

MARYLAND STRATEGIC HIGHWAY SAFETY PLAN 2011-2015

DON'T
TEXT
DRIVE



August 2011

**Destination Saving
Lives**
Maryland Strategic Highway Safety Plan

Table of Contents

Executive Summary	ES-1
Introduction and Background	1
2003 Strategic Highway Safety Plan	1
2006 Strategic Highway Safety Plan	1
The SHSP Update Process	4
Zero Fatalities.....	4
Statewide Fatality Goal	4
Statewide Injury Goal.....	5
Update Approach.....	6
Emphasis Area: Distracted Driving	8
Emphasis Area: Impaired Driving	10
Emphasis Area: Aggressive Driving	12
Emphasis Area: Occupant Protection	14
Emphasis Area: Highway Infrastructure	16
Emphasis Area: Pedestrian Crashes	18
Implementation	20
Appendix	21
Maryland Strategic Highway Safety Plan Implementation Team	21

Table of Figures

Figure 1.	Statewide Motor Vehicles Crashes, 2005 to 2009.....	2
Figure 2.	Statewide Motor Vehicle Fatalities, 2005 to 2009.....	2
Figure 3.	Statewide Motor Vehicle Injuries, 2005 to 2009.....	3
Figure 4.	Statewide Motor Vehicle Serious Injuries, 2005 to 2009.....	3
Figure 5.	Maryland Fatality Goals through 2015	5
Figure 6.	Maryland Injury Goals through 2015.....	5
Figure 7.	SHSP Update Matrix	6
Figure 8.	Distracted Driving Fatalities and Injuries, 2005 to 2009.....	8
Figure 9.	Distracted Driving Fatality Objectives through 2015	9
Figure 10.	Distracted Driving Injury Objectives through 2015.....	9
Figure 11.	Impaired Driving Fatalities and Injuries, 2005 to 2009.....	10
Figure 12.	Impaired Driving Fatality Objectives through 2015	11
Figure 13.	Impaired Driving Injury Objectives through 2015.....	11
Figure 14.	Aggressive Driving Fatalities and Injuries, 2005 to 2009.....	12
Figure 15.	Aggressive Driving Fatality Objectives through 2015.....	13
Figure 16.	Aggressive Driving Injury Objectives through 2015	13
Figure 17.	Occupant Protection Fatalities and Injuries, 2005 to 2009.....	14
Figure 18.	Occupant Protection Fatality Objectives through 2015	15
Figure 19.	Occupant Protection Injury Objectives through 2015	15
Figure 20.	Highway Infrastructure-Related Fatalities and Injuries, 2005 to 2009.....	16
Figure 21.	Highway Infrastructure Fatality Objectives through 2015.....	17
Figure 22.	Highway Infrastructure Injury Objectives through 2015	17
Figure 23.	Pedestrian Fatalities and Injuries, 2005 to 2009.....	18
Figure 24.	Pedestrian Fatality Objectives through 2015.....	19
Figure 25.	Pedestrian Injury Objectives through 2015	19

Executive Summary

In the past 10 years, Maryland has developed two Strategic Highway Safety Plans (SHSP). The first Maryland SHSP, modeled after the American Association of State Transportation Officials (AASHTO) national plan, focused on the State's challenges in 23 program areas and included multiple strategies to reduce fatalities and serious injuries on Maryland's roadways.

In 2006, Maryland updated the SHSP based on the process recommended by the 2005 Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The update followed a data-driven, multidisciplinary approach involving the 4 Es of highway safety – engineering, education, enforcement, and emergency medical services. The result was a statewide, comprehensive safety plan that provided a coordinated framework for reducing fatalities and serious injuries on all public roads. The 2006 SHSP established statewide goals, objectives, and 14 key emphasis areas developed in consultation with Federal, state, local, and private sector safety stakeholders.

Despite increases in vehicle miles traveled, reported traffic crashes declined in Maryland, dropping to a historic low of 96,392 in 2009. Between 2005 and 2009, the number of fatalities decreased by 10.4 percent, overall injuries decreased by 14.4 percent, and serious injuries declined by 39.9 percent. To continue this positive trend, Maryland updated the SHSP in 2010 under the direction of the SHSP Management and Implementation Teams.

