit stops and station locations in underserved communities which have a high need for pedestrian and bicyclist safety improvements.
- Improve pedestrian and bicyclist safety data and performance measures. Develop performance measures to evaluate the completeness and quality of pedestrian and bicyclist networks, including such factors as levels of traffic stress, infrastructure condition and completeness, ease of use. Research pedestrian and bicyclist crash data deficiencies and provide recommendations for improvement. Assess infrastructure conditions at NJ Transit Bus and Rail stops related to pedestrian and bicyclist safety and provide recommendations on how best to address. Evaluate approaches and best practices for the development of Crash Modification Factors for various pedestrian and bicyclist safety countermeasures. Assess opportunities to include pedestrian and bicyclist infrastructure elements and volumes on the NJDOT Straight Line Diagram.
- Assess performance of counties and municipalities in expending pedestrian and bicyclist infrastructure grants and provide recommendations to improve expenditure performance.

Other Vulnerable Road Users

The Other Vulnerable Road Users EA encompasses a number of high-risk users including mature drivers, younger drivers, motorcyclists, work zone workers, and other road workers. Strategies for encouraging positive driver behavior, evaluating approaches for modification, and improving roadway design are recommended.

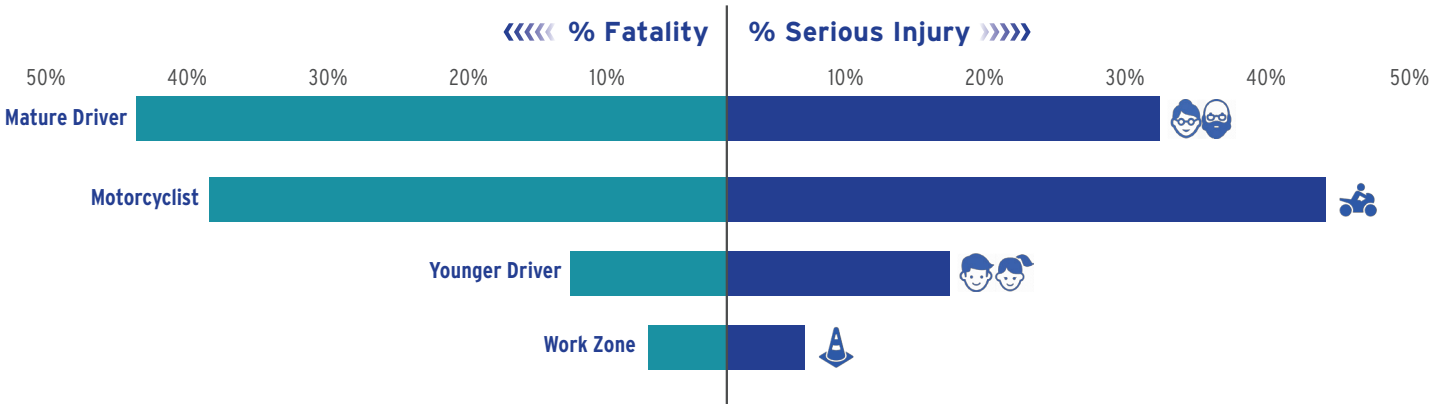


Figure 3.33 - Other Vulnerable Road Users Breakdown[3-12]

Mature Drivers

Mature driver crashes are crashes where the driver is 65 years or older. Mature drivers have a lifetime of experience that includes safe driving practices, but they're particularly vulnerable because of their propensity to be seriously injured or killed in the event of a crash.

Motorcyclists

Motorcyclists crashes are where the vehicle type involved is a motorcycle. People riding on a motorcycle are more vulnerable in a traffic crash as they are not protected as they might be in a car. Motorcyclists operate at similar speeds as other motor vehicles without the same level of protection. New Jersey law requires any person operating or riding a motorcycle to wear safety helmets approved by the U.S. Department of Transportation (USDOT). Adherence to this law helps save many lives involved in traffic crashes every year.

[3-12] Percentage based on primary contributing factor; fatalities and serious injuries may be the result of multiple factors and overlap is possible.

Younger Drivers

Younger driver crashes are crashes where the driver age is between 16 years and 20 years. This group of vulnerable road users include drivers in the Graduated Driver License (GDL) program, and newly-licensed drivers. Younger drivers are inexperienced in recognizing hazardous situations and reacting in time to avoid collisions.

Work Zone

Work zone crashes occur in temporary traffic control zones such as construction, maintenance, or utility work zone. A work zone may involve lane closures, detours and moving equipment. The work zone may be long or short-term and may be of varying lengths. Navigating through a work zone is different than navigating on a regular roadway and it creates hazardous conditions for the people working in the work zone as well as for drivers.

Other Road Workers

This group of vulnerable roadway users consists of crossing guards, emergency responders (police, fire, Emergency Medical Services (EMS)), safety service patrol responders, tow truck drivers, maintenance workers, utility workers, etc. Crash data specific to this group is not available. The 2020 NJ SHSP will incorporate data and safety measures for this roadway user group.

Other Vulnerable Road Users Emphasis Area Goals, Objectives, Strategies

Goal 1:
Eliminate Other Vulnerable Road User fatalities and serious injuries.

