DELAWARE
2021-2025 Strategic Highway Safety Plan:
Toward Zero Deaths

December 2020

On behalf of the citizens of Delaware and dedicated transportation safety professionals, we are pleased to present the ***Delaware 2021 – 2025 Strategic Highway Safety Plan: Toward Zero Deaths (SHSP),*** which provides a framework to reduce fatalities and serious injuries resulting from crashes on Delaware's roadways. Ensuring the safety of all road users on our transportation system is a top priority of our agencies and critical to improving the quality of life for Delaware's residents and its many visitors.

This Plan, developed through multi-agency coordination, establishes a comprehensive, data-driven and performance-based framework to reduce fatalities and serious injuries by 15 percent over the next five years to ultimately reach our goal of zero fatalities and serious injuries on Delaware's roadways. The SHSP continues the legacy of prior Plans and provides a benchmark for which roadway safety projects, programs and initiatives can be evaluated and selected based on their consistency with the goals and objectives of the SHSP.

The development of this Plan is a testament to the existing partnerships that have been forged between multiple state and local agencies. Strengthening these partnerships and developing new ones are vital to the successful execution of the SHSP. Implementation of strategies and safety countermeasures requires strong advocacy, coordination, and the commitment of resources from various sources. Objectives and strategies included in this Plan will be incorporated into other programs when possible and projects should be prioritized based on their consistency with the SHSP goals.

We, on behalf of Governor John Carney, approve the ***Delaware 2021 – 2025 Strategic Highway Safety Plan: Toward Zero Deaths.***

DelDOT

Nicole Majeski
Acting Secretary, Department of Transportation

Nathaniel McQueen, Jr.
Secretary, Department of Safety and Homeland Security

Colonel Melissa Zebley
Superintendent, Delaware State Police

Table of Contents

Executive Summary

Since 2010, over 1,100 people have died and 5,600 people have been seriously injured as a result of a motor vehicle crash on Delaware's roadways. 2015 and 2019 experienced the highest number of fatalities during the most recent ten-year period with 133 reported each year. These statistics are unacceptable. The Delaware Department of Transportation, Delaware Office of Highway Safety, and the Delaware State Police, the agencies responsible for developing Delaware's Strategic Highway Safety Plan (SHSP), are committed to eliminating fatalities and serious injuries on Delaware roadways through a multi-disciplinary planning effort that includes the identification of transportation safety problems and implementation of data-driven strategies to reduce crashes.

GOAL

The Delaware Strategic Highway Safety Plan: Towards Zero Deaths aims to eliminate fatalities and serious injuries on Delaware's roadways through a multi-agency approach that utilizes education, enforcement, engineering and emergency medical service strategies.

An SHSP is a comprehensive transportation safety plan with a goal of reducing fatalities and serious injuries on all public roads making effective use of state, regional, and local crash data to establish consistent statewide goals, objectives, Emphasis Areas, priorities, and countermeasures with stakeholders and other transportation plans. An SHSP includes engineering, education, enforcement, and emergency medical service strategies. Federal transportation legislation requires states to develop, implement, and update an SHSP every five years.

Delaware's SHSP serves as the state's comprehensive transportation safety plan and was developed in coordination with Delaware's other transportation plans. Delaware's 2021-2025 SHSP builds upon the successes and lessons learned of previous Plans and will serve as the state's safety Plan from 2021 through 2025.

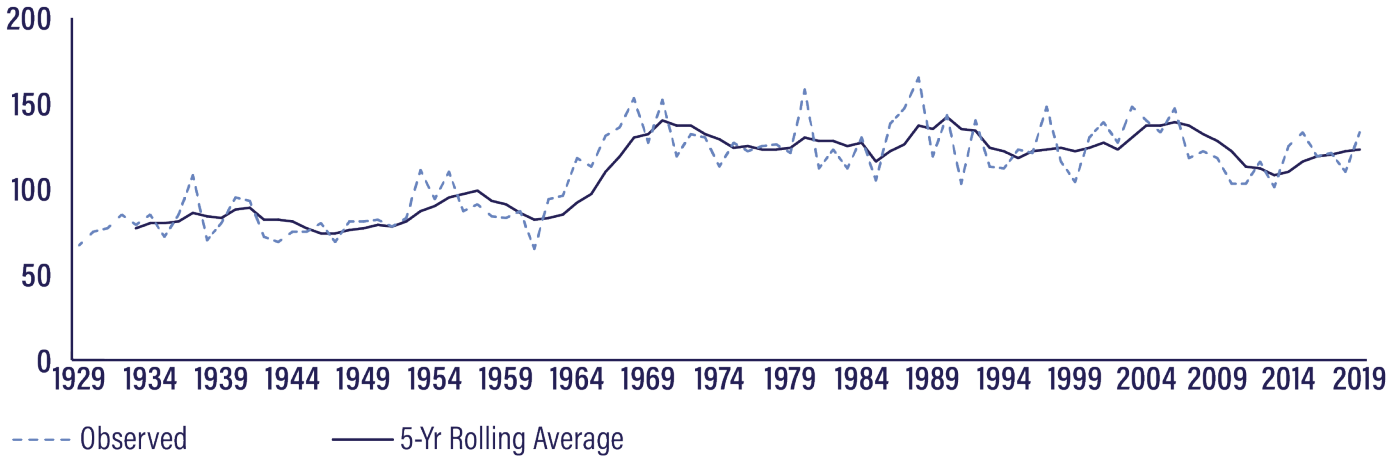
Delaware 2021 - 2025 Strategic Highway Safety Plan: Toward Zero Deaths

OVERALL OBJECTIVE

Delaware's 2021-2025 SHSP objective is to **reduce fatalities and serious injuries by 15% over the next five years** to ultimately reach the goal of zero fatalities and serious injuries on Delaware's roadways.

The SHSP Core Committee, comprised of the Delaware Department of Transportation, Delaware Office of Highway Safety, and Delaware State Police, met several times throughout 2020 and coordinated with stakeholders, advocacy groups and the public to gain consensus on the major Plan elements and solicit ideas for strategies and actions that should be implemented over the next five years. Fatal and serious injury crash data from 2015 through 2019 was analyzed to identify data-driven Emphasis Areas, which were then ranked by the percentage of fatalities and serious injuries and compared to total fatalities and serious injuries statewide. Eight data-driven Emphasis Areas are included in Delaware's 2021-2025 SHSP, retaining seven Emphasis Areas from the 2015 Plan and adding Distracted Driving as a new Emphasis Area. Additionally, Traffic Records continues as an Emphasis Area in recognition that comprehensive and quality traffic safety data remains critical to making informed decisions regarding safety resource allocation.

Delaware Traffic Fatalities *(1929 - 2019)*



The Plan includes general strategies and detailed actions for each Emphasis Area that were selected based on input from a multitude of sources including Emphasis Area teams and feedback from a Virtual Public Workshop.

The Plan includes performance measures for the Plan's overall objective and each Emphasis Area as well as those required by Federal transportation legislation. Delaware will continue to annually monitor these performance measures as it implements strategies to achieve the Plan's objective.

2021-2025 SHSP EMPHASIS AREAS

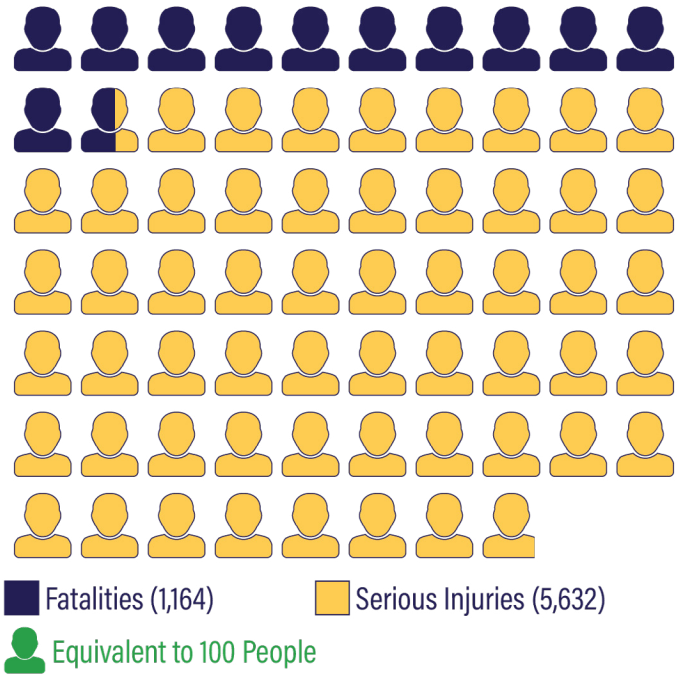
1. Intersections
2. Distracted Driving
3. Impaired Driving
4. Roadway Departure
5. Pedestrians
6. Motorcycles
7. Unrestrained Motorists
8. Speeding
9. Traffic Records

Introduction

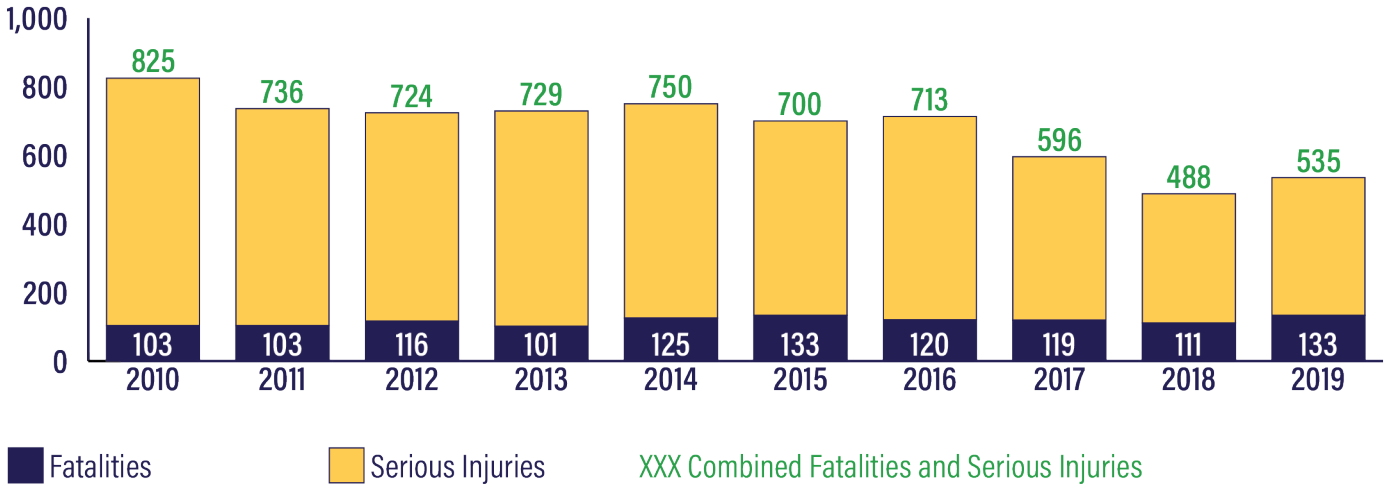
Since 2010, over 1,100 people have died and 5,600 people have been seriously injured as a result of a motor vehicle crash on Delaware's roadways. Many of these crashes were preventable incidents resulting from a combination of behavioral, environmental, and infrastructure-related factors. Many of these factors are well-known within the transportation industry, while other new challenges continue to emerge. To address all of these factors, a multi-agency approach that utilizes education, enforcement, engineering, and emergency medical services strategies is essential to eliminating these crashes.

Although the combined number of fatalities and serious injuries have declined in recent years, public safety is a top priority for the State of Delaware. Since we cannot predict the future of transportation and highway safety with absolute certainty, we must continue efforts to meet today's challenges and mitigate new ones to achieve the long-term vision of eliminating fatalities and serious injuries. Through the development, evaluation, and implementation of this SHSP, the coordinating agencies are committed to this challenge for all of Delaware's road users.

Persons Killed or Seriously Injured *(2010-2019)*



Statewide Annual Observed Fatalities and Serious Injuries



This Plan was developed in accordance with federal requirements as described below and in the following pages. The Delaware 2021-2025 Strategic Highway Safety Plan: Toward Zero Deaths will be effective for five years from 2021 through 2025.

2021-2025 SHSP Update Process

- Consulted with Stakeholders, Advocacy Groups and the General Public
- Reviewed Crash Data
- Selected Data-Driven Emphasis Areas
- Identified Performance-Based Objectives
- Employed a Multidisciplinary Approach
- Coordinated SHSP with Other Plans
- Developed Implementable Actions
- Evaluated Past Performance
- Considered Special Rules
- Obtained Executive Leadership Support

2021-2025 SHSP DEVELOPMENT TIMELINE

SHSP
Background and History

Several federal laws and programs have supported a coordinated national highway safety program, beginning with the Highway Safety Act of 1966. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), adopted in 2005, established the requirement for each State to develop an SHSP in order to be eligible for full federal funding apportionments. This requirement has continued through two subsequent federal laws: Moving Ahead for Progress in the 21st Century (MAP-21) Act, adopted in 2012, and the Fixing America's Surface Transportation (FAST) Act, adopted in 2015.

Strategic Highway Safety Plan

A statewide coordinated safety plan that provides a data-driven and comprehensive framework for reducing fatalities and serious injuries on all public roads.

Delaware implemented its first SHSP in 2006 to fulfill the requirements outlined in SAFETEA-LU and updated the Plan in 2008. In 2010 and 2015, the SHSP coordinating agencies adopted updated revisions of Delaware's SHSP.

Beginning in 2009, several national traffic safety stakeholders including the American Association of State Highway and Transportation Officials (AASHTO), Governors Highway Safety Association (GHSA), and National Association of Chiefs of Police (NACOP) began discussions to create a national highway safety vision. Recognizing that even one death is unacceptable, the group concluded that the elimination of highway deaths is an appropriate goal. Toward Zero Deaths: A National Strategy on Highway Safety was published in June 2014 and the nationwide vision was officially launched in March 2015. Delaware has adopted the national Toward Zero Deaths strategy as part of the overall Plan goal.

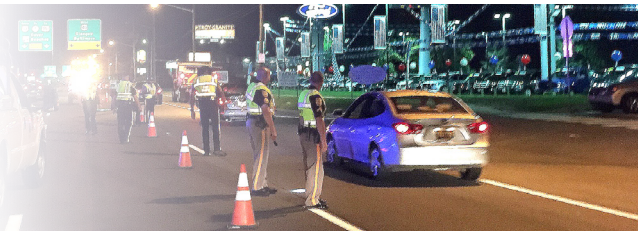
Plan Coordination

Effective implementation of Delaware's SHSP will leverage the resources of other transportation planning and programming activities, and as such, the SHSP serves as the coordinating document for the other plans and programs that involve safety on Delaware's roadways. This coordination involves the Statewide Long-Range Transportation Plan, the Capital Transportation Program (CTP), the Transportation Improvement Programs (TIPs) and Regional Transportation Plans developed by the State's three Metropolitan Planning Organizations (MPO), three plans that implement parts of the SHSP – the Highway Safety Plan (HSP), the Highway Safety Improvement Program (HSIP) and the Commercial Vehicle Safety Plan (CVSP), as well as other state plans and programs. This integration is important for improving overall safety coordination and linkages among State agencies leading to comprehensive transportation safety planning.

The HSIP, developed by DelDOT, funds and implements various infrastructure safety projects such as signing and pavement markings, signal and signal timing modifications, rumble strips, high-friction surface treatments, intersection improvements, and roundabouts. To qualify as an HSIPproject, the countermeasure must be related to one or more of the strategies of the SHSP. The HSP, developed by the Office of Highway Safety, funds behavioral safety programs such as Click It or Ticket and Arrive Alive Delaware. The CVSP, developed by the Delaware State Police, funds efforts targeting safety for the trucks and buses that travel Delaware's roadways. Strategies within the Emphasis Areas of the SHSP can target safety improvements for commercial motor vehicles.

Stakeholder Input

Delaware's SHSP was developed in collaboration with representatives from multiple stakeholders who contribute unique and valuable perspectives toward the goal of reducing fatalities and serious injuries on Delaware's roadways. The stakeholders provide expertise in the 4 E's of transportation safety: engineering, education, enforcement, and emergency medical services.



The Delaware SHSP committee structure is comprised of two levels: the Core Committee and the Stakeholder Committee. The Core Committee provides guidance and direction during the development of the SHSP update. The Core Committee members include Delaware Department of Transportation (DelDOT), Delaware Office of Highway Safety (OHS), and Delaware State Police (DSP). The Stakeholder Committee provides a broad perspective on safety throughout Delaware at the federal, state, county, and municipal level and includes those stakeholders required by FHWA as well as other stakeholders that provide unique perspectives on transportation safety such as the Delaware Fire Chief's Council. A list of members is shown in the organizational chart below.

CORE COMMITTEE

DelDOT | **OHS** | **DSP**

STAKEHOLDER COMMITTEE

- City of Wilmington
- DART/DTC
- DE Department of Education
- DE Department of Health and Social Services
- DE Department of Justice
- DE Office of Highway Safety
- DE Office of Emergency Medical Services
- DE Police Chiefs' Council
- DE State Fire Chiefs' Association
- DE State Fire School
- Delaware State Police
- DelDOT - Department of Motor Vehicles
- DelDOT Planning
- DelDOT Project Development
- DelDOT Traffic
- DELJIS
- Dover/Kent County MPO
- DSP Truck Enforcement Unit
- FHWA
- FMCSA
- Kent County Department of Planning Services
- New Castle County Department of Land Use
- New Castle County PD
- NHTSA
- Salisbury/Wicomico MPO
- Sussex County
- UD T^2 / LTAP Center
- WILMAPCO

The Core Committee met several times throughout 2020 to coordinate updates to Delaware's SHSP goals and objectives, and select Emphasis Areas. In June 2020, a Virtual Public Workshop was conducted, inviting the Stakeholder Committee, advocacy groups, and the general public to review the proposed goals, objectives, and Emphasis Areas of the 2021-2025 Delaware SHSP. The Virtual Public Workshop was available for viewing for 30 days. Attendees were encouraged to provide feedback via an online survey. The Core Committee received a total of 66 responses to the online survey, with the majority of respondents indicating support for the presented Plan elements. Input from the survey was incorporated into the development of strategies and actions for the SHSP Emphasis Areas.

Throughout the summer of 2020, the Core Committee identified members from the Stakeholder Committee, interested advocacy groups, and members of the public to form teams for each of the eight data-driven Emphasis Areas. Each Emphasis Area team met to review detailed crash data specific to their Emphasis Area, establish Emphasis Area objectives, and develop strategies and actions to be included for implementation in their Emphasis Area. Delaware's Traffic Records Coordinating Committee (TRCC) serves as the Emphasis Area Team for the Plan's one non-data-driven Emphasis Area: Traffic Records.

Delaware Strategic Highway Safety Plan Virtual Public Workshop

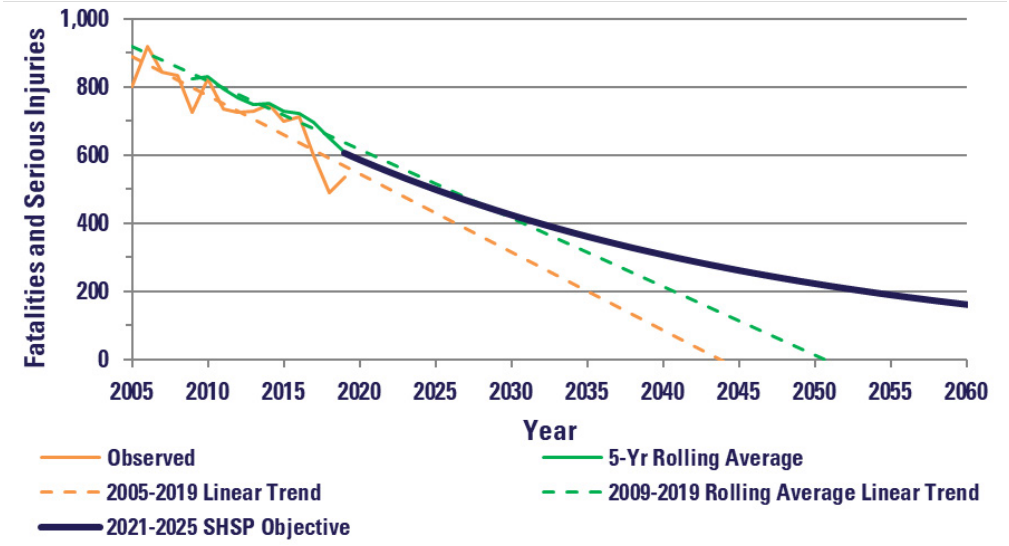
95%
of respondents support the SHSP Goal

91%
of respondents support the Overall Objective

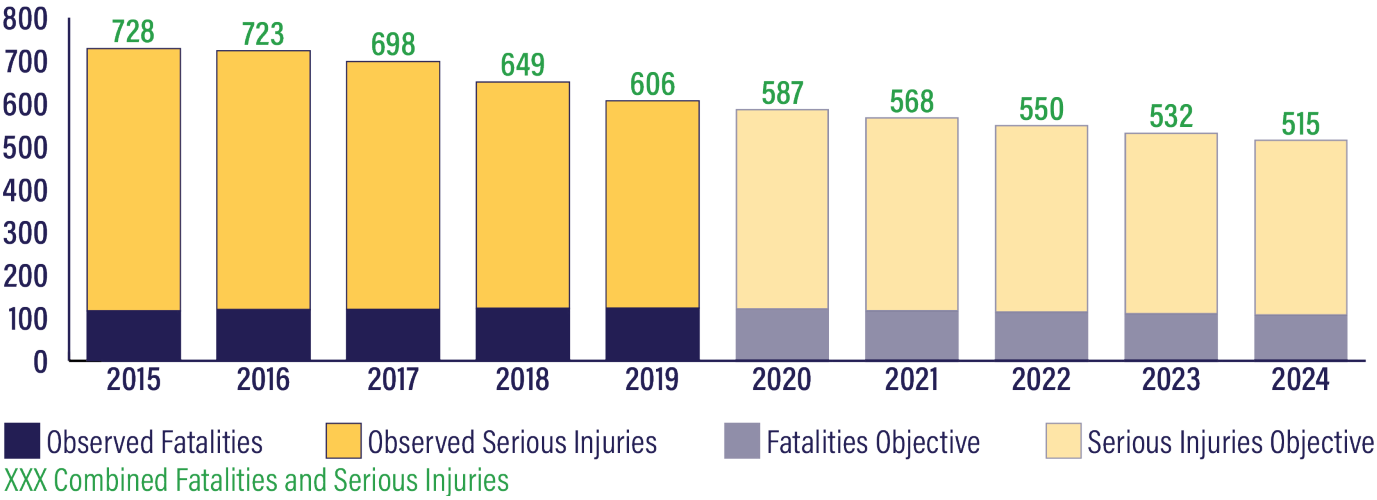
86%
of respondents support the recommended Emphasis Areas

Goal and Objectives

The 2021–2025 Delaware SHSP includes an overall goal and objective that is consistent with the National Toward Zero Deaths (TZD) Strategy on Highway Safety. To achieve the long-term goal of eliminating fatalities and serious injuries on Delaware's roadways, an overall objective was established for the five-year period from 2021 through 2025. Several trendlines were reviewed to determine an aggressive, yet achievable, overall objective. Through a comparison of various linear trendlines, it was found that the reduction of combined fatalities and serious injuries ranged from 2.6 to 4.4 percent annually or 12 to 20 percent over five years. Based on the historic trends, Delaware established an objective to reduce fatalities and serious injuries over the next five years by 15 percent (a 3.2 percent annual reduction) as measured from the 2019 five-year rolling average. A five-year rolling average is the average of five individual, consecutive points of data that provides a better understanding of the overall data over time without eliminating years with significant increases or decreases. The 2019 five-year rolling average is the average of observed data for 2015 through 2019. The overall Plan objective served as the basis for establishing specific Emphasis Area objectives, which are documented within each Emphasis Area's fact sheets within this Plan.



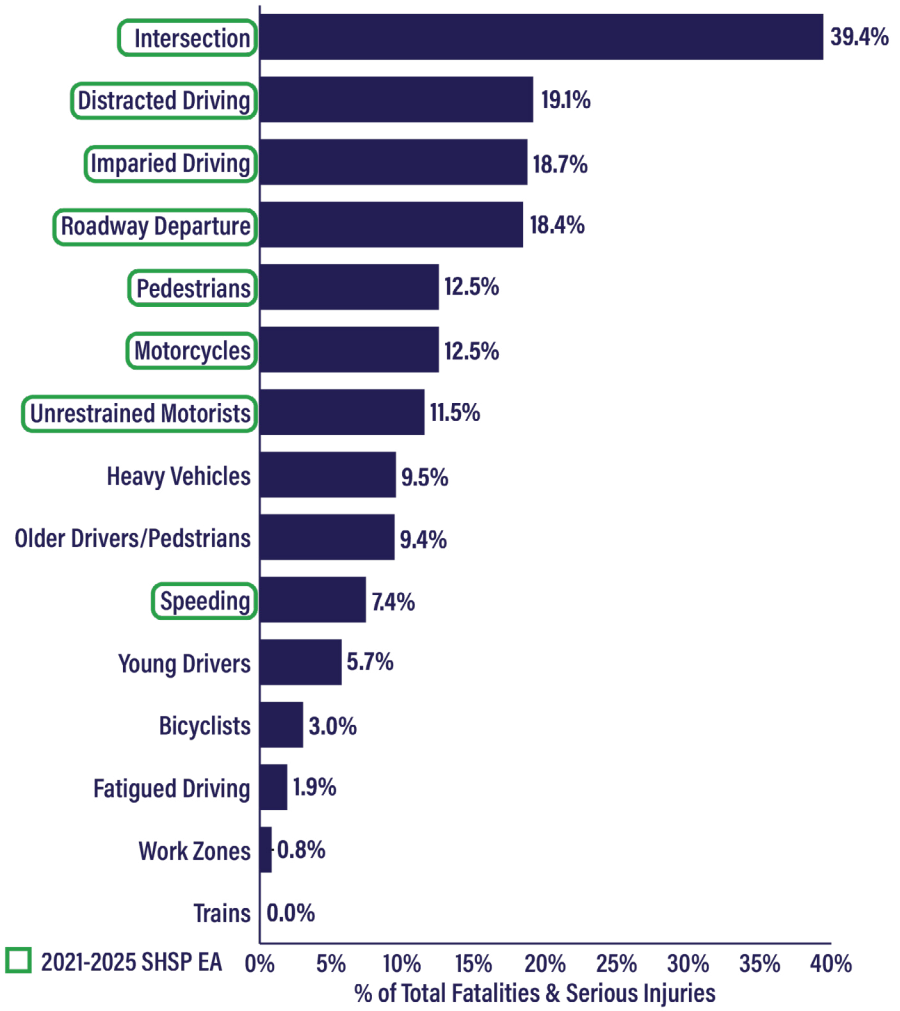
Statewide Fatalities and Serious Injuries *(5-Year Rolling Averages)*

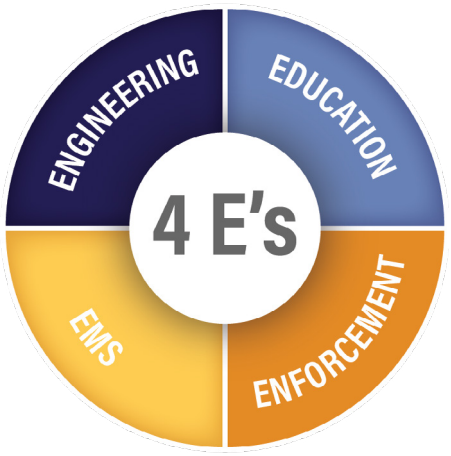


Emphasis Areas and Strategies

Emphasis Areas represent key factors contributing to crashes for which the development of strategies and detailed actions could have the greatest potential to reduce fatalities and serious injuries. Establishment of Emphasis Areas allows Delaware to prioritize the use of limited funds and resources and ensure that safety efforts are targeted effectively to meet the objectives of the SHSP. In order to select data-driven Emphasis Areas, crash data was obtained from DelDOT's Crash Analysis and Reporting System (CARS) which includes detailed crash data for all reported crashes statewide. CARS is populated with crash reports that are entered by law enforcement officers statewide into E-Crash, Delaware's statewide electronic crash reporting system.

Emphasis Area Ranking *(2015-2019 Crashes)*





Fatality and serious injury crash data from 2015 through 2019 were analyzed to identify Emphasis Areas for inclusion in the SHSP. During this five-year period, 616 fatalities and 2,416 serious injuries occurred on Delaware's roadways. These crashes were analyzed to determine causal factors from an infrastructure, behavioral and road user perspective to identify risk factors correlating to 15 potential Emphasis Areas. The potential Emphasis Areas considered were based on suggestions from AASHTO in their original national SHSP.

Eight data-driven Emphasis Areas were selected: Intersections, Distracted Driving, Impaired Driving, Roadway Departures, Pedestrians, Motorcycles, Unrestrained Motorists, and Speeding. One non-data driven Emphasis Area, Traffic Records, was also selected as continued data improvements are necessary for the development of a robust SHSP. The eight data-driven Emphasis Areas account for 94 percent of all fatalities and 85 percent of all serious injuries.

2021-2025 SHSP EMPHASIS AREAS

1. Intersections
2. Distracted Driving
3. Impaired Driving
4. Roadway Departure
5. Pedestrians
6. Motorcycles
7. Unrestrained Motorists
8. Speeding
9. Traffic Records

Heavy Vehicles and Older Drivers/Pedestrians represent 9.5 percent and 9.4 percent of the combined fatalities and serious injuries, respectively, while Speeding represents 7.4 percent of the combined fatalities and serious injuries. Speeding was chosen as an Emphasis Area because it is commonly understood that higher speeds increase crash severity leading to more fatalities and serious injuries. A review of the Fatality Analysis Reporting System (FARS) shows that 29 percent of all fatal crashes in Delaware from 2014-2018 involved speeding; therefore, it is likely that speeding, as a contributing factor in crashes, is under-represented in the crash data. A FARS analyst manually reviews the crash circumstances and crash narrative for each fatal crash and makes a determination on whether speeding was a contributing factor. Crashes involving heavy vehicles are generally caused by the non-heavy vehicle involved in the crash so strategies from other Emphasis Areas will likely support a reduction in heavy vehicle related crashes as well. Additionally, the CVSP identifies strategies and actions to address heavy vehicle crashes. SHSP strategies addressing driver and pedestrian behaviors and infrastructure addressing pedestrians will likely have a benefit on reducing older driver/pedestrian related crashes.

Distracted Driving was added as a new Emphasis Area

Crashes at rail-highway grade crossings account for an extremely low number of fatalities and serious injuries; therefore, an emphasis area for these types of crashes is not included in this Plan. However, safety at these locations is monitored and improvements are considered annually through DelDOT's federally-required Highway-Rail Grade Crossing Program. In addition, Delaware State Police and local law enforcement agencies have participated in the Operation Clear Track initiative since 2017.

Detailed crash data for each of the selected Emphasis Areas was reviewed to identify specific characteristics and risk factors that could yield more information regarding the contributing factors of each of the crashes. Specific objectives were developed for each Emphasis Area, based on the overall SHSP objective. To meet the objective of each Emphasis Area and the overall Plan and address the contributing factors identified through the data review, strategies and actions were developed to address the 4 E's of transportation safety: Engineering, Education, Enforcement and Emergency Medical Services. These strategies and actions were based on current best practices from Federal Highway Administration (FHWA), National Highway Traffic Safety Administration (NHTSA), other states, and continuation of the implementation of countermeasures that have proven to provide safety benefits in Delaware. Strategies and actions were also developed based on a review of others state's SHSPs and through ideas generated by the expertise of each Emphasis Area team. Strategies and actions that reflect proven countermeasures are included as well as some new actions that will be implemented to further meet the objective of the SHSP. Each proposed strategy is general, focusing on one of the 4 E's, data improvements, or policy updates. For each strategy, several actions are identified that will form the basis for Action Plans during the SHSP implementation period.

The eight data-driven Emphasis Areas account for 94% of fatalities and 85% of serious injuries

Many of the fatality and serious injury crashes have factors that would be addressed by multiple Emphasis Areas. For example, a roadway departure crash may involve an impaired, distracted, unrestrained, and speeding motorist. Proposed strategies and actions for one Emphasis Area may contribute to reducing fatalities and serious injuries in another Emphasis Area. For example, actions to keep vehicles on the roadway could lead to reductions in crashes involving distracted or impaired drivers and/or motorcyclists. The distracted driving, impaired driving, and unrestrained motorists Emphasis Areas frequently overlap with other Emphasis Areas with over 40 percent of all fatalities and serious injuries from 2015 through 2019 involving at least one of these factors.

In addition to strategies and actions for each Emphasis Area, strategies and actions were developed to address overall programmatic, policy, and safety culture improvements to address safety needs over the next five years. Implementing overall and Emphasis Area specific strategies will be challenging without the proper resources. Agencies will need appropriate levels of funding, staffing resources, and Executive Leadership support to be successful in implementing safety strategies that are effective at reducing fatalities and serious injuries on Delaware's roadways.

Emphasis Area fact sheets are provided on the following pages for each of the nine selected Emphasis Areas. The fact sheets provide a brief description of the Emphasis Area, the Emphasis Area objective, a review of relevant fatal and serious injury crash data, and strategies and actions to achieve the objective. In addition, a statewide crash statistics fact sheet provides a summary of common data trends for all fatal and serious injury crashes.

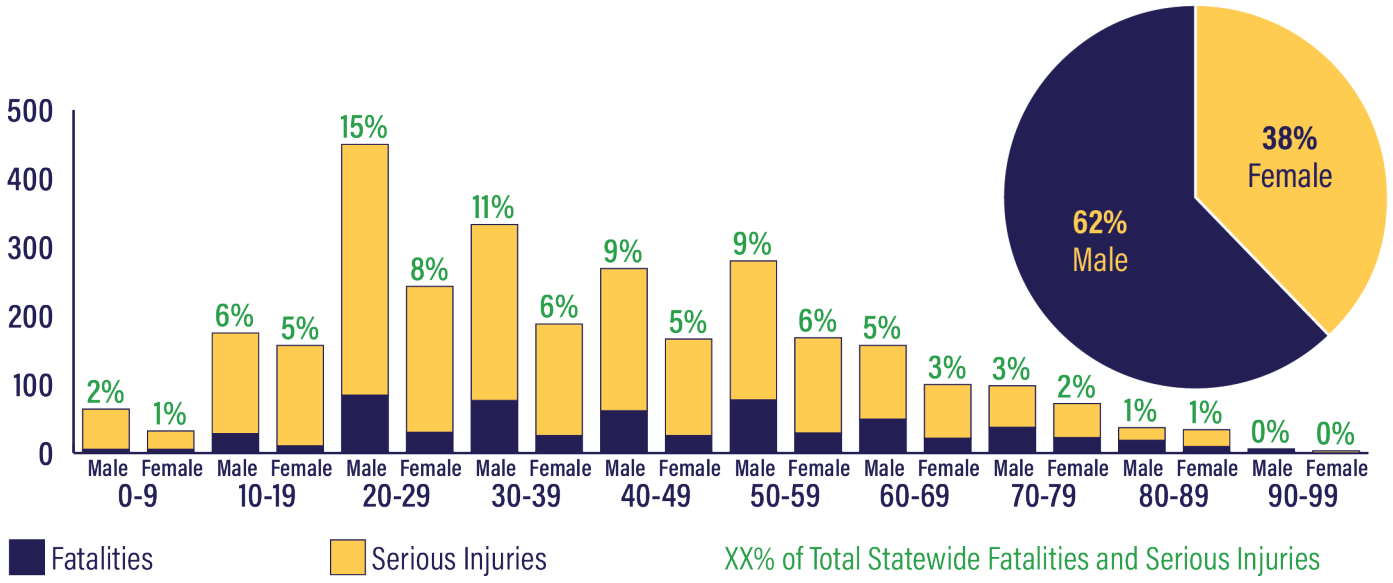
Statewide Crash Data Summary and Overall Strategies

From 2015 through 2019, there have been over 136,000 total crashes on Delaware's roadways resulting in 616 people being killed and 2,416 people seriously injured with many more suffering minor injuries and propertydamage. Crashes are preventable occurrences and providing engineering, education, enforcement and emergency medical services strategies has been proven to reduce the number and severity of crashes. In order to implement safety countermeasures, education outreach, and effective enforcement practices, proper funding, properly trained personnel and strong legislation are required. Effective implementation of the 2021-2025 SHSP requires strong executive support, a strong safety culture and constant coordination and cooperation among all safety partners. Strategies and actions have been developed that address overall program needs and updated policies to further support the goal and objective of this Plan.

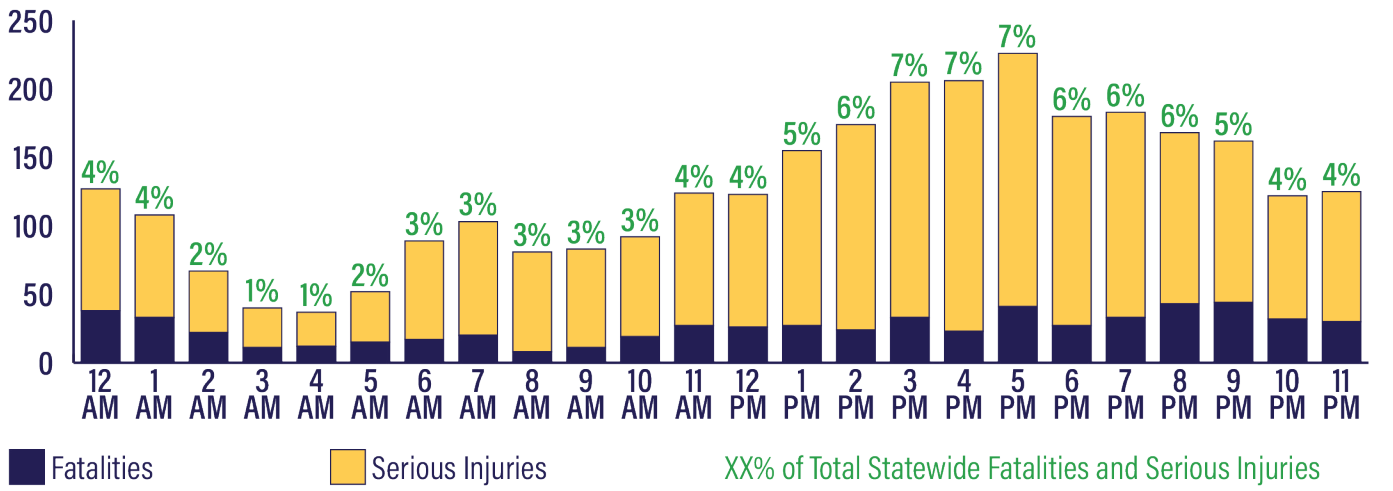
Additionally, the advancement of new vehicle technologies such as connected and autonomous vehicles (CAV) hold the prospect of improved safety on our roadways; however, many obstacles remain before these technologies become fully integrated into our transportation system. Some collision avoidance technologies are in use today; however, implementing Vehicle to Infrastructure technology could provide safety benefits that have not been realized to date that may have benefits on addressing those crashes that are a result of driver error. Delaware will continue to prepare for a future with these new technologies that will serve to improve safety on Delaware's roadways. Strategies and actions for implementation of infrastructure improvements that support the implementation of CAV technology are included in this Plan and incorporate ideas generated by the Advisory Council on Connected and Autonomous Vehicles.

Crash Data Summary (2015-2019)

Age/Gender of Crash Victim



When?

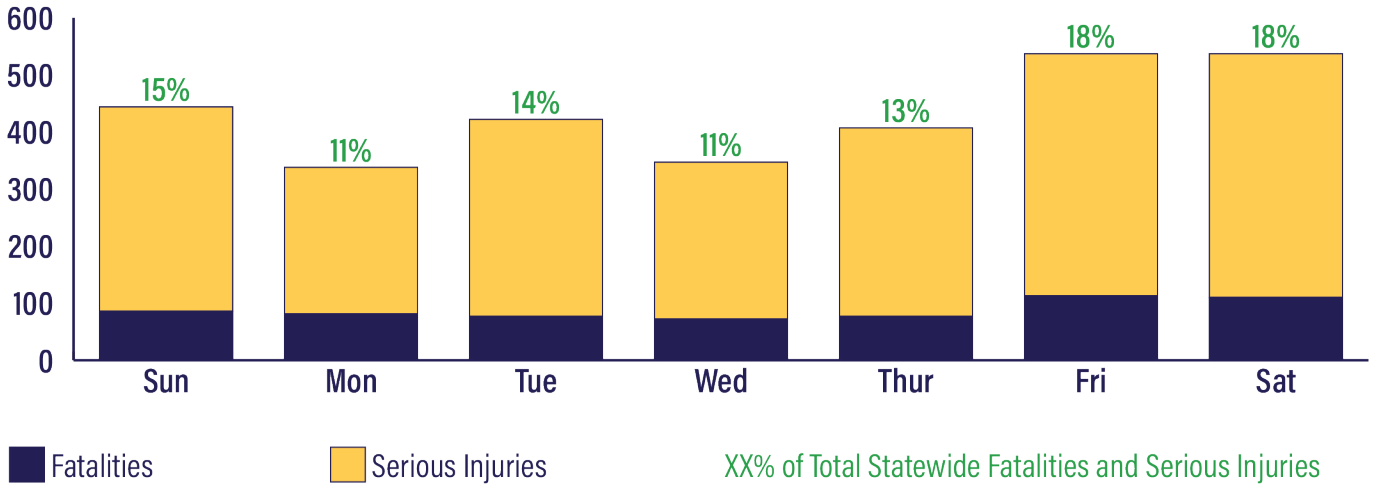


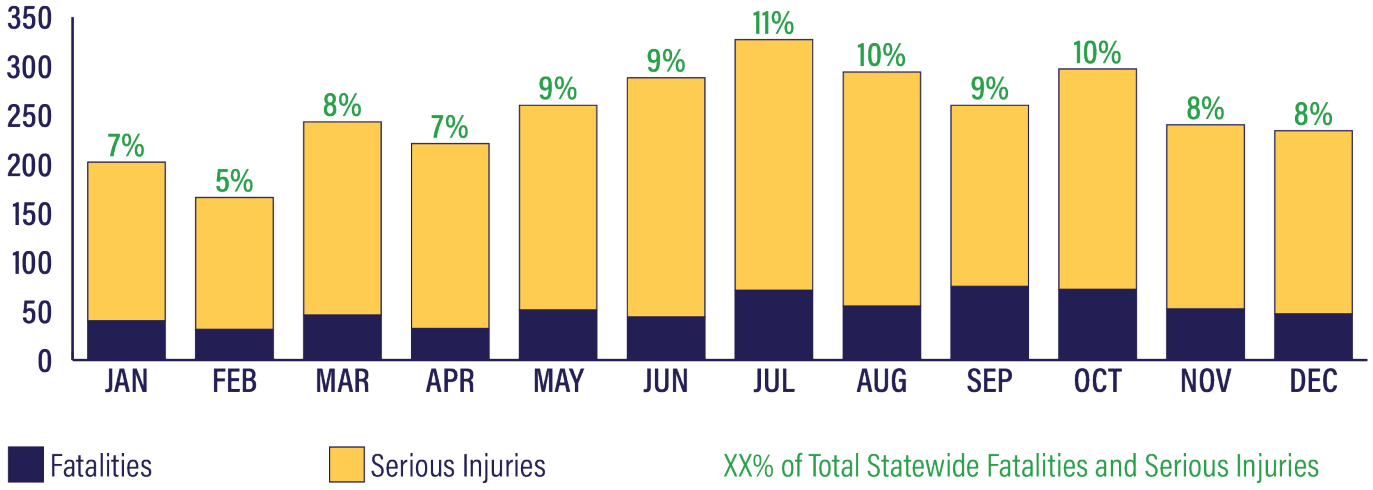
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	28	34	24	12	11	9	7	6	4	15	15	15	16	22	22	22	24	31	29	22	24	28	12	12	444
Monday	11	11	4	2	3	6	9	12	9	7	9	11	16	24	30	30	22	25	16	23	20	14	15	9	338
Tuesday	10	8	5	2		10	26	24	19	13	14	21	16	25	26	16	41	36	24	19	17	24	12	14	422
Wednesday	12	1	6	2	5	3	13	19	12	11	11	10	15	12	23	34	24	27	23	19	17	14	19	15	347
Thursday	16	11	8		7	4	10	24	18	10	16	16	20	14	21	31	27	29	26	18	25	19	23	14	407
Friday	21	15	8	3	1	9	11	10	11	21	7	28	24	36	15	38	34	42	41	40	37	31	17	37	537
Saturday	29	28	12	19	10	11	13	8	8	6	20	23	16	22	37	34	34	36	21	42	28	32	24	24	537
Total	127	108	67	40	37	52	89	103	81	83	92	124	123	155	174	205	206	226	180	183	168	162	122	125	3,032

XX Statewide Fatalities and Serious Injuries during Day of Week and Hour of Day

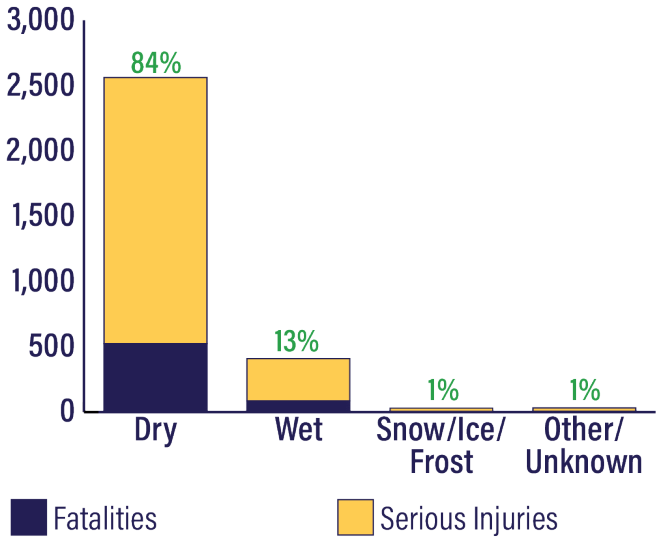
Lower Frequency — Higher Frequency

When?