Maryland joined AASHTO, other national organizations and several other states in adopting a *Toward Zero Deaths* fatality goal to reduce motor vehicle-related fatalities and injuries by one-half by 2030. To monitor progress toward this goal, Maryland approved interim fatality targets for the life of the SHSP, representing an average annual decrease of 3.1 percent. Each emphasis area also adopted measurable fatality and injury objectives in line with these goals.



- The Distracted Driving Emphasis Area Team identified the need to evaluate and recommend legislation and/or regulations that limit the use of electronic devices while driving, increase reporting of distracted driving incidents across multiple disciplines; and conduct an education campaign to educate the public.
- The Impaired Driving Emphasis Area Team recommended an increase enforcement of alcohol and drug impairment laws; enhancement of the prosecution and adjudication of alcohol and drug impaired driving cases; and public awareness initiatives, including education and media programs. Additional strategies included implementation of programs to reduce underage drinking and driving, and integration of Driving Under Influence (DUI) data to ensure offender information is available to judges, prosecutors, and probation and parole.
- To reduce aggressive driving and speeding, the Aggressive Driving Emphasis Area Team proposed strategies to identify the behaviors, target audiences, and corridors where aggressive driving and speeding is a problem; a continuation of the regional *Smooth Operator* campaign; and development and implementation of a year round aggressive driving campaign. They also recommended implementing a statewide enforcement strategy on aggressive driving, and the identification of effective engineering solutions to address the problem.
- The Occupant Protection Emphasis Area Team recommended four strategies to achieve their objectives, including an expansion of *Click It or Ticket* and the Law Enforcement Challenge programs; year round nighttime seatbelt enforcement and education program; and an increase in the correct use of child

passenger safety devices for infants, children, and pre-drivers. They also recommended legislation or regulations that would require the use of safety devices in all seating positions.

- The Highway Infrastructure Emphasis Area Team identified three strategies to accomplish their measurable objectives, including a corridor program that would target safety improvements where the severity index is high; identification of high crash locations and implementation of safety improvements; and identification of system wide improvements to reduce the severity of intersection-related, construction zone and run-off-the road crashes.
- The Pedestrian Emphasis Area Team identified four strategies, including the development of model process to identify and prioritize high-incident locations and system wide pedestrian safety issues; the development and evaluation of model approaches for built environments that accommodate safe pedestrian travel; and the development and evaluation of model approaches to improve pedestrian and motorist awareness and behavior. The team also recommended creating partnerships among state, regional, and local stakeholders to develop action plans that address high-priority locations and system wide issues using comprehensive approaches to pedestrian safety.



Implementation of the 2011-2015 SHSP will involve the collaborative work of professionals representing the disciplines of transportation planning, engineering and operations, public outreach and education, legislation and law enforcement, and emergency medical service systems. Each of these disciplines has a critical role to play in defining the optimal combination of countermeasures that will yield the best traffic safety outcomes.

This revised SHSP also takes a new approach by focusing not only the issues that cause the greatest number of traffic safety problems, but on geographic areas where traffic crashes are most prevalent. Each Emphasis Area Team will focus on areas where their issue is most concentrated. In addition, the Teams will work together to focus on high-priority corridors to combat the combination of issues present at these locations.

A wide range of stakeholder groups will be involved in the successful implementation of the SHSP, including state agencies and nongovernmental organizations, regional authorities, local agencies, community organization and the public.

Introduction and Background

2003 Strategic Highway Safety Plan

In 1997, AASHTO published the national SHSP to save lives on the nation's roadways through implementation of strategies that target specific highway safety problems. AASHTO issued a challenge to states to develop their own SHSPs and Maryland was one of the states that answered the call. The early Maryland SHSP, modeled after the national plan, focused on the State's problems in 23 program areas, and included multiple strategies to reduce fatalities and serious injuries on Maryland's roadways.

2006 Strategic Highway Safety Plan

In 2006, Maryland updated the SHSP based on the process recommended by SAFETEA-LU. The update followed a data driven, multidisciplinary approach involving the 4 Es of safety – engineering, education, enforcement, and emergency medical services. The result was a statewide, comprehensive safety plan that provided a coordinated framework for reducing fatalities and serious injuries on all public roads. The 2006 SHSP established statewide goals, objectives, and key emphasis areas developed in consultation with Federal, state, local, and private sector safety stakeholders. These emphasis areas included the following:

- Impaired Driving;
- Information and Decision Support Systems;
- Hazardous Locations:
 - Keep Vehicles on the Roadway;
 - Intersections;
 - Work Zones; and
 - Pedestrians.
- Occupant Protection;
- Driver Competency:
 - Distracted Driving;
 - Older Drivers;
 - Young Drivers;
 - Motorcycles; and
 - Truck and Bus.
- Aggressive Driving; and
- Emergency Medical Response.