Objective 1[3-13]

Reduce the five-year rolling average of mature driver fatalities by 14%, serious injuries by 5%, and total injuries by 5%, over the period from 2018 to 2023.

Objective 1 Performance Metric

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

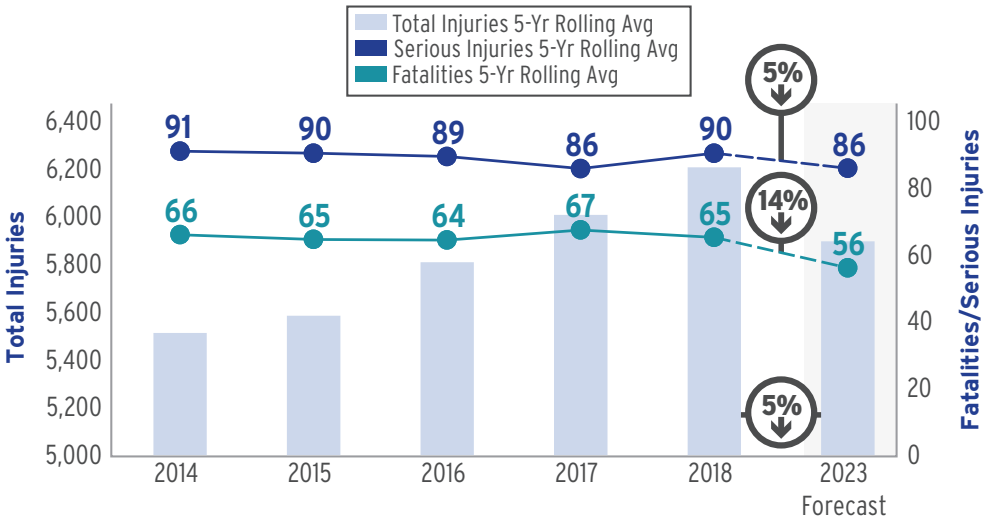


Figure 3.34 Mature Drivers 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-13] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Objective 2[3-14]

Reduce the five-year rolling average of younger driver fatalities by 27%, serious injuries by 14%, and total injuries by 14%, over the period from 2018 to 2023.

Objective 2 Performance Metric

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

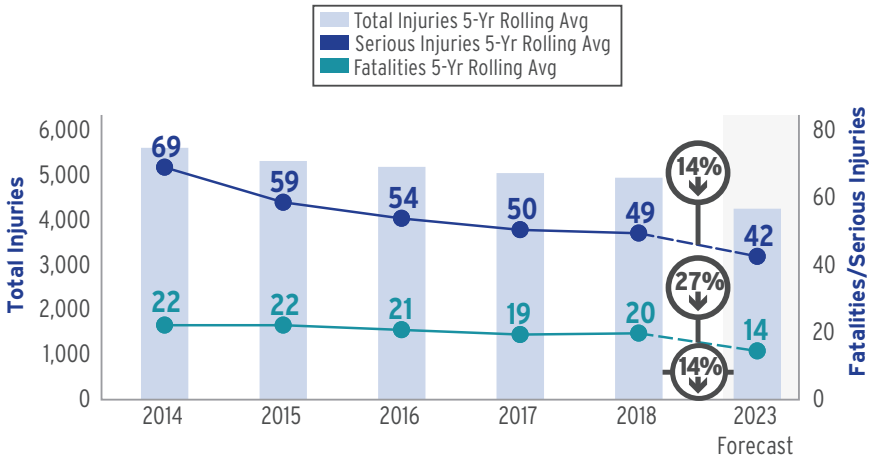


Figure 3.35 Younger Driver 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

Objective 3[3-15]

Reduce the five-year rolling average of motorcyclist fatalities by 27%, serious injuries by 14%, and total injuries by 14%, over the period from 2018 to 2023.

Objective 3 Performance Metric

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

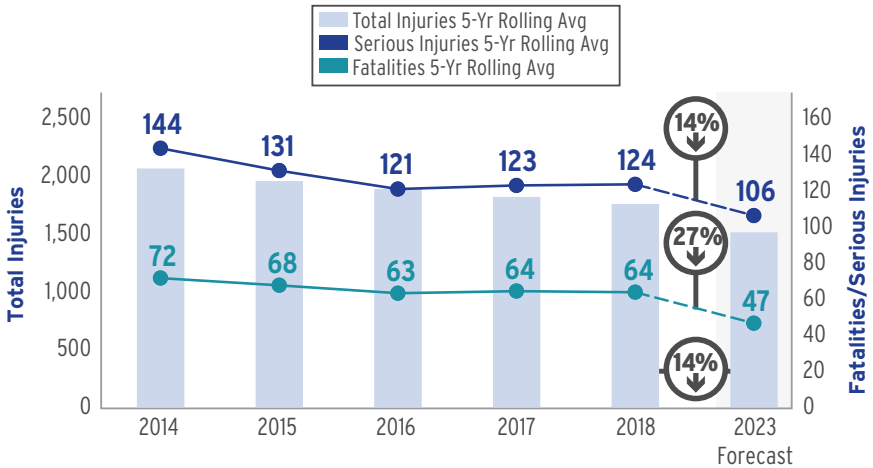


Figure 3.36 Motorcyclists 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

[3-14] [3-15] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Objective 4[3-16]

Reduce the five-year rolling average of work zone fatalities by 38%, serious injuries by 38%, and total injuries by 38%, over the period from 2018 to 2023.