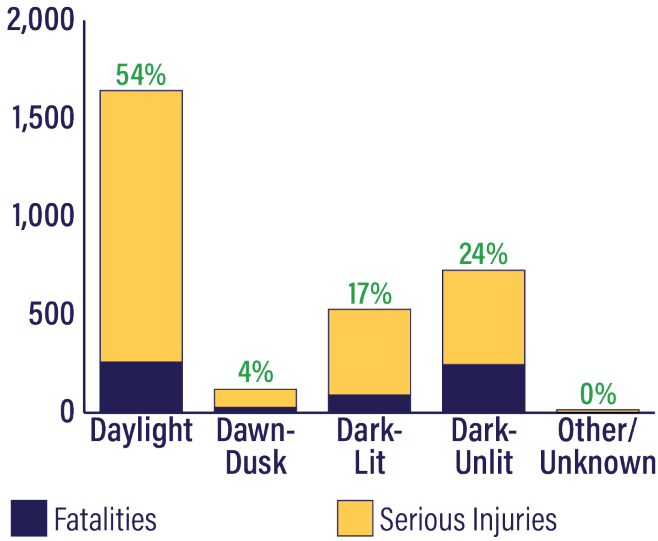




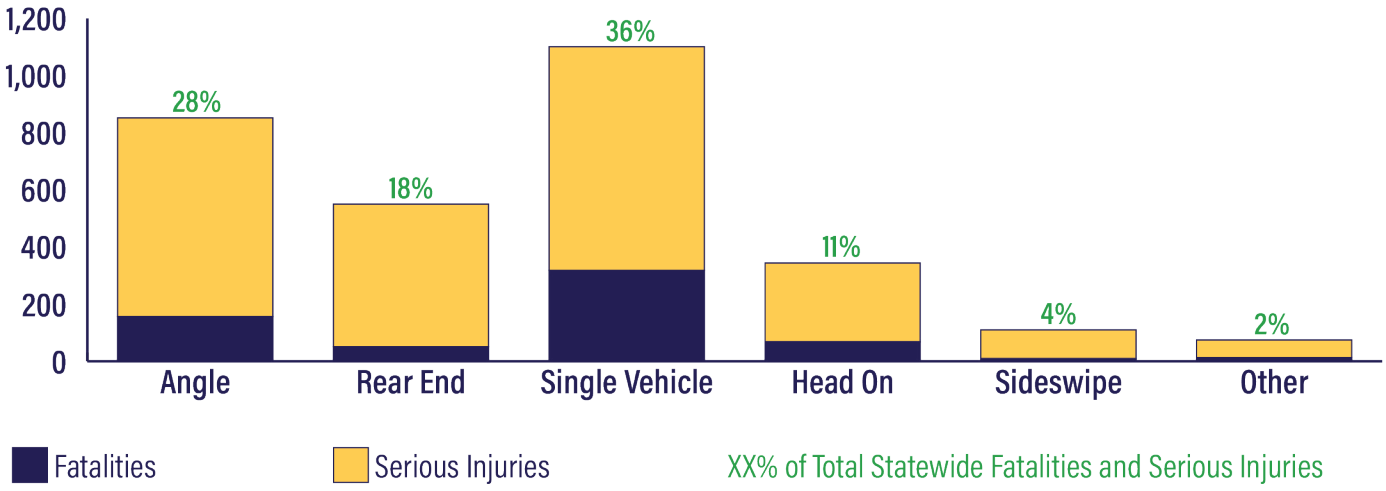
Surface Condition



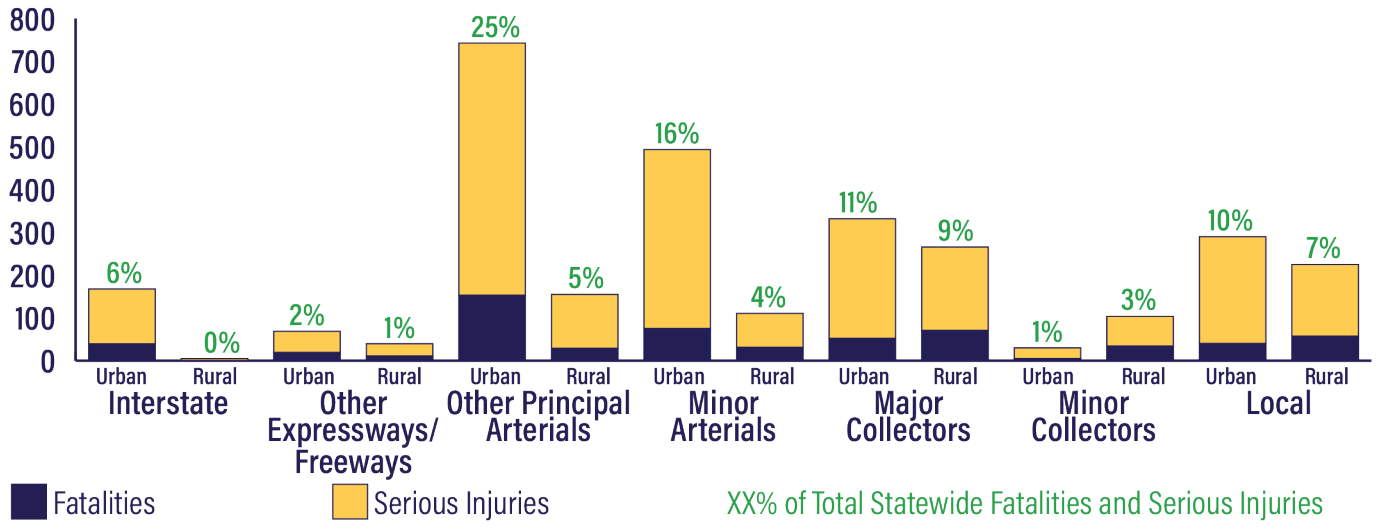
Lighting Condition



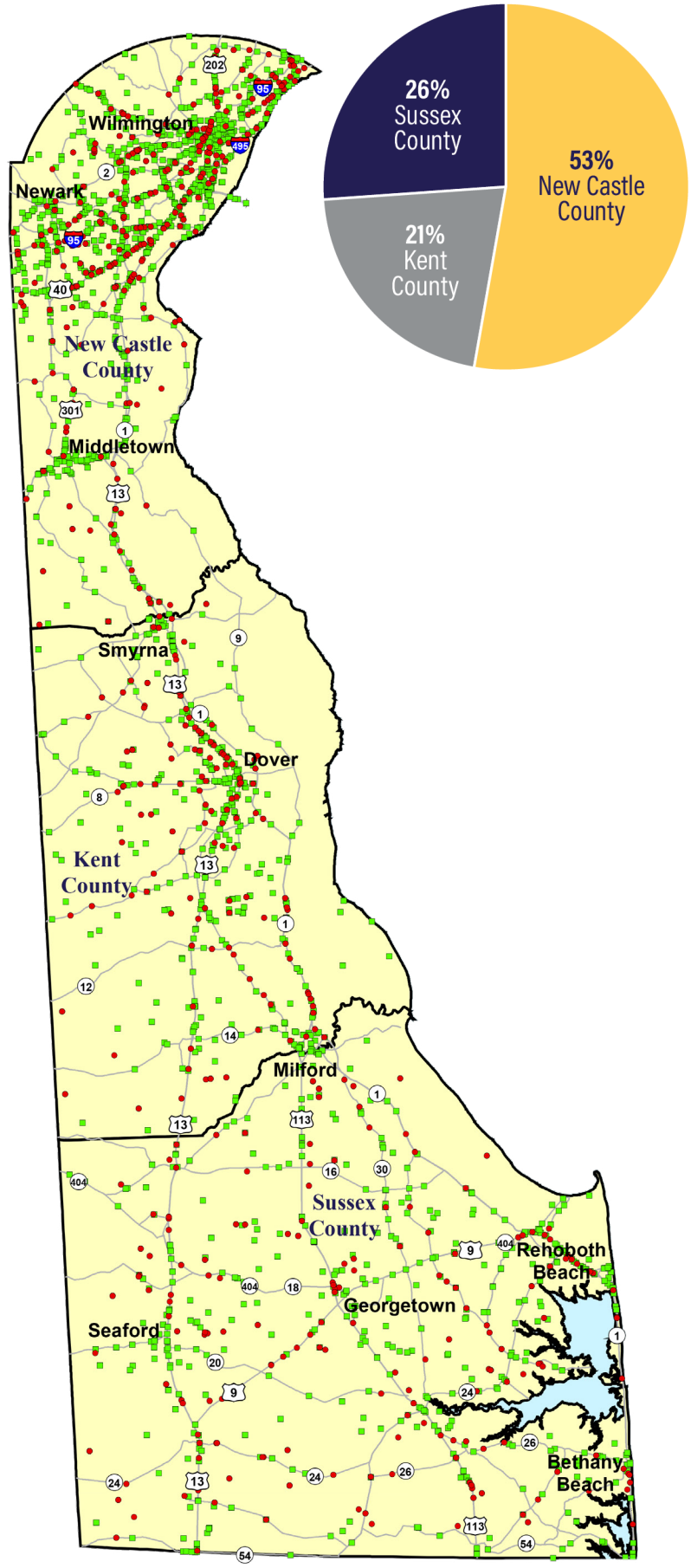
Manner of Impact



Roadway Functional Classification



Where?



Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

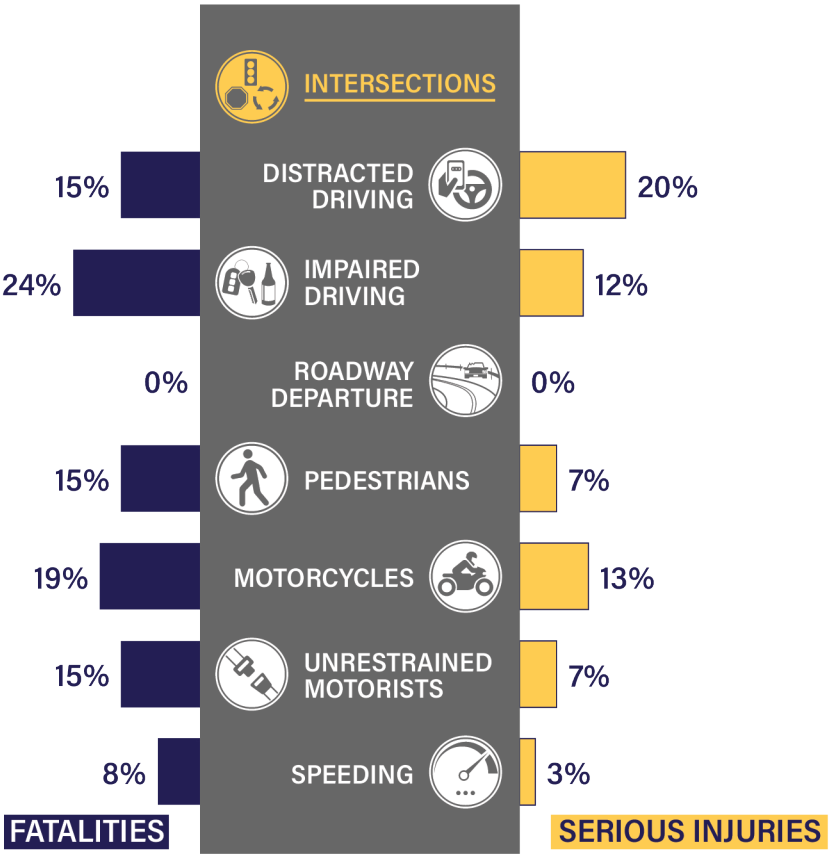
Statewide Overall Strategies

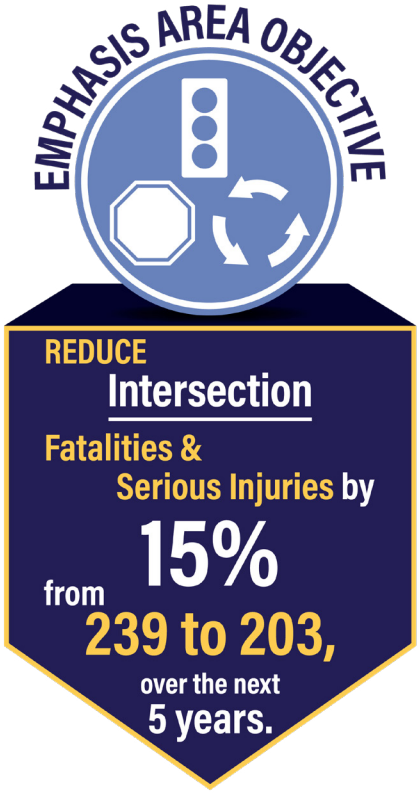
	Strategy 1: Implement statewide programs and policies that are aimed at improving funding, safety culture and agency practices in an effort to reduce fatalities and serious injuries.
1.1	Examine the feasibility of establishing a dedicated Highway Patrol.
1.2	Coordinate with municipalities to discuss the feasibility of developing Local Road Safety Plans.
1.3	Educate the public and legislators on various safety countermeasures, specific crash problems and transportation safety challenges.
1.4	Examine the feasibility of establishing a data-driven "Safety Corridor" program that provides for increased penalties for various moving violations targeted at driver behavioral improvements.
	Strategy 2: Implement statewide programs and policies that provide for the development of infrastructure related to Connected and Autonomous Vehicles (CAV) and supports Cooperative Automated Transportation (CAT).
2.1	Begin implementing safety-related recommendations from the CAV Council to prepare for CAV in Delaware.
2.2	Review national strategies and best practices regarding CAV and CAT and begin implementation of those strategies that will have the most benefit on crash reduction and driver behavior improvements.
2.3	Research, and where appropriate, implement policies and/or adopt specifications for enhanced pavement markings to support the implementation of CAV.
	Strategy 3: Improve linkages between land use and transportation to improve safety for all road users.
3.1	Support legislation that requires land use authorities to enter into agreements with DelDOT that link and comprehensively coordinate future land use and transportation decisions.

Emphasis Area 1
Intersections

Intersections involve multiple turning and crossing maneuvers that create numerous conflict points and crash potentials between vehicles, pedestrians, and bicyclists – making intersections one of the most complex traffic situations that road users encounter. Many factors can contribute to an intersection crash, many of which are identified as their own Emphasis Area within this Plan. From 2015 through 2019, nearly 40 percent of fatalities and serious injuries occurred at an intersection, as determined by the reporting officer at the time of the crash.

Intersection Emphasis Area Overlap with Other Emphasis Areas *(2015-2019 Crashes)*

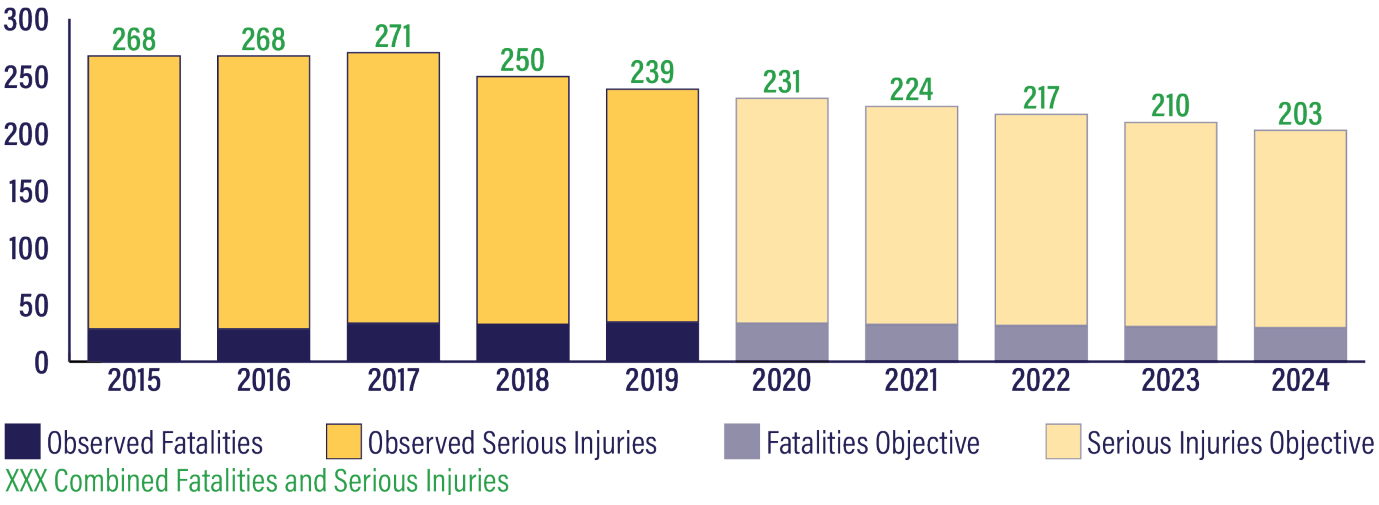




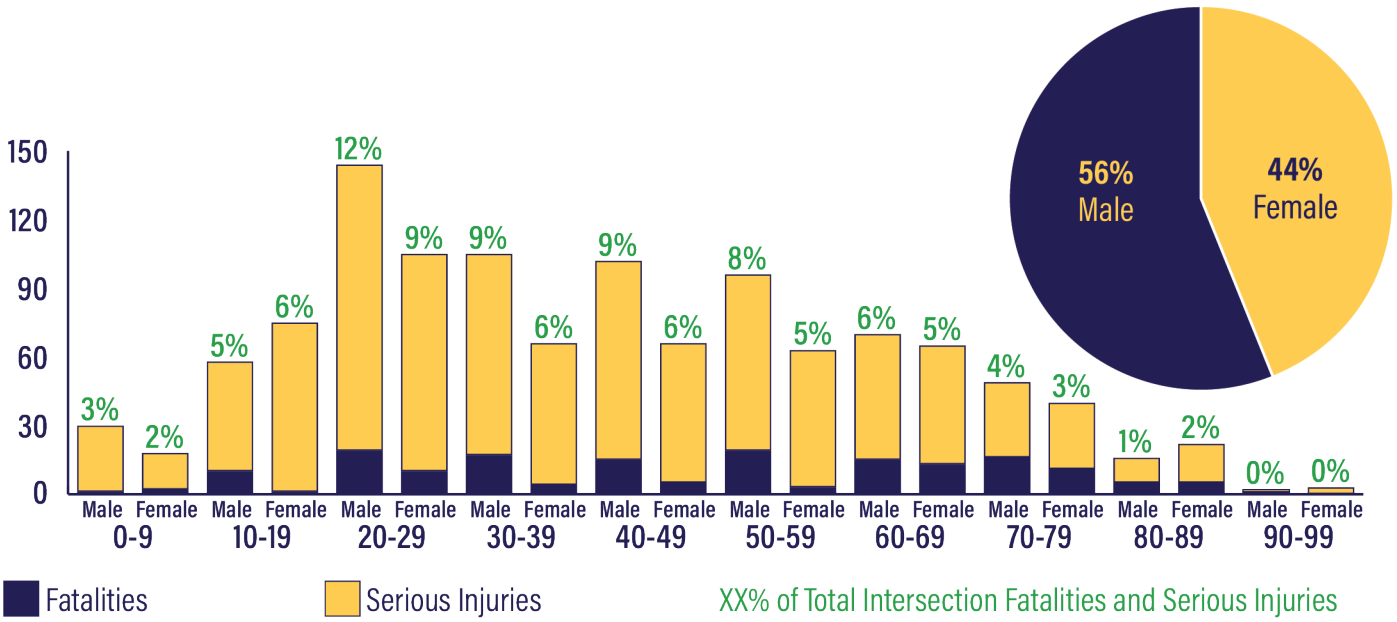
Crash Data Summary (2015-2019)

Intersection Crash Definition: Persons fatally or seriously injured in crashes that occurred at an intersection or related to an intersection or crossover, as determined by the reporting officer at the time of the crash.

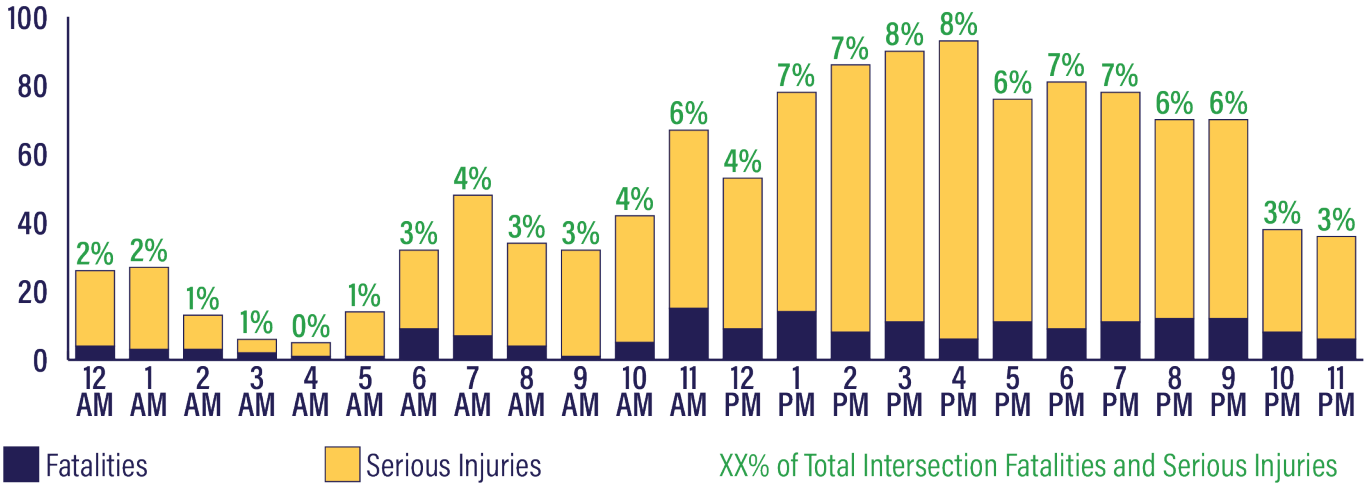
Intersection Fatalities and Serious Injuries *(5-Year Rolling Averages)*



Age/Gender of Crash Victim



When?



	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	6	6	3	1	2	4		2		4	11	6	4	11	13	5	5	16	13	3	11	17	4	2	149
Monday	3		2		2	1	4	3	2	3	2	7	9	11	18	12	9	6	10	12	9	7	6		138
Tuesday	3	2		1		3	13	11	6	7	8	11	10	14	13	12	19	10	11	9	5	10	3	1	182
Wednesday	4	1	1	2			4	7	7	6	6	7	4	6	11	15	13	10	11	13	10	10	5	4	157
Thursday	4	2			1	1	4	15	10	2	5	8	10	8	9	9	15	6	8	8	11	7	10	7	160
Friday	3	1	3			1	3	4	5	7	3	13	13	15	8	19	14	9	20	17	13	10	4	13	198
Saturday	3	15	4	2		4	4	6	4	3	7	15	3	13	14	18	18	19	8	16	11	9	6	9	211
Total	**26**	**27**	**13**	**6**	**5**	**14**	**32**	**48**	**34**	**32**	**42**	**67**	**53**	**78**	**86**	**90**	**93**	**76**	**81**	**78**	**70**	**70**	**38**	**36**	**1,195**

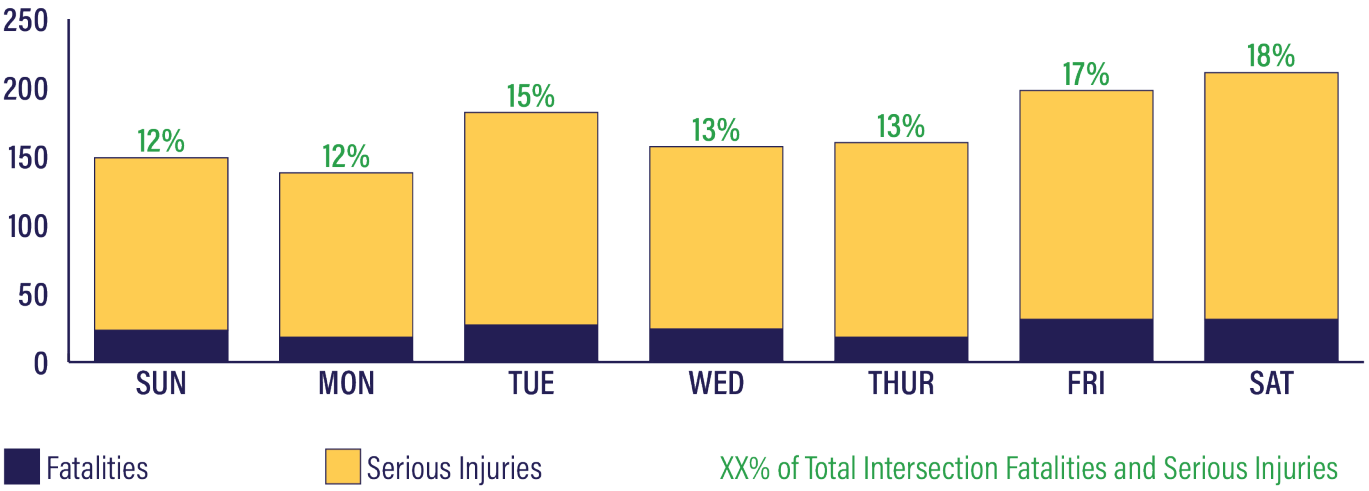
XX Intersection Fatalities and Serious Injuries during Day of Week and Hour of Day

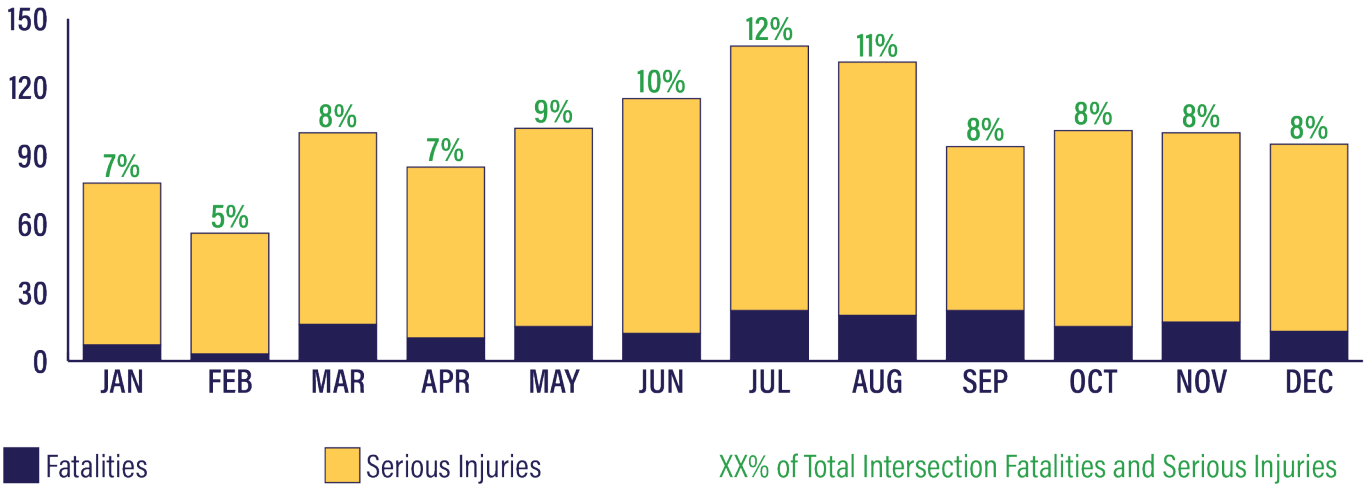
Lower Frequency — Higher Frequency

2015 to 2019 Intersection Fatalities & Serious Injuries

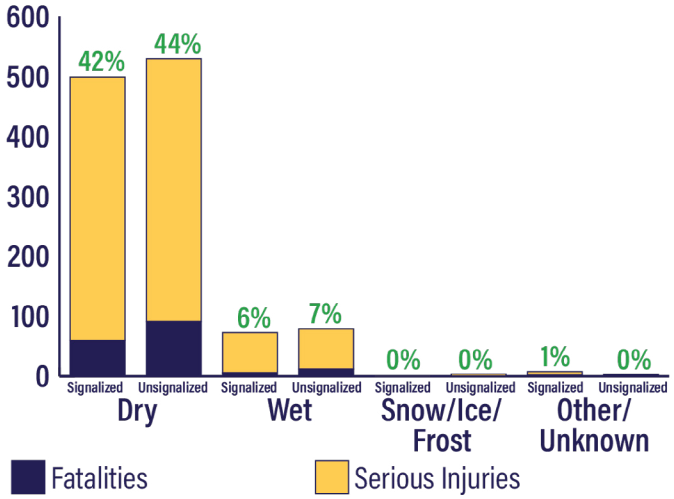
- 74% occurred in urban areas
- 60% occurred between 1 PM and 10 PM
- 56% were male
- 53% were angle crashes
- 53% occurred in New Castle County
- 51% occurred at unsignalized intersections
- 47% occurred along divided roadways
- 36% occurred at unsignalized intersections along undivided roadways
- 35% occurred on principal arterial roadways
- 21% were 20 to 29 years old
- 13% occurred on wet/snowy/icy roadways
- 13% occurred during dark, unlit conditions

When?

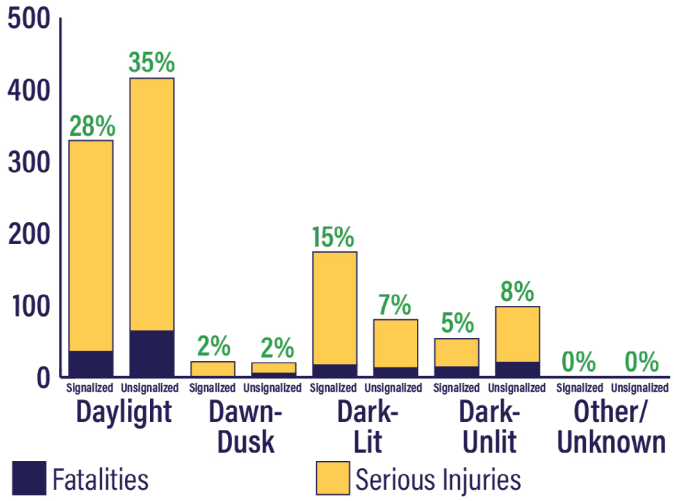




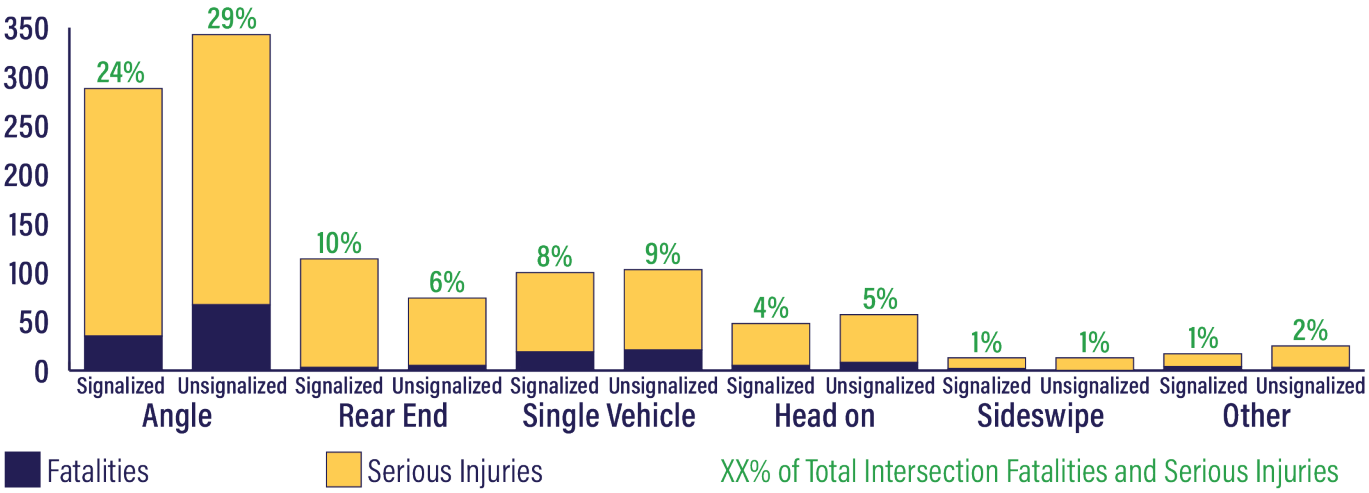
Surface Condition



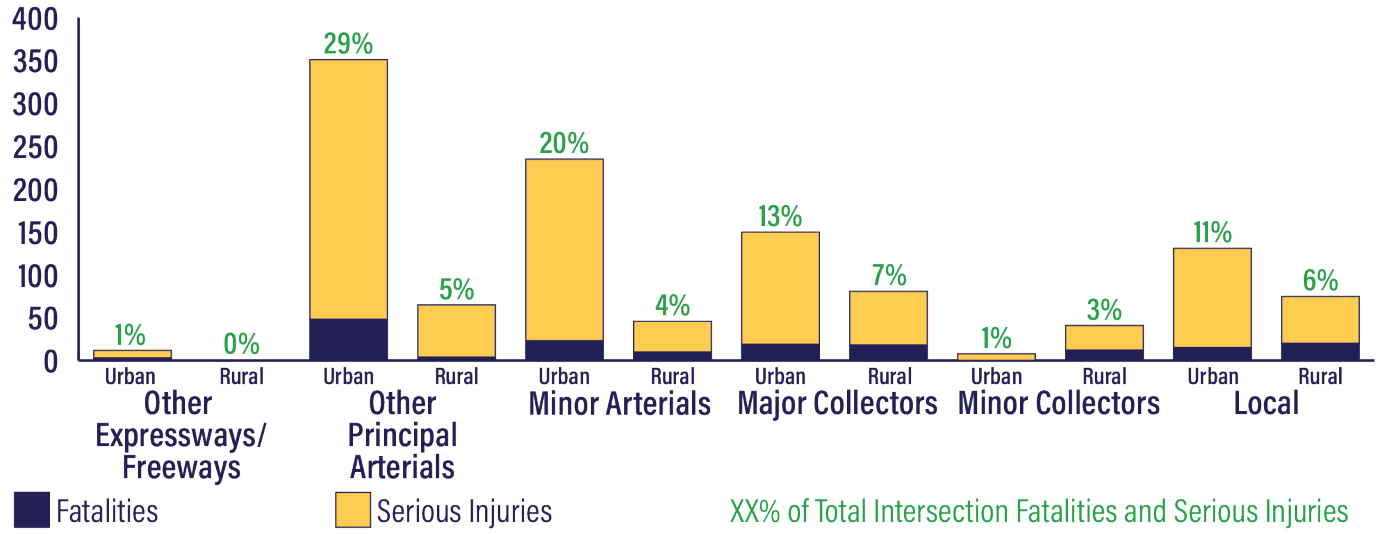
Lighting Condition



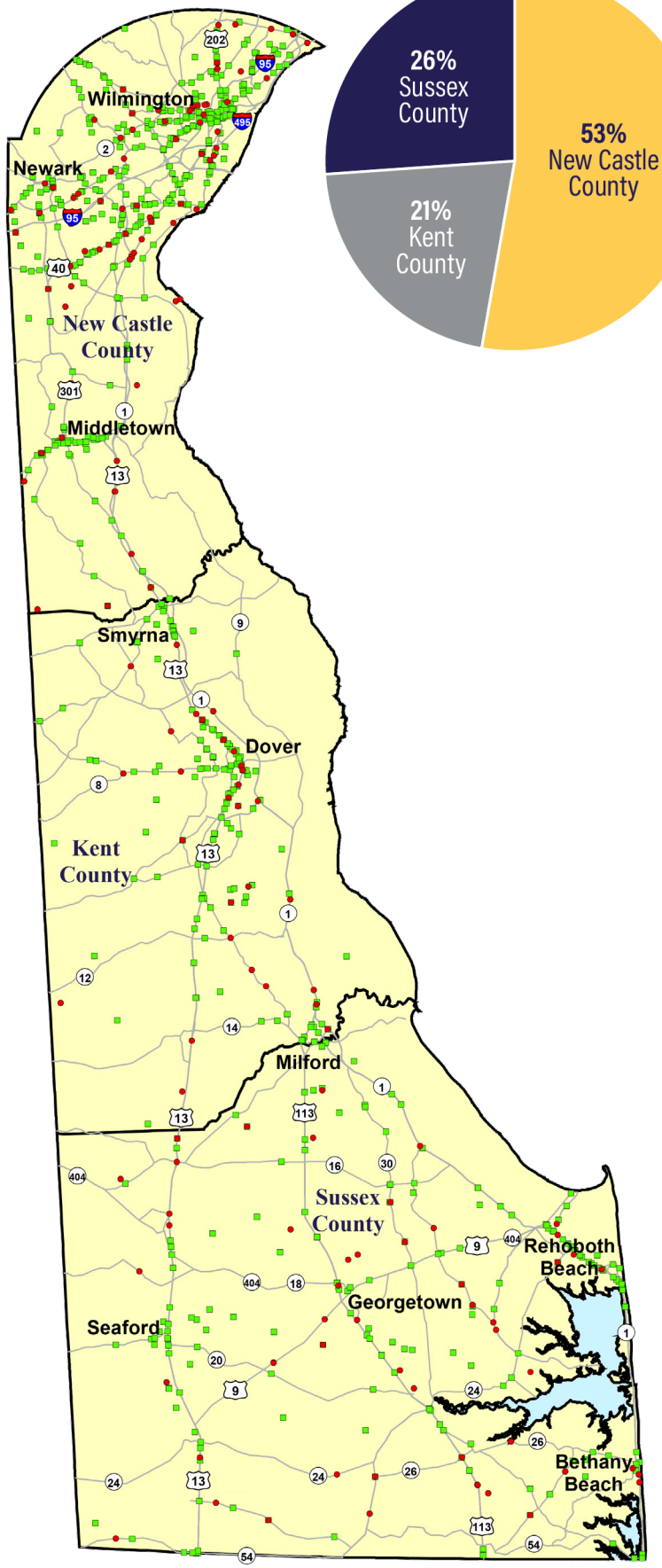
Manner of Impact

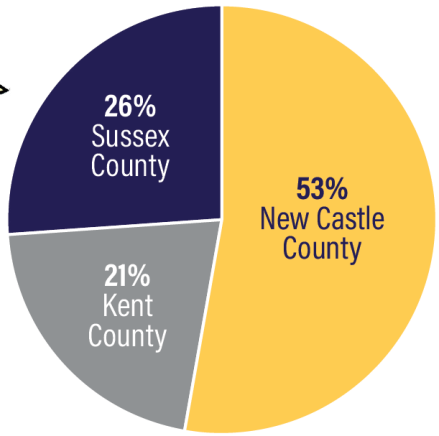


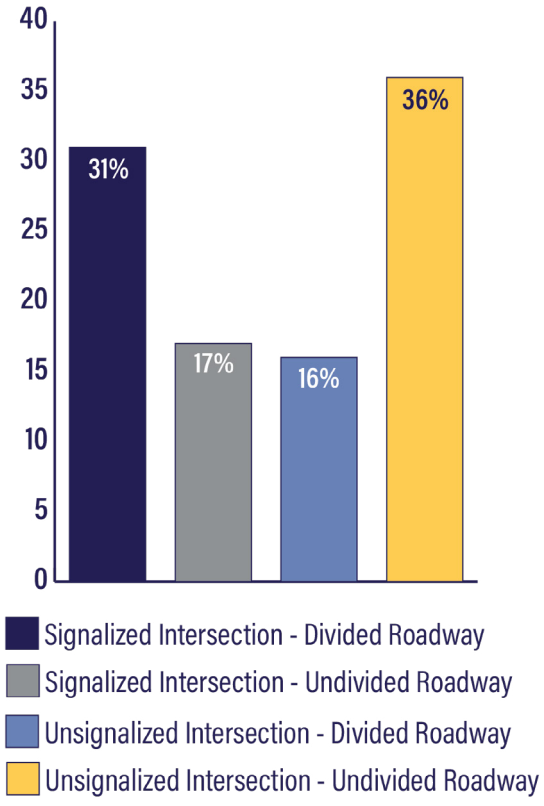
Roadway Functional Classification



Where?







Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

Emphasis Area Strategies: Intersections

	Strategy 1: Reduce the frequency and severity of intersection crashes through operational, geometric and traffic control device improvements.
1.1	Continue to prioritize critical corridors for safety audits to identify and implement effective countermeasures, such as reducing conflict points along divided highways.
1.2	Implement systemic intersection-related safety improvements at high-risk intersections.
1.3	Establish a proactive conflict point removal program focusing on median crossover closures, road vacations and removal of redundant intersections.
1.4	Establish an intersection safety program, similar to the Corridor Capacity Preservation Program (CCPP) with the goal of eliminating recurring high crash intersections.
1.5	Investigate the feasibility of piloting a traffic signal countdown indication.
1.6	Perform before/after studies to evaluate and identify the most effective treatments for a given crash type/location.
	Strategy 2: Reduce the frequency and severity of intersection crashes using innovative technology and automated enforcement practices.
2.1	Expand the Electronic Red Light Safety Program (ERLSP) to include additional signalized intersections and utilize collections to fund additional safety projects.
2.2	Support the enactment of legislation to expand the use of automated enforcement for intersection violations including "block the box" and stop sign running.
2.3	Utilize technology to collect data regarding near-miss events at intersections to support the identification of appropriate safety countermeasures.
2.4	Implement Digital Short-Range Communications (DSRC) and/or cellular-based technology at intersections to ready infrastructure for the safety benefits of Vehicle to Infrastructure communications.
2.5	Investigate the feasibility of implementing dynamic all-red and dilemma zone protection at signalized intersections to reduce the occurrence of red light running.
	Strategy 3: Develop and distribute consistent public information messaging to educate the public on traffic laws, new traffic control devices and intersection safety.
3.1	Implement targeted public awareness campaigns to improve road user knowledge and comprehension of new and existing traffic control devices for intersections.
3.2	Evaluate the analytics of social media pages to determine if appropriate target audiences are being reached with safety messaging.
3.3	Review and revise the Delaware Driver Manual to incorporate new and existing traffic control devices to improve road user's knowledge.

Emphasis Area Strategies: Intersections

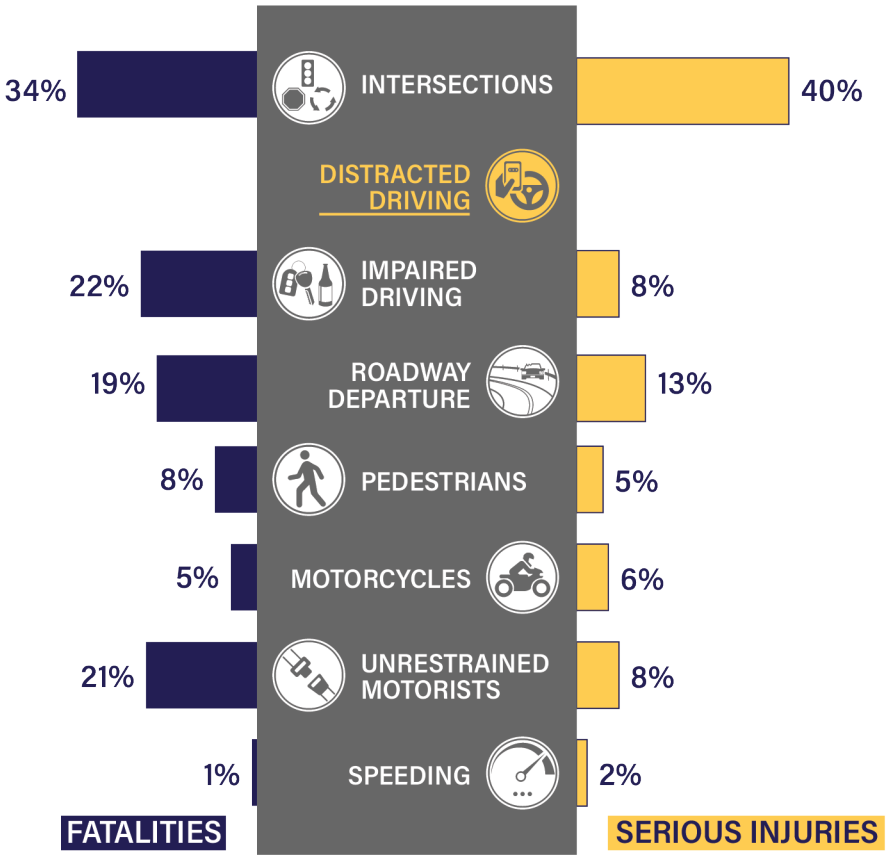
Strategy 4: Implement policies and guidelines targeting safety improvements at intersections.

4.1	Update DelDOT's Roundabout Design Guidance Memorandum to include the latest best practices and encourage designers to consider roundabouts where appropriate.
4.2	Update the DelDOT Roundabout Design Guidance Memorandum to include design guidelines for compact roundabout installations.
4.3	Evaluate the need for revisions to DelDOT's Complete Streets policy and implementation plan.

Emphasis Area 2
Distracted Driving

Distracted driving is frequently associated with talking or texting on a cell phone; however, distracted driving also includes other distractions such as eating or grooming while driving, or any distraction that takes the driver's attention away from the task of safe driving. Sending or reading a text takes your eyes off the road for 5 seconds, which equates to traveling the length of a football field with your eyes closed at 55 mph. Delaware's hands-free cell phone law went into effect on January 2, 2011; however, continued efforts are needed to fight this complex behavioral issue.

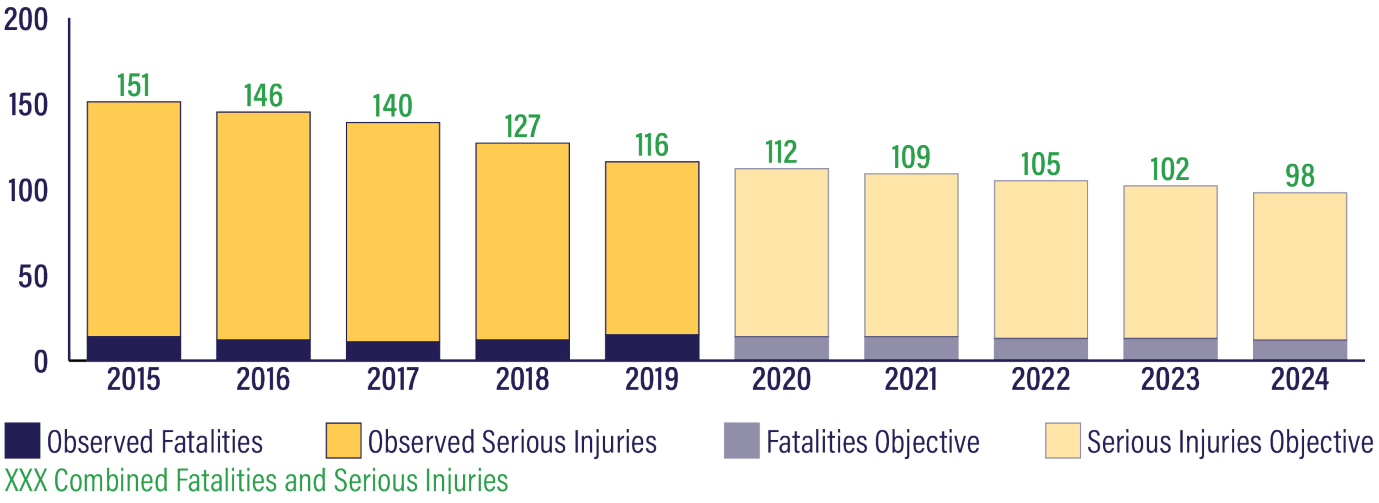
Distracted Driving Emphasis Area Overlap with Other Emphasis Areas (*2015-2019 Crashes*)



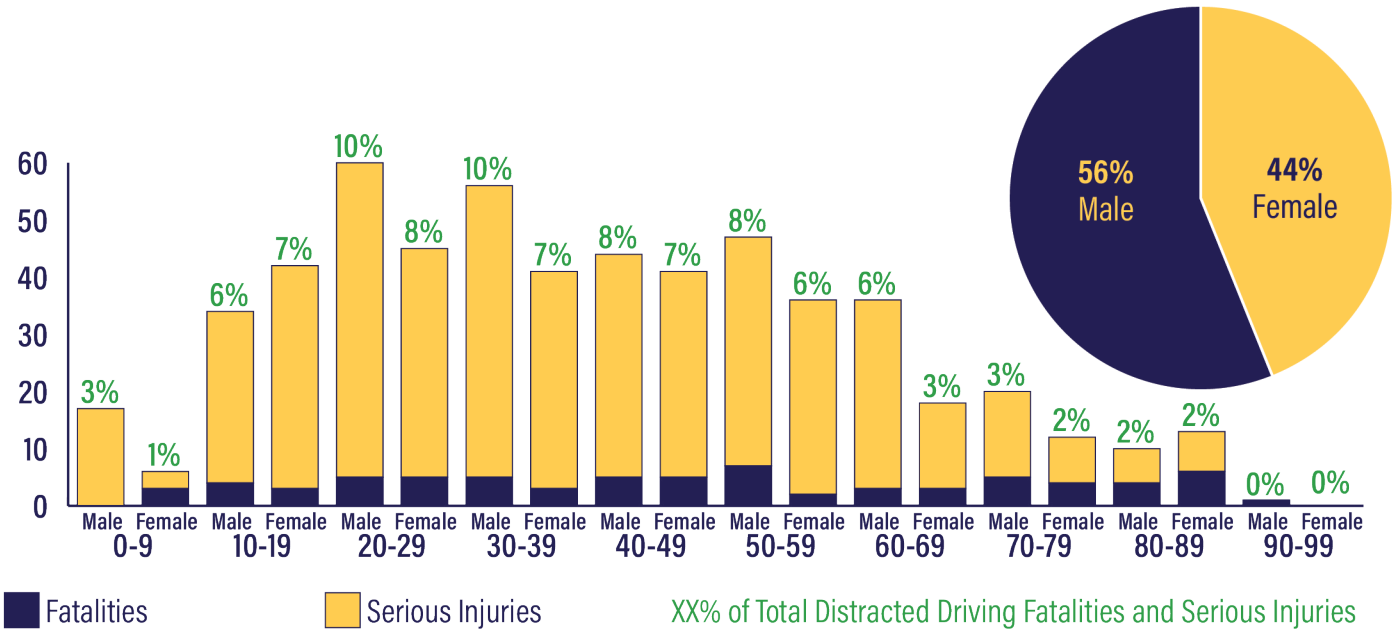
Crash Data Summary (2015-2019)

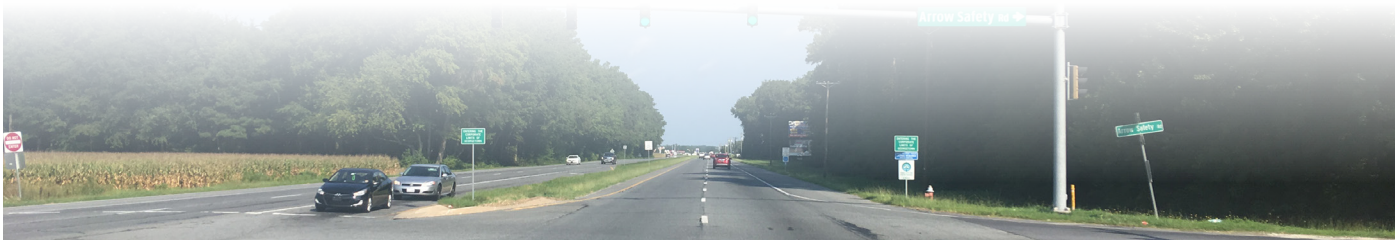
Distracted Driving Crash Definition: Persons fatally or seriously injured in a crash that involved distracted or inattentive driving. Driver distraction includes use of cell phone/texting, grooming/applying makeup, attending to children, having a verbal dispute, use of headphones, use of other electronic devices, eating, external distraction, or other inside the vehicle distraction.

Distracted Driving Fatalities and Serious Injuries *(5-Year Rolling Averages)*

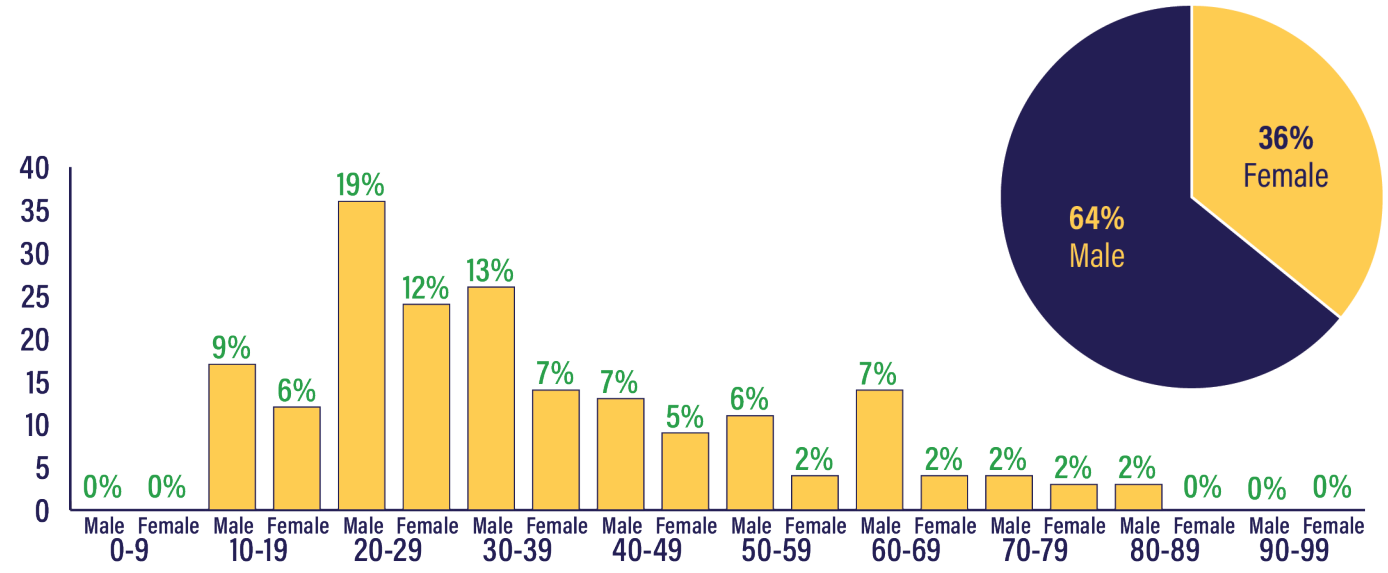


Age/Gender of Crash Victim

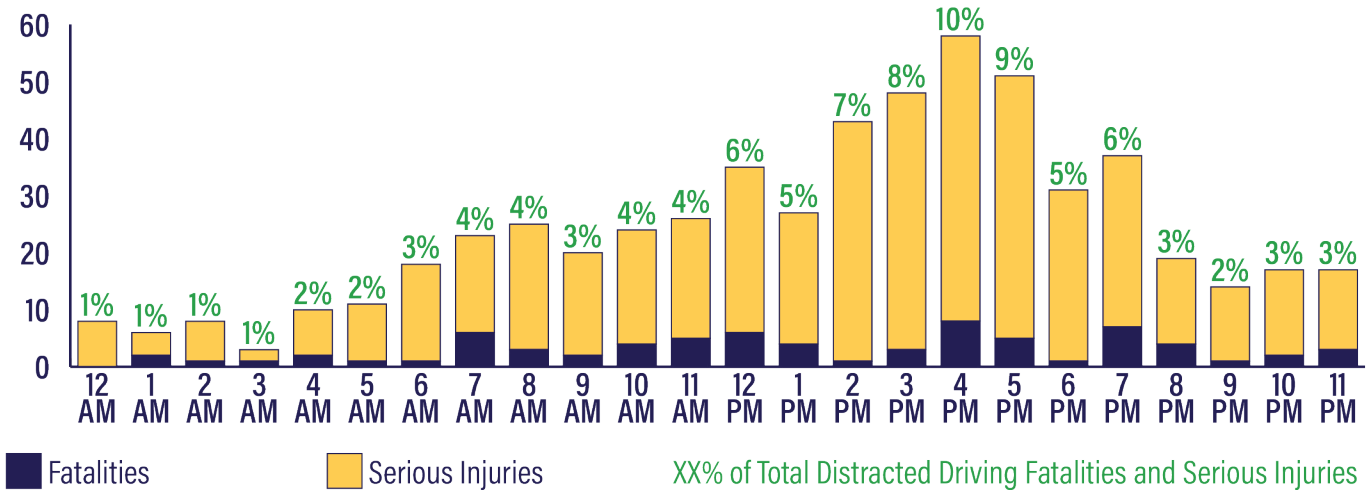




Age/Gender of Distracted Drivers



When?

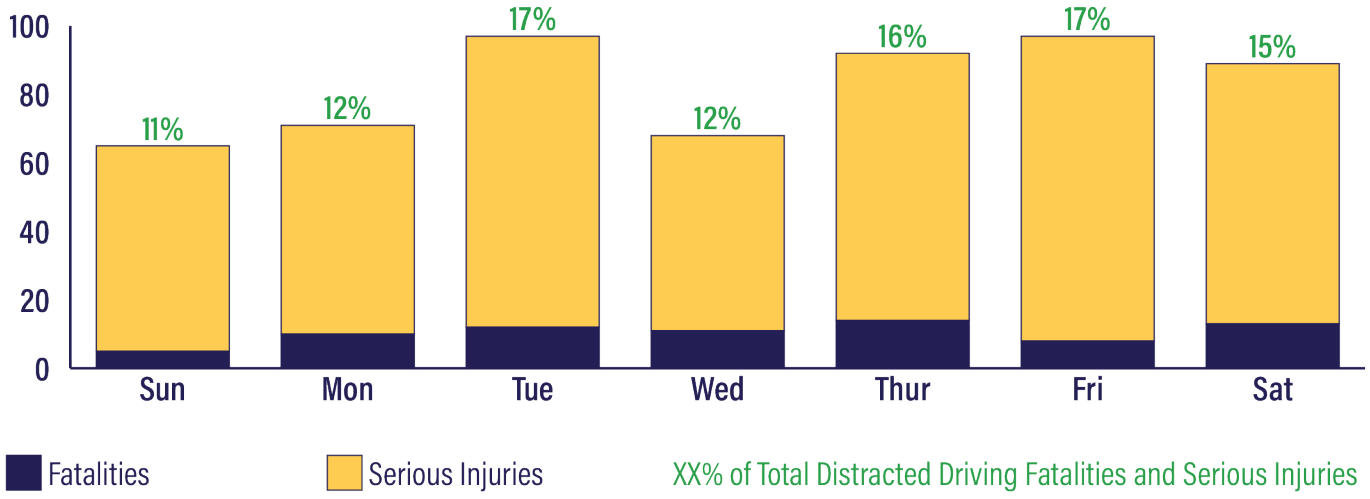


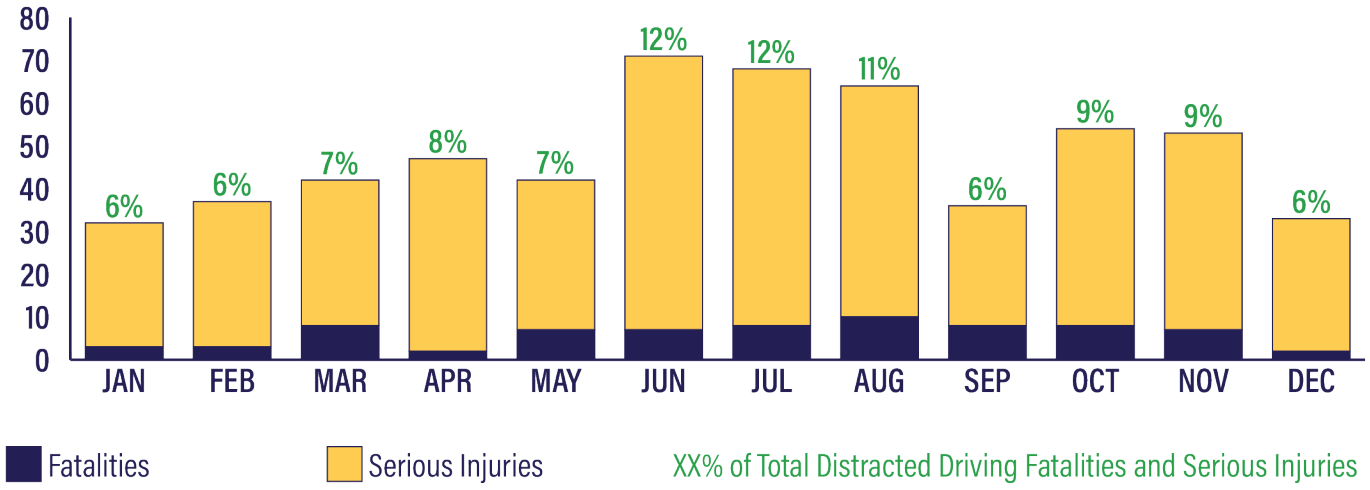
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	2		1		2	3	3			6	5	3	5	8	2	3	1	5	9	2	1	1	1	2	65
Monday	1	2			1	3		1	5	2	3	2	6	2	8	10	7	7	3	5	2	1			71
Tuesday			2			2	4	9	4	4	2	7	3	1	12	2	16	10	5	2	4	6	1	1	97
Wednesday			2		2	1	4	2	1	2	3	2	3	4	5	11	5	6	2	4	5		3	1	68
Thursday	2				1		4	6	10	2	4	1	6	4	5	11	8	8	4	7	2		3	4	92
Friday	3	1	1		1	1	2	2	3	2	1	6	7	6	3	6	13	11	6	7	2	2	5	6	97
Saturday		3	2	3	3	1	1	3	2	2	6	5	5	2	8	5	8	4	2	10	3	4	4	3	89
Total	8	6	8	3	10	11	18	23	25	20	24	26	35	27	43	48	58	51	31	37	19	14	17	17	579

XX Distracted Driving Fatalities and Serious Injuries during Day of Week and Hour of Day

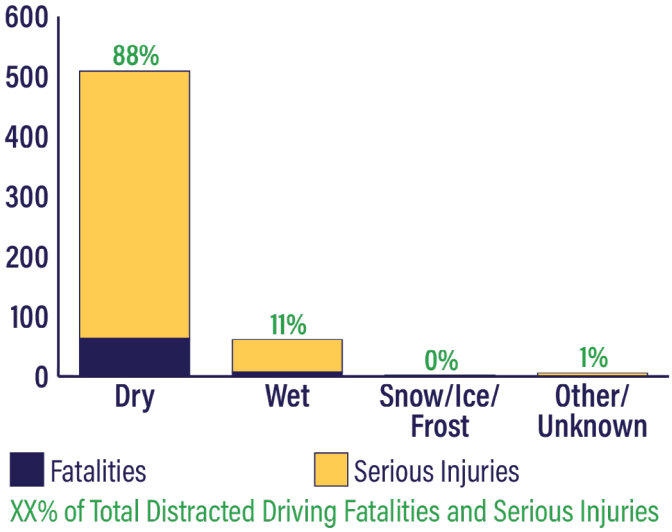
Lower Frequency — Higher Frequency

When?

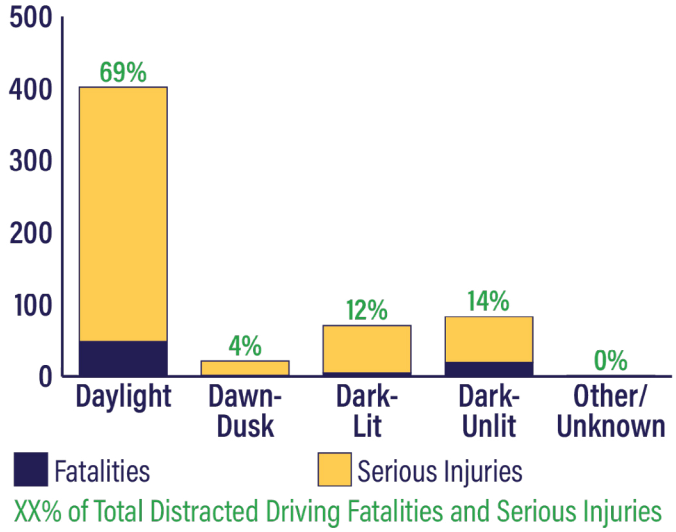




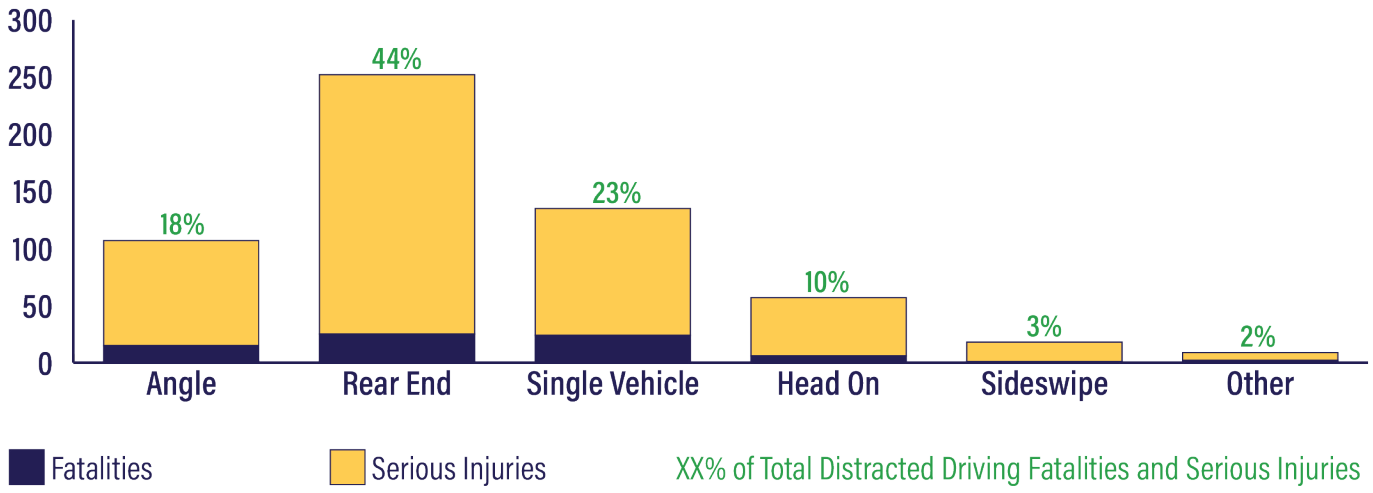
Surface Condition



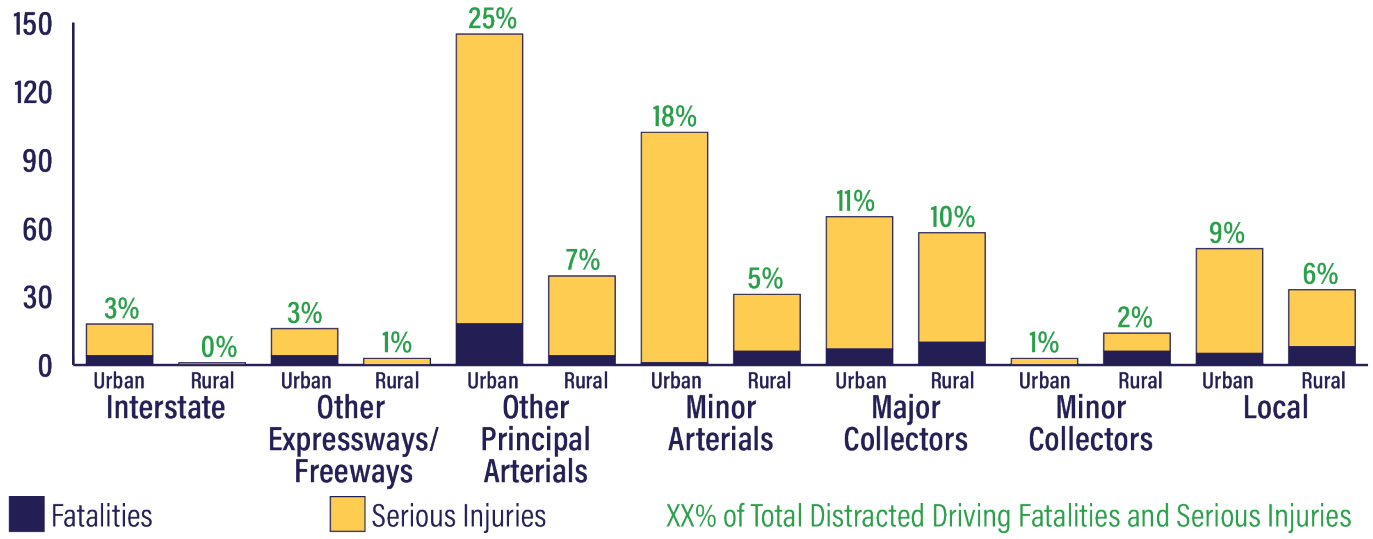
Lighting Condition



Manner of Impact



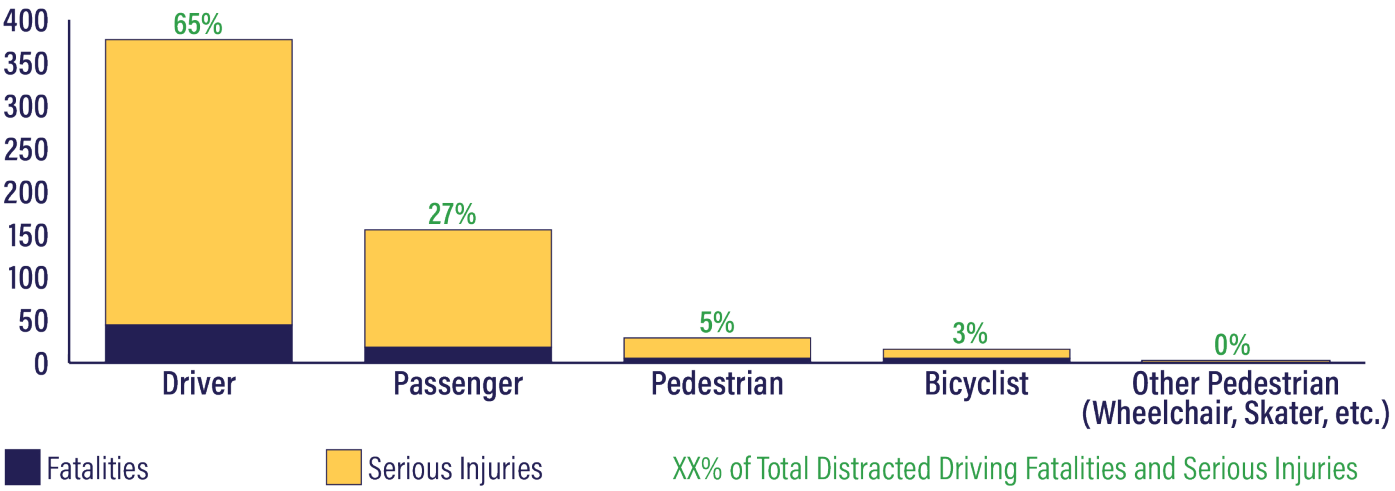
Roadway Functional Classification

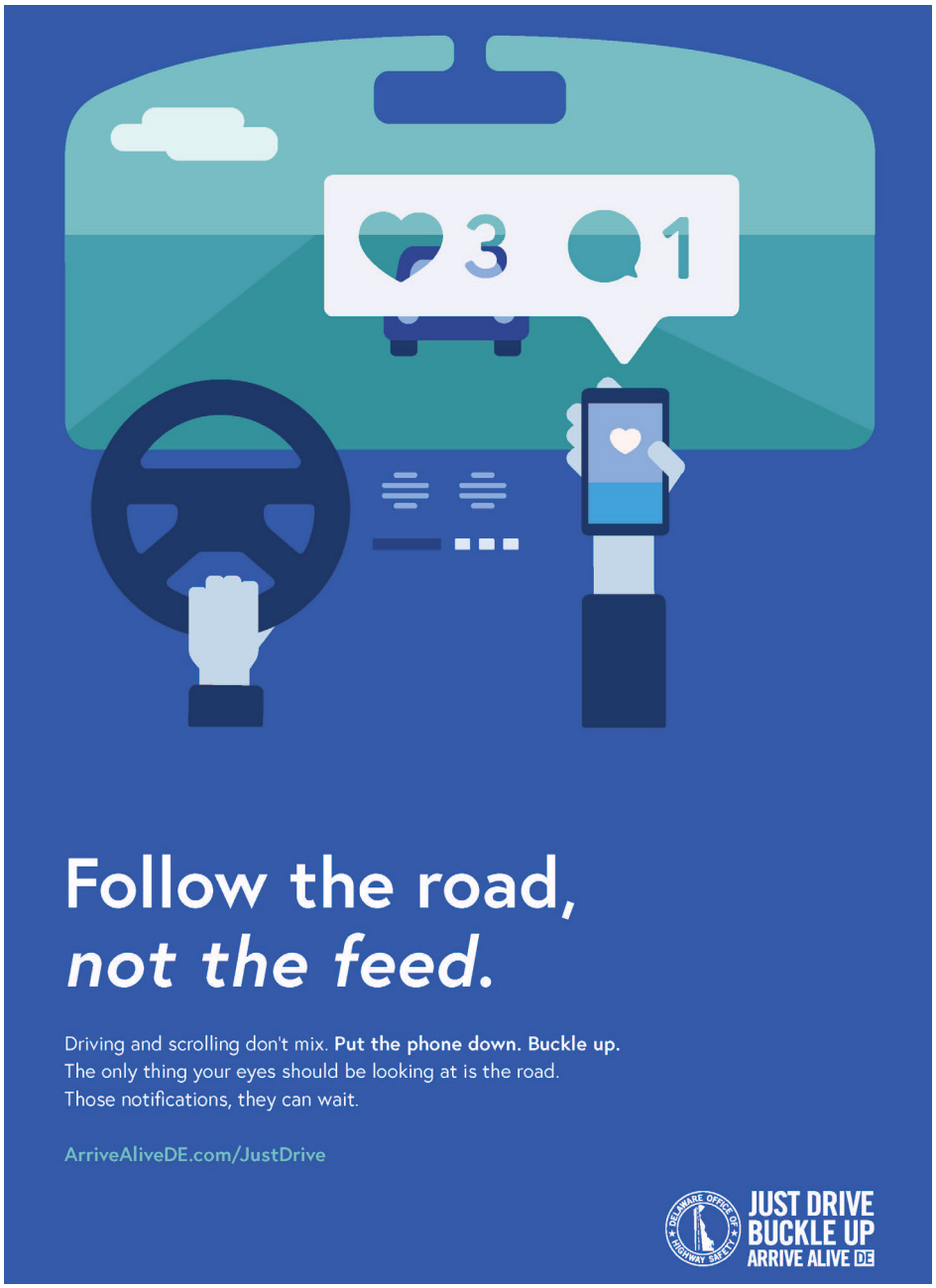


2015 to 2019 Distracted Driving Fatalities & Serious Injuries

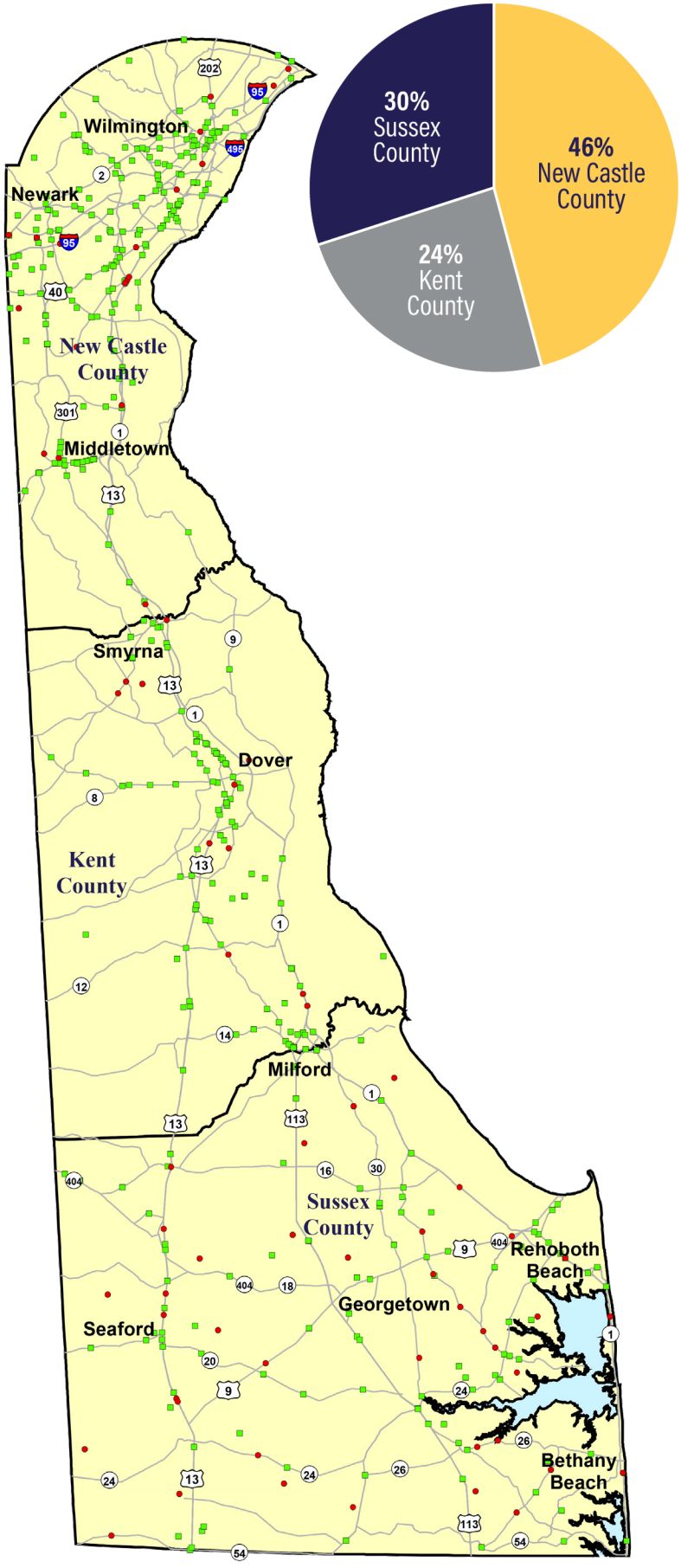
- 69% occurred in urban areas
- 61% occurred along arterial roadways
- 45% occurred in New Castle County
- 44% were rear end crashes
- 35% were 20 to 39 years old
- 31% occurred during dark/dawn/dusk conditions
- 17% were rear end crashes between 2 PM and 6 PM
- 12% occurred on wet/snowy/icy roadways

Person Type


400
350
300
250
200
150
100
50
0
65%
27%
5%
3%
0%
Driver
Passenger
Pedestrian
Bicyclist
Other Pedestrian (Wheelchair, Skater, etc.)
Fatalities
Serious Injuries
XX% of Total Distracted Driving Fatalities and Serious Injuries


3
1
Follow the road,
not the feed.
Driving and scrolling don't mix. Put the phone down. Buckle up.
The only thing your eyes should be looking at is the road.
Those notifications, they can wait.
ArriveAliveDE.com/JustDrive
JUST DRIVE
BUCKLE UP
ARRIVE ALIVE DE

Where?



Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

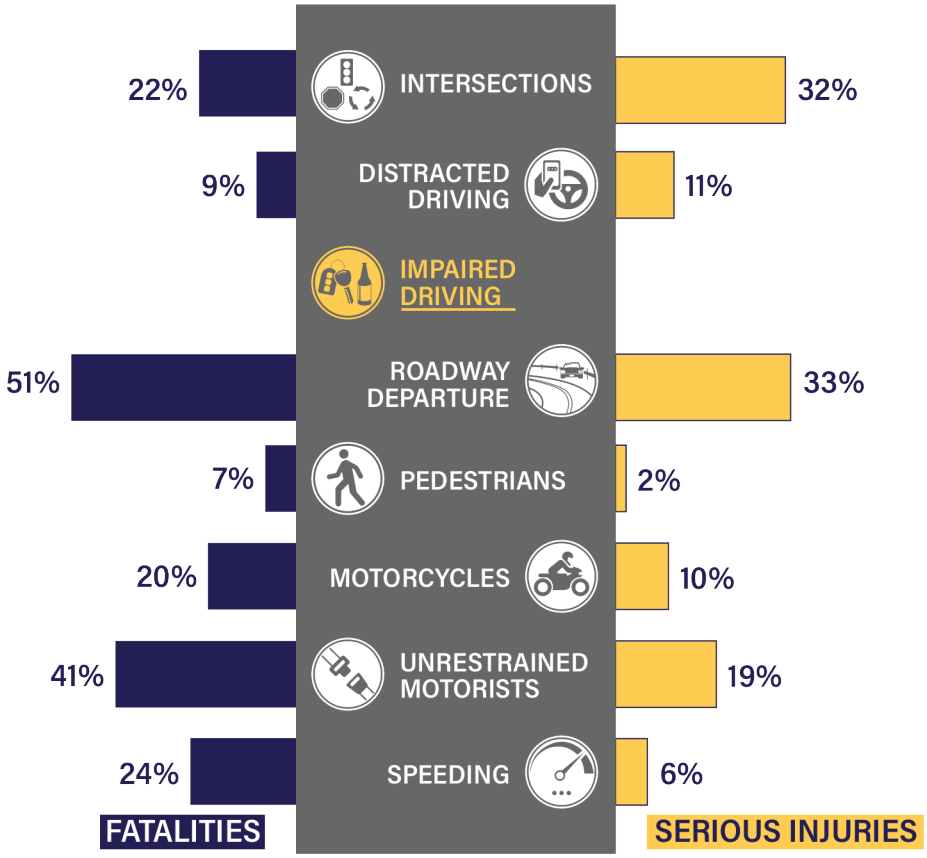
Emphasis Area Strategies: Distracted Driving

	Strategy 1: Develop and distribute consistent public information messages to increase public awareness of the laws and dangers of distracted driving.
1.1	Continue to incorporate distracted driving messaging into safety campaigns.
1.2	Partner with stakeholders to promote distracted driving awareness by encouraging employers to implement policies to eliminate distracted driving.
1.3	Increase young driver awareness of the dangers of distracted driving through revisions to the Driver Education curriculum.
1.4	Incorporate distracted driving education into defensive driver education programs.
	Strategy 2: Increase distracted driving enforcement programs.
2.1	Conduct high visibility enforcement campaigns targeted at reducing distracted driving.
2.2	Identify best practices for distracted driving enforcement.
	Strategy 3: Support legislative action to strengthen distracted driving efforts.
3.1	Consider expanding distracted driving laws to eliminate the use of hands-free devices.
3.2	Investigate the need for enhancements to the existing cell phone law to incorporate new technologies into the list of banned devices.
3.3	Support legislative enhancements to incorporate points on a driver's record for cell phone violations.
	Strategy 4: Improve roadway infrastructure to minimize the consequences of distracted driving.
4.1	Continue to install shoulder and centerline rumble strips to alert distracted drivers when they drift out of the travel lane.
	Strategy 5: Improve data collection and monitoring of distracted driving trends.
5.1	Provide law enforcement training regarding properly identifying distracted driving as a contributing factor in crashes to better quantify the distracted driving problem.
5.2	Evaluate citation data related to cell phone usage while driving to determine if the data could be used as an additional source for problem identification.
5.3	Improve field level accessibility of data related to previous violations/warnings to law enforcement.

Emphasis Area 3
Impaired Driving

Drug or alcohol impairment has major effects on the cognitive abilities of a motor vehicle operator and is a contributing factor in many crashes resulting in fatalities and serious injuries. Fatalities and serious injuries considered in this Emphasis Area occurred in a crash involving a driver that is legally impaired by alcohol and/or drugs. In Delaware, a driver is considered legally impaired when their blood alcohol concentration (BAC) is 0.08 percent or greater or there is the presence of an illicit or recreational drug within the driver's blood. From 2015 through 2019, impaired driving was a factor in 30 percent of all fatalities and 16 percent of all serious injuries.