Objective 4 Performance Metric

Percentage change in five-year rolling average for the period ending 2023 as measured against the baseline five-year rolling average for the period ending 2018.

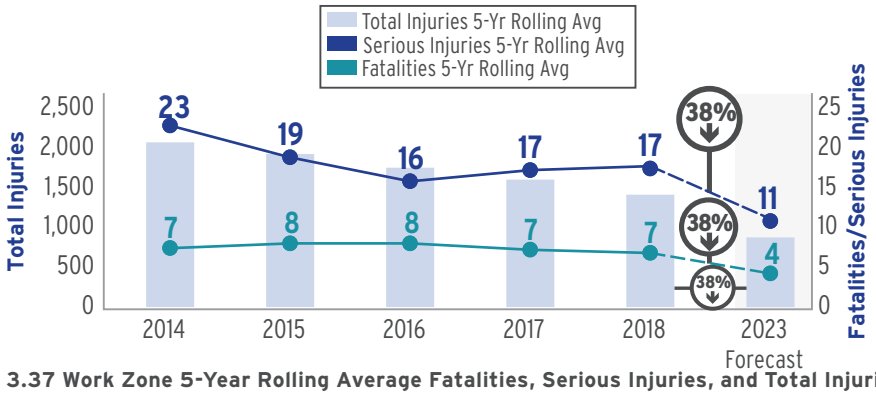


Figure 3.37 Work Zone 5-Year Rolling Average Fatalities, Serious Injuries, and Total Injuries

Objective 5

Establish a baseline level of performance for other road workers and set a target for improvement.

[3-16] FARS. (Fatalities). CRD. (Serious injuries and total injuries). A total percentage reduction over the 5-year period is calculated using a per year reduction rate, compounded annually over 5 years.

Strategies:

- Assess state, county, and municipal programs to identify and prioritize high-risk crash locations for mature drivers and younger drivers. Provide recommendations to strengthen processes to better address mature driver and younger driver infrastructure needs (e.g. guide rail, crash cushions, signage, pavement markings, backplates with retroreflective borders on signal heads, yellow change intervals, etc.).
- Implement educational campaigns to improve mature driver, younger driver, motorcyclist, and work zone workers safety. Assess current efforts and develop a plan to centralize campaigns where they can be most effective in reducing fatalities and serious injuries. Develop a plan to coordinate with the NJ State League of Municipalities to increase awareness of these campaigns.
- Review current educational campaigns and make recommendations to improve quality and consistency across the state. Develop a plan for a centralized repository for the education materials to be available in multiple languages.
- Consider opportunities to provide mature drivers and younger drivers with alternate transportation choices such as ride share and safe-ride-home programs; ride-hailing options (e.g. Uber, Lyft); public transportation; and walking or bicycling. Identify worldwide best practices on how to use these services and reduce car trips. Prepare recommendations for improvement and possible expansion with new alternate transportation choices.
- Target enforcement efforts where it can be most effective in reducing younger driver fatalities and serious injuries.
- Identify existing legislation related to younger drivers, motorcyclists, and work zone workers; track progress; and make recommendations for improvement.
- Develop a strategy to increase enrollment in motorcycle rider safety education and for incorporating motorcycle awareness into automobile and truck driver education. Include helmet use, visibility (through clothing, lighting), defensive driving, discouraging secondary riders, etc. in the training program. Develop a strategy to encourage out-of-state riders' use of USDOT approved helmets.
- Review existing research on best practices related to improving motorcycle safety. If further research is required, prepare a research problem statement.
- Ensure that the latest motorcycle friendly infrastructure design practices are shared and considered in roadway design, construction zones, and maintenance policies and practices.
- Provide recommendations for a unified work zone strategy to be employed by state agencies, authorities and counties. This unified strategy will include leveraging technology to alert drivers to work zones and providing for safe pedestrian and bicyclist accommodations in work zones.
- Identify best practices in other states and countries in using physical barriers (including trucks with crash cushions) to protect workers in work zones. Review current practices in New Jersey by NJDOT, NJTA, SJTA, and New Jersey counties and make recommendations for improvement.
- Implement or improve education/training for workers on the roads and drivers travelling through school zones or work zones. Identify and recommend worldwide best practices for work zone training and education that should be considered in New Jersey. Develop a plan to prepare and incorporate in traffic safety education training, content to protect crossing guards as well as children walking to school.

Data

Reliable and detailed traffic safety data helps practitioners accurately identify problems, risk factors and priority areas. These are subsequently used to formulate strategies, set targets and monitor performance.

The cycle of gathering data, taking action and then evaluating results is fundamental for any road safety strategy. Without ongoing data analysis, there will be no sustained reduction in crashes or severity of injury.

Reliable, accurate data can also help build political will to prioritize road safety by:

- Documenting the nature and magnitude of the road traffic injury problem
- Demonstrating the effectiveness of countermeasures that prevent crashes and injuries
- Providing information on reductions in socio-economic costs that can be achieved through effective prevention

While traffic safety is mostly identified through crash data, an effective traffic records system consists of other valuable data that support and compliment crash data and its analyses. A comprehensive traffic records system should include the following data:

Model performance measures are used to monitor and improve the quality of the data in the traffic record system. These measures, listed in the figure below, are also used to evaluate performance goals in the Traffic Records Strategic Plan, Traffic Records Assessment, and Highway Safety Plan, and Strategic Highway Safety Plan.