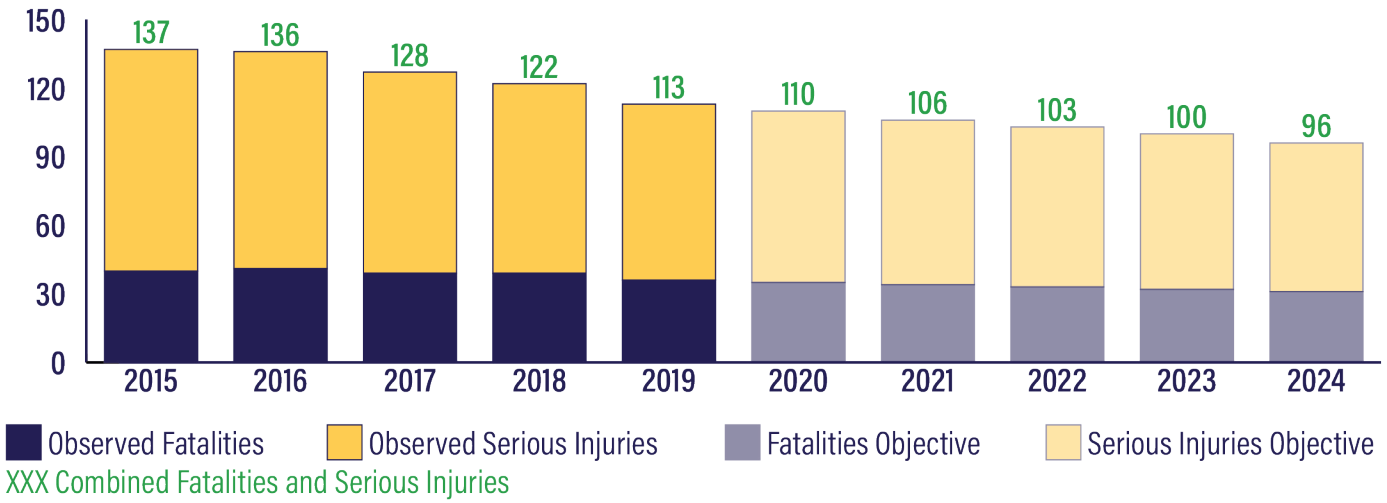
Impaired Driving Emphasis Area Overlap with Other Emphasis Areas (*2015-2019 Crashes*)



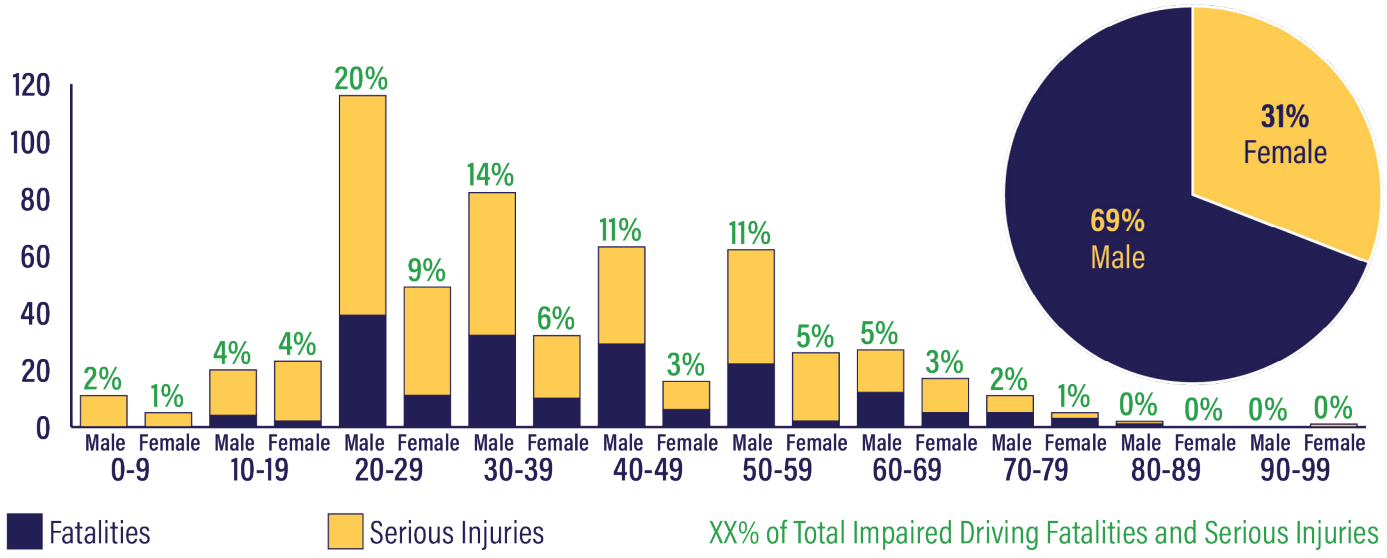
Crash Data Summary (2015-2019)

Impaired Driving Crash Definition: Persons fatally or seriously injured in crashes that involved an impaired driver.

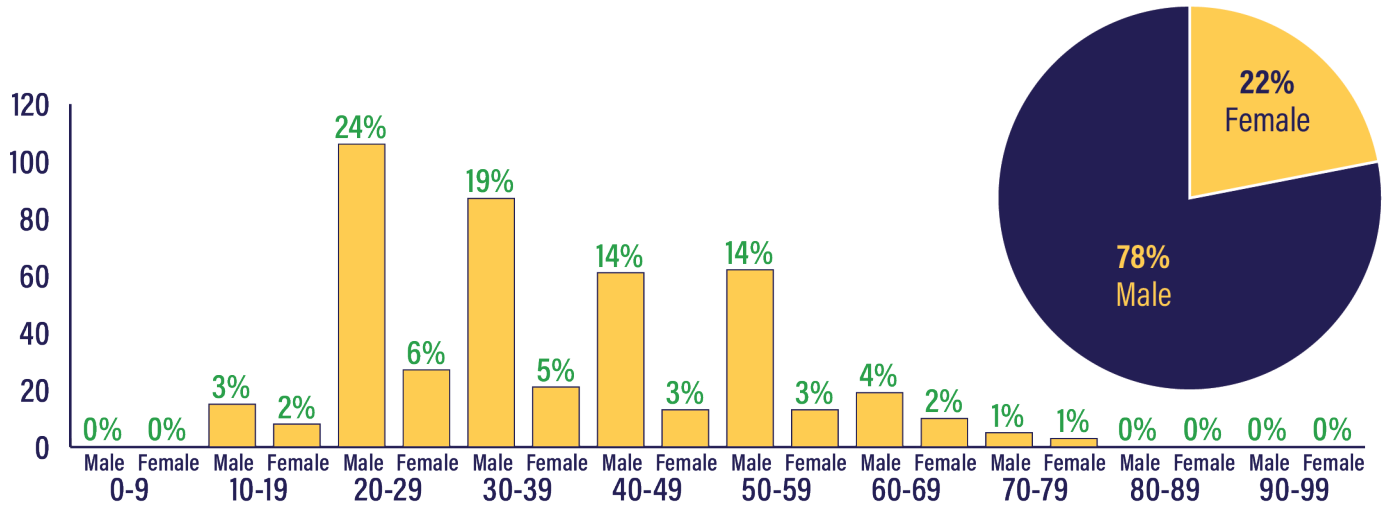
Impaired Driving Fatalities and Serious Injuries *(5-Year Rolling Averages)*



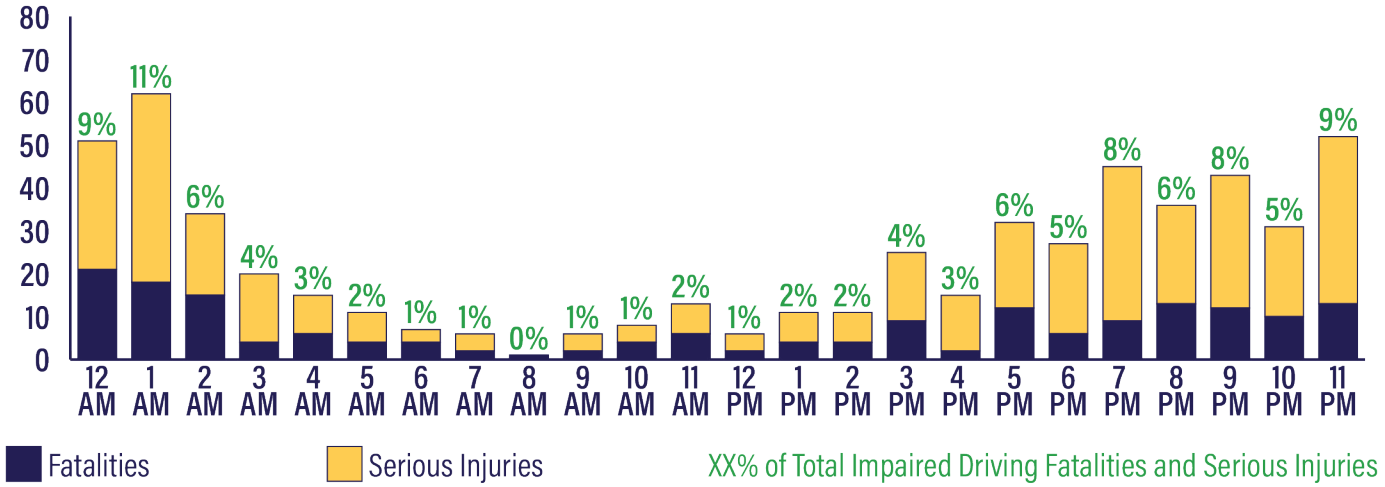
Age/Gender of Crash Victim



Age/Gender of Impaired Driver



When?

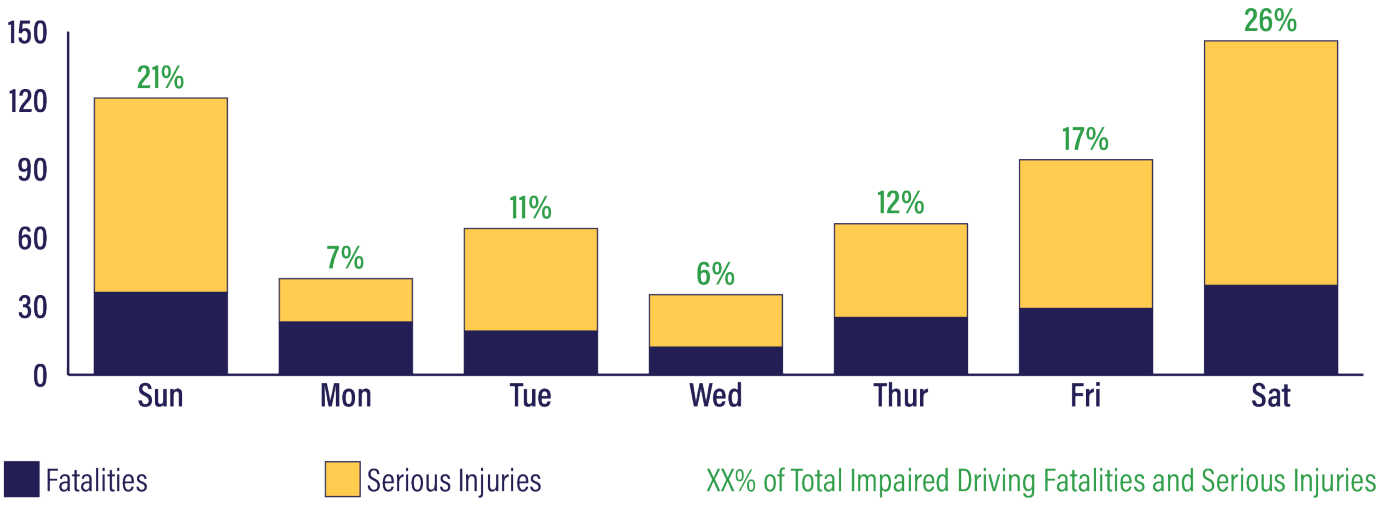


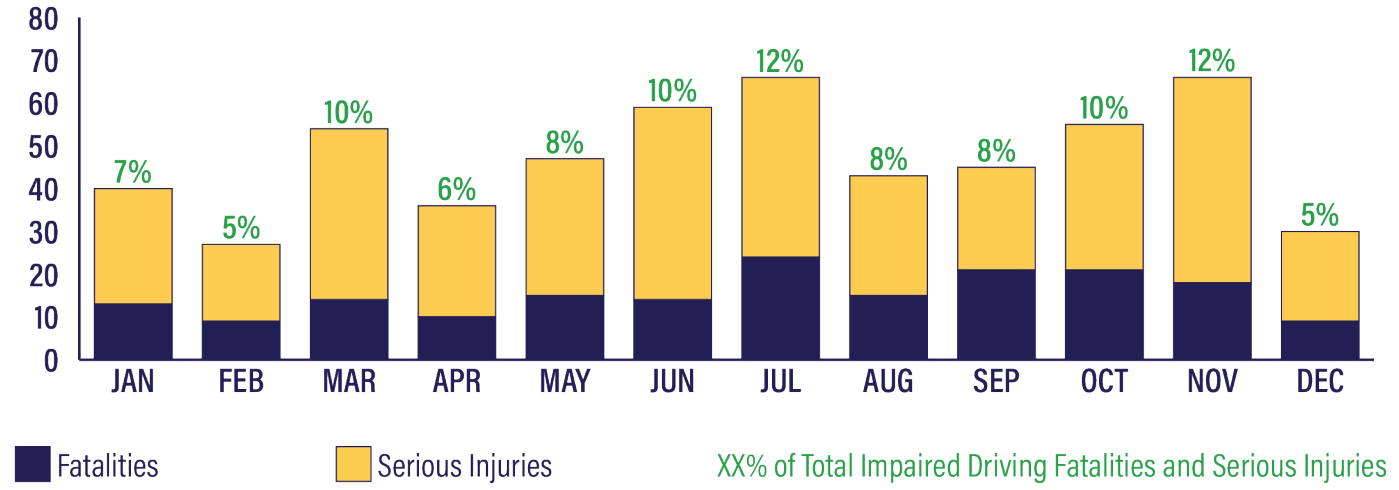
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	13	22	11	10	7	2		2			1	2	1		3	2	2	3	7	8	7	7	4	7	121
Monday	4	5	2	1			2				1			1	1	5		3	2	3	6	1	3	2	42
Tuesday	3	2	3	1		2	1	2	1	2	2	3		3		1	5	4	4	4	4	7	6	4	64
Wednesday	2		2	1	2						2			1		5		3	1	1	4	2	3	6	35
Thursday	5	6	4		1	1		2		2	1	1	1	4	3	4	1	5	2	6	2	9	1	5	66
Friday	10	10	5	3		1	1			1		1	1		1	1	2	5	6	8	9	6	4	19	94
Saturday	14	17	7	4	5	5	3			1	1	6	3	2	3	7	5	9	5	15	4	11	10	9	146
Total	51	62	34	20	15	11	7	6	1	6	8	13	6	11	11	25	15	32	27	45	36	43	31	52	568

XX Impaired Driving Fatalities and Serious Injuries during Day of Week and Hour of Day

Lower Frequency — Higher Frequency

When?

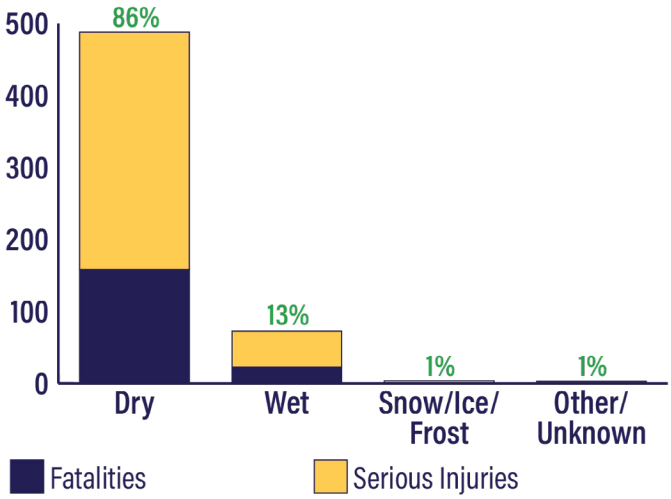




2015 to 2019 Impaired Driving Fatalities & Serious Injuries

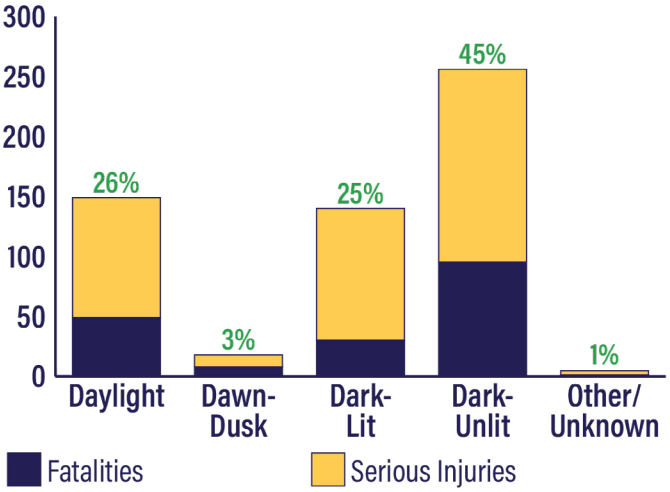
- 69% were male
- 64% occurred on a Friday, Saturday, or Sunday
- 59% occurred in urban areas
- 53% occurred along collector or local roadways
- 53% were impaired persons
- 45% occurred during dark (unlit) conditions
- 42% occurred in New Castle County
- 42% occurred from 7 PM to 3 AM on a Friday, Saturday, or Sunday
- 39% occurred in roadway departure crashes
- 29% were 20 to 29 years old
- 20% occurred on principal arterials
- 18% occurred on rural collector/local roads during dark (unlit) conditions

Surface Condition



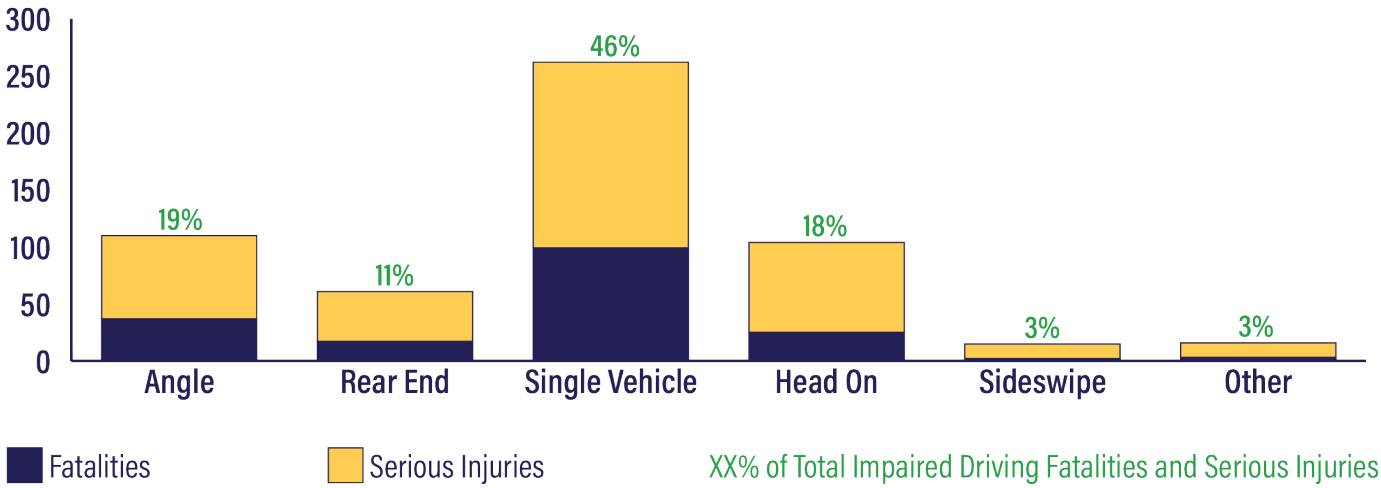
XX% of Total Impaired Driving Fatalities and Serious Injuries

Lighting Condition



XX% of Total Impaired Driving Fatalities and Serious Injuries

Manner of Impact

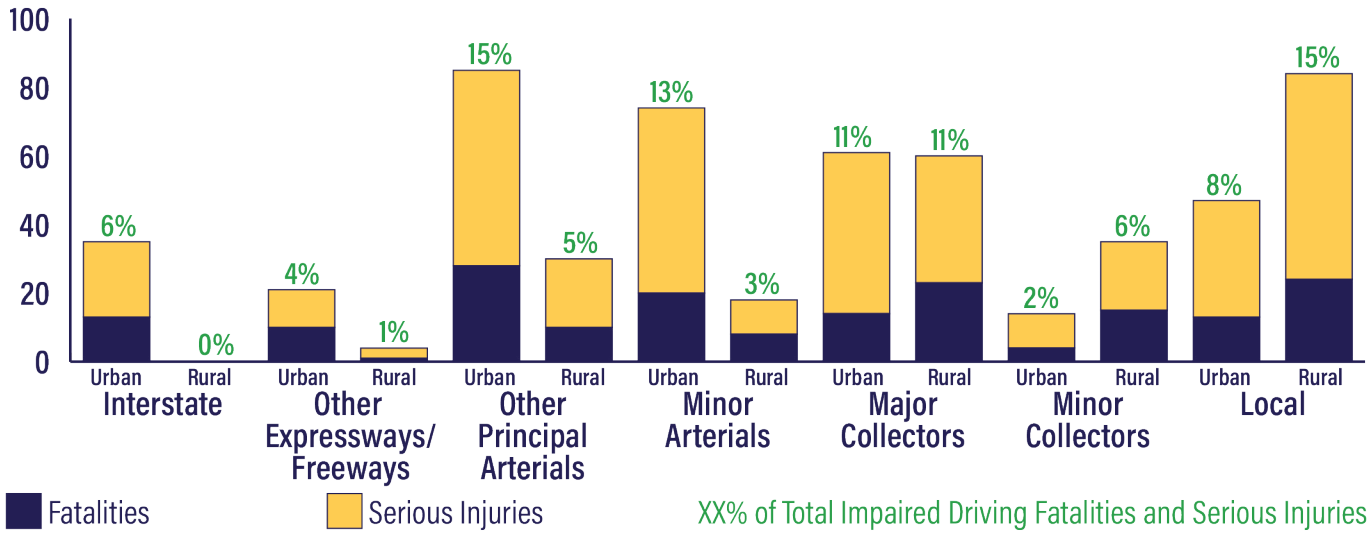


XX% of Total Impaired Driving Fatalities and Serious Injuries

Impaired Drivers in 2015-2019 Fatal and Serious Injury Crashes

- 87% of impaired drivers were Delaware Residents
- 78% of impaired drivers were male
- 54% of impaired drivers were 20 to 39 years old
- 45% of impaired drivers were seriously injured
- 29% of impaired drivers were fatally injured
- 20% of impaired drivers were drug-impaired

Roadway Functional Classification



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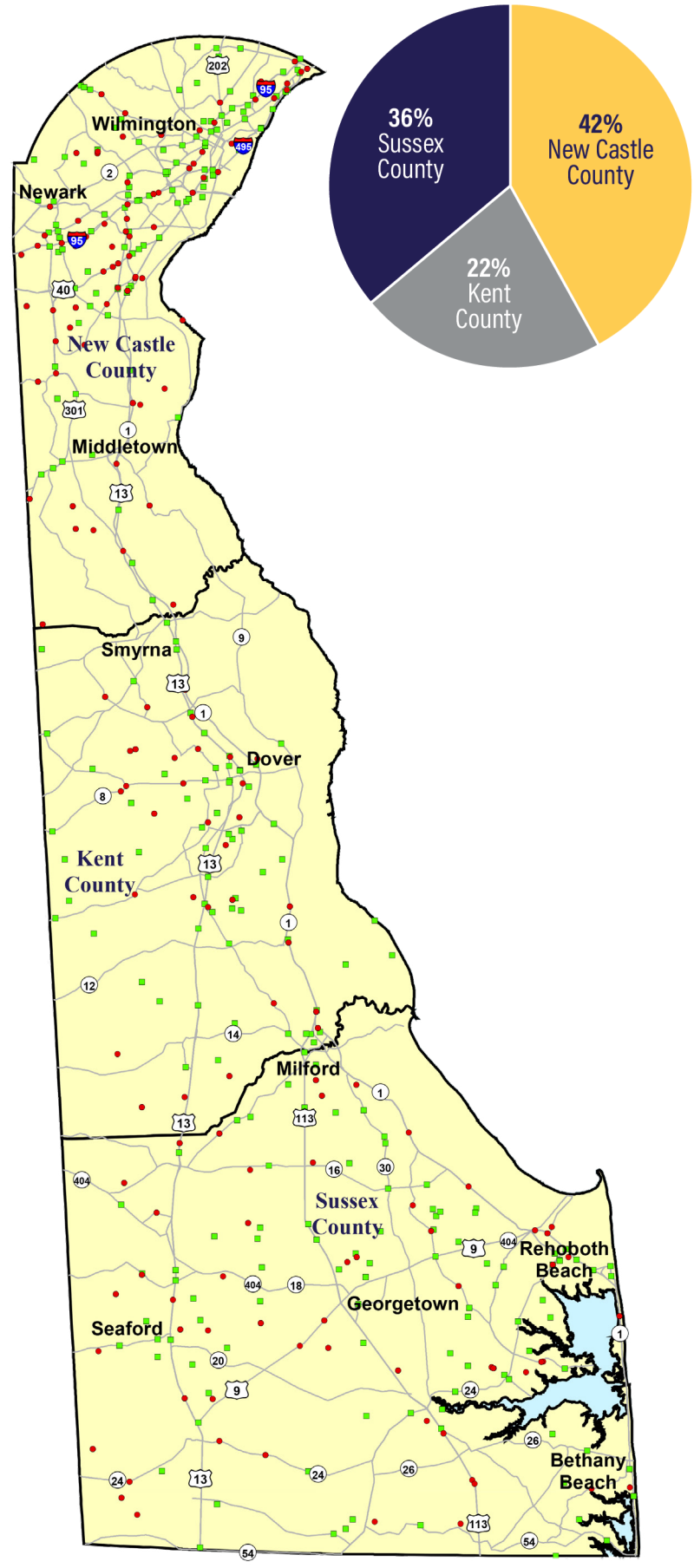


Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

Emphasis Area Strategies: Impaired Driving

	Strategy 1: Develop and distribute consistent public information messages to increase public awareness of the laws and dangers of impaired driving.
1.1	Develop programs that utilize multi-component interventions that combine programs and policies to reduce impaired driving.
1.2	Expand drug impaired outreach campaigns.
1.3	Promote the use of and develop programs for ride sharing services focusing on areas where impaired driving may be concentrated.
1.4	Encourage the use of ride sharing services prior to consumption to minimize the enticement of personal vehicle use once impaired.
1.5	Partner with stakeholders to distribute educational resources to promote the dangers of impaired driving.
1.6	Expand Department of Education efforts to demonstrate the dangers of impaired driving to students.
	Strategy 2: Strengthen impaired driving enforcement programs.
2.1	Strengthen efforts to increase compliance, enforcement, and adjudication of impaired driving laws.
2.2	Conduct targeted high-visibility enforcement campaigns, such as DUI checkpoints.
2.3	Increase location-based enforcement efforts based on robust data analysis.
2.4	Conduct outreach and training to educate owners/servers of alcohol establishments regarding the dangers of over-serving alcohol and identifying impaired persons.
2.5	Encourage law enforcement to train all staff in impaired driving enforcement best practices, including an expansion of the Drug Recognition Expert program.
2.6	Increase risk perception by publicizing information about enforcement initiatives.
2.7	Investigate and evaluate technologies and best practices to support impaired driving enforcement.
	Strategy 3: Install proven engineering treatments to mitigate the consequences of impaired driving.
3.1	Prioritize corridors to provide enhanced nighttime visibility.
3.2	Update DelDOT's standard specifications and the Delaware MUTCD to further implement enhanced pavement markings and retroreflectivity on roadways.
3.3	Install roadway lighting to address nighttime crashes and investigate the effectiveness of a systemic roadway lighting program.
3.4	Partner with Delaware Transit Corporation to investigate and evaluate enhanced transit services including trolley services.

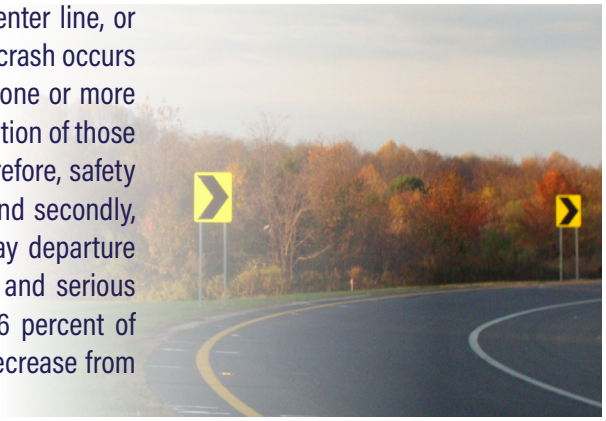
Emphasis Area Strategies: Impaired Driving

Strategy 4: Improve data collection and monitoring of impaired driving trends.

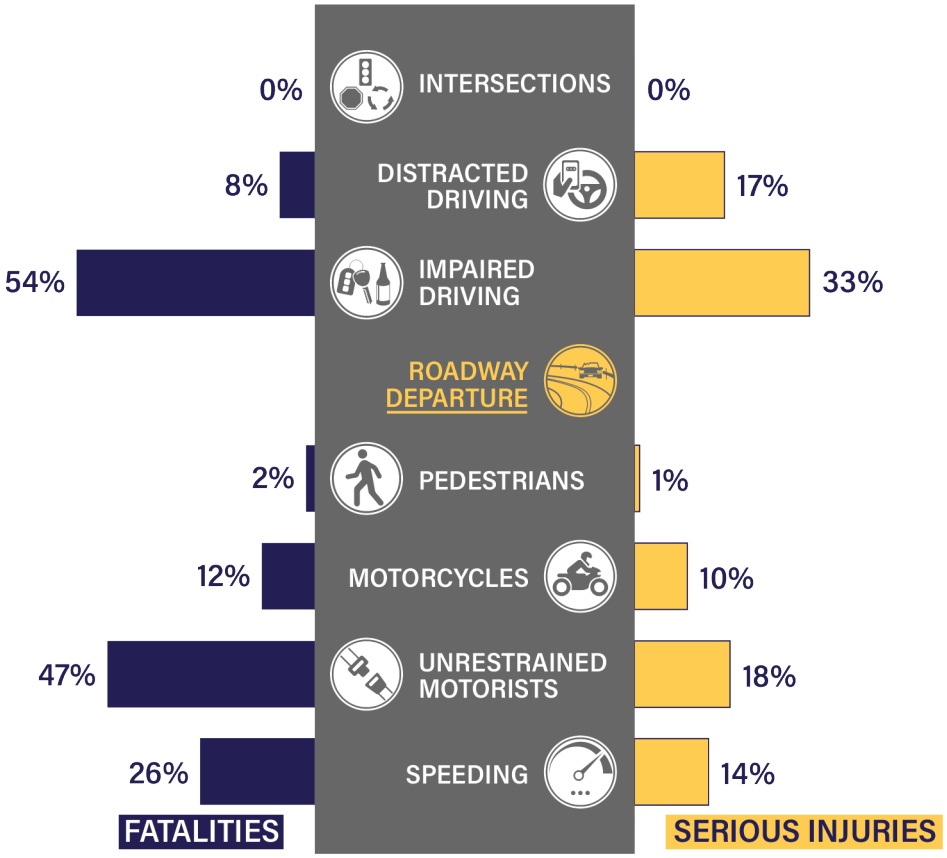
4.1	Develop policies and procedures to improve data sharing between the Impaired Driving Report and crash reports so that crash reports are updated with information related to impairment status and test results, especially for drug-impaired related crashes.
4.2	Improve the collection, processing, and reporting of data related to drug testing and support Division of Forensics with additional resources.
4.3	Partner with Delaware Alcohol and Tobacco Enforcement (DATE) and NHTSA to expand DATE records management system related to alcohol enforcement.

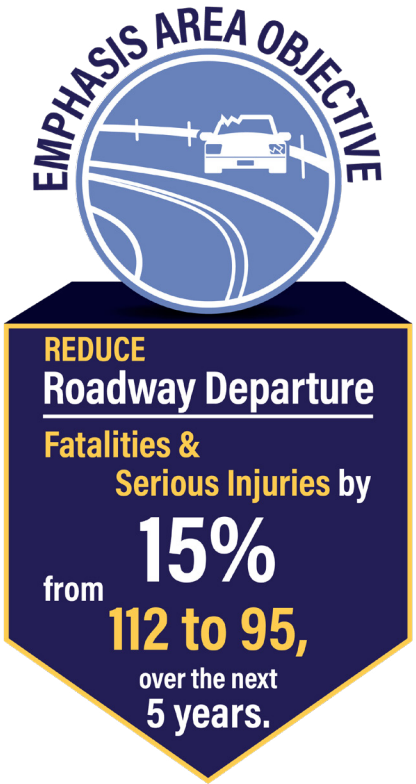
Emphasis Area 4
Roadway Departure

A roadway departure occurs when a vehicle crosses an edge line, a center line, or otherwise leaves the traveled way of any roadway. A roadway departure crash occurs when that vehicle leaves the traveled way and strikes another vehicle, one or more fixed objects located outside of the traveled way, overturns, or a combination of those actions. Often, roadway departure crashes involve a single vehicle; therefore, safety strategies typically first address keeping the vehicle on the roadway and secondly, address the consequences of leaving the roadway. Historically, roadway departure crashes in Delaware have represented a high percentage of fatalities and serious injuries. From 2015 through 2019, nearly 28 percent of fatalities and 16 percent of serious injuries resulted from roadway departure crashes, which is a decrease from 2007 through 2014.



Roadway Departure Emphasis Area Overlap with Other Emphasis Areas (*2015-2019 Crashes*)

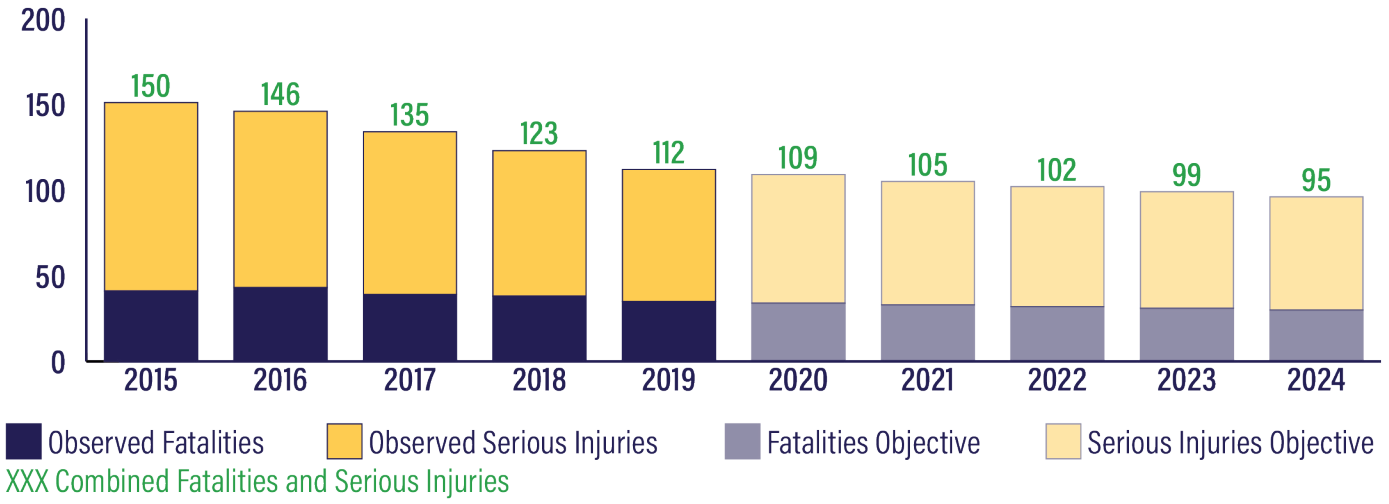




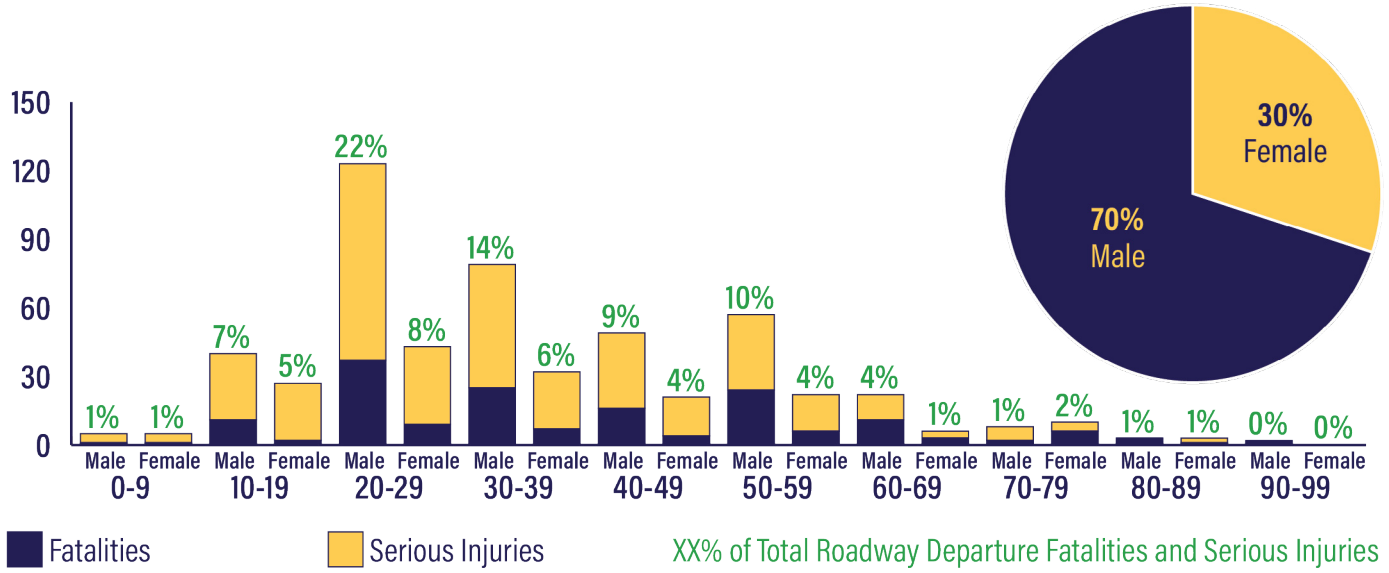
Crash Data Summary (2015-2019)

Roadway Departure Crash Definition: Persons fatally or seriously injured in crashes that involve a roadway departure as defined by FHWA's roadway departure definition.

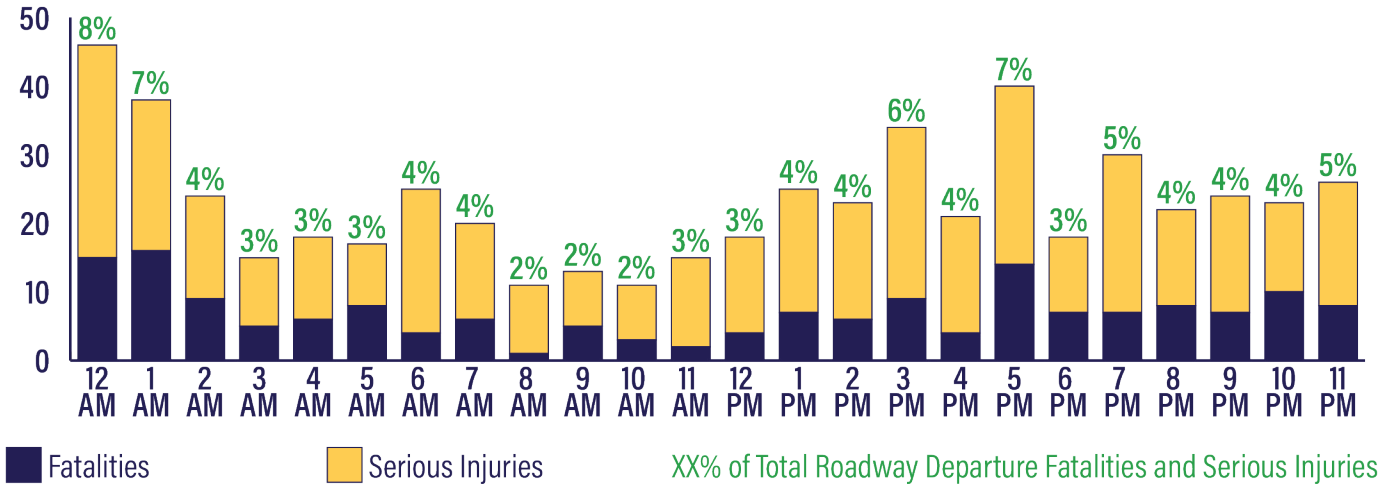
Roadway Departure Fatalities and Serious Injuries *(5-Year Rolling Averages)*



Age/Gender of Crash Victim



When?



	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	12	12	11	5	7	4	4	1	2	6	1	2	3	3	4	6	3	2	4	5	3	3	3	2	108
Monday	3	6	2	2		2	2	2		1	2	3	2	4	4	5	1	5	3	2	5	1	3	4	64
Tuesday	4	2		1		1	4	5	3	1	3	2	3	2	3	1	4	6	2	3	2	5	4	2	63
Wednesday	1		3		2	2	2	2	1				2	1	4	8	1	3	3		2		3	3	43
Thursday	4	6	2		1	2	2	5	2	3	4	1	3	3	1	4	3	8	3	4	3	2	1	1	68
Friday	10	8	2	1	1	4	5	4	3	1		5	3	7	4	2	2	7	1	5	3	8	3	9	98
Saturday	12	4	4	6	7	2	6	1		1	1	2	2	5	3	8	7	9	2	11	4	5	6	5	113
Total	46	38	24	15	18	17	25	20	11	13	11	15	18	25	23	34	21	40	18	30	22	24	23	26	557

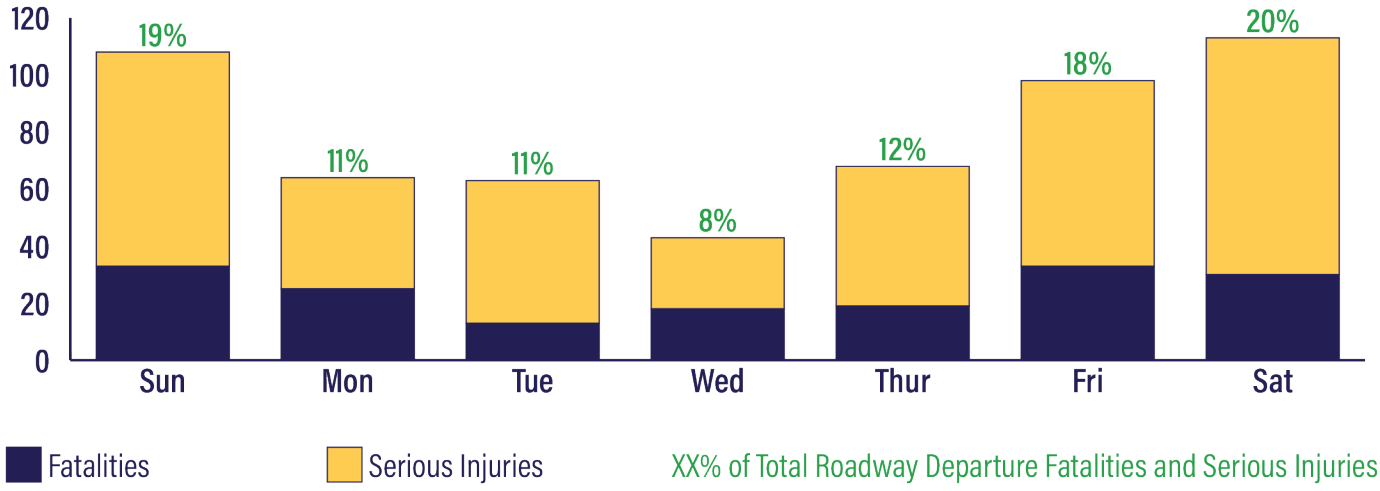
XX Roadway Departure Fatalities and Serious Injuries during Day of Week and Hour of Day

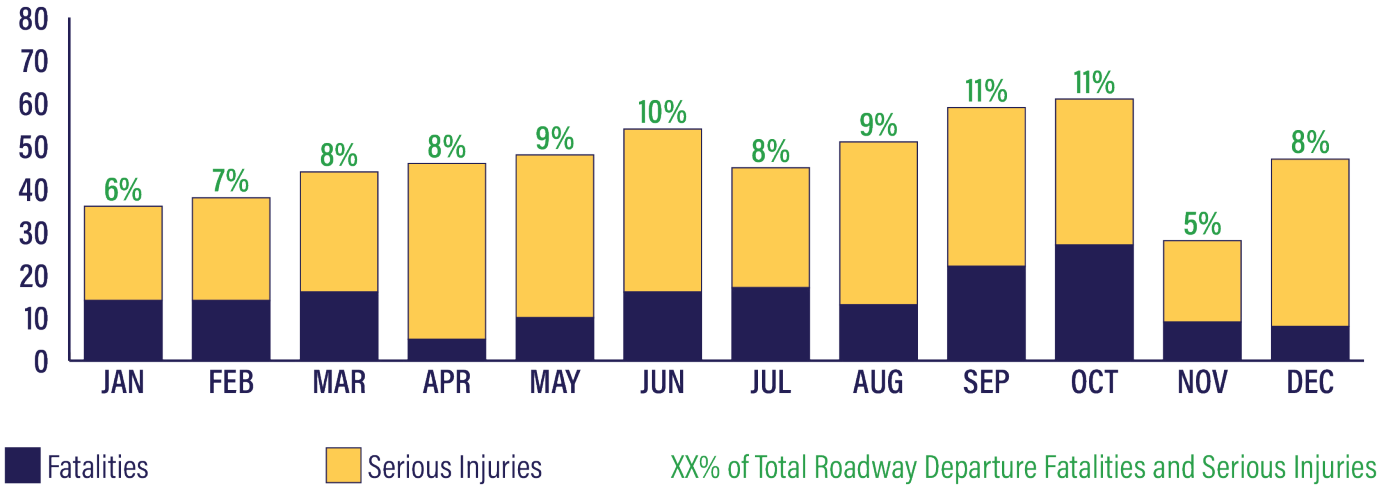
Lower Frequency — Higher Frequency

2015 to 2019 Roadway Departure Fatalities & Serious Injuries

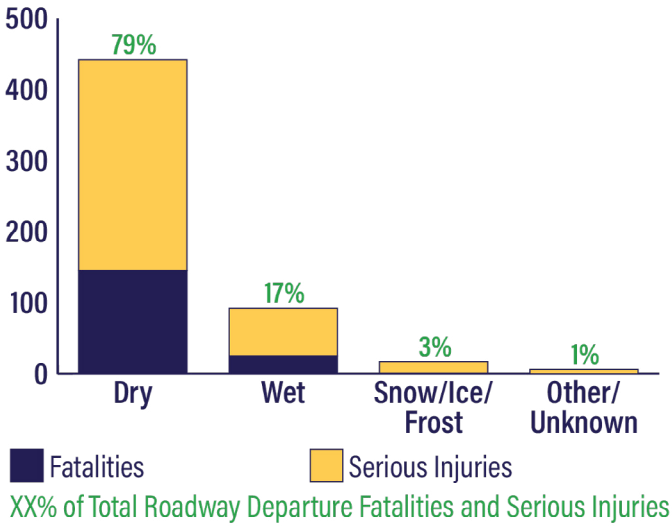
- 80% occurred in single vehicle crashes
- 70% were male
- 60% occurred along collector and local roadways
- 57% occurred on a Friday, Saturday, or Sunday
- 52% occurred in rural areas
- 48% occurred within a horizontal curve
- 40% occurred during dark (unlit) conditions
- 30% were 20 to 29 years old
- 20% occurred on wet/snowy/ice roadways
- 20% occurred between 11 PM and 2 AM
- 20% involved striking a tree

When?