With this understanding, the NJ 2020 SHSP has established the following Goals, Objectives and Strategies for strengthening New Jersey's crash data in support of reducing fatalities and serious injuries.

Data Emphasis Area Goals, Objectives, Strategies

Goal 1:
Improve crash reporting process

Objective 1
New Jersey will identify the percentage of crash records that are deemed acceptable with no missing critical data elements and no errors in critical data elements. Establish a performance metric(s) for the timeliness in crash data availability from the time a crash occurs to when the crash is reported, and for measuring uniformity of data collection across jurisdictions. New Jersey will also have Injury Surveillance, Citations/Adjudications, Vehicle Registration, Driver Licensing and History, and Roadway Inventory datasets linked to NJ Crash Datasets.

Objective 1 Performance Metric
The percentage of crash records with no missing critical data elements and no errors in critical data elements; baseline level of performance and target for improvement for timeliness and uniformity; and the number of datasets that are linked to another system or file.

Objective 1
Create a Safety Resource Center to manage data linked to data portal and make it accessible.

Objective 1 Performance Metric
Data linkage to portal is in place.

Goal 2:
Improve quality of data and integrate it with existing open data portal for New Jersey

Objective 2
Create a data dashboard on NJDOT website.

Objective 2 Performance Metric
Approved dashboard on NJDOT website.

Objective 3
Increase public access to the Open Data Portal.

Objective 3 Performance Metric
Number of users for data analysis tools and portals.

Goal 3:
Improve data inventory

Objective 1
A complete inventory of traffic and infrastructure data is available for sharing between organizations and agencies.

Objective 1 Performance Metric
Traffic and infrastructure data inventory.

Objective 2
Have a statewide data standard for inventory and reporting roadway attributes.

Objective 2 Performance Metric
Approved inventory process/manual for all MPOs, counties, and municipalities.

Goal 4:
Integrate health and equity considerations into safety analyses

Objective 1
Develop alternate methods to assess health and equity factors related to crashes.

Objective 1 Performance Metric
Alternate tools for crash analysis.

Goal 5:
Assess the consistency of crash data on all data query platforms.

Objective 1
Assess the consistency of data on all data query platforms.

Objective 1 Performance Metric
Crash data query platforms assessment.

Strategies

- Improve law enforcement training to ensure the completeness and accuracy of critical data elements in the police crash investigation report form. Assess the viability of providing increased online training as well as local in-person training.
- Monitor, assess, and report on compliance of police departments with statutory reporting of crashes.
- Reduce time for law enforcement to complete the police crash investigation report form by assessing existing efforts and providing recommendations to auto populate fields in the form.
- Establish a time frame for the crash report to be publicly available.
- Research best practices and technology to collect crash data. Explore opportunities to engage the vendors of Traffic Records Management Systems to encourage compliance with the Electronic Data Transfer (EDT) protocols and platform.
- Ensure all law enforcement departments are using the same crash report standards by providing updates on changes to the police crash investigation reporting form manual.
- Increase on-going efforts by New Jersey Office of Information Technology and Statewide Traffic Records Coordinating Committee to integrate Injury Surveillance, Citations /Adjudications, Vehicle Registration, Driver Licensing and History, and Roadway Inventory databases with the New Jersey Crash Records database.
- Develop scope, vision, mission, and goals for a Safety Resource Center and outline its role in the context of agency roles, academia, law enforcement, and the public. The Safety Resource Center is envisioned to share information, develop guidance, and provide training.
- The Safety Resource Center will identify data needs and organize a public outreach program for sharing data by creating newsletters, training, and helpdesk.
- Develop a concept for a comprehensive and user-friendly data dashboard on NJDOT's crash records page.
- Improve access to data analysis tools and portals.
- Create a statewide standard for data reporting to facilitate data integration.
- Create a pedestrian and bicyclist database that captures volume and infrastructure. Consider using the NJDOT Straight Line Diagram as the data platform. Research best practices in collecting and non-motorized volumes and propose an approach to counting non-motorized travel in New Jersey.
- Improve the inventory of recently constructed pedestrian and bicyclist facilities.
- Continue to expand the NJDOT Straight Line Diagram to all public roadways.
- Standardize data collection for roadway attributes across the state. Research best practices on inventorying and reporting on roadway attributes and develop a standard data collection guidebook.
- Identify and document health outcome data and trauma data to be incorporated in safety analyses.

- Identify, define, map, and analyze environmental justice communities and communities of health concern. Research best practices from other states and countries in gathering equity related data.
- Research data to identify factors leading to overrepresented FSI crashes in environmental justice communities.
- Ensure crash data is consistent on all query platforms and is updated continuously from a single database by reviewing the existing crash data process and providing recommendations for improvements.

4: Implementation and Evaluation

The success of the NJ 2020 SHSP will be measured by the ability to implement the strategies established by the EATs and to make continued progress toward achieving its goals. Successful implementation will require a concerted, collaborative effort over the next five years with a disciplined approach to reporting and oversight, along with strong leadership support for the EATs to help the teams overcome challenges along the way. Periodically, it will be important to take a step back and evaluate progress. The following explains New Jersey's approach.

Implementation

One of the major goals for the NJ 2020 SHSP update process is to increase focus on implementation. Each EAT developed goals, objectives, and strategies. The teams identified other state, regional, and local plans and programs requiring coordination. Many strategies will result in projects and programs to be implemented through the statewide transportation planning and programming process to utilize federal funding. Other strategies may be implemented through state, county, municipal, and other resources.

The NJ 2020 SHSP includes an implementation strategy to keep stakeholders engaged and drive performance over the next five years. NJDOT and DHTS will continue to serve in a collaborative leadership role. The Core Working Group, which includes NJDOT, DHTS, and FHWA, will continue to provide program management support throughout the implementation period. Figure 4.1 below illustrates the annual implementation cycle.

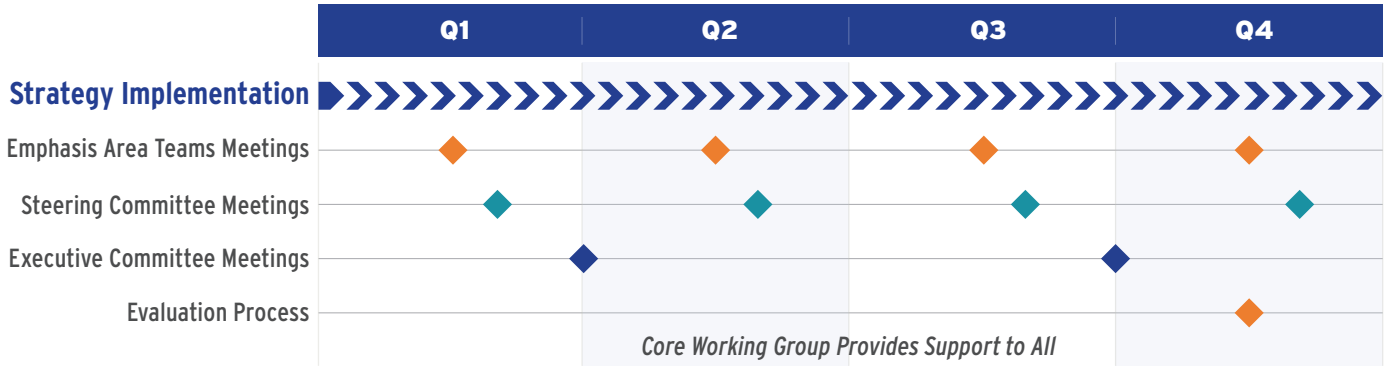


Figure 4.1 Annual Implementation and Evaluation Cycle

Monitoring and Reporting

Why a monitoring and reporting process?

Regular reporting documents the collaborative and coordinated efforts of government agencies, law enforcement, non-profit organizations, the health industry, and academia. Reporting also creates accountability and helps EATs stay focused on achieving the goals.

A formalized tracking process is being instituted to ensure regular, timely reporting of strategy implementation progress. This plan establishes the process, roles, and responsibilities for management and reporting. Table 4.1 outlines this process.

Who is responsible for what?

Role	Responsibility
Core Working Group	» Develop the reporting tool. A quarterly report update will be provided to the Steering Committee at the ending of each calendar quarter: March 31, June 30, September 30, and December 30. NJDOT will be responsible for obtaining report updates from the EATs, providing a quality control review of reports from the EATs, and populating the reporting tool for public consumption.
Emphasis Area Team Leaders	» Provide quarterly progress updates to NJDOT in accordance with requirements established by the Core Working Group to ensure the public report is updated for the calendar quarter.
Steering Committee	» Provide input on structure of the reporting tool. » Quarterly review of EA progress utilizing the reporting tool as a basis for review.
Executive Committee	» Final approval of the reporting tool structure.

Table 4.1 Monitoring and Reporting Responsibilities

Change Management Process

Why a change management process?

Changes are expected as the implementation of the NJ 2020 SHSP takes place over the next five years.

To ensure that implementation of the NJ 2020 SHSP continues as a collaborative, coordinated, performance-driven effort, it is important to have a clear change management process in place to which all involved stakeholders understand and subscribe so that changes are made in a transparent, coordinated manner.

How does the change management process work?

Change management will advance in a tiered approval framework. Changes with minimal impact will require little to no approval, but will be reported, while more significant changes will need approval at a higher authority. This tiered process seeks to balance flexibility in advancing work while reducing risk of changes that may be of high sensitivity to stakeholders. Based on a risk assessment, changes are characterized in two risk tiers: Low Risk and High Risk.

Low Risk (Minor) Changes include the following:

- Minor changes to delivery dates (up to 6 months)
- Minor changes in strategy language that do not affect the spirit or intent of the strategy or the deliverable
- Changes in EAT Lead, Implementation Lead, or Other Related Organizations

High Risk (Major) Changes include the following:

- Changes to EA goals or objectives (include language or targets)
- Adding or deleting strategies
- Significant changes to target delivery dates (greater than 6 months)
- Significant changes to strategy language that may impact the spirit/intent of the strategy or significantly change the deliverable

Who is responsible for what?