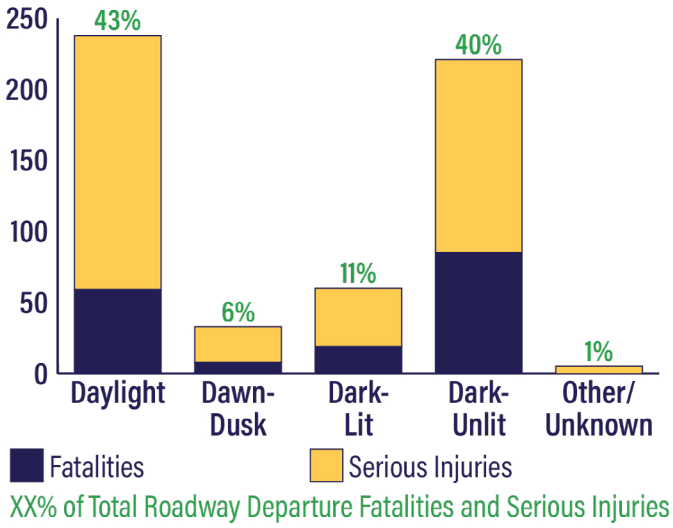




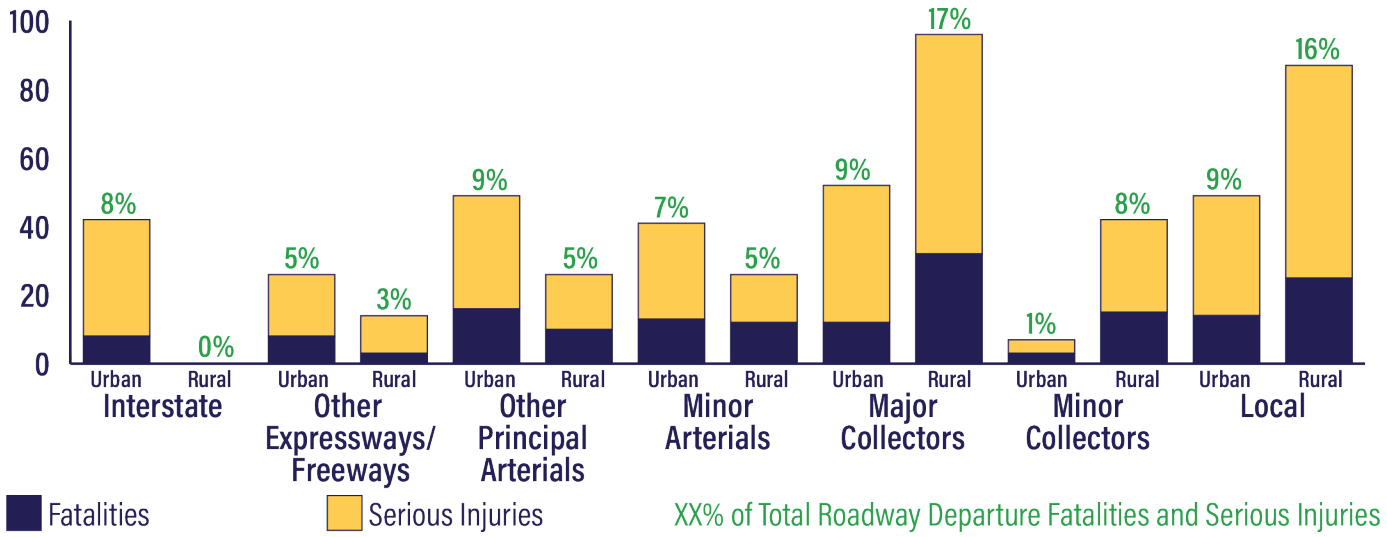
Surface Condition



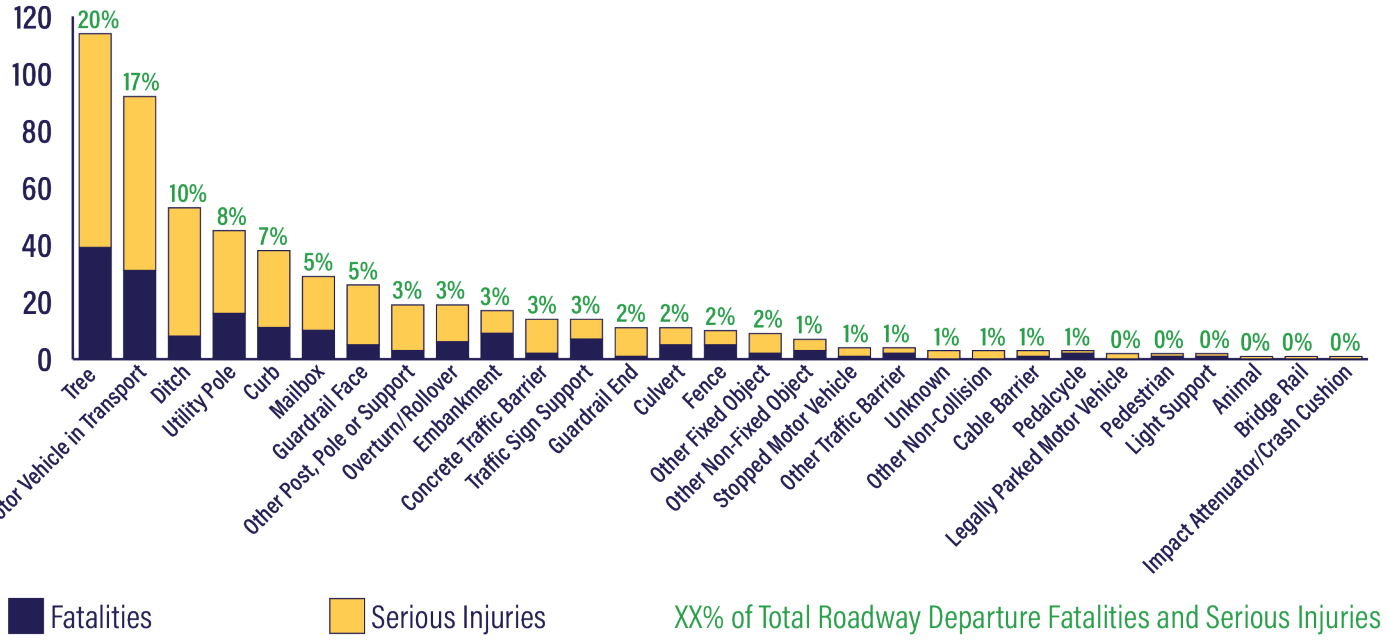
Lighting Condition



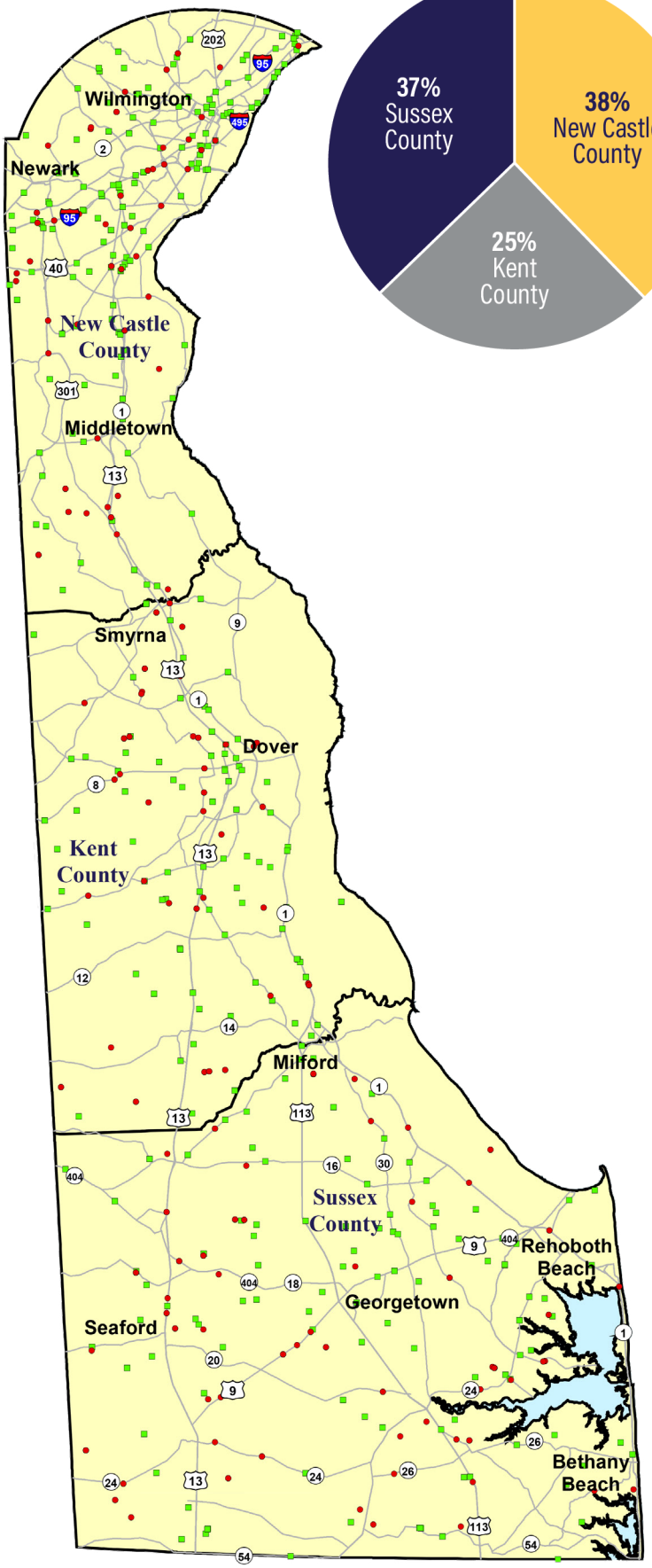
Roadway Functional Classification

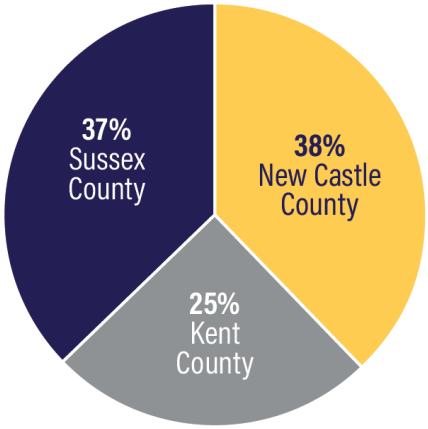


Most Harmful Event



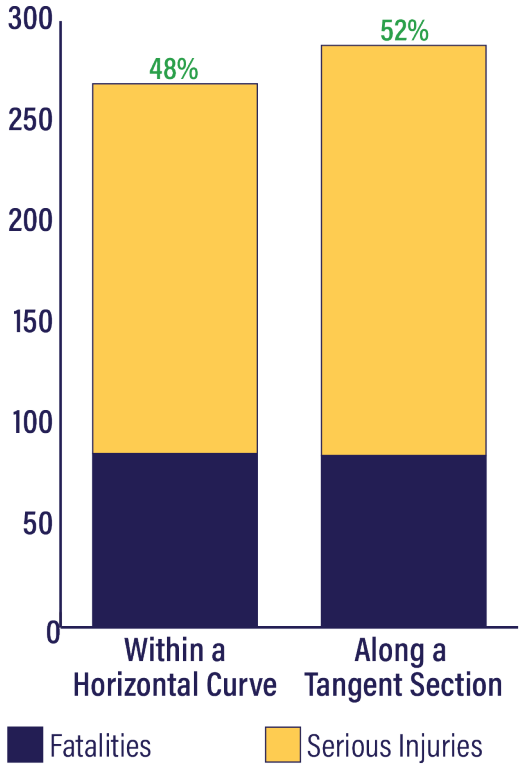
Where?





37%

of all fatalities in Sussex County occurred in roadway departure crashes



XX% of Total Roadway Departure Fatalities and Serious Injuries

54%

of vehicle occupant fatalities and 20% of vehicle occupant serious injuries in roadway departure crashes were unrestrained motorists

Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

Emphasis Area Strategies: Roadway Departure

	Strategy 1: Reduce the likelihood of vehicles leaving a travel lane through the implementation of engineering countermeasures.
1.1	Continue the systemic installation of proven engineering safety countermeasures such as high-friction surface treatments, rumble strips, and traffic control devices.
1.2	Update DelDOT's Rumble Strip Design Guidance Memorandum to incorporate sinusoidal rumble strips.
1.3	Implement enhanced pavement markings on roadways and prioritize high-risk corridors to improve nighttime and inclement weather pavement marking visibility.
1.4	Conduct targeted road safety audits to identify opportunities to reduce roadway departure crashes.
1.5	Investigate and implement innovative solutions targeted at keeping vehicles on the roadway.
1.6	Develop a systemic safety improvement program to implement roadway lighting along high-risk corridors.
	Strategy 2: Minimize the consequence of leaving the roadway by improving the roadside environment.
2.1	Develop a program to install median guardrail on high-risk segments of divided highways based on a data-driven prioritization process.
2.2	Maintain clear zones whenever possible including removing, preventing, or delineating trees within the clear zone.
2.3	Work with utility companies to identify roadside utility equipment with a history of vehicular impacts to remove, relocate, redesign, shield or delineate this infrastructure.
2.4	Support national research initiatives for improved roadside safety hardware and implement best practices.
2.5	Formalize the DelDOT MASH committee including its membership, roles, and responsibilities.
2.6	Consider implementing guidelines for the repair and maintenance of guardrail, end treatments and associated hardware.
	Strategy 3: Develop and distribute consistent public information messaging to educate the public about safe driving practices that reduce the frequency of roadway departure crashes.
3.1	Incorporate roadway departure messaging into public safety awareness campaigns for other Emphasis Area campaigns.
3.2	Increase public awareness of the benefits of rumble strips.
3.3	Incorporate roadway departure safety practices and driving tips within the Driver's Education and Defensive Driving curricula.

Emphasis Area Strategies: Roadway Departure

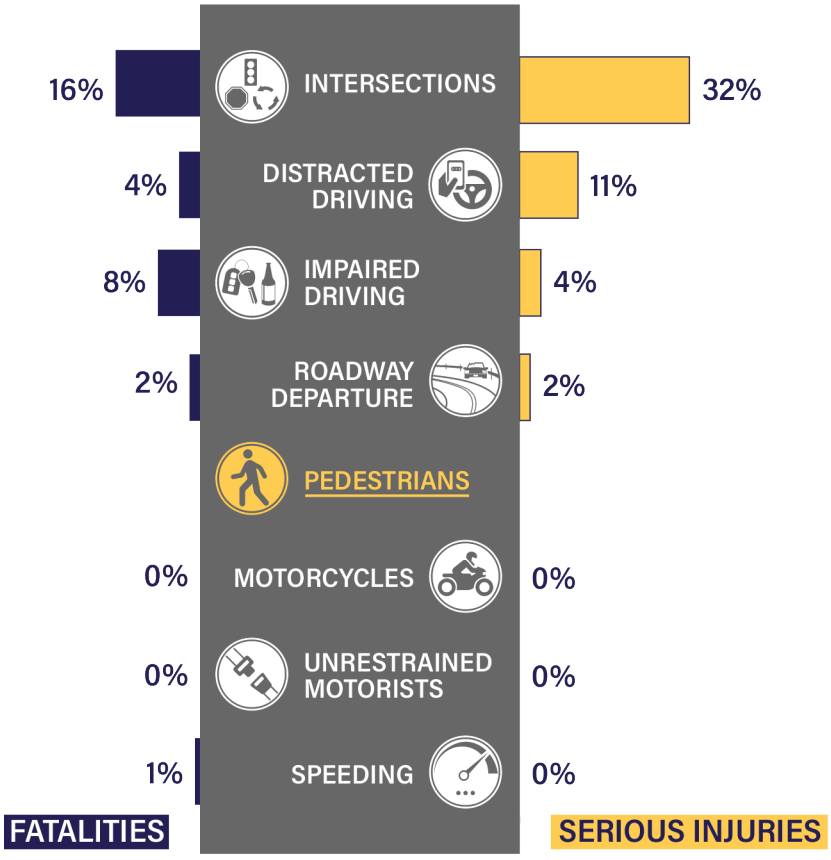
	Strategy 4: Develop policies and guidelines to implement effective safety measures to reduce the frequency and severity of roadway departure crashes.
4.1	Develop implementation guidance for high-friction surface treatments.
4.2	Evaluate the feasibility of incorporating safety factors as a selection criterion for DelDOT's Pavement Rehabilitation Program.
4.3	Review DelDOT's design policies and guidelines for opportunities to promote design practices to reduce roadway departure crashes.
4.4	Support legislation related to the use of Road Departure Mitigation units in all vehicles and partner with various companies/agencies to implement their use.
	Strategy 5: Improve roadway departure crash data collection and analysis to enhance the identification of high-risk corridors and high-risk driving behaviors.
5.1	Collect comprehensive pavement skid resistance data and correlate with roadway departure crash frequency.

Emphasis Area 5
Pedestrians

All Delawareans are pedestrians for a portion of their daily travel. For some Delawareans, walking is their primary mode of transportation. Pedestrian fatalities accounted for 25 percent of all fatalities and 9 percent of all serious injuries from 2015 through 2019. Compared to 2007 through 2014 data used to develop the 2016-2020 SHSP, pedestrian fatalities have increased by 15 percent; however, there has been a 48 percent decrease in seriously injured pedestrians. In a 2016 report by the Governor's Highway Safety Association, Delaware's pedestrian fatalities per capita ranked highest in the nation, based on data from 2015. Improvements have been made to pedestrian infrastructure; however, addressing pedestrian-involved crashes remains a challenge. Fifty-six percent of pedestrian fatalities and serious injuries occur on divided highways, which are typically high-speed, multi-lane suburban corridors that are surrounded by commercial and residential land uses and significant transit usage which combine to create a potentially unsafe environment for pedestrian crossings.

Providing safe pedestrian facilities on these roadways is a primary focus of the engineering countermeasures that have been deployed over the last ten years; however, many pedestrians do not cross at established crossing locations. Educating pedestrians on safe crossing techniques and having proper reflectivity at night can impact pedestrian behavior resulting in a reduction of pedestrian crashes. Improving driver awareness of pedestrians is also critical to increasing pedestrian safety.

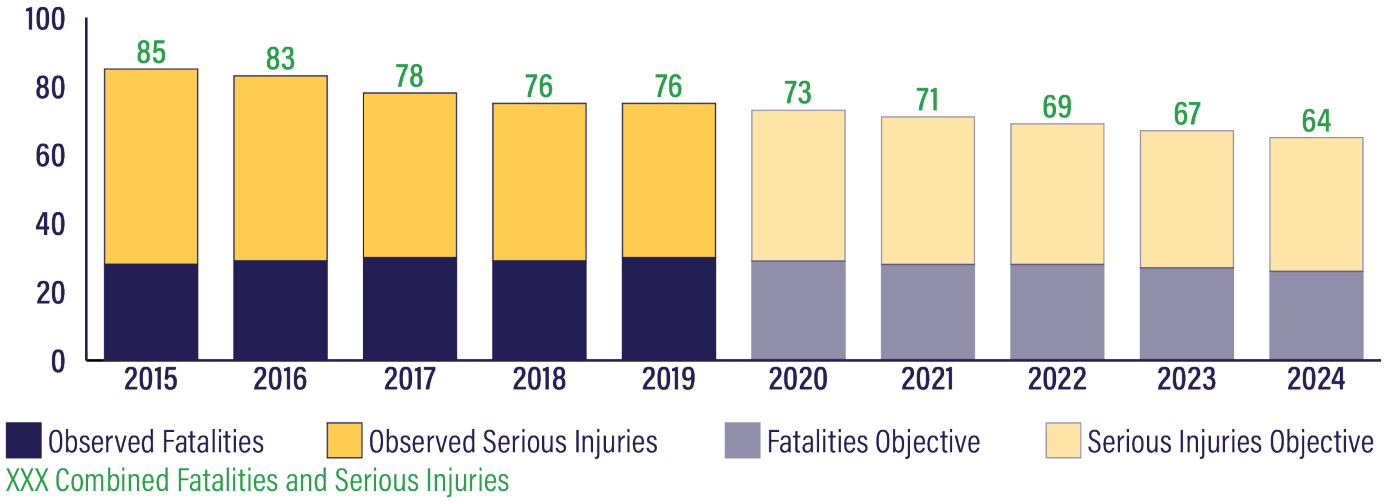
Pedestrians Emphasis Area Overlap with Other Emphasis Areas ***(2015-2019 Crashes)***



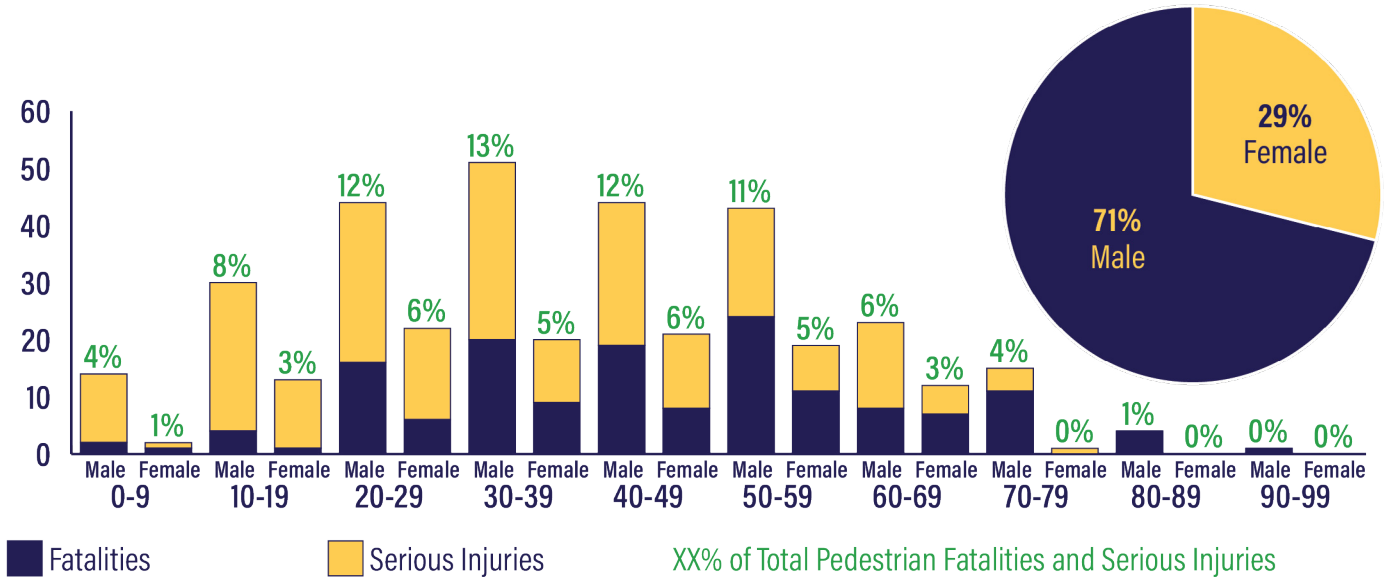
Crash Data Summary (2015-2019)

Pedestrian Crash Definition: Pedestrians fatally or seriously injured.

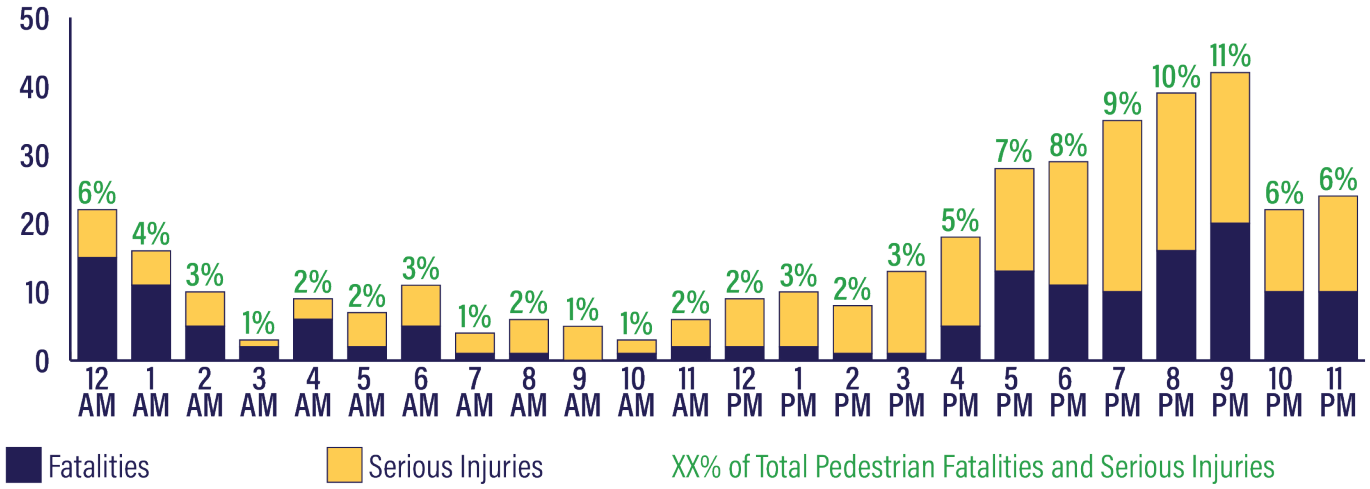
Pedestrian Fatalities and Serious Injuries *(5-Year Rolling Averages)*



Age/Gender of Crash Victim



When?



	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	4	7	1	1		1	1				1	1			1	2	1	3	8	4	4	7			47
Monday	2	1			1		2				1		1	4	1	2	3	4	3	6	7	3	4	1	46
Tuesday	4	2				2	5	1	2	1	1	2		1		2	4	4	2	3	3	6	3	8	56
Wednesday	2		3		2	1	1	1	2	2		1	1	2	1	1	2	6	3	5	3	7	1	2	49
Thursday	1	1	2		5	1		2	1	1		1	4		3	3	1	3	4	2	6	2	5	4	52
Friday	3	1	2			1	2						2	3	1	1	6	3	3	8	9	12	6	6	69
Saturday	6	4	2	2	1	1			1	1		1	1		1	2	1	5	6	7	7	5	3	3	60
Total	22	16	10	3	9	7	11	4	6	5	3	6	9	10	8	13	18	28	29	35	39	42	22	24	379

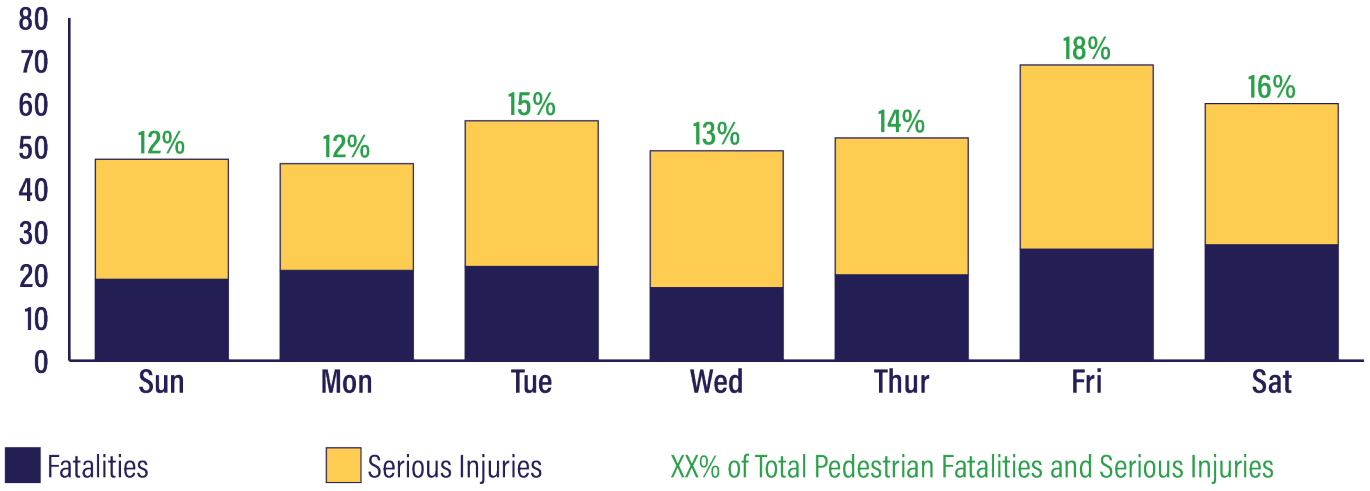
XX Pedestrian Fatalities and Serious Injuries during Day of Week and Hour of Day

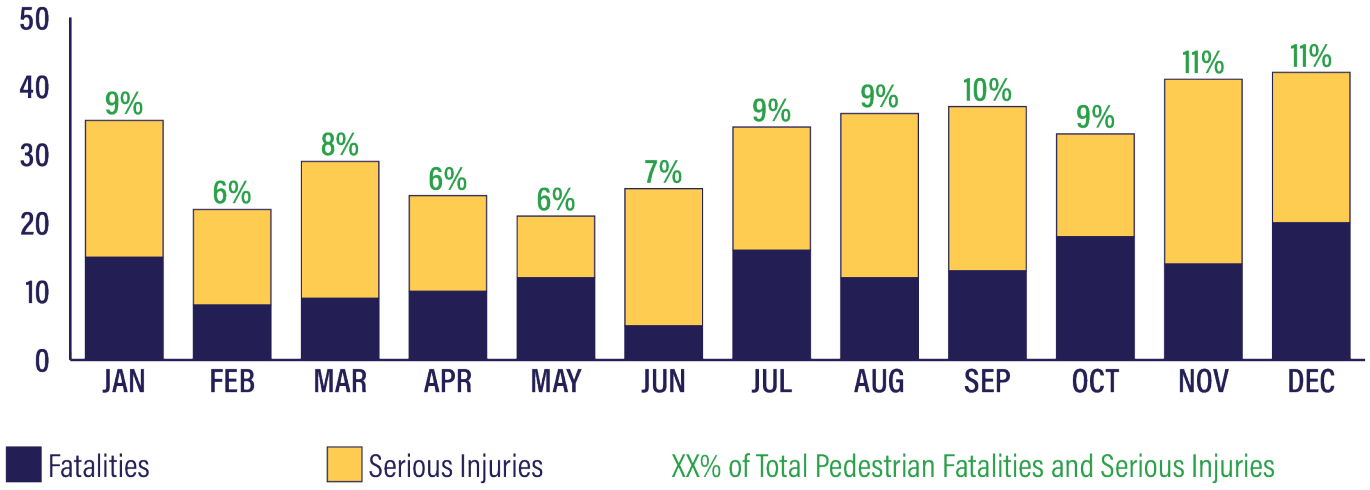
Lower Frequency — Higher Frequency

2015 to 2019 Pedestrian Fatalities & Serious Injuries

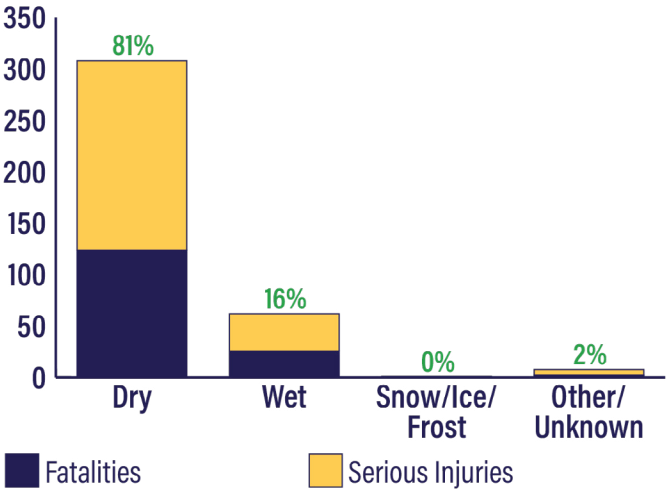
- 89% occurred in urban areas
- 63% occurred in New Castle County
- 73% occurred between 4 PM and 2 AM
- 71% were male
- 69% involved no contributing factor on the part of the vehicle driver
- 56% occurred along divided roadways
- 53% were 20 to 49 years old
- 41% occurred on principal arterials
- 36% occurred during dark (unlit) conditions
- 34% occurred on a Friday or Saturday

When?

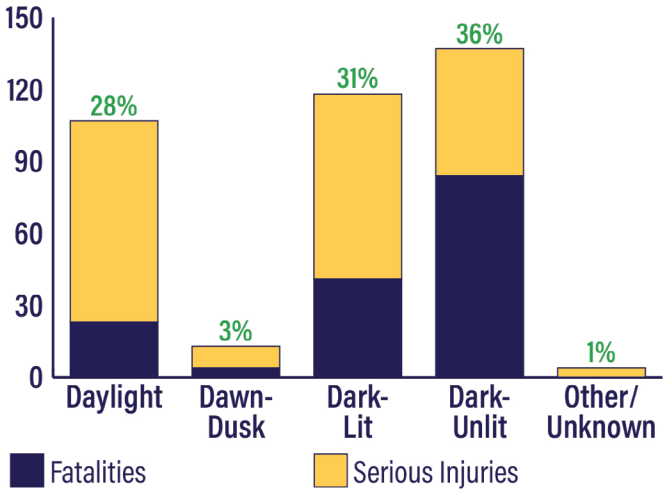




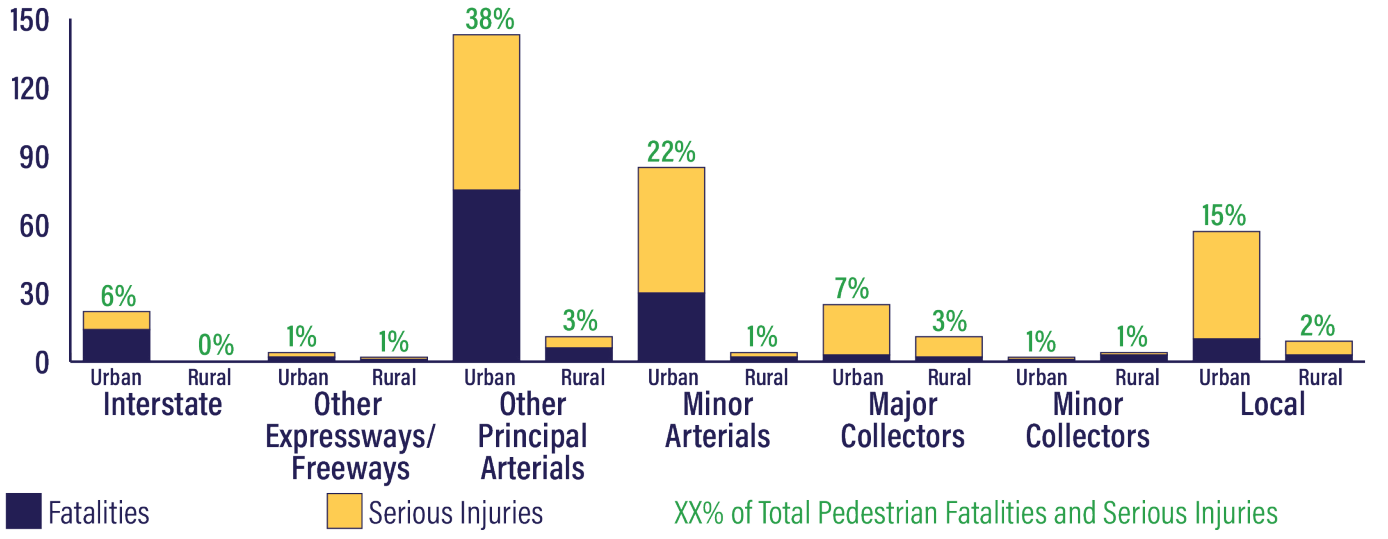
Surface Condition



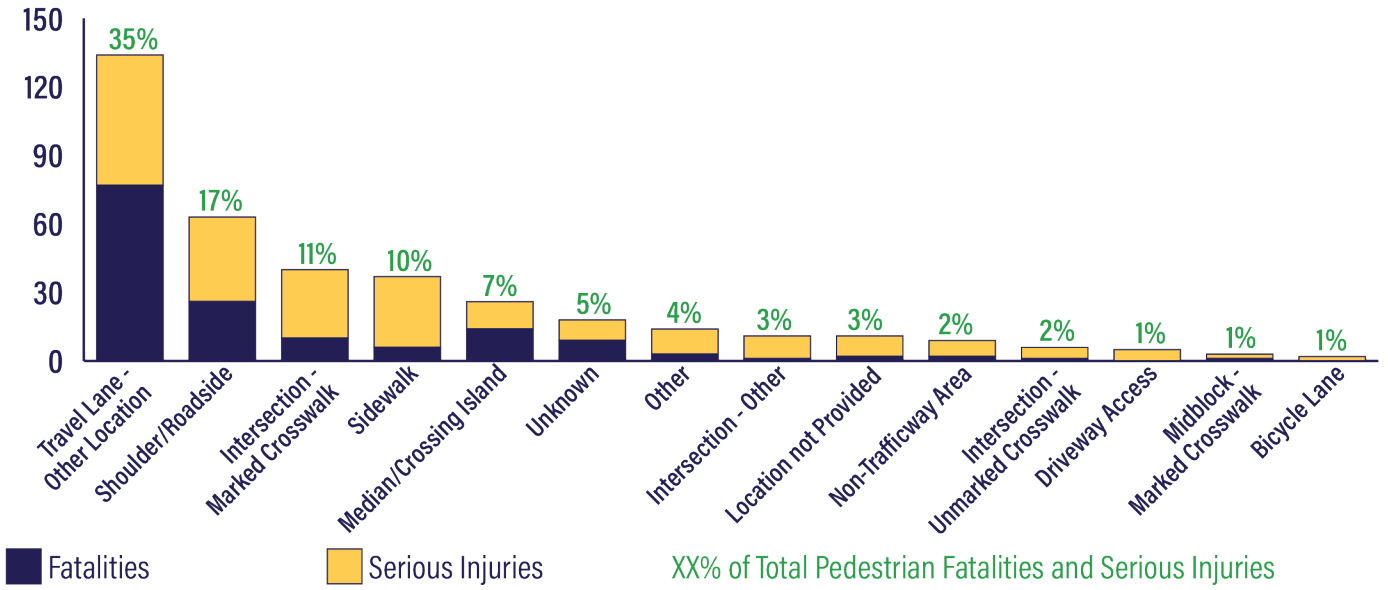
Lighting Condition



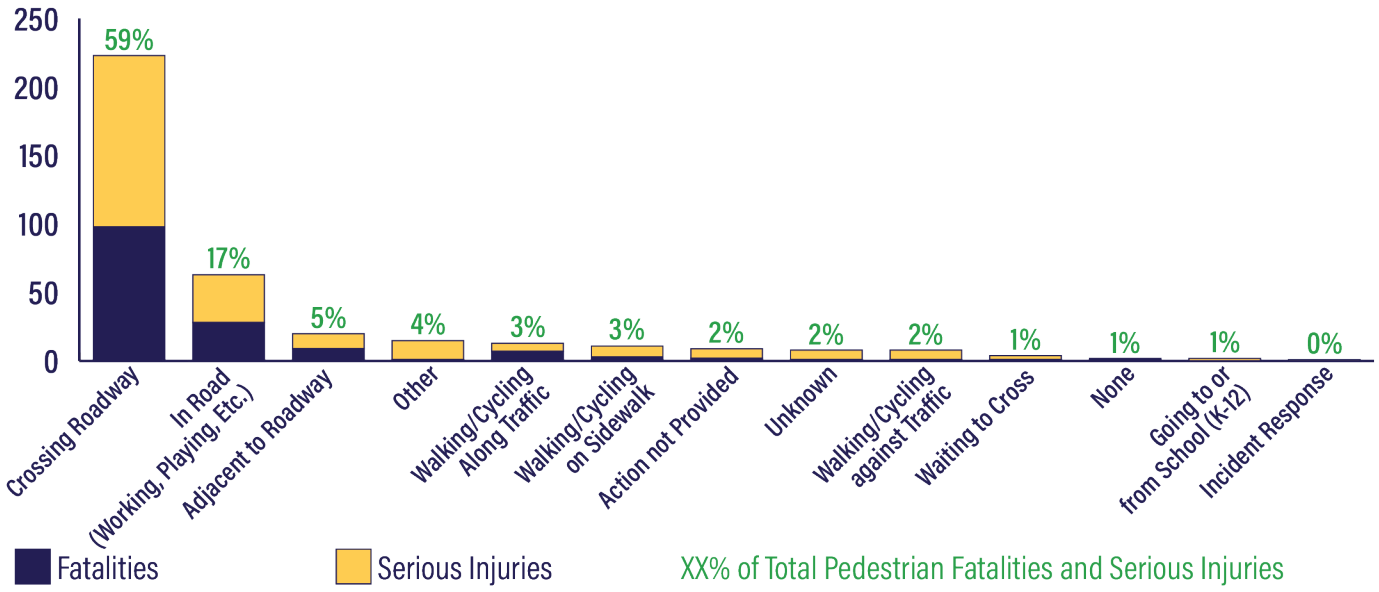
Roadway Functional Classification



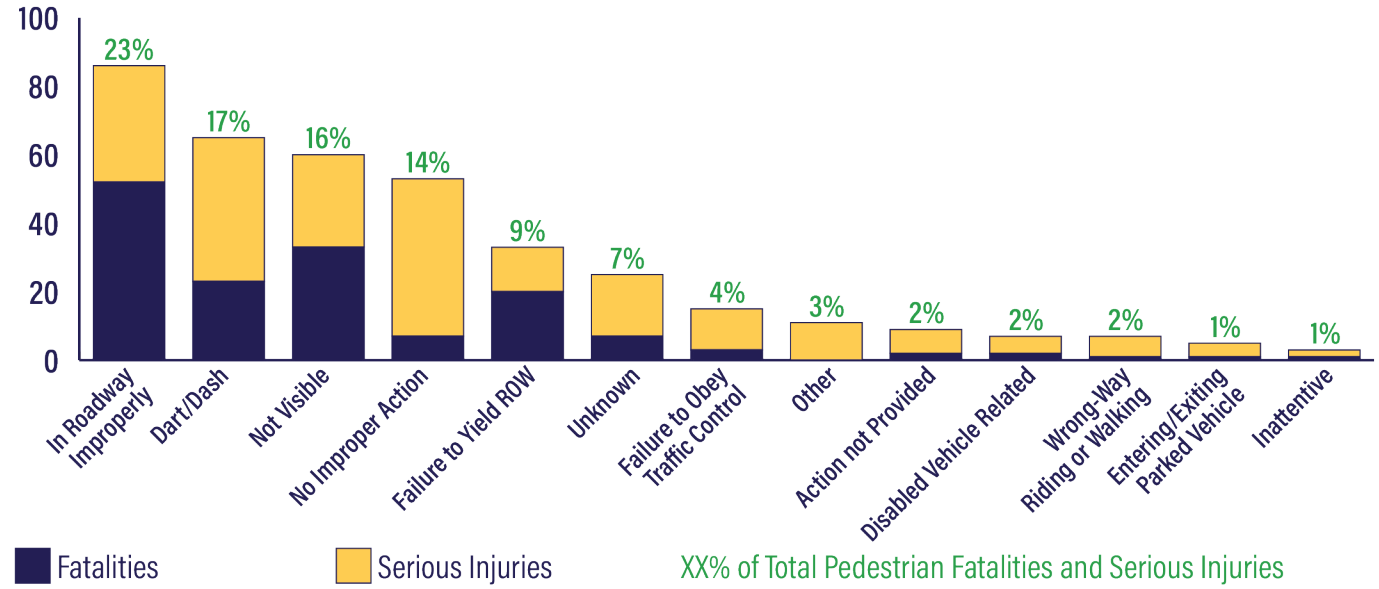
Pedestrian Location Prior to Crash



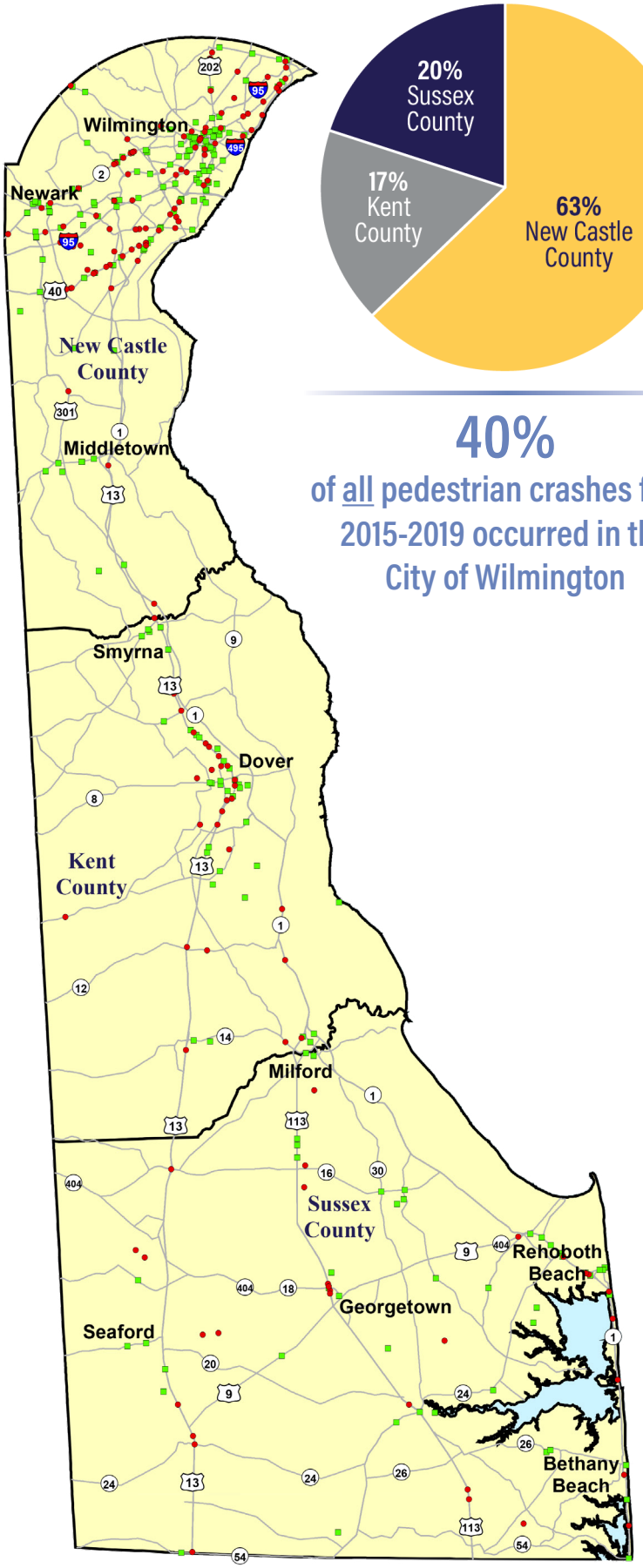
Pedestrian Action Prior to Crash

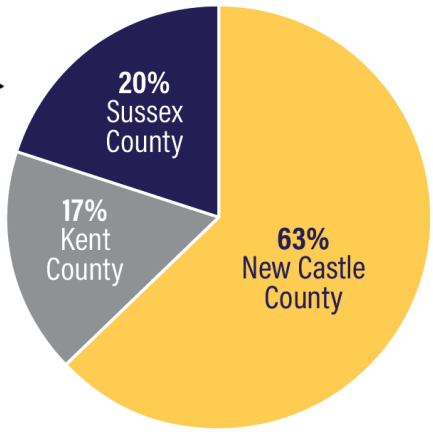


Pedestrian Action at Time of Crash



Where?