Role	Responsibility
Core Working Group	» Gather low risk (minor) changes from the EAT Leaders as part of the quarterly reporting process. The Core Working Group will establish the method for reporting low risk (minor) changes. » Manage updates to the high risk (major) change request form and make it available to each EAT Leader. » Review low risk (minor) changes identified as part of the quarterly reporting process to ensure they meet the low risk criteria. » Review high risk (major) changes received from EAT Leaders and ensuring that the change request is vetted and responded to before the next quarterly reporting cycle. NJDOT will take the lead on these activities on behalf of the Core Working Group.
Emphasis Area Team Leaders	» Report on low risk (minor) changes as part of the quarterly reporting cycle in accordance with the method established by the Core Working Group. » Submit high risk (major) change requests to the Core Working Group.
Steering Committee	» Advised of all minor and major changes. The Core Working Group will seek Steering Committee input on major change requests as required.
Executive Committee	» Advised of all minor and major changes. The Core Working Group will seek Executive Committee approval on major change requests as required.
Assistant Commissioner, Planning, Mult-modal and Grants Administration, NJDOT	» Approval of Major Changes
Director, Division of Highway Traffic Safety, NJLPS	» Approval of Major Changes

Table 4.2 Change Management Process Responsibilities

Evaluation

The Core Working Group will take the lead in conducting a periodic holistic evaluation of progress toward eliminating FSI. It will be performed throughout the five-year implementation of the NJ 2020 SHSP. A review will be also conducted of the implementation process to assess how it is working and identify opportunities for improvement. Periodic evaluations can help reinforce the overarching NJ 2020 SHSP goals and objectives, gather feedback to improve the implementation process along the way, and document lessons learned in advance of the NJ 2025 SHSP. Evaluation will be conducted at the process level and at the performance level as follows:

1. **Process evaluation:** Addresses the SHSP procedural, administrative, and managerial aspects and assesses progress in these areas.
2. **Performance evaluation:** Addresses the outputs and outcomes resulting from SHSP implementation. It assesses the progress of SHSP implementation and the degree to which it is meeting goals and objectives.

The evaluation process will provide an assessment of progress in outcome and output goals and objectives including:

- Performance in reducing FSI against the goal set
- Performance in achieving objectives for each EA
- Performance in addressing strategies identified for each EA
- Performance in considering equity in all aspects of implementation

Recommendations may be made for areas where performance is not being achieved and may include, but not be limited to:

- Modification of goals
- Modification of performance objectives or targets
- Modification of strategies
- Modifications to the organizational committees and EATs with a focus on elements related to leadership and management structures to ensure collaboration and communication are maintained
- Results of Evaluation will set the stage for the development of the 2025 SHSP update

How is the evaluation process going to work?

Annually, the NJDOT will initiate the evaluation process in or around April, which is midway through the federal fiscal year. The evaluation will include an analysis of performance data as well as a survey of the SHSP participants to gather feedback on the implementation process. At year four of the plan's implementation, the Core Working Group will lead an overall evaluation that will be used to guide the development of the 2025 update. This evaluation will

assess the cumulative results of the prior years to determine whether the strategies contributed to (or are correlated with) reduced fatalities and serious injuries on all public roads. Beyond fatalities and serious injuries, the overall evaluation may also include an assessment of progress measured in terms of education efforts, enforcement efforts, infrastructure implementation, and other areas.

Who is responsible for what?

Role	Responsibility
Core Working Group	» Develop and issue a SHSP Evaluation Survey. Use of a web-based survey can improve the efficiency of compiling results. » Furnish performance data and other information that will be required by survey respondents in completing the survey. » Compile and disseminate survey results and prepare recommendations for changes based on the results. » Coordinate with EAT Leaders where appropriate. » Document lessons learned and any approved changes to the SHSP or processes and share with the Executive Committee, Steering Committee, EAT Leaders, EATs and publish on saferoadsforallnj.com. NJDOT will be responsible for leading these efforts and coordinating with the Core Working Group.
Emphasis Area Team Leaders	» Complete the survey in accordance with direction from the Core Working Group. » Participate in a meeting with the Steering Committee and Core Working Group to discuss survey results and recommendations.
Emphasis Area Team Members	» Complete the survey in accordance with direction from the Core Working Group.
Steering Committee	» Complete the survey in accordance with direction from the Core Working Group. » Participate in a meeting with the Core Working Group and EAT Leaders to discuss survey results and recommendations.
Assistant Commissioner, Planning, Multimodal and Grants Administration, NJDOT	» Approve changes in cooperation with the Director, Division of Highway Traffic Safety, NJLPS. » In cooperation with the Director, Division of Highway Traffic Safety, NJLPS, raise proposed changes as deemed appropriate to the Executive Committee.
Director, Division of Highway Traffic Safety, NJLPS	» Approve changes in cooperation with the Assistant Commissioner, Planning, Multimodal, and Grants Administration, NJDOT. » In cooperation with the NJDOT Assistant Commissioner, Planning, Multimodal, and Grants Administration, raise proposed changes as deemed appropriate to the Executive Committee.
Executive Committee	» Review the survey results and recommendations for proposed changes and provide comments to the Core Working Group and approve any process changes.