40%
of all pedestrian crashes from 2015-2019 occurred in the City of Wilmington

52%
of pedestrians fatally injured were impaired

Fatality
Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

Emphasis Area Strategies: Pedestrians

	Strategy 1: Develop and distribute consistent public information messages to educate the public about pedestrian safety.
1.1	Increase targeted public outreach, based on specific data-driven trends (e.g., impairment, visibility, etc.).
1.2	Increase awareness regarding pedestrian infrastructure improvements and incorporate educational outreach in conjunction with implementation of pedestrian improvement projects.
1.3	Develop and distribute targeted public information messages to increase public awareness regarding safety issues during vehicle breakdowns.
	Strategy 2: Develop educational training programs to improve pedestrian safety awareness.
2.1	Incorporate pedestrian (and other road user) laws and rules of the road into Drivers Education and Defensive Driving curricula.
2.2	Develop an educational outreach program for school children targeting pedestrian safety issues.
2.3	Develop and implement formal crossing guard certification requirements, similar to programs for flaggers in highway work zones.
	Strategy 3: Strengthen pedestrian safety laws and enforcement efforts.
3.1	Utilize a strategic law enforcement and social services approach to address substance abuse related to pedestrian crashes and behaviors.
3.2	Conduct high-visibility enforcement campaigns targeting both pedestrians and drivers to promote pedestrian safety.
3.3	Support the expansion of legislation permitting the use of automated speed enforcement in Delaware.
3.4	Evaluate the need for a "Pedestrian Safety Behavior Modification" class and require those charged with various pedestrian safety violations to participate in the class.
	Strategy 4: Install effective engineering countermeasures to improve pedestrian safety.
4.1	Continue conducting pedestrian safety audits at high-crash locations and critical corridors and incorporate pedestrian behavioral surveys into the audits.
4.2	Install infrastructure improvements to reduce pedestrian exposure, the potential for pedestrian/vehicle conflicts, and increase pedestrian visibility.
4.3	Perform before/after studies to evaluate and identify the most effective pedestrian safety treatments.
4.4	Research, and where appropriate, implement innovative pedestrian detection at signalized intersections and at other locations along high-risk corridors where driver feedback can be provided via signs and signals.

Emphasis Area Strategies: Pedestrians

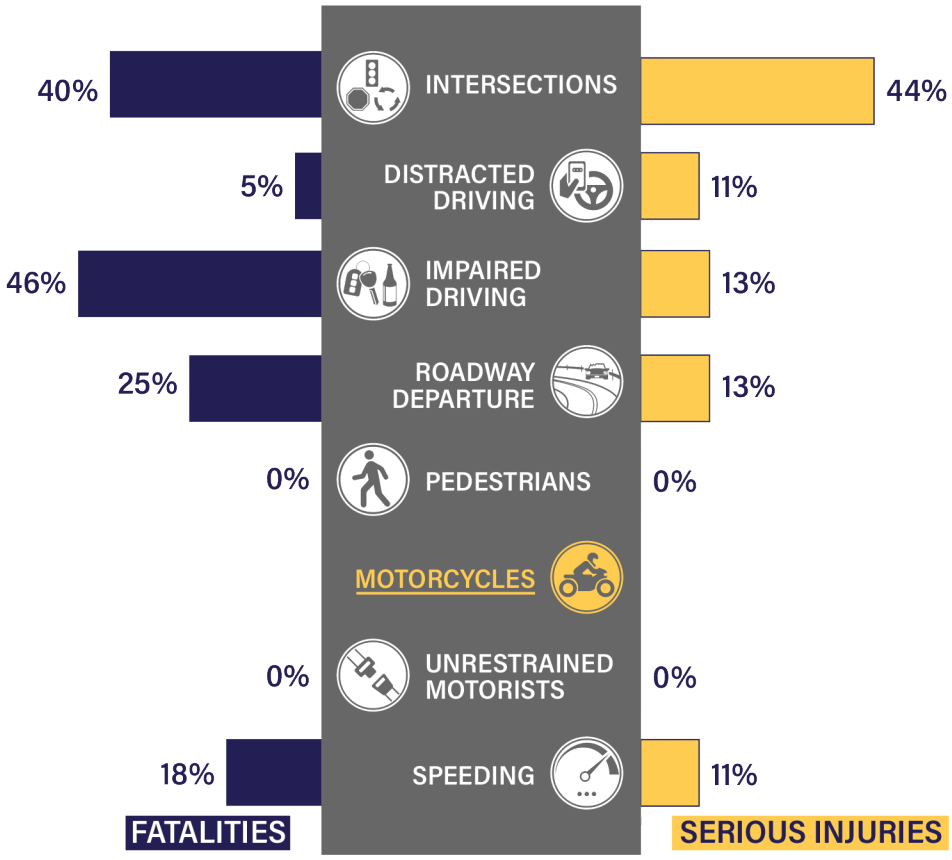
	Strategy 5: Develop policies and/or guidelines to support pedestrian safety measures.
5.1	Consider revising DelDOT's design policies and guidelines to promote design practices that reduce vehicular speeds and promote pedestrian safety.
5.2	Revise DelDOT's Development Coordination Manual to require additional pedestrian infrastructure improvements related to new developments.
5.3	Evaluate the need for revisions to DelDOT's Complete Streets policy and implementation plan.
5.4	Initiate a Pedestrian Safety Stakeholder group with membership from appropriate state agencies, advocacy groups and the public to identify pedestrian safety and connectivity improvements, policy updates and improved collaboration between state and local agencies, consistent with the objectives of the 2021-2025 SHSP.
	Strategy 6: Improve data collection of pedestrian crashes and monitor trends.
6.1	Working with the Division of Substance Abuse and Mental Health (DSAMH), share data to link mental health issues and substance abuse with traffic and pedestrian travel patterns to improve educational outreach to vulnerable populations.
6.2	Correlate pedestrian crashes with population changes associated with summer resort seasons, holiday shopping and other times that increase pedestrian activity and if necessary, identify appropriate pedestrian safety countermeasures.
6.3	Correlate pedestrian crashes to income levels and homeless populations in Delaware and if necessary, identify appropriate pedestrian safety countermeasures.
6.4	Implement best practices for the use of the new pedestrian origin-destination data to capture improved data about pedestrian travel patterns and crashes.
	Strategy 7: Improve emergency services and incident management to address pedestrian safety.
7.1	Evaluate the expansion of DelDOT's Motorist Assistance Patrol (MAP) to increase services along interstates, freeways, and expressways to reduce pedestrian exposure during vehicle breakdowns.

Emphasis Area 6
Motorcycles

In 2019, the death rate for motorcyclists was 9.1 per 10,000 registrations, whereas the death rate for all registered vehicles was 1.4. Compared to passenger vehicles, motorcycles tend to be more difficult to operate, are less visible to other motorists on the roadway, provide virtually no protection to their riders (particularly when riders are not wearing helmets), and are capable of traveling at high speeds; therefore, motorcyclists are susceptible to greater injury when involved in a crash. Nearly one out of every four motorcycle fatalities or serious injuries result from roadway departure crashes. Motorcyclists account for 13 percent of all fatalities and 12 percent of all serious injuries from 2015 through 2019.

Motorcycle operators are required to obtain a special endorsement on their driver's license by passing both a written exam and a road skills test or by completing the approved motorcycle rider education program. Law enforcement may impound motorcycles of riders who are driving without a motorcycle endorsement. Delaware's helmet law requires all motorcycle riders to have a helmet in their possession; however, only requires those under the age of 19 to wear a helmet when riding. Strategies to address motorcycle safety typically involve education and enforcement countermeasures, aimed at operator safety and awareness of motorcycles by other drivers.

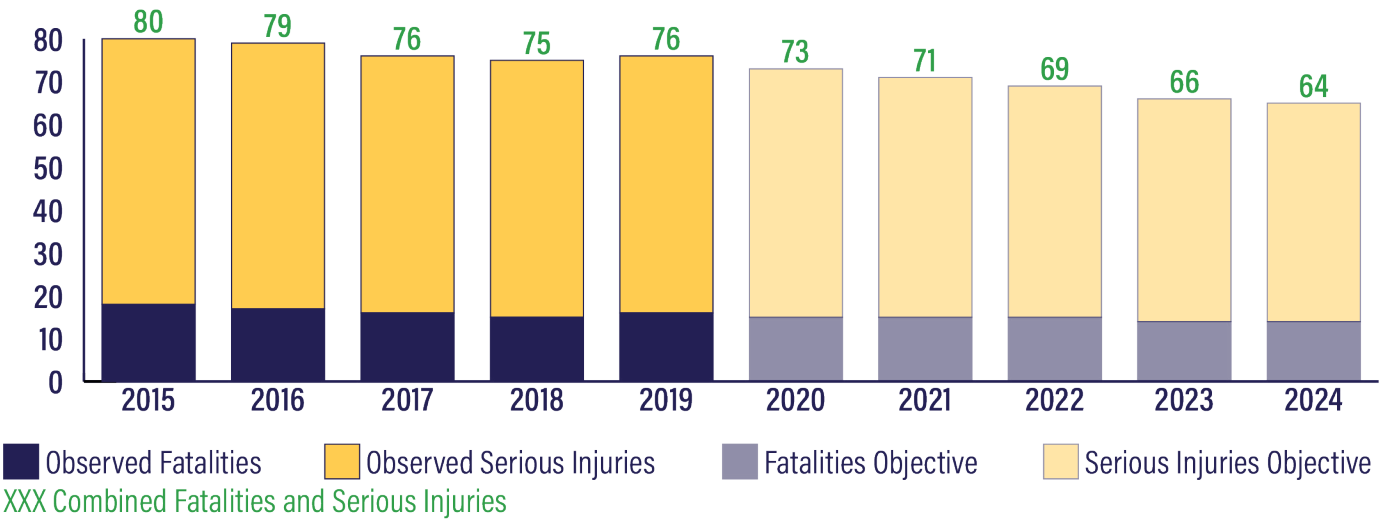
Motorcycles Emphasis Area Overlap with Other Emphasis Areas *(2015-2019 Crashes)*



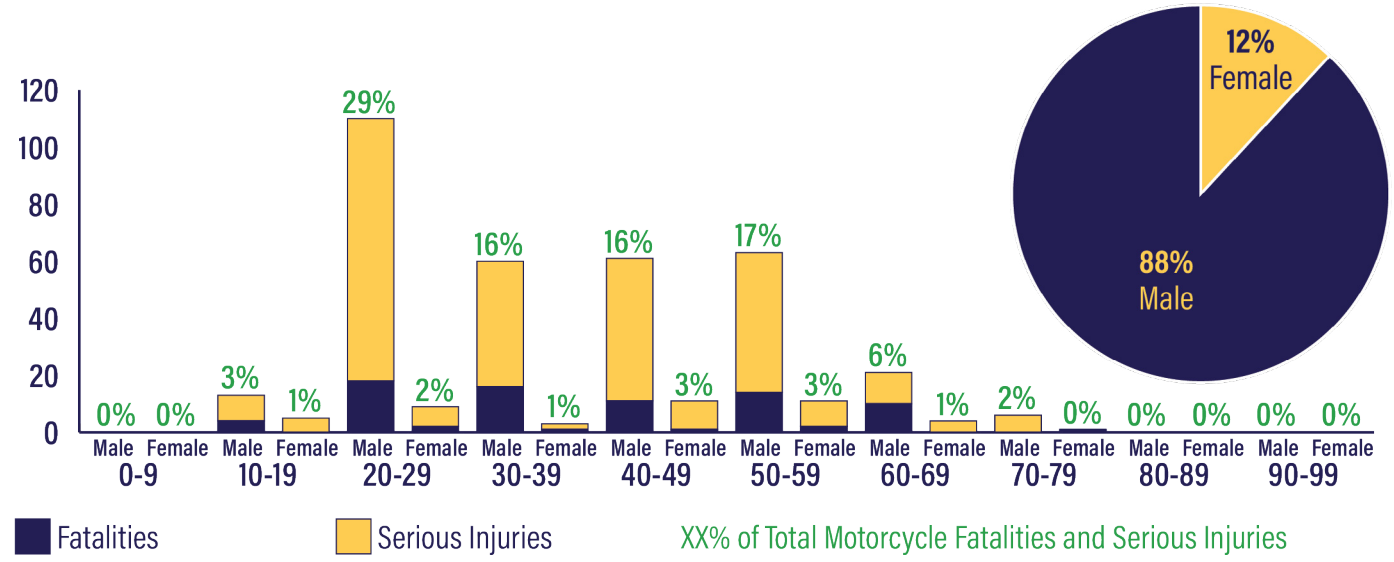
Crash Data Summary (2015-2019)

Motorcycle Crash Definition: Motorcycle drivers or passengers fatally or seriously injured.

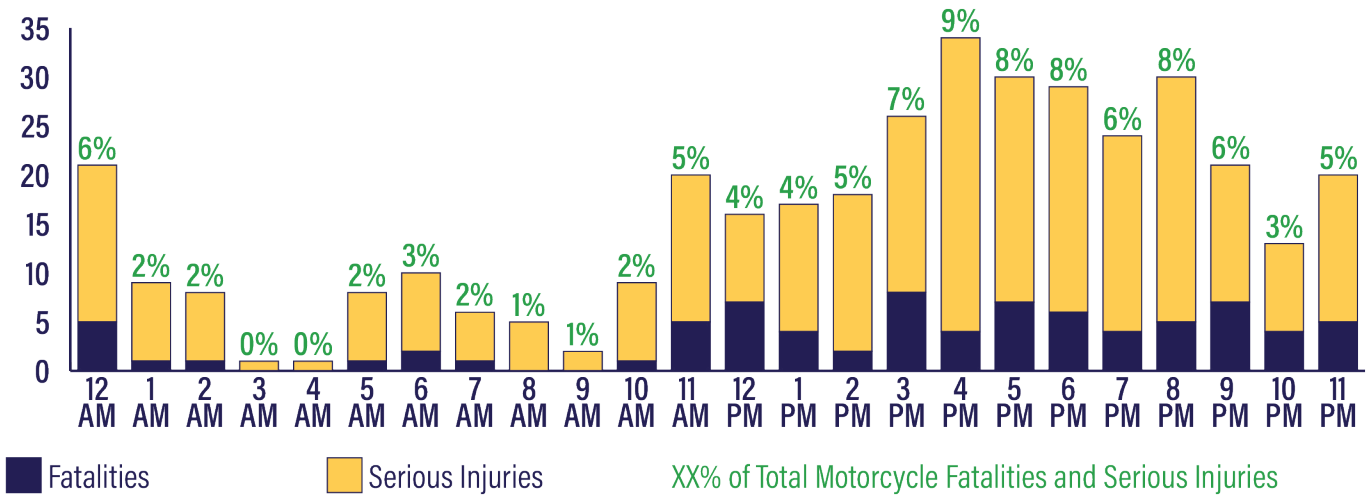
Motorcycle Fatalities and Serious Injuries *(5-Year Rolling Averages)*



Age/Gender of Crash Victim



When?

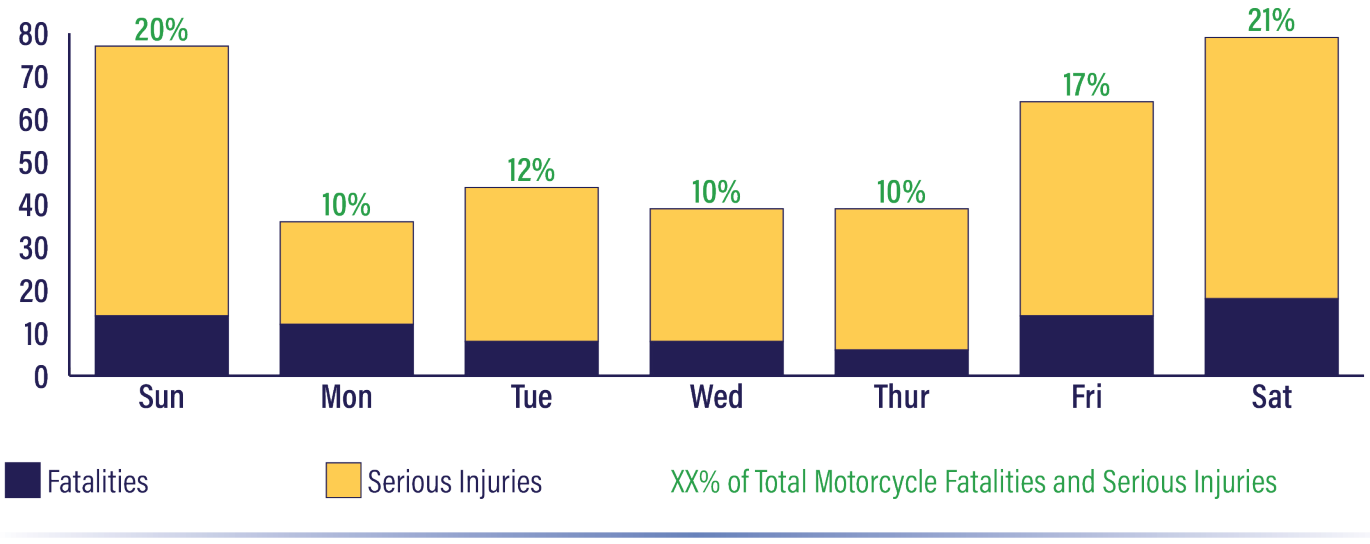


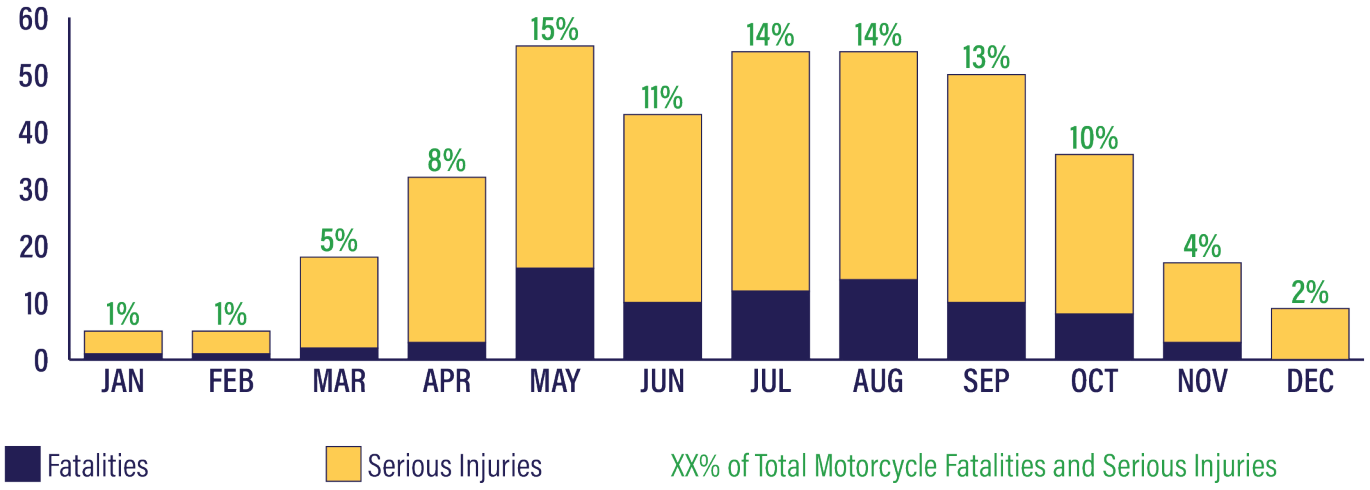
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	7	3	2		1		1	1	1	1		7	4	2	5	4	8	7	9	2	5	5	1	1	77
Monday	4		2			1	1						1	1	1	6	5	4	3		3		2	2	36
Tuesday	1					2	4	1	4		1	1	1	4	3	1	5	2	6	3	2	2	1		44
Wednesday	2						1	2			3	1	3	1		6	2	7	3	1	1	3	2	1	39
Thursday	2	1	1				1	2				3			2	1	5	1	6	3	3	6	2		39
Friday	3	1	3			2	2			1		3	4	7	2	3	1	4		8	9	2	2	7	64
Saturday	2	4		1		3					5	5	3	2	5	5	8	5	2	7	7	3	3	9	79
Total	21	9	8	1	1	8	10	6	5	2	9	20	16	17	18	26	34	30	29	24	30	21	13	20	378

XX Motorcycle Fatalities and Serious Injuries during Day of Week and Hour of Day

Lower Frequency — Higher Frequency

When?

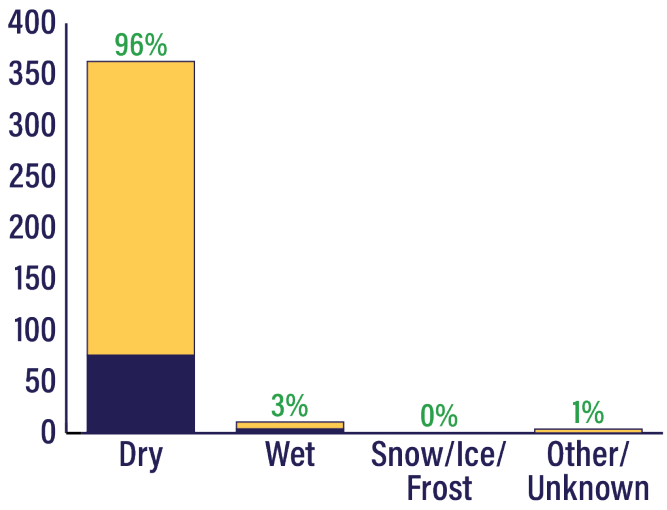




2015 to 2019 Motorcycle Fatalities & Serious Injuries

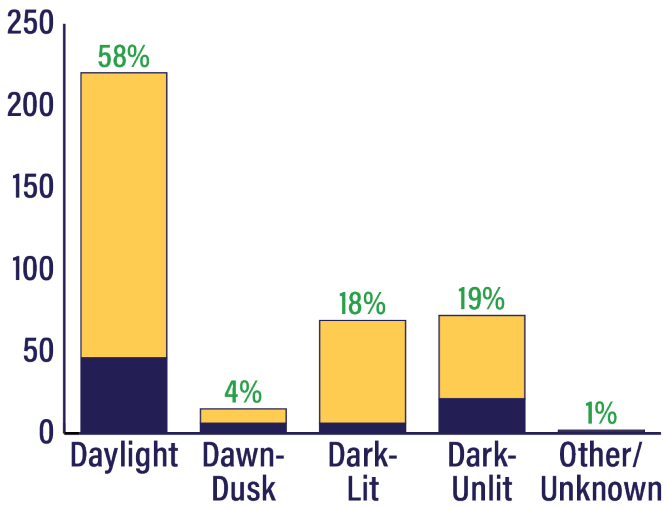
- 88% were male
- 77% occurred from May through October
- 58% occurred on a Friday, Saturday or Sunday
- 46% occurred between 3 PM and 9 PM
- 40% occurred on divided roadways
- 37% were not wearing a helmet
- 35% were in single-vehicle crashes
- 31% were 20 to 29 years old
- 29% occurred on principal arterial roadways
- 24% occurred within a horizontal curve

Surface Condition



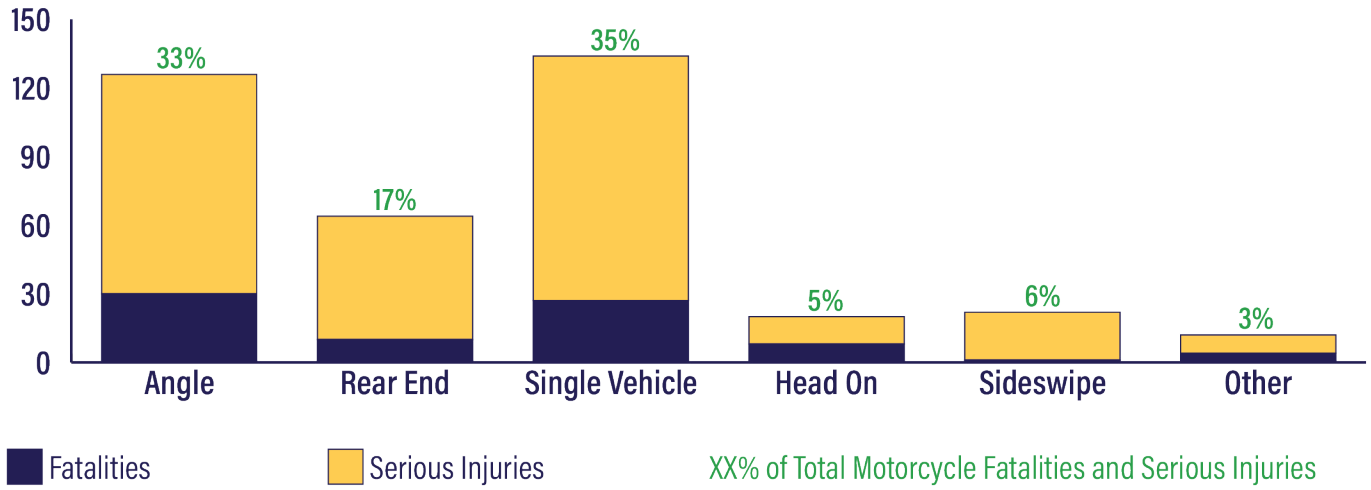
XX% of Total Motorcycle Fatalities and Serious Injuries

Lighting Condition



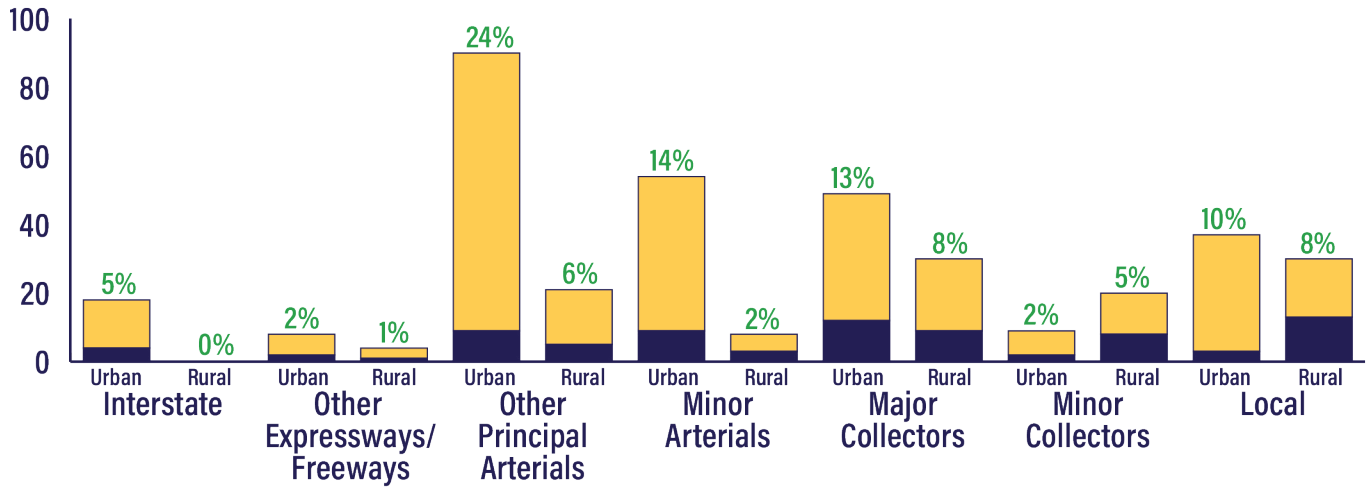
XX% of Total Motorcycle Fatalities and Serious Injuries

Manner of Impact

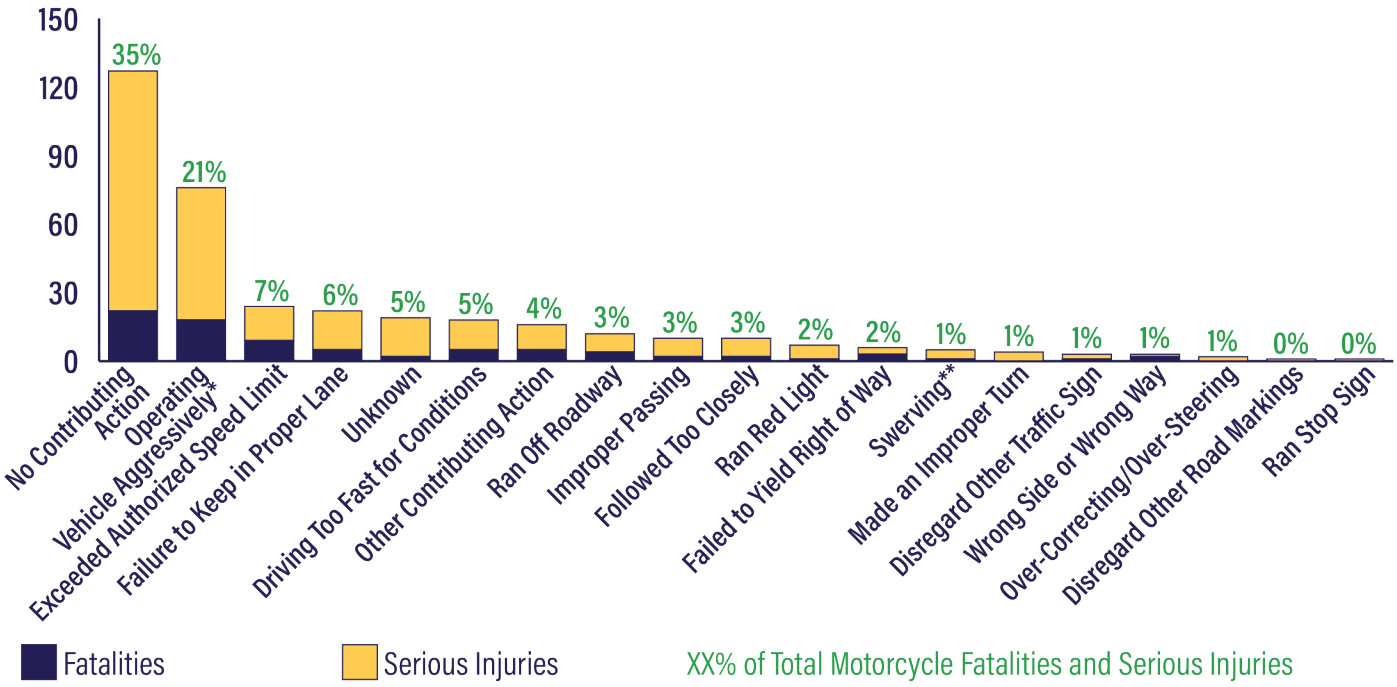


XX% of Total Motorcycle Fatalities and Serious Injuries

Roadway Functional Classification

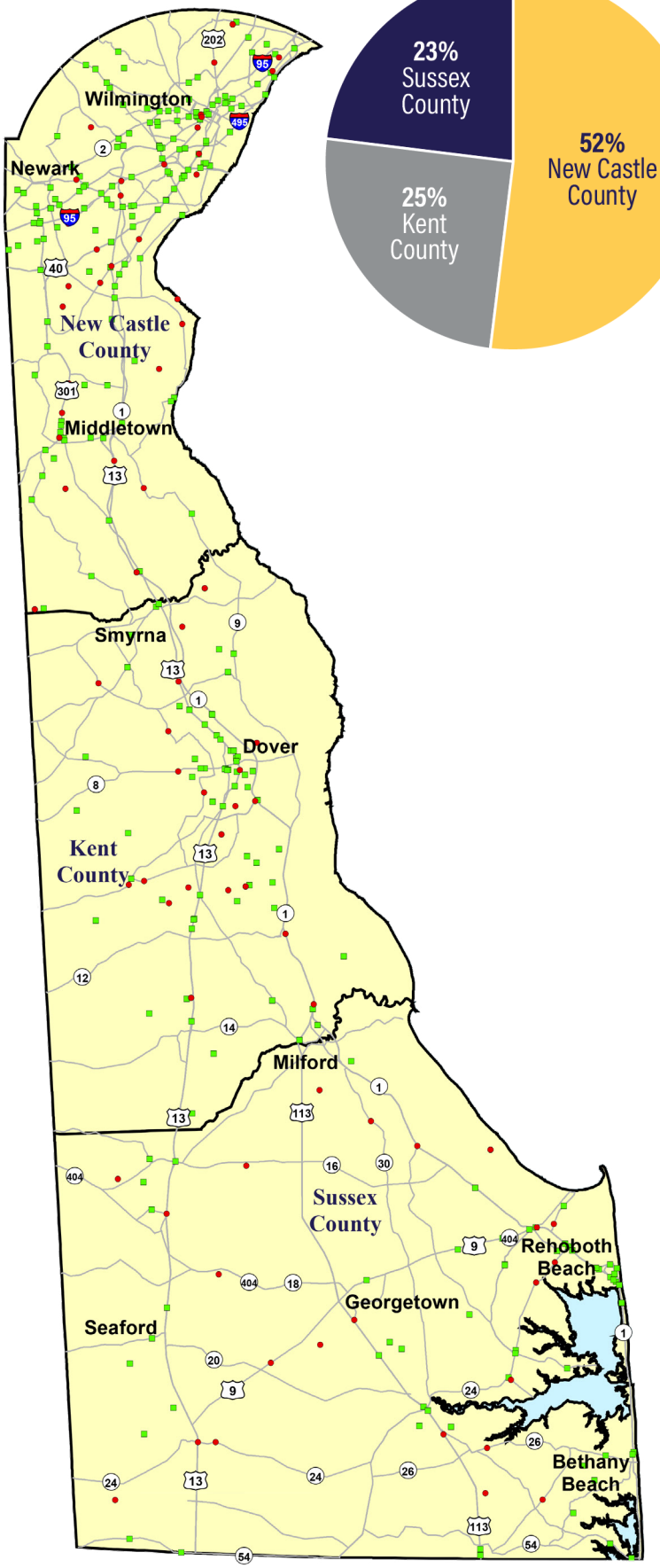


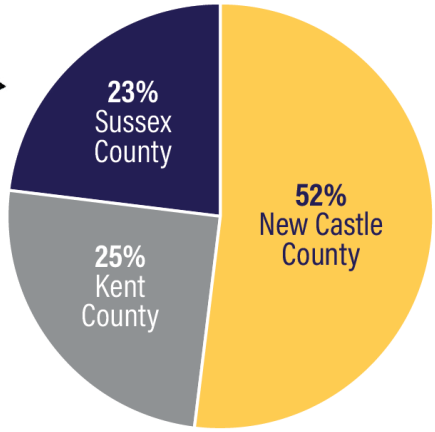
Driver Contributing Circumstance



* Operating vehicle in erratic, reckless, careless, negligent or aggressive manner
** Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.

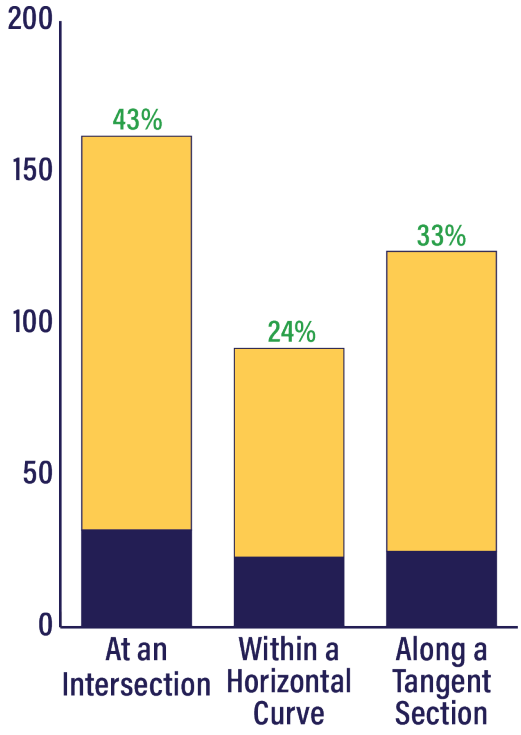
Where?