Table 4.3 Evaluation Process Responsibilities

As an example, the Data EAT established a strategy to provide more training on the police crash investigation report form (NJTR-1) over the five-year implementation period. At the start of the NJ 2020 SHSP implementation, the Data EAT would establish a baseline level of NJTR-1 training as well as an increased target. At the end of the implementation period, the actual figures would be reported to demonstrate if the increase was achieved, along with an explanation of any issues encountered and lessons learned. Additionally, the evaluation should summarize accomplishments of each EA as well as opportunities for improvement.

It is anticipated that increased focus on implementation will keep the NJ 2020 SHSP in the forefront of every stakeholder's mind, so they remain interested and committed to the plan. They are a part of the solution in reducing roadway fatalities and injuries by continuing to advocate and provide for safety in all projects and programs.

New Jersey's safety partners will use the NJ 2020 SHSP to guide investment decisions for safety programs. NJDOT, through their STIP planning process, will invest in safety-focused improvements, toward achieving the performance targets that have been set.

Figures and Tables

Figures

Tables

Appendices

Driving Toward ZERO Deaths

Appendix A: References

Notes

1: Introduction and Background

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Appendix B: Terms and Acronyms

- **4Es** Term referring to four broad stakeholder communities who care about safety and are responsible for making the roads safe for all users:
  - Engineering (for example, highway design, traffic, maintenance, operations, planning)
  - Enforcement (state and local law enforcement agencies)
  - Education (for example, driver education, citizen advocacy groups, educators, prevention specialists)
  - Emergency response (for example, first responders, paramedics, fire, and rescue)
- **ARIDE** Advanced Roadside Impaired Driving Enforcement – ARIDE is a New Jersey State Police training program for law enforcement to provide officers with general knowledge related to drug impairment identification.
- **CVSP** Commercial Vehicle Safety Plan – FMCSA required plan as a condition of receipt of MCSAP grant funding.
- **DRE** Drug Recognition Expert or Drug Recognition Evaluator – Police officer trained to recognize impairment in drivers under the influence of drugs other than, or in addition to, alcohol. Source: International Association of Police Chiefs
- **DVRPC** Delaware Valley Regional Planning Commission - Metropolitan planning organization covering Burlington, Camden, Gloucester and Mercer counties in New Jersey; and Bucks, Chester, Delaware, Montgomery and Philadelphia counties in Pennsylvania.
- **DWI** Driving While Intoxicated
- **EA** Emphasis Area
- **EAT** Emphasis Area Team
- **EATL** Emphasis Area Team Leader
- **EMS** Emergency Medical Services
- **FARS** Fatality Analysis Reporting System – FARS is a nationwide census providing NHTSA, Congress and the American public yearly data regarding fatal injuries suffered in motor vehicle traffic crashes. Source: NHTSA
- **FHWA** Federal Highway Administration – Agency within the U.S. Department of Transportation that supports state and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program). Source: FHWA
- **FMCSA** Federal Motor Carrier Safety Administration – Agency within the U.S. Department of Transportation with a primary mission to reduce crashes, injuries and fatalities involving large trucks and buses. Source: FMCSA

- HRRR — High Risk Rural Roads – Any roadway functionally classified as a rural major or minor collector or a rural local road with significant safety risks, as defined by a state in accordance with an updated state strategic highway safety plan. Source: FHWA
- HSIP — Highway Safety Improvement Program – HSIP is a core FHWA Federal-aid program with the purpose to achieve significant reduction in traffic fatalities and serious injuries on all public roads, including non-state-owned roads and roads in tribal land. Source: FHWA
- HSP — Highway Safety Plan – A state document, coordinated with the state strategic highway safety plan as defined in 23 U.S.C. 148(a), that the state submits each fiscal year as its application for highway safety grants, which describes the strategies and projects that state plans to implement and the resources from all sources it plans to use to achieve its highway safety performance targets. Source: NHTSA
- MPO — Metropolitan Planning Organization – Federally mandated and funded transportation planning agency made up of representatives from local government and key transportation agencies to guide federal transportation investment and ensure investment decisions are based on a continuing, cooperative and comprehensive planning process. Source: NJTPA
- MCSAP — Motor Carrier Safety Assistance Program – Federal grant program that provides financial assistance to states to reduce the number and severity of crashes and hazardous materials incidents involving commercial motor vehicles. Source: FMCSA
- NHTSA — National Highway Traffic Safety Administration – Agency within the U.S. Department of Transportation with a mission to reduce deaths, injuries and economic losses resulting from motor vehicle crashes. Source: NHTSA
- NJDHTS — New Jersey Division of Highway Traffic Safety, New Jersey Department of Law and Public Safety
- NJDOT — New Jersey Department of Transportation
- NJTPA — North Jersey Transportation Planning Authority – Metropolitan planning organization for the northern 13 counties of the state.
- RSA — Roadway Safety Audit – Formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users. Source: FHWA
- SDRC — Safety Data Resource Center
- SHSP — Strategic Highway Safety Plan – A data-driven, comprehensive, multidisciplinary plan integrating the 4Es of safety. It establishes statewide performance measures, goals, objectives, and EAs and describes a program of strategies to reduce or eliminate safety hazards. It is developed by the state Department of Transportation (DOT) in consultation with federal, state, local, and tribal safety stakeholders, in accordance with 23 U.S.C. § 148.

- SSI — Systemic Safety Improvement - An improvement that is widely implemented based on high-risk roadway features that are correlated with specific severe crash types.
- SJTPO — South Jersey Transportation Planning Organization – Metropolitan planning organization covering Atlantic, Cape May, Cumberland and Salem counties.
- STIP — Statewide Transportation Improvement Program
- STRCC — State Traffic Records Coordinating Committee
- TIP — Transportation Improvement Program
- TZD — Toward Zero Deaths – The highway safety vision for the United States. It is a national strategy providing a platform of consistency for state agencies, private industry, national organizations and others to develop safety plans that prioritize safety culture and promote the national TZD vision.
- VMT — Vehicle Miles Traveled

Appendix C: Acknowledgements

Thank You to All Highway Safety Partners

Safety Partner Organizations

- 3M
- AAA Mid-Atlantic
- AARP
- American Heart Association
- Arora and Associates, P.C.
- Asbury Park Police Department
- Atlantic County
- Atlantic Mobile Health
- Bergen County
- Bicycle Coalition of Greater Philadelphia
- Brain Injury Alliance of NJ
- Burlington County
- Camden County
- Cape May County
- Cumberland County
- CDM Smith, Inc.
- Children's Hospital of Philadelphia
- Civic Eye Collaborative
- City of Fort Lee
- City of Jersey City
- City of Linden
- City of Newark
- City of West Orange
- City of Vineland
- Cross County Connection
- Delaware Department of Transportation
- Dewberry
- Delaware Valley Regional Planning Commission
- Essex County
- EZRide
- Families for Safe Streets Greater Philadelphia
- Fitzgerald & Halliday, Inc.
- Federal Highway Administration
- Federal Motor Carrier Safety Administration
- Gannett Fleming, Inc.
- Gloucester County
- GoHunterdon
- GPI/Greenman-Pedersen, Inc.
- Greater Mercer TMA
- Hudson County
- Hudson TMA
- IH Engineers, P.C.
- Insurance Council of NJ
- Jacobs Engineering Group, Inc.
- Jersey Shore Regional Trauma Center Hackensack Meridian Health
- Johnson, Mirmiran & Thompson, Inc.
- JPCL Engineering, LLC
- Kean University
- Keep Middlesex Moving
- KS Engineers, PC
- Maser Consulting P.A.
- MBO Engineering, LLC
- McCormick Taylor
- Mercer County
- Mothers Against Drunk Driving NJ
- Michael Baker International, Inc.
- Middlesex County
- Monmouth County
- Morris County
- Morristown Medical Center
- National Highway Traffic Safety Administration
- NJ Motor Vehicle Commission
- NJ Association of County Engineers

- NJ Bike and Walk Coalition
- NJ Department of Banking and Insurance
- NJ Department of Education
- NJ Department of Health
- NJ Department of Transportation
- NJ Department of Law and Public Safety, Division of Highway Traffic Safety
- NJ Governor's Office
- NJ Motor Vehicle Commission
- NJ Police Traffic Officers Association
- NJ State Police
- NJ Transit
- NJ Turnpike Authority
- NJ Future
- NJ Institute of Technology
- NJ Manufacturers
- NJ State Association of Chiefs of Police
- NJ Office of the Attorney General
- NJ Prevention Network
- NJ State Association of Chiefs of Police
- Nikhil Badlani Foundation
- NJM Insurance Group
- NV5
- North Jersey Transportation Planning Authority
- Oak Knoll School
- Ocean County
- Office of Senator Troy Singleton
- Pam Fischer Consulting
- Passaic County
- Peace Care
- Pedestrian Injury Prevention Partnership
- Port Authority of New York and New Jersey
- Rails to Trails
- Remington & Vernick Engineers, Inc.
- Ridewise
- Rowan University
- Safe Kids New Jersey
- Salem County
- Sam Schwartz Engineering, LLC
- Servicios Latinos de Burlington County
- Somerset County
- South Jersey Transportation Authority
- South Jersey Transportation Planning Organization
- Stantec Consulting Services, Inc.
- Sussex County
- Sustainable Jersey
- T & M Associates
- T.Y. Lin International
- Taylor Wiseman & Taylor
- Tetra Tech
- The College of NJ
- The Wei LLC
- Township of Burlington
- Township of Cedar Grove
- Township of Chester
- Township of Hillside
- Township of Maplewood
- Township of Montgomery
- Township of Plainsboro
- Township of Voorhees
- Township of Warren
- Township of West Orange
- Township of West Windsor
- Township of Randolph
- TransOptions
- Transportation Management Associations Council of NJ
- Trenton Health Team
- Tri-State Transportation Campaign
- University Hospital
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- Utility & Transportation Contractors Association of NJ
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- Michael Cox, NJ Motor Vehicle Commission
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- Aashna Jain, Rutgers University
- Amy Kaminski, FHWA
- Peter Kremer, Michael Baker International, Inc.
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- Chris Zajac, NJDOT
- Matthew Lawson, Mercer County
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2020 Strategic Highway Safety Plan

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August 2020

Driving Toward ZERO Deaths