44%

of motorcyclists fatally injured were impaired



XX% of Total Motorcycles Fatalities and Serious Injuries

Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

Emphasis Area Strategies: Motorcycles

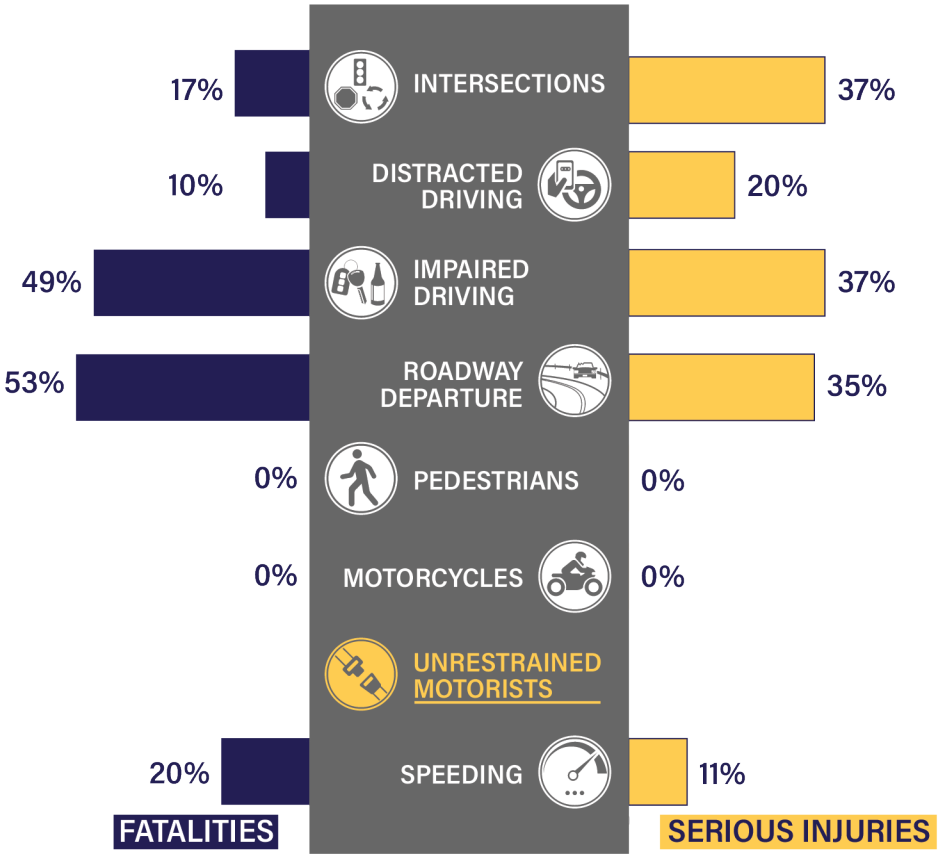
	Strategy 1: Develop and distribute consistent public information messages to increase public awareness of motorcycle safety.
1.1	Promote the use of reflective and personal protective equipment (PPE), including helmet use.
1.2	Provide targeted safety public awareness campaigns directed at impaired motorcyclists.
1.3	Provide targeted motorcycle safety public awareness campaigns during specific holiday periods and in targeted areas.
1.4	Provide targeted motorcycle safety public awareness campaigns directed at motor vehicle blind spots and checking for motorcycles.
1.5	Increase the number of motorcycle safety course/endorsement course instructors available within the state.
1.6	Promote the sharing of information regarding crash locations, roadway characteristics, and hazards regarding potential problems for motorcyclists.
1.7	Conduct surveys of motorcyclists to better understand trends with personal protective equipment (PPE) use, general motorcycle operation and interaction with other traffic.
	Strategy 2: Strengthen motorcycle safety enforcement programs.
2.1	Conduct targeted high-visibility enforcement campaigns to reduce motorcycle crashes.
	Strategy 3: Support legislative action to strengthen motorcycle safety, including endorsement laws and motorcycle enforcement efforts.
3.1	Support the enactment of a universal motorcycle helmet law.
3.2	Investigate the feasibility of enacting a graduated motorcycle helmet law, similar to that of the graduated driver licensing requirements.
3.3	Examine penalties related to operating a motorcycle without an endorsement and consider enhancing the penalties similar to that of operating a motor vehicle without a license.
3.4	Research the use of ignition interlock devices (IID) and motorcycle-specific requirements to determine device availability and determine if there is a tendency to circumvent the IID law.
3.5	Review regulations regarding temporary motorcycle permits and motorcycle endorsements to evaluate potential contradictions between the two.
	Strategy 4: Improve infrastructure and consider motorcycles when installing improvements.
4.1	Investigate and research roadside safety hardware best practices to reduce the severity of motorcycle crashes involving existing roadside hardware.
4.2	Educate the highway engineering and maintenance workforce on roadway conditions that may be hazardous to motorcycles.

Emphasis Area 7
Unrestrained Motorists

Seat belts and child car seats are the most effective in-vehicle safety devices to prevent serious injuries and death during a crash and have saved more lives between 1960 and 2012 than all other vehicle technologies (air bags, etc.) combined. According to NHTSA, the risk of a fatal injury in a crash is reduced nearly by half by wearing a seat belt. By law, the driver of the vehicle is responsible for making sure that everyone in the vehicle is properly wearing a seat belt in Delaware.

Although Delaware's seat belt usage rate has generally increased since establishing a primary seat belt enforcement law in 2003 and reached 93 percent in 2019, 25 percent of fatalities from 2015 through 2019 were unrestrained motorists. Failing to wear a seat belt is not typically a contributing factor to a crash occurring; however, this poor pre-crash choice often overlaps with other poor driving characteristics (e.g., speeding, impaired driving, distracted driving). Continued educational and enforcement strategies are critical to maintaining and increasing the current rate of seat belt usage and ensuring their use becomes habit for the next generation. Continued increases in seat belt usage is of upmost importance to achieving long-term safety benefits.

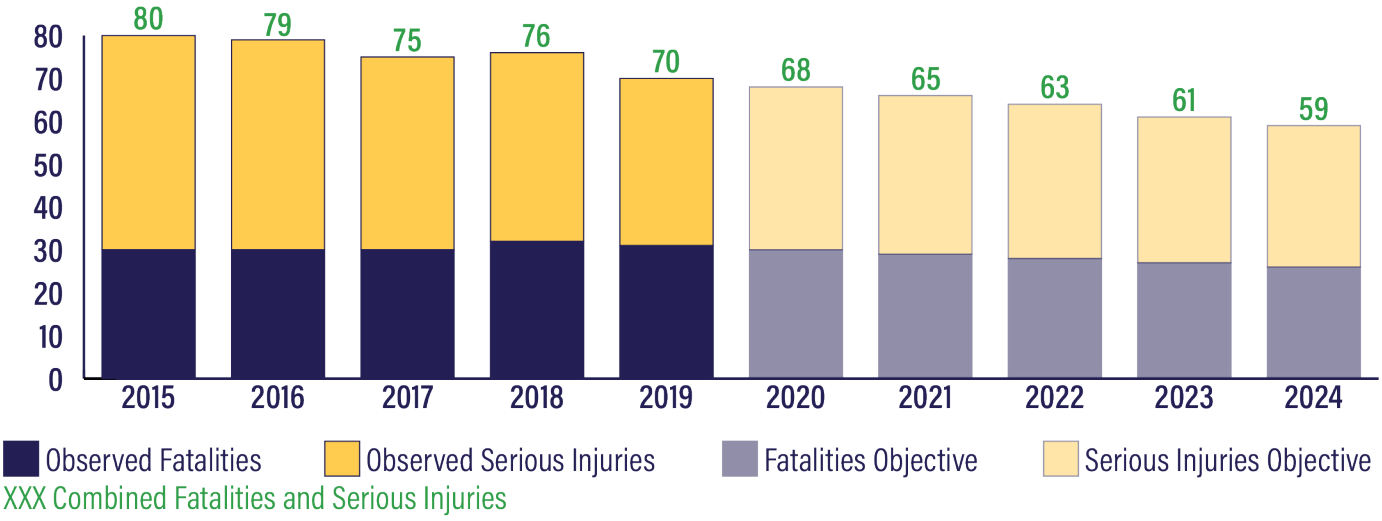
Unrestrained Motorists Emphasis Area Overlap with Other Emphasis Areas (*2015-2019 Crashes*)



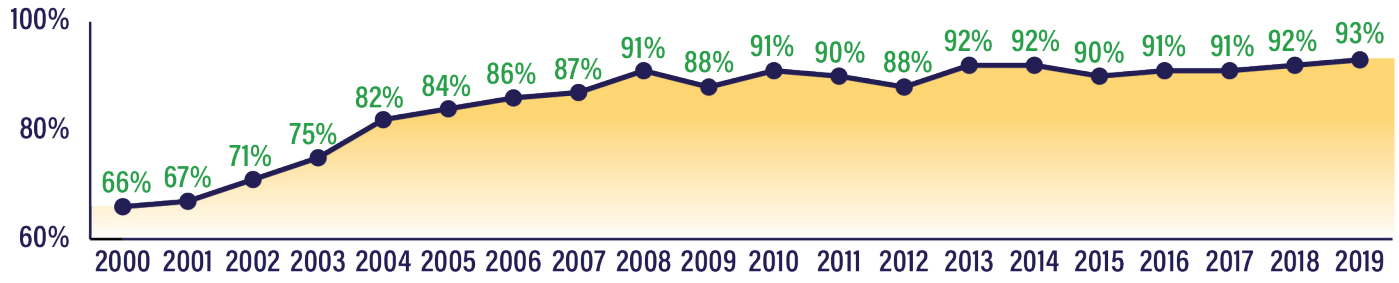
Crash Data Summary (2015-2019)

Unrestrained Motorists Crash Definition: Drivers or passengers of motor vehicles not wearing a seat belt (or proper child restraint) excluding those in the following vehicle styles: Farm Tractors, Motorcycles, Scooters, Snowmobiles, Horse and Buggies, and ATVs

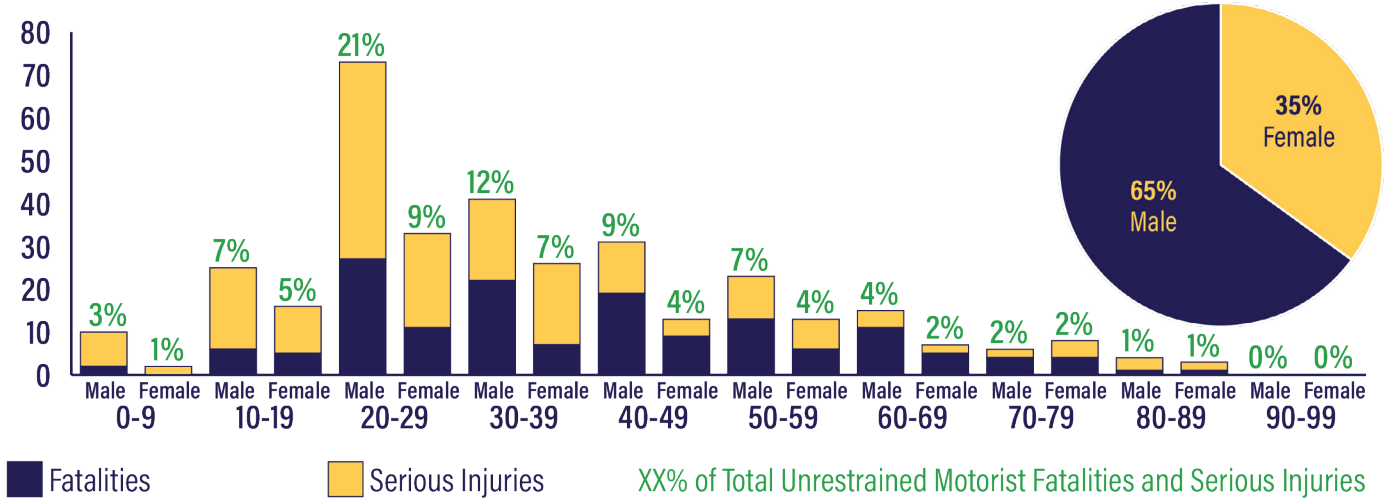
Unrestrained Motorist Fatalities and Serious Injuries *(5-Year Rolling Averages)*



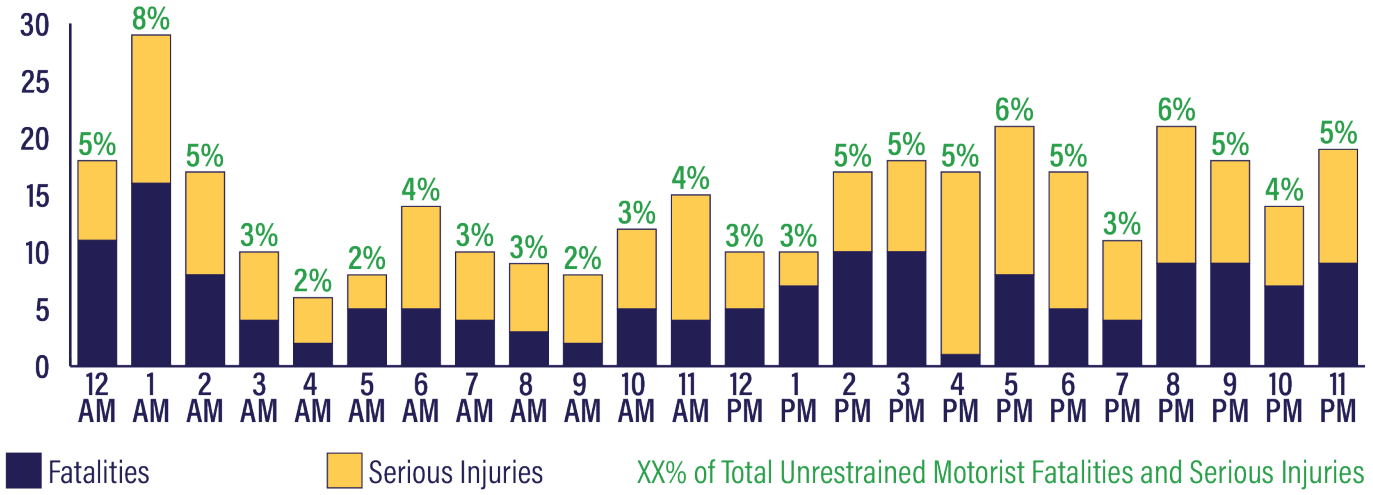
Delaware Observed Seat Belt Usage



Age/Gender of Crash Victim



When?



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Sunday	3	9	9	4	3	2	2	1		2	1		3	1		2	2	2	4	2	4	1	1	2	60
Monday	3	3	1	1	1		2	1	1			2		1	3	2	2						2		25
Tuesday		1		1		2	3	3	3	2	1	2	2	1	4		7	2	1	1	1	7	2	5	51
Wednesday	1		1	1			2	1			2	3	1	1	2		1	2	2	1	3	1	1	3	29
Thursday		6	3		1	1	2	1	3	1	3	3	2	1	3	2	2	9		1	5	2	2	3	56
Friday	4	7	1	1		1			1		1	4	1	2	3	8	2	5	5	1	5	3	2	4	61
Saturday	7	3	2	2	1	2	3	3	1	3	4	1	1	3	2	4	1	1	5	5	3	4	4	2	67
Total	18	29	17	10	6	8	14	10	9	8	12	15	10	10	17	18	17	21	17	11	21	18	14	19	349

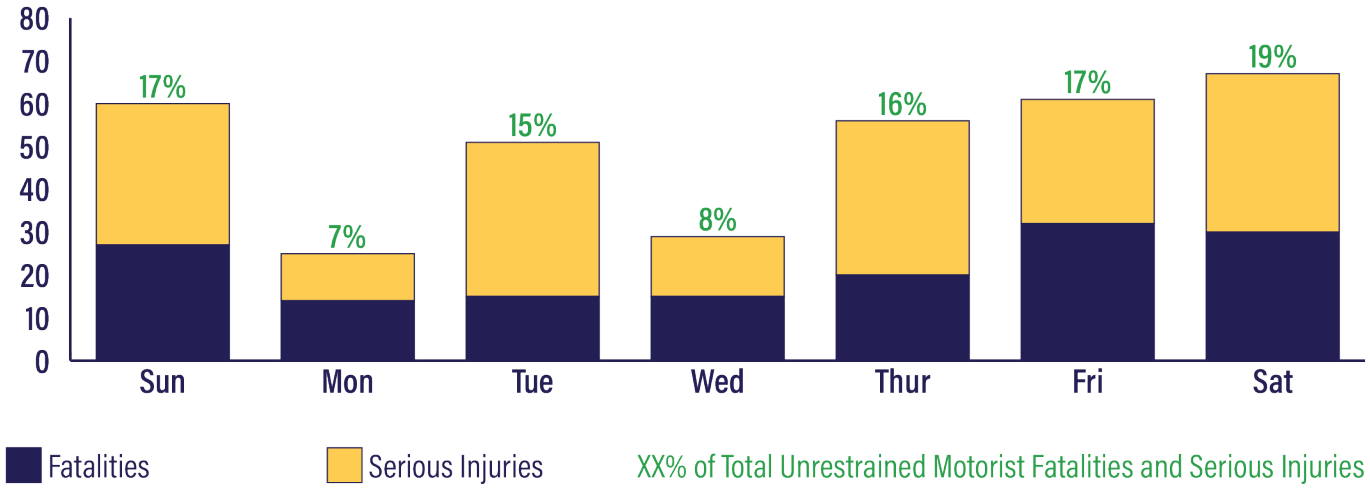
XX Unrestrained Motorist Fatalities and Serious Injuries during Day of Week and Hour of Day

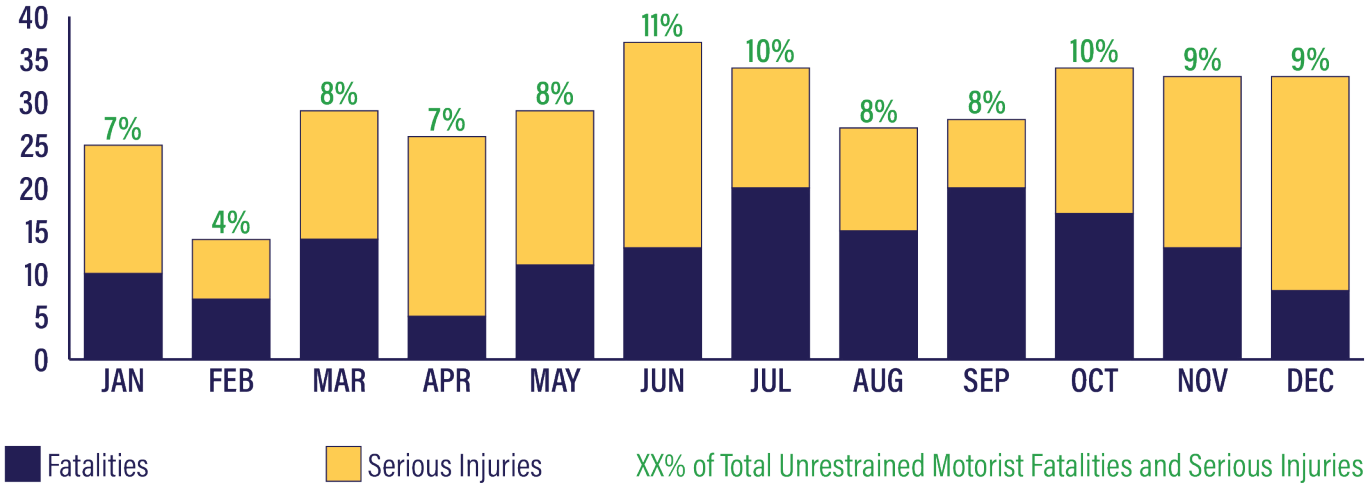
Lower Frequency — Higher Frequency

2015 to 2019 Unrestrained Motorist Fatalities & Serious Injuries

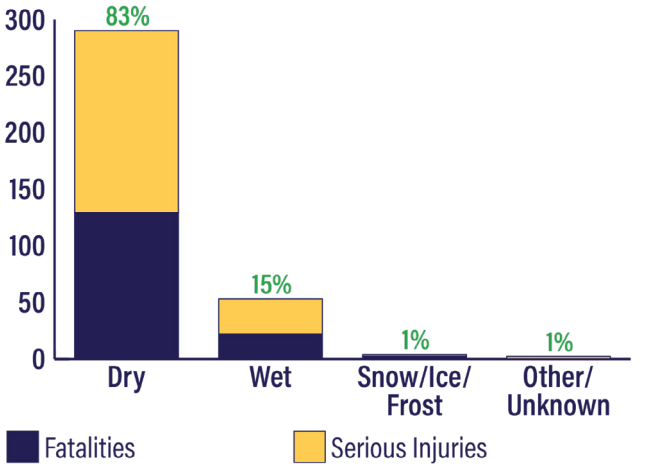
- 70% were Delawareans
- 67% were drivers
- 65% were male
- 56% occurred during dark/dawn/dusk conditions
- 54% occurred in urban areas
- 53% occurred on a Friday, Saturday or Sunday
- 48% occurred on arterial roadways
- 45% occurred in single vehicle crashes
- 30% were 20 to 29 years old
- 30% of all fatalities in Sussex County were unrestrained motorists
- 28% were impaired drivers
- 24% occurred between 11 PM and 3 AM

When?

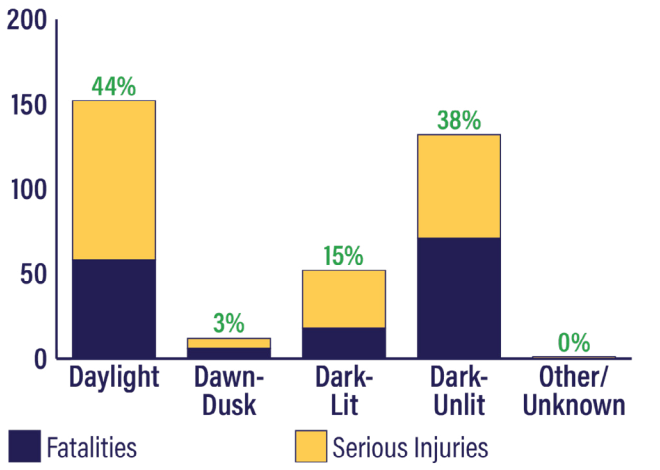




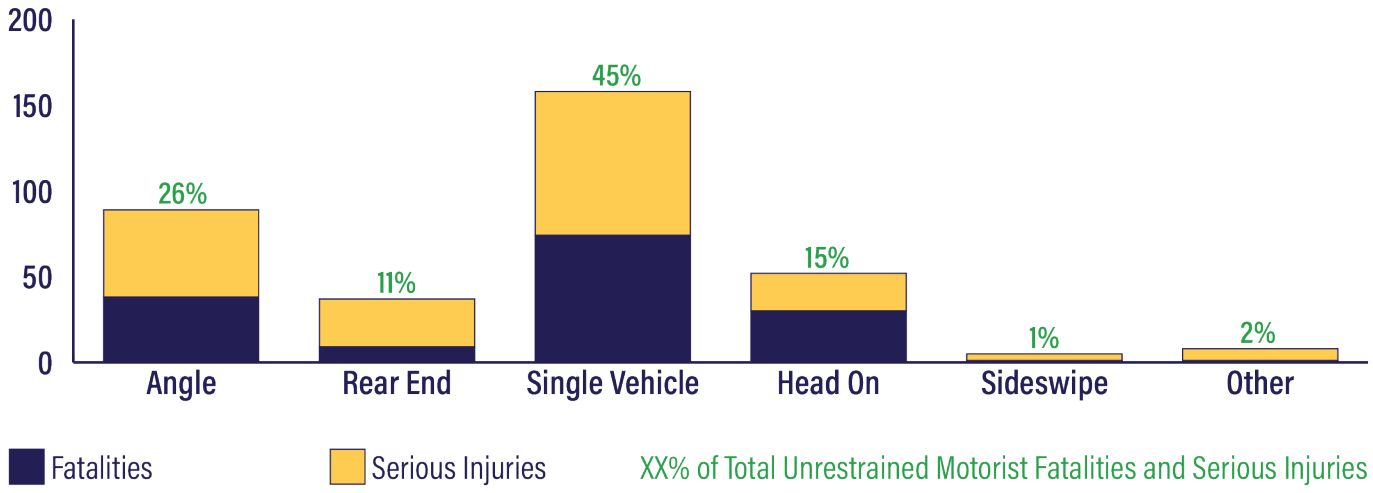
Surface Condition



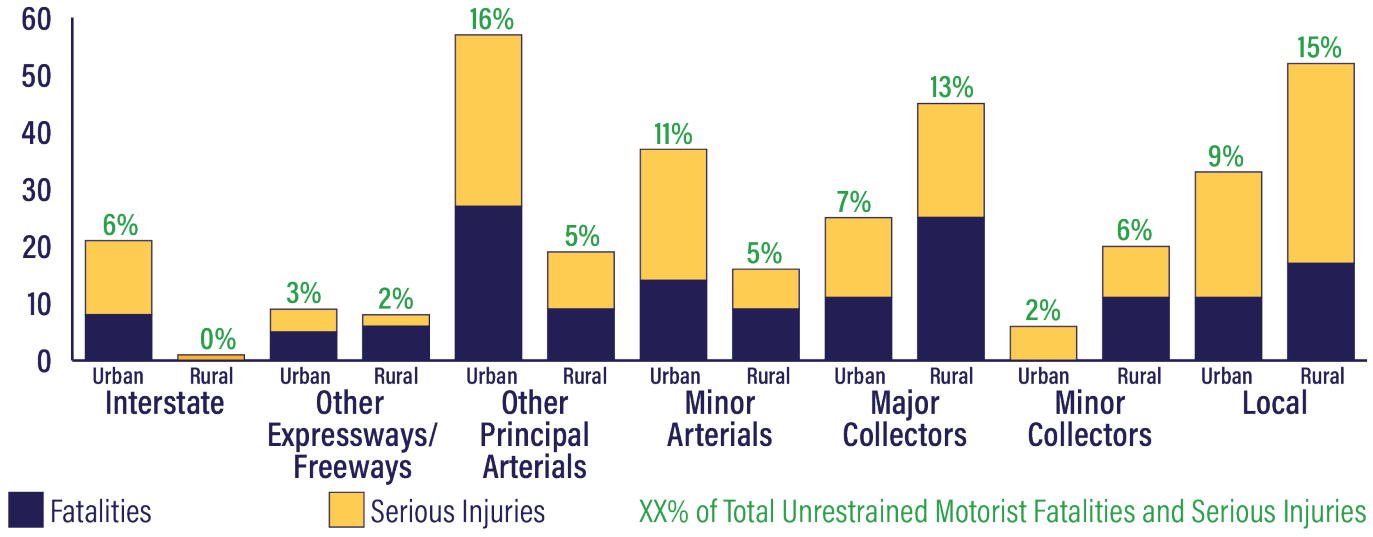
Lighting Condition



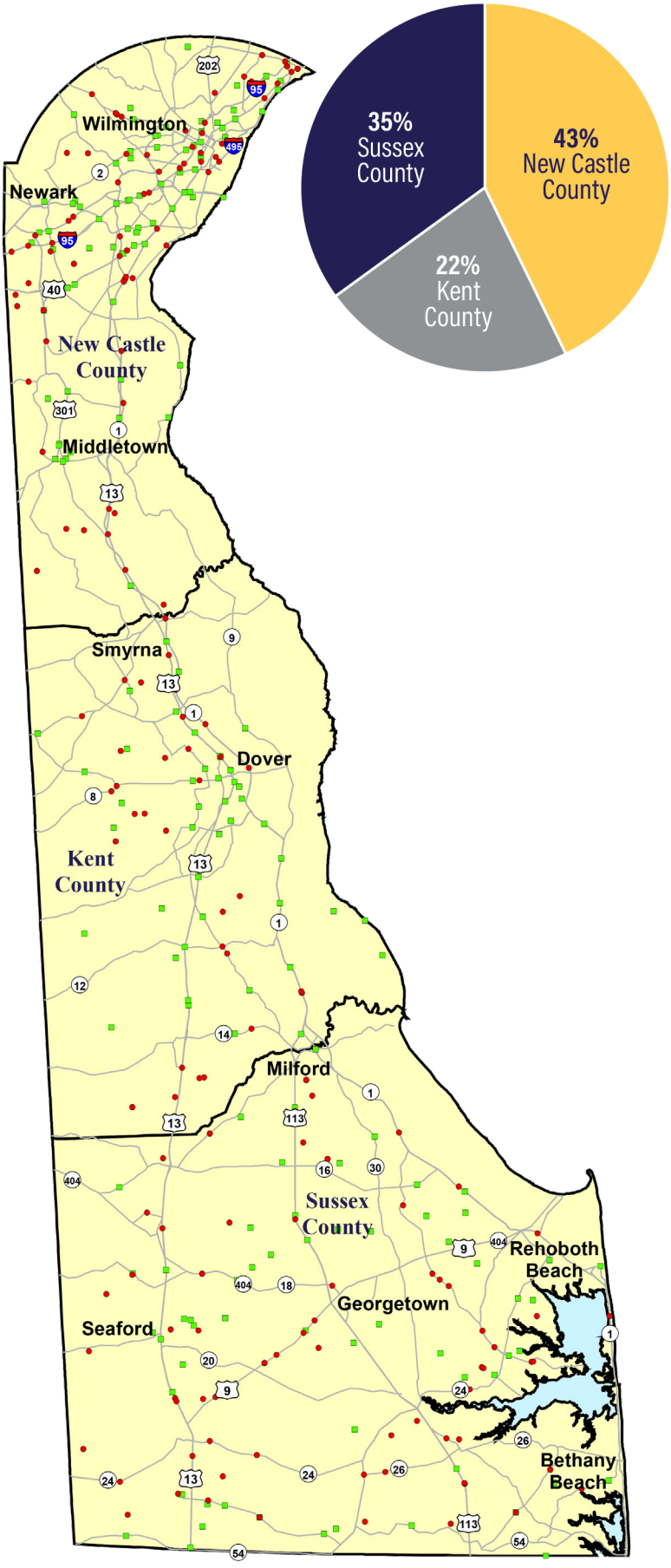
Manner of Impact



Roadway Functional Classification

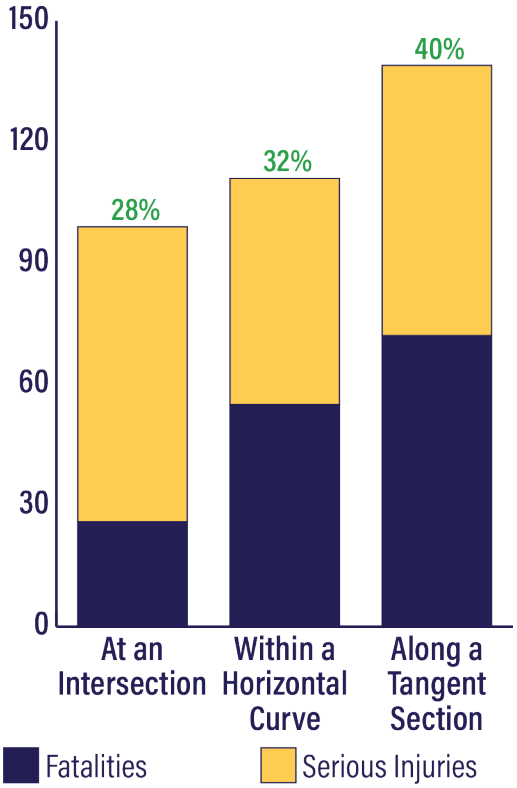


Where?



39%

of unrestrained motorists fatally injured were impaired



XX% of Total Unrestrained Motorist Fatalities and Serious Injuries

Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

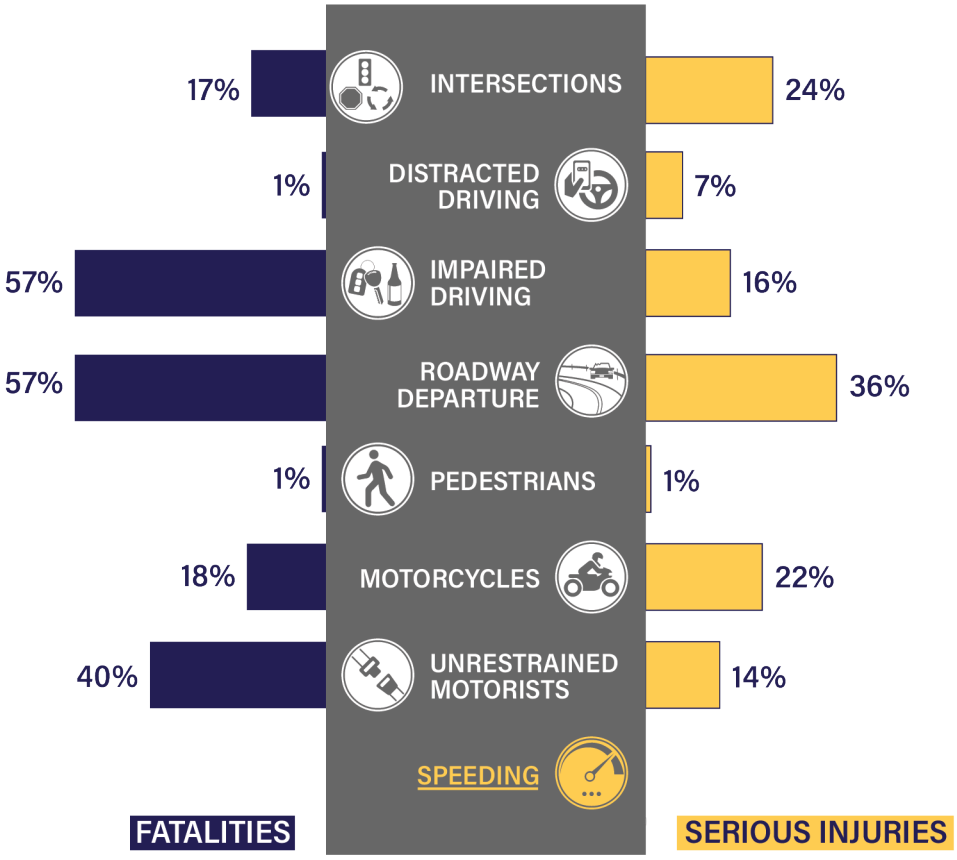
Emphasis Area Strategies: Unrestrained Motorists

	Strategy 1: Improve seat belt and child-restraint compliance through enforcement.
1.1	Strengthen efforts to increase compliance, enforcement, and adjudication of the seat belt and child restraint laws.
1.2	Conduct targeted high-visibility enforcement campaigns, such as nighttime saturation patrols, to increase seat belt usage.
1.3	Place law enforcement officers in larger vehicles with a higher vantage point to observe unrestrained motorists.
1.4	Research and implement innovative enforcement tools related to unrestrained motorists.
1.5	Research other states' seat belt laws and penalties and make recommendations to revise Delaware law.
	Strategy 2: Develop and distribute consistent public information messages to increase public awareness of the law and safety benefits related to seat belt usage and child-restraint systems.
2.1	Partner with stakeholders and other available educational resources to promote increased occupant protection.
2.2	Develop targeted media campaigns depicting local celebrities wearing seat belts.
2.3	Collaborate with youth organizations to develop and distribute consistent messaging towards "tweens" regarding proper restraint and seating locations for children.

Emphasis Area 8
Speeding

Higher vehicle speeds may be a contributing factor in many crashes increasing the severity for persons involved. Speeding has become a socially accepted behavior, and, in some cases, it can even be encouraged by one's peers. Speeding commonly overlaps with other adverse behaviors (impaired driving, distracted driving, lack of seat belts) and, as a result, is anecdotally underreported. Recognizing that higher speeds increase crash severity, Delaware has included Speeding as an Emphasis Area even though it ranks slightly lower than some other potential Emphasis Areas.

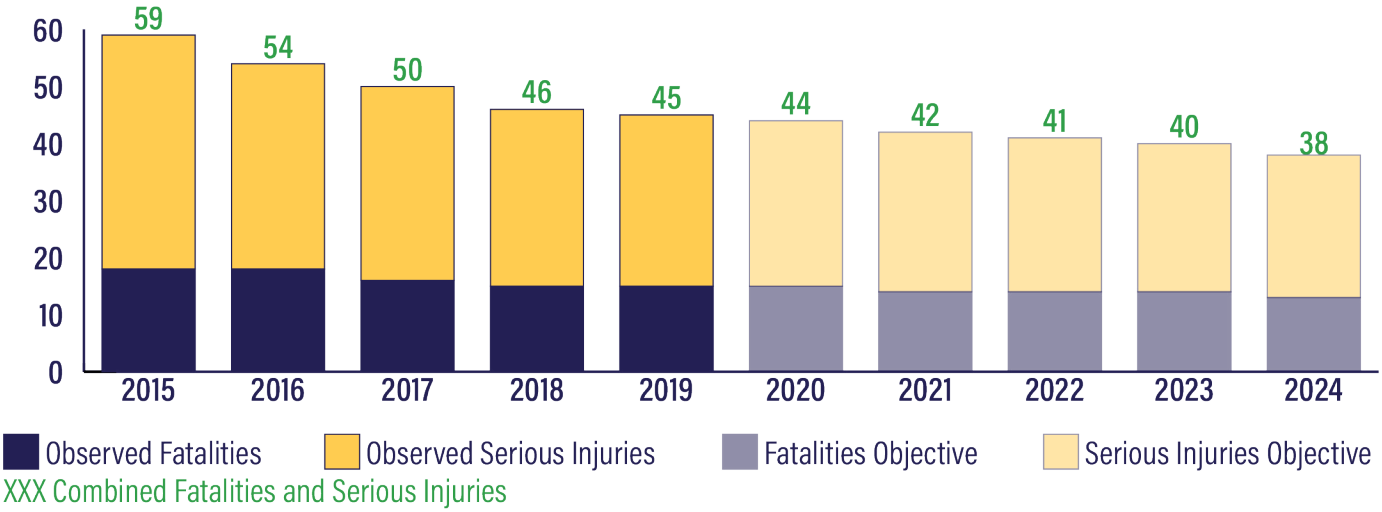
Speeding Emphasis Area Overlap with Other Emphasis Areas *(2015-2019 Crashes)*



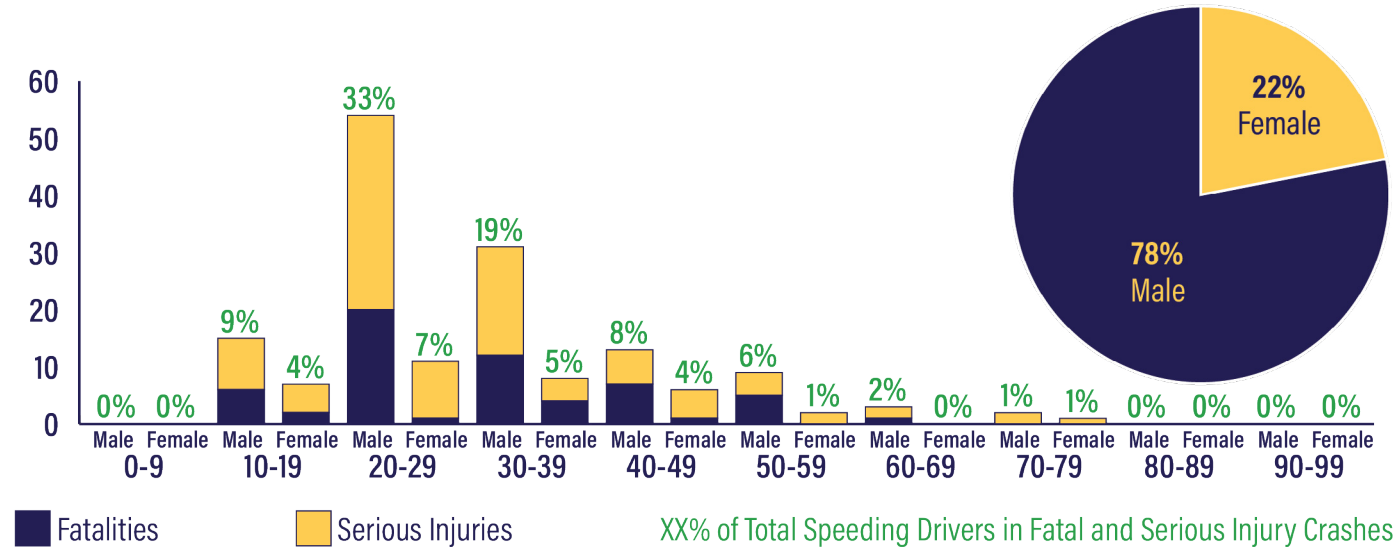
Crash Data Summary (2015-2019)

Speeding Crash Definition: Persons fatally or seriously injured in crashes that involved a speeding driver.

Speeding Fatalities and Serious Injuries *(5-Year Rolling Averages)*

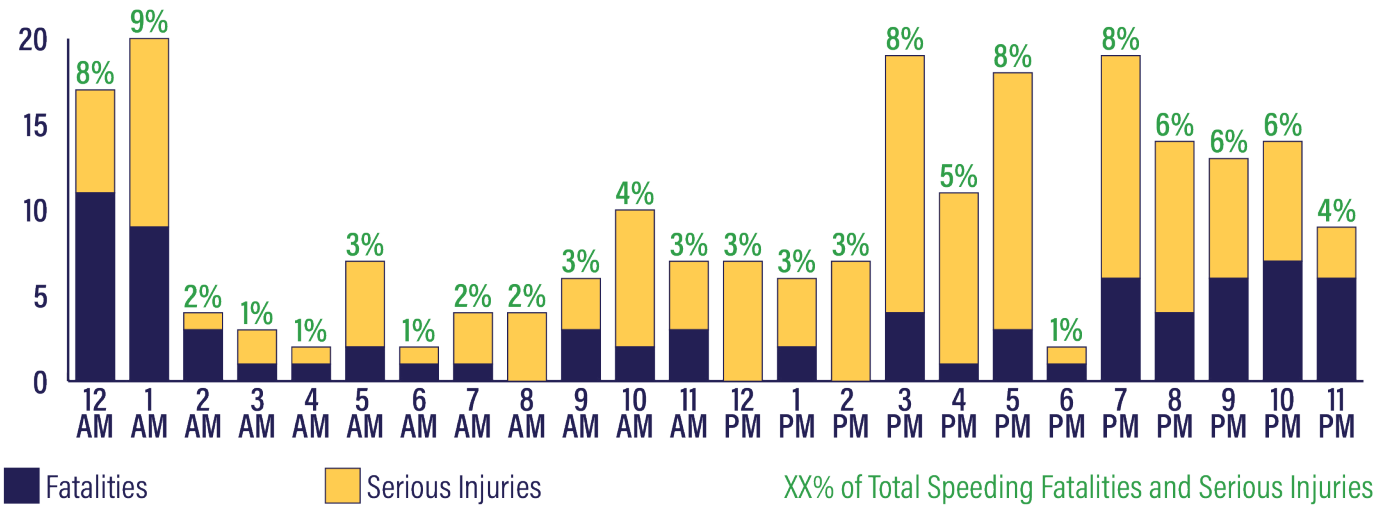


Age/Gender of Speeding Driver



DRIVESAFE

When?



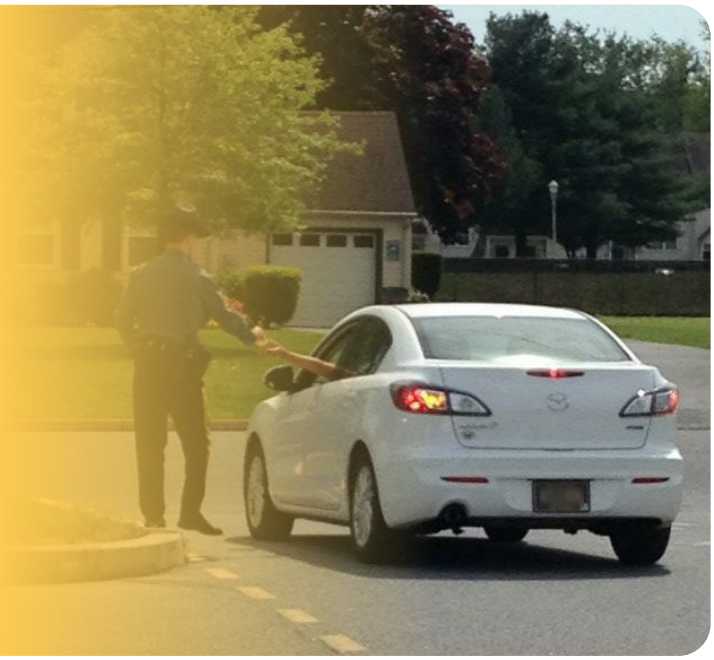
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
Sunday	4	9	3	3	1					2	1			1	1	3	1			5	1		4	2	41
Monday	3					1						2		1	1	4		1		3	3		3	1	23
Tuesday		1				2			2	1	2		3	1	2	1	3	7		1	1		1	1	29
Wednesday	2		1		1	1		2	1	1	2		2	1	1	7					2	1	4		29
Thursday	1	3				1	1			1	1	3	1			4	3	2		2	4	3			30
Friday	4	5						2			1	1	1	1			2	4	1	5		4		1	32
Saturday	3	2				2	1		1	1	3	1		1	2		2	4	1	3	3	5	2	4	41
Total	17	20	4	3	2	7	2	4	4	6	10	7	7	6	7	19	11	18	2	19	14	13	14	9	225

XX Speeding Fatalities and Serious Injuries during Day of Week and Hour of Day

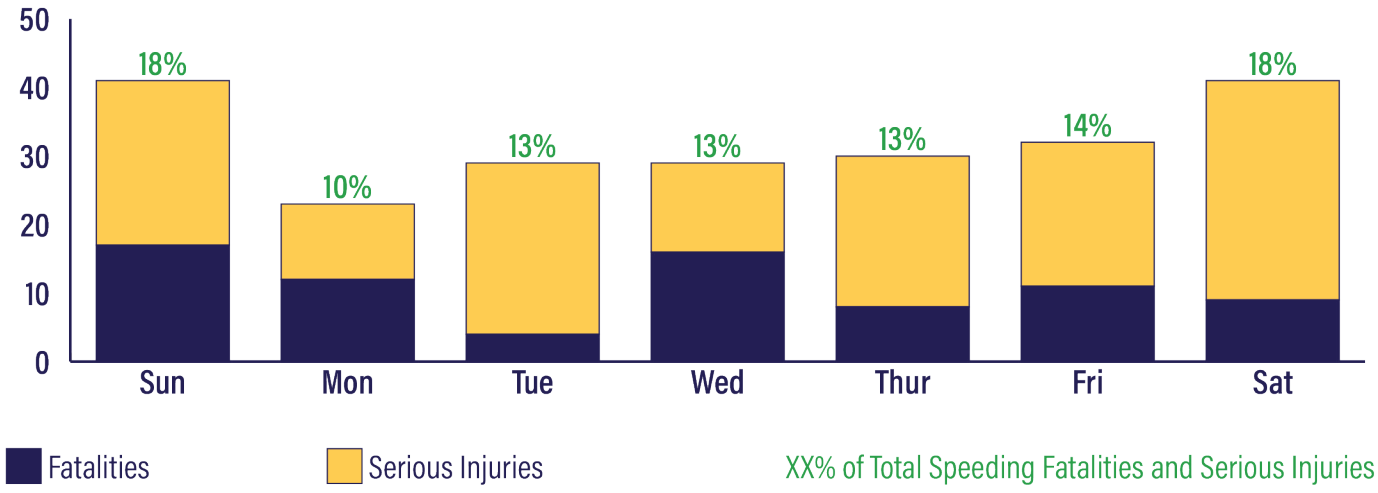
Lower Frequency — Higher Frequency

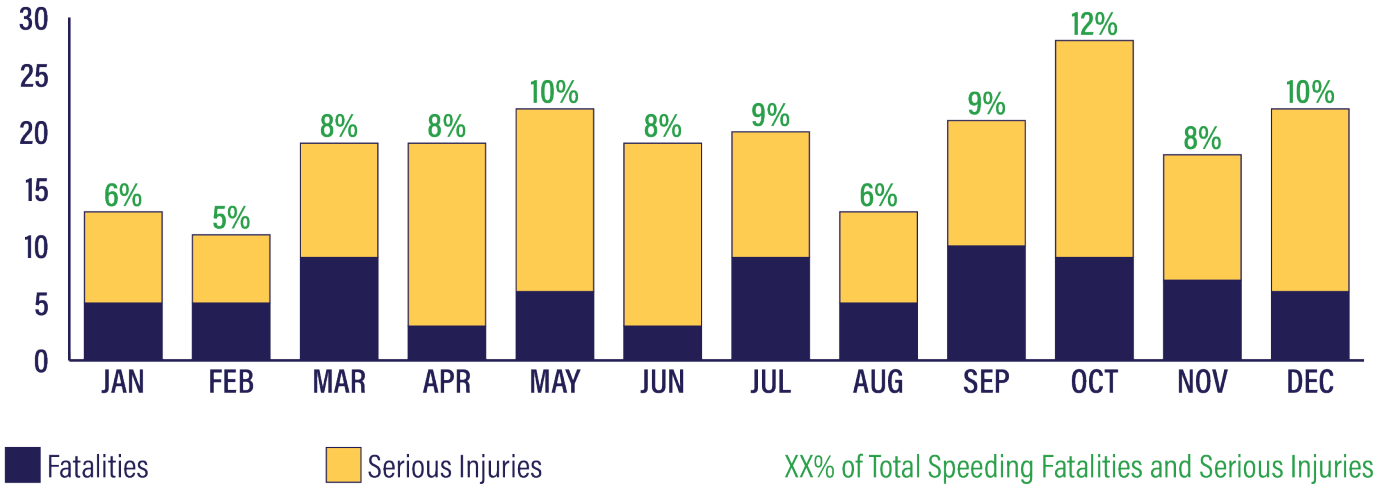
2015 to 2019 Speeding Fatalities & Serious Injuries

- 68% were male
- 62% occurred in urban areas
- 56% occurred in single vehicle crashes
- 54% occurred in New Castle County
- 54% occurred on collector or local roads
- 50% occurred on a Friday, Saturday, or Sunday
- 41% during dark (unlit) conditions
- 35% were 20 to 29 years old
- 31% occurred between 3 PM and 8 PM
- 25% were motorcyclists
- 25% occurred on wet/snowy/icy roadways

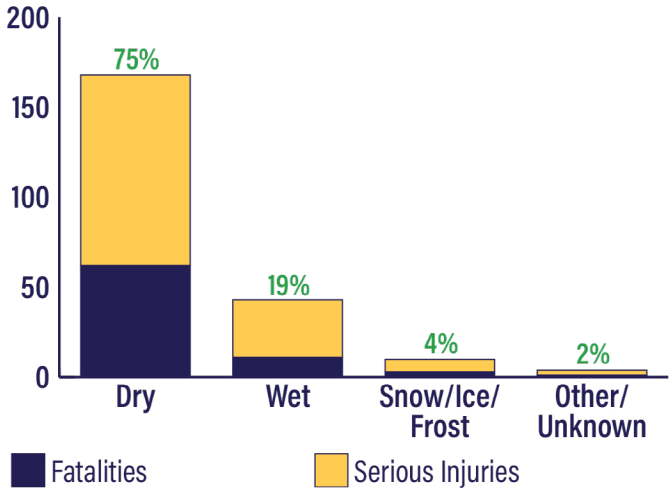


When?

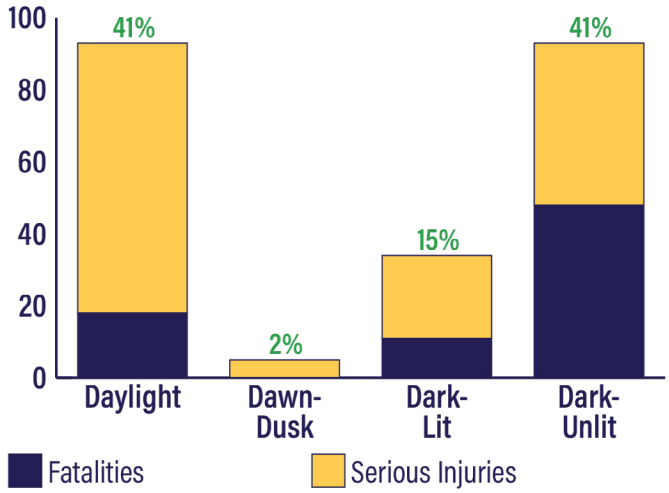




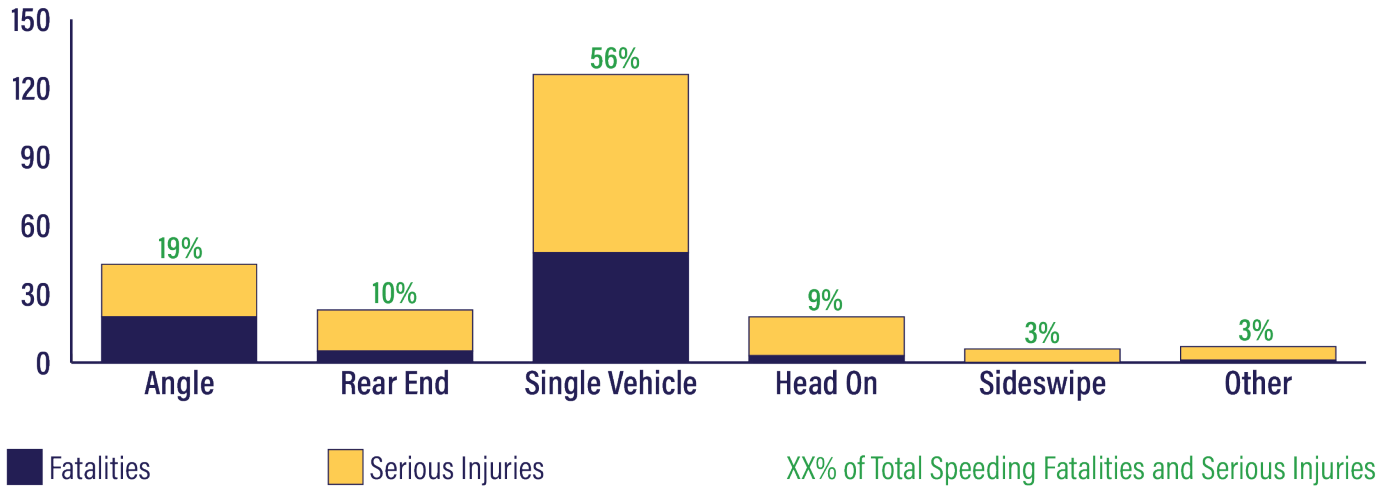
Surface Condition



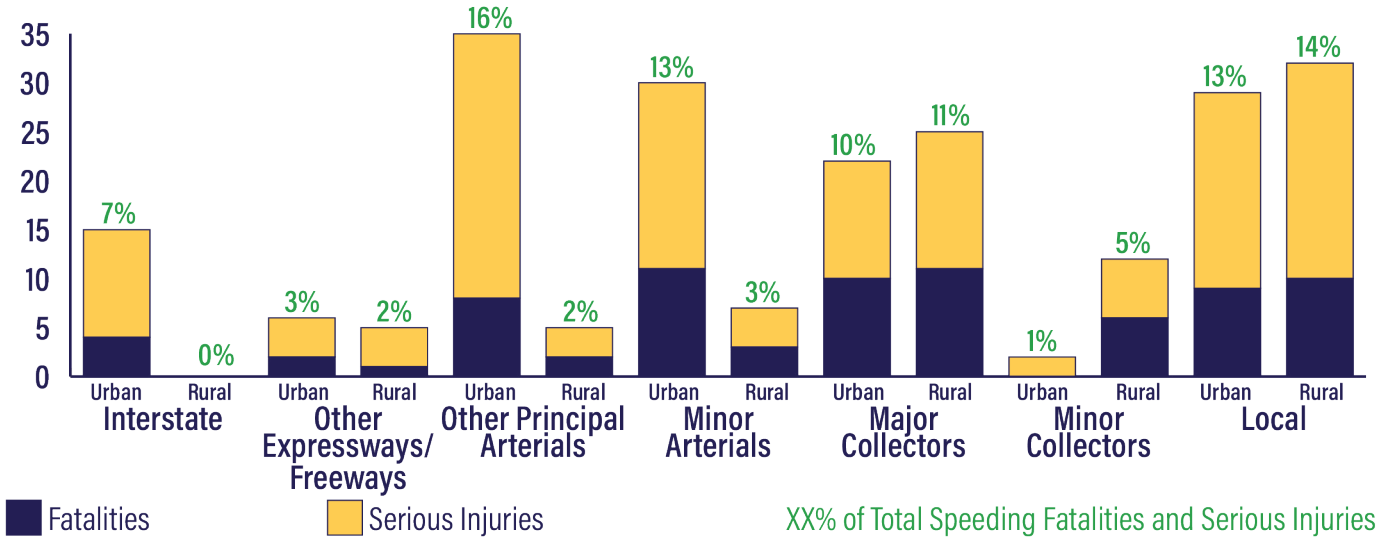
Lighting Condition



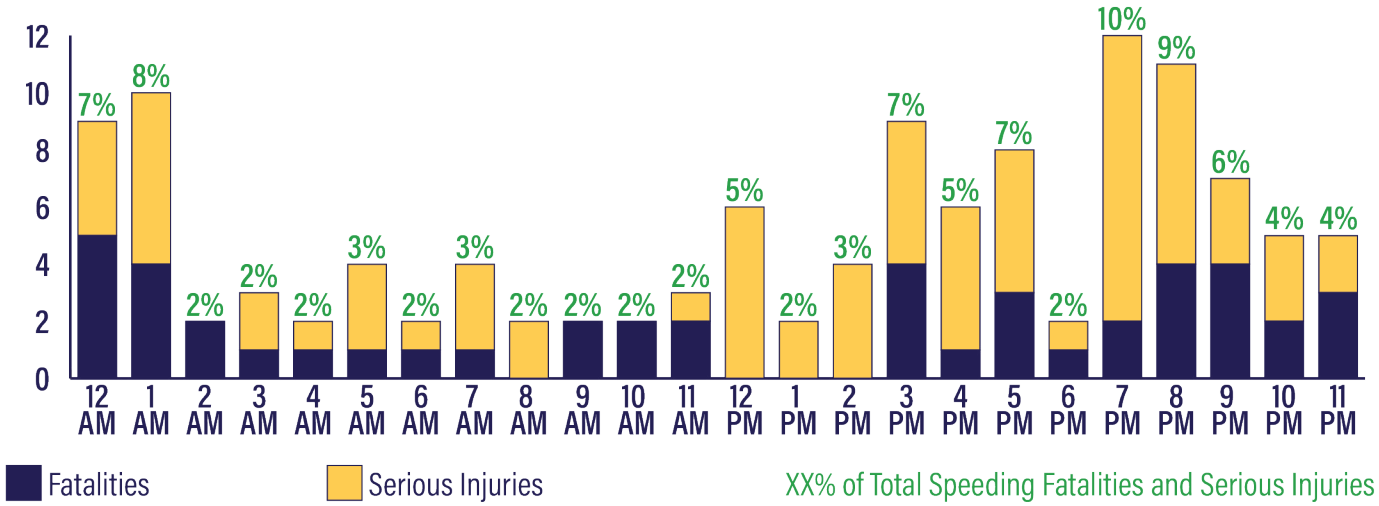
Manner of Impact



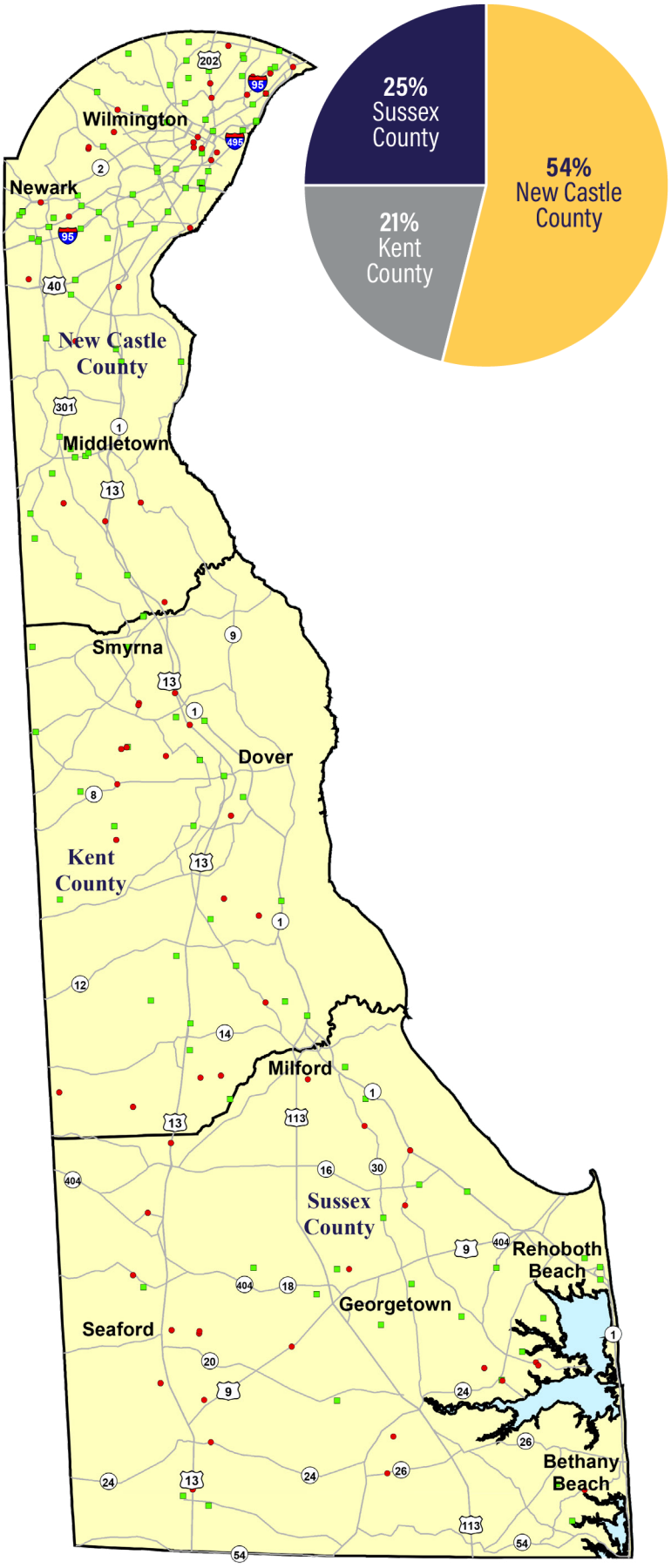
Roadway Functional Classification

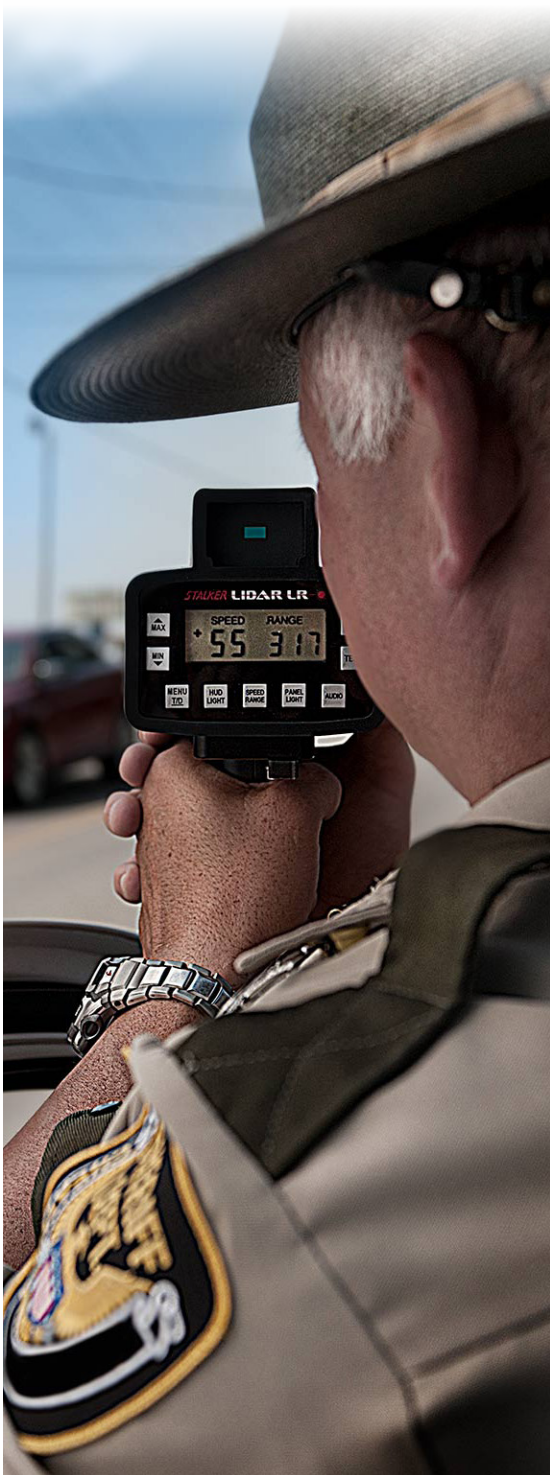


When? *(Collectors & Local Roads)*



Where?





Fatality

Serious Injury

Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location; therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.

Emphasis Area Strategies: Speeding

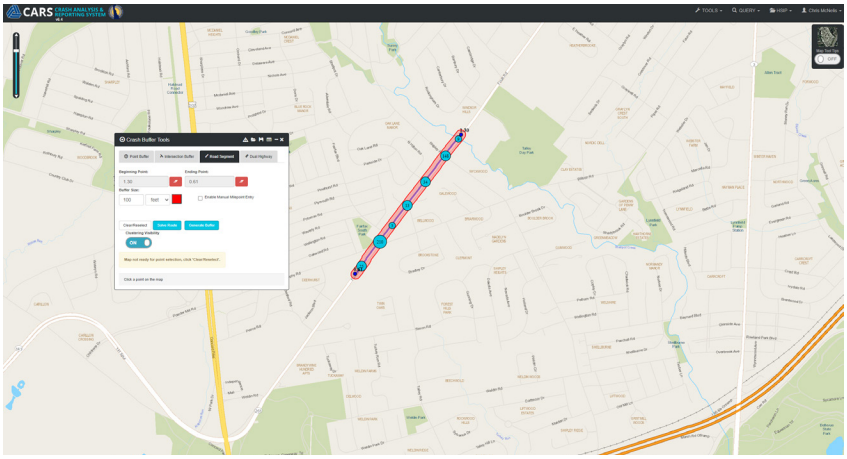
	Strategy 1: Develop and distribute consistent public information messages to increase public awareness of the law and consequences of speeding.
1.1	Develop targeted public safety awareness campaigns that reduce the perception that speeding is acceptable and improve public understanding of the consequences of speeding.
1.2	Expand the use of Variable Message Signs for displaying safety messages.
1.3	Revitalize the DelDOT residential roadways speeding campaign ("At 25 She's Alive...") and consider similar campaigns targeting local and collector roadways.
1.4	Ensure drivers education instructors and defensive driving programs incorporate speeding laws and the benefits of driving at a safe and reasonable speed into their lesson plans.
	Strategy 2: Reduce the frequency and severity of speeding related crashes by implementing innovative enforcement practices.
2.1	Conduct targeted high-visibility enforcement campaigns to decrease speeding.
2.2	Consider implementing a pilot program using non-traditional vehicles to conduct speed enforcement.
2.3	Support the enactment of legislation permitting the use of automated speed enforcement in Delaware.
2.4	Utilize crowd sourcing data to deploy law enforcement in areas that receive higher than average speeding complaints.
	Strategy 3: Implement engineering countermeasures that reduce speed differentials and increase compliance with posted speed limits.
3.1	Investigate the feasibility of implementing a local road systemic safety program that identifies infrastructure improvements that can be installed on local roadways to reduce speeding-related crashes.
3.2	Investigate the need for developing a program to systemically complete speed studies to identify the appropriate speed limit on local roadways that currently have an unposted speed limit.
3.3	Research the effectiveness and evaluate the feasibility of implementing Variable Speed Limit signing on all freeways/ expressways in Delaware.
3.4	Evaluate the feasibility and effectiveness of implementing Variable Speed Limit signs on SR 1 in the resort areas and combine speed limit reductions with pedestrian improvements.
3.5	Implement engineering countermeasures that have a combined crash reduction on speeding related crashes and pedestrian related crashes.

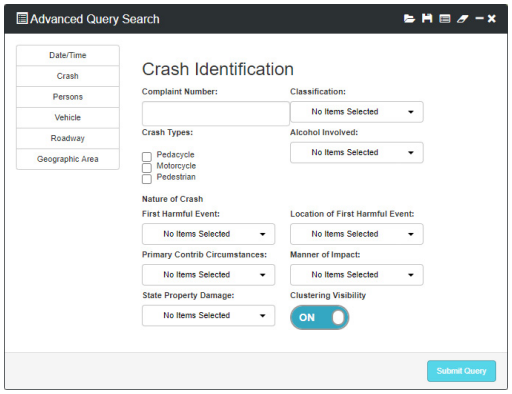
Emphasis Area Strategies: Speeding

	Strategy 4: Develop policies and guidelines to implement effective safety measures to reduce the frequency and severity of speeding related crashes.
4.1	Formally establish revised regulations and guidelines regarding the establishment of speed limits with less reliance on the 85th-percentile speed as the sole determining factor.
4.2	Update policies and procedures for the use of Radar Speed Feedback signs at appropriate locations.
4.3	Develop policies and guidelines to encourage the use of speed monitoring devices in commercial vehicle fleets.
4.4	Consider revising DelDOT's design policies and guidelines to promote design practices that reduce speeding related crashes.
	Strategy 5: Improve speeding crash data collection and analysis to enhance the identification of high-risk corridors and high-risk driving behaviors.
5.1	Develop a program to share continuously collected speed data with law enforcement regarding where speeding is occurring.
5.2	Validate the existing speed limit data within DelDOT's Transportation System Data Management (TSDM).
5.3	Provide law enforcement training in properly identifying speed as a contributing factor in crashes to better quantify the speeding problem in Delaware.

Emphasis Area 9
Traffic Records

Traffic safety data is the primary source of information about the environment, human behavior, and vehicle performance in a crash; therefore, the availability of timely, accurate, complete, uniform, integrated, and accessible traffic safety data is required to address safety problems and program limited resources. The effectiveness of informed decision making requires sound research, programs and policies, and is directly dependent on data availability and quality. Delaware's Traffic Records Coordinating Committee (TRCC) is the primary point of leadership, planning, policy setting, and accountability for Delaware's safety data. The TRCC was established and continues to meet on a regular basis to coordinate actions among state agencies and to commit the resources necessary for the integration and sharing of safety-related data.





Emphasis Area Strategies: Traffic Records

	Strategy 1: Improve the timeliness, accuracy, completeness, uniformity, accessibility, and integration of data that is needed to identify priorities for transportation and traffic safety programs.
1.1	Maintain the Traffic Records Coordinating Committee (TRCC) with a multi-disciplinary membership to prioritize traffic records improvement projects.
1.2	Update the Delaware Traffic Safety Information System Strategic Plan to document specific activities, projects and goals to improve traffic records.
1.3	Develop a recurring training program for law enforcement to provide a better understanding of the purpose of crash data reporting and review common errors and omissions in crash reporting.
1.4	Investigate the integration of injury and crash outcome data from trauma centers with crash data to allow for targeted data analysis.
1.5	Continue efforts to integrate crash and citation data to allow for identification and prioritization of safety strategies.
1.6	Incorporate location information into citation data to provide an additional data source for location-based safety analyses.
1.7	Investigate the sharing of non-traditional safety related data between state agencies to improve outreach to vulnerable populations, improve interdiction of unsafe behaviors and overall reduce serious injuries and fatalities.

Performance Measures

SHSP Performance Measures

Delaware uses a performance-based approach to assessing progress towards improving safety on its roadways. This strategic approach ensures accountability and transparency of highway safety programs and informs planning, programming, and decision-making for the greatest possible reduction in fatalities and serious injuries.

SHSP Performance Measures

- **Statewide fatalities and serious injuries**
- **Fatalities and serious injuries in intersection crashes**
- **Fatalities and serious injuries in distracted driving crashes**
- **Fatalities and serious injuries in impaired driving crashes**
- **Fatalities and serious injuries in roadway departure crashes**
- **Pedestrian fatalities and serious injuries**
- **Motorcyclist fatalities and serious injuries**
- **Unrestrained motorist fatalities and serious injuries**
- **Fatalities and serious injuries in speeding crashes.**

Note: All SHSP performance measures are based on the combined number of fatalities and serious injuries

Statewide fatality and serious injury crash data is reviewed and reported annually in DelDOT's HSIP Annual Report, the OHS's Annual Highway Safety Report, and DSP's Annual Traffic Statistical Report. Each report documents performance measures relevant to the specific agency's responsibilities associated with the SHSP Emphasis Areas. Through the development of these reports and regular monitoring of crash trends, DelDOT, OHS, and DSP are able to execute a multidisciplinary approach to consider modifications to highway safety programs that are consistent with changes in crash trends.

Several performance measures have been identified as part of this Plan. A performance measure for the combined number of fatalities and serious injuries is provided for the Plan's overall objective and there is a performance measure for each Emphasis Area objective. Each performance measure has a target that encompasses the five-year period covered by this Plan. Performance measures consider the combined number of fatalities and serious injuries to provide a more robust data set; however, every person killed in a motor vehicle crash is a painful reminder of the inherent risks associated with any mode of travel. Consistent with the Toward Zero Deaths vision, there is an underlying culture and commitment among Delaware's SHSP stakeholders to emphasize the reduction of fatalities during the planning and implementation of its safety programs.

Federally-Required Performance Measures

In addition to the aforementioned performance measures that Delaware will use to track progress of its 2021-2025 SHSP, FHWA requires State Departments of Transportation and MPOs to establish and report the following five annual safety performance measure targets for all public roadways:

- Number of Fatalities
- Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
- Number of Serious Injuries
- Rate of Serious Injuries per 100 million VMT
- Combined Number of Non-motorized Fatalities and Serious Injuries

Since the federally-mandated safety performance measures requirement began in 2017, DelDOT, OHS and DSP have met annually to establish these safety performance measure targets. As required, these annual targets have been established for consistency with Delaware's current SHSP. This process will continue with the adoption of this Plan.

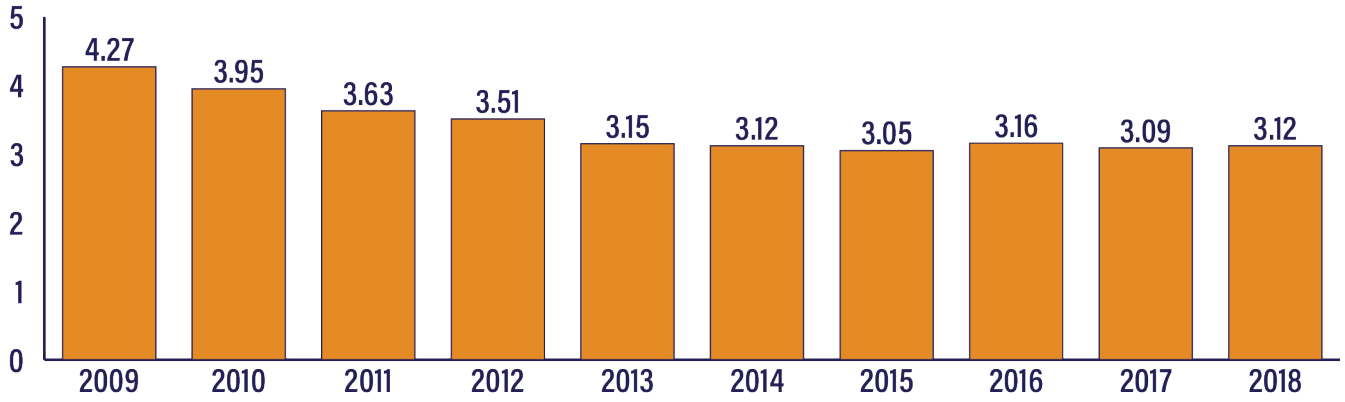
Special Rules

Two Special Rules were established as part of MAP-21 and continued with the passing of the FAST Act: High Risk Rural Roads and Older Drivers and Pedestrians. Crash rates (as defined by the Rules) for these two crash types are reviewed on an annual basis and additional mitigation efforts are required if rates increase compared to prior years.

High Risk Rural Roads

MAP-21 eliminated set-aside funds from the HSIP for High Risk Rural Roads (HRRR) and implemented a Special Rule that now requires states with an increase in fatality rates on rural roads to obligate a specified amount of HSIP funds to HRRR. If a state's fatality crash rate on HRRR increases over the most recent two-year period, states must obligate 200 percent of the amount of HRRR funds received in Federal Fiscal Year 2009.

Delaware HRRR Special Rule Performance *(5-Year Rolling Average Fatality Rate)*



Federal legislation defines a high risk rural road as "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 SHSP". As part of the SHSP update process, states must define its methodology to define a "significant safety risk." Delaware defines a high risk rural road as "any roadway functionally classified as a rural major or minor collector or a rural local road or an intersection that includes a rural collector or local road as one of the intersecting roads that experiences a high crash rate or crash frequency when compared to similarly classified road segments or intersections."

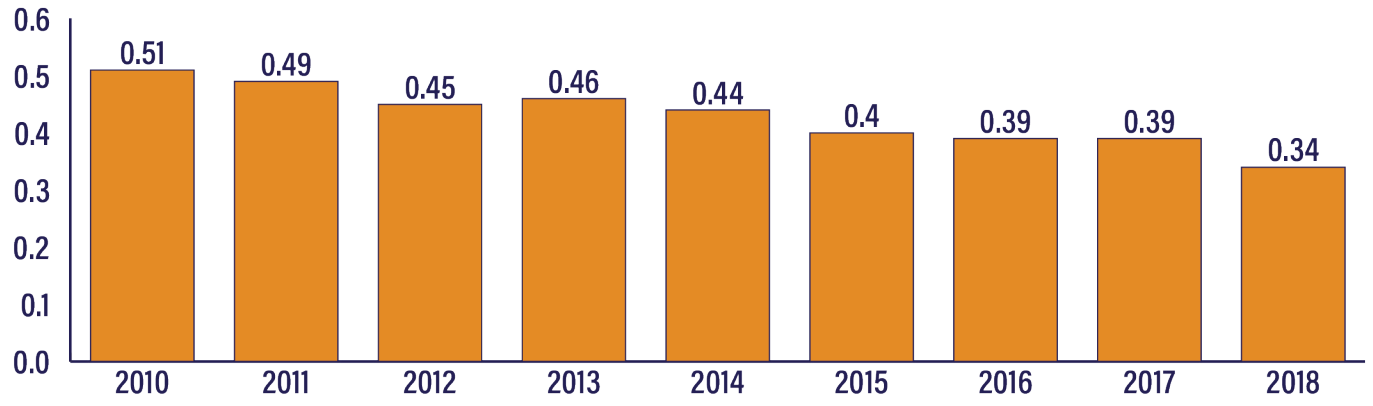
Since 2011, the HRRR Special Rule has not applied in Delaware except for FY2020 (based on a comparison of 2017 and 2015 rates). DelDOT has obligated $900,000 of HSIP funds towards HRRR projects to meet the requirements of the HRRR Special Rule. HRRR-funded projects will be consistent with the SHSP.

Older Drivers and Pedestrians

States are required to include strategies in their SHSP to improve safety for older drivers and pedestrians, defined as 65 years and older, if the state meets the Older Drivers and Pedestrians Special Rule. This Special Rule was enacted as part of MAP-21 and continued with the passing of the FAST Act. According to FHWA's Older Drivers and Pedestrians Rule, the Special Rule applies to the state if the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians 65 years of age and older increases during the most recent 2-year period.

In recent years, the crash rate for older drivers and pedestrians in Delaware as defined by the Special Rule has not increased and therefore this Special Rule has not applied. Strategies specifically addressing older drivers and pedestrians are not included in this Plan; however, Delaware's older population is considered when implementing several strategies included in the eight data-driven Emphasis Areas.

Delaware Older Driver and Pedestrians Special Rule Performance
(5-Year Rolling Average Fatal and Serious Injury per Capita Rate)



Evaluation

Evaluation of 2016-2020 SHSP

Evaluating performance is a key component of an SHSP. Since adoption of Delaware's 2016-2020 SHSP, Delaware's core SHSP agencies have regularly monitored progress towards meeting the annual fatal and serious injury targets outlined in the SHSP. The results of these evaluations are reported annually through DelDOT's HSIP Annual Report, the OHS's HSP and Annual Highway Safety Report, and DSP's Annual Traffic Statistical Report. Since 2017, crash data trends are reviewed annually to support the establishment of the five federally required safety performance measure targets.

2016-2020 SHSP Performance Measure		Annual Target Met?				
		2015	2016	2017	2018	2019
Overall Goal *(Combined Fatalities & Serious Injuries)*		✗	✗	✓	✓	✓
Overall Fatalities		✗	✗	✗	✗	✗
Overall Serious Injuries		✓	✗	✓	✓	✓
Emphasis Areas *(Combined Fatalities and Serious Injuries)*	1 – Intersections	✗	✓	✗	✓	✓
	2 – Roadway Departure	✓	✓	✓	✓	✓
	3 – Impaired Driving	✓	✗	✓	✓	✓
	4 – Unrestrained Motorists	✓	✓	✓	✓	✓
	5 – Motorcycles	✗	✓	✓	✗	✗
	6 – Speeding	✓	✓	✓	✓	✓
	7 – Pedestrians	✗	✓	✓	✗	✗

✓ Target Met ✗ Target Not Met

In June 2018, Delaware's SHSP Stakeholders reconvened to track interim progress toward achieving the SHSP objectives and discuss strategy implementation highlights. In addition to this SHSP Safety Summit, Delaware's safety professionals routinely provide SHSP updates to statewide stakeholders via various forums, including DelDOT's Winter Workshop and OHS's Highway Safety Conference.

Evaluating the 2021-2025 SHSP

This Plan serves as the fourth update to Delaware's SHSP since the original Plan was adopted in 2006. The SHSP is a dynamic and living document intended to be consulted frequently and updated when necessary to respond to transportation safety changes. Delaware's safety professionals will continue utilizing its established processes and inter-agency relationships to evaluate the 2021-2025 SHSP and will strive to identify and implement enhancements to these processes. The coordinating agencies of the Delaware SHSP will reconvene in 2025 to develop an updated Plan and reevaluate the selected Emphasis Areas.

Implementation

Implementation of the 2016-2020 SHSP has been ongoing since that Plan was approved and several key accomplishments are highlighted below. Implementation of the strategies and actions identified in the 2021-2025 SHSP is expected to result in a reduction in fatalities and serious injuries. Delaware's relatively small size allows various opportunities for safety professionals from the Core Committee agencies of the SHSP to communicate regularly through numerous established committees and groups.

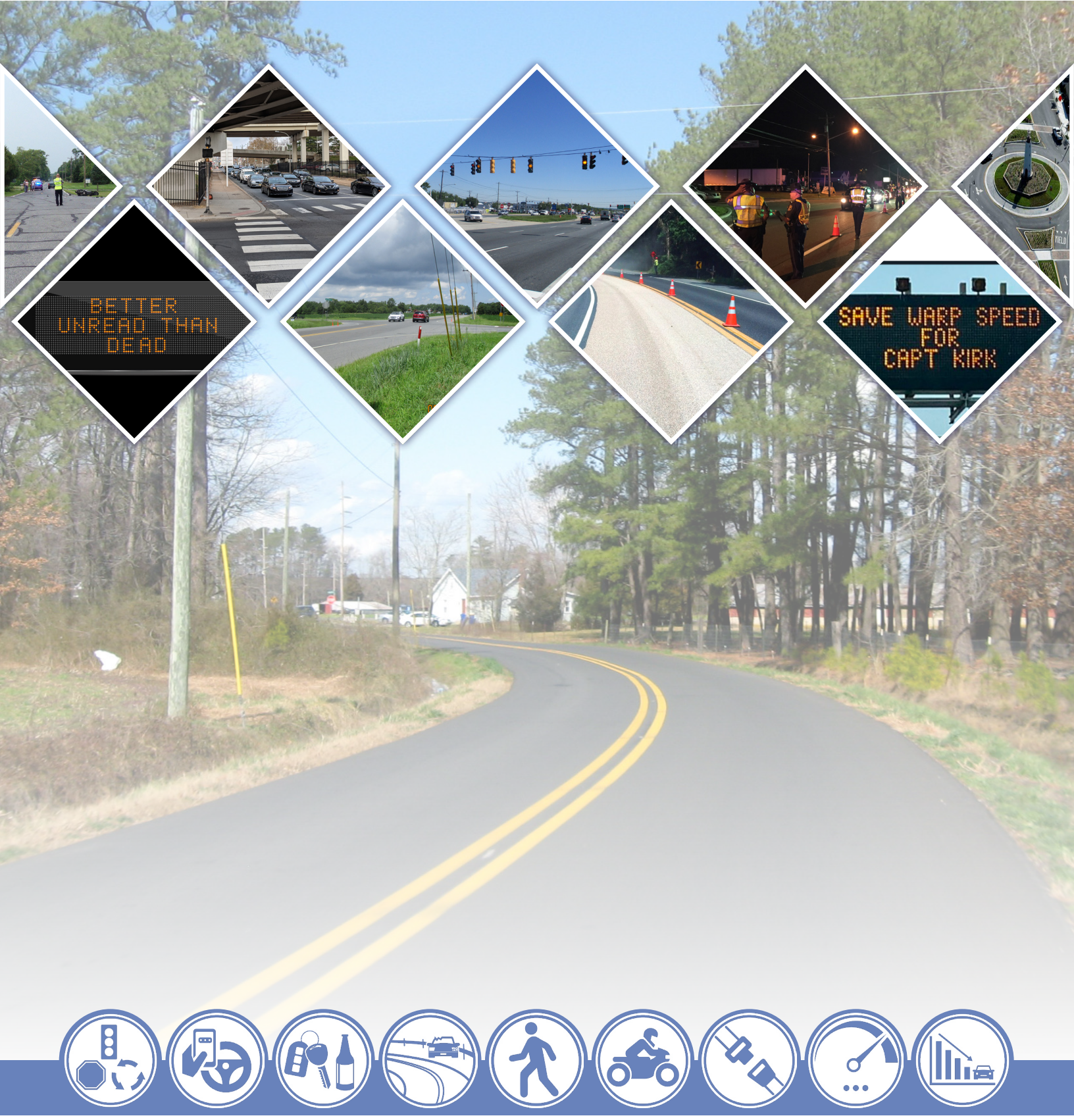
These established and ongoing initiatives allow the agencies to identify current crash trends, identify strategies, and implement countermeasures throughout the year. Additionally, each of the Core Committee agencies monitors crash trends annually through the publication of their respective annual reports. Implementation of the 2021-2025 SHSP will occur through the methods identified on the next page.

2016-2020 SHSP Key Accomplishments

- 10 Pedestrian Safety Audits conducted
- 300 miles of rumble strips installed
- High-friction surface treatment installed at 32 locations , resulting in a 2017 National Roadway Safety Award
- Since 2017, Delaware State Police's Drive to Save Lives enforcement initiatives have resulted in the issuance of 2,613 speeding violations, 485 cell phone violations, and 297 seatbelt violations
- Intersection safety program established (10 intersections evaluated annually)
- 25 miles of freeway median barrier constructed
- Expansion of the Drug Recognition Expert (DRE) Program to include 50 trained DREs covering the state
- Office of Highway Safety has partnered with various private businesses throughout Delaware to provide $15 discount codes for using Lyft to reduce occasions of impaired driving
- Office of Highway Safety partnered with the Delaware Transit Corporation to provide reflective materials and pedestrian safety education to transit patrons
- Since 2016, 17 DUI checkpoints have occurred throughout Delaware, netting 163 DUI arrests
- Annually, Delaware State Police issued an average of 7,400 speeding violations
- While partnering with homeless shelters, DelDOT, OHS and DSP provided safety tips to pedestrians

Implementation of the 2021-2025 SHSP

- Existing committees that are representative of various Emphasis Areas, such as the Impaired Driving Task Force, will be responsible for prioritizing and tracking the implementation of proposed strategies and actions for the respective Emphasis Area.
- If a committee or council does not exist for a particular Emphasis Area, those Emphasis Area teams will create annual Action Plans that will be used to prioritize and track implementation of the proposed strategies and actions for their respective Emphasis Area.
- The Core Committee will conduct outreach annually to the Stakeholder Committee to update members on implementation progress and share the latest trends and strategies being implemented towards reaching the Plan's objective.
- Implementation of the Plan will be reported annually through DelDOT's HSIP Annual Report, the OHS's Highway Safety Plan and Annual Highway Safety Report, and DSP's Annual Traffic Statistical Report.
- The Core Committee will provide periodic updates to agency leadership, highlighting current crash trends, progress towards achieving overall and Emphasis Area objectives, highlighting key accomplishments and requesting leadership assistance with necessary legislative actions or policy updates.
- A tracking document will be maintained to track the implementation status of the strategies and actions for each Emphasis Area.



DELAWARE

2021-2025
Strategic Highway Safety Plan:
Toward Zero Deaths