Implementation of the 2006 SHSP began immediately after approval by the Governor. SHSP Implementation Emphasis Area Teams worked on implementing strategies and action steps through statewide programs and activities. Regional teams, established at the 2007 Leadership Summit, implemented programs at the local level.

Despite increases in vehicle miles traveled, traffic crashes declined in Maryland dropping to a historic low of 96,392 in 2009. Between 2005 and 2009, the number of fatalities decreased by 10.4 percent, overall injuries decreased by 14.4 percent, and serious injuries declined by 39.9 percent. The number of crashes and fatalities are shown in Figures 1 and 2 and Figures 3 and 4 show the number of injuries and serious injuries.

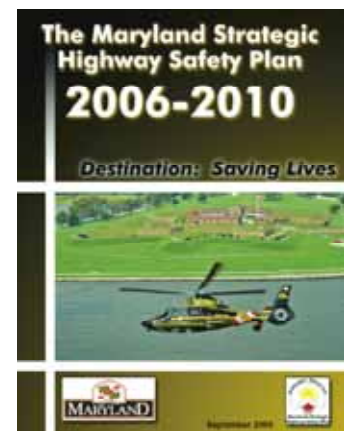


Figure 1. Statewide Motor Vehicles Crashes
2005 to 2009

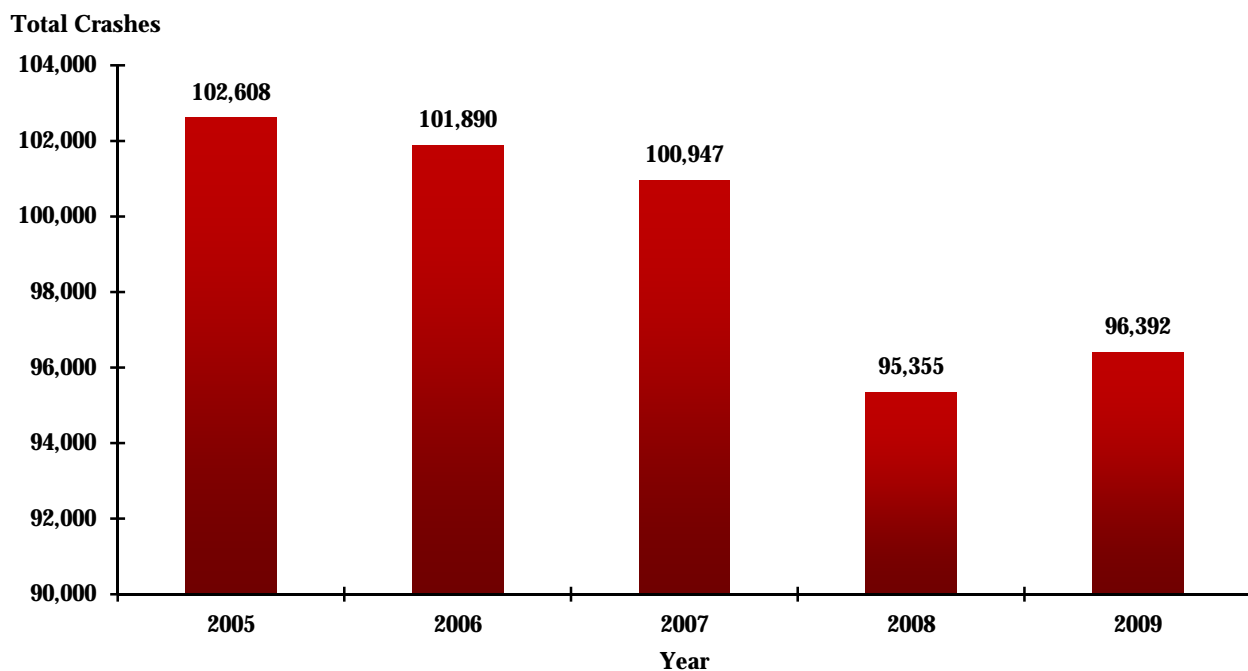


Figure 2. Statewide Motor Vehicle Fatalities
2005 to 2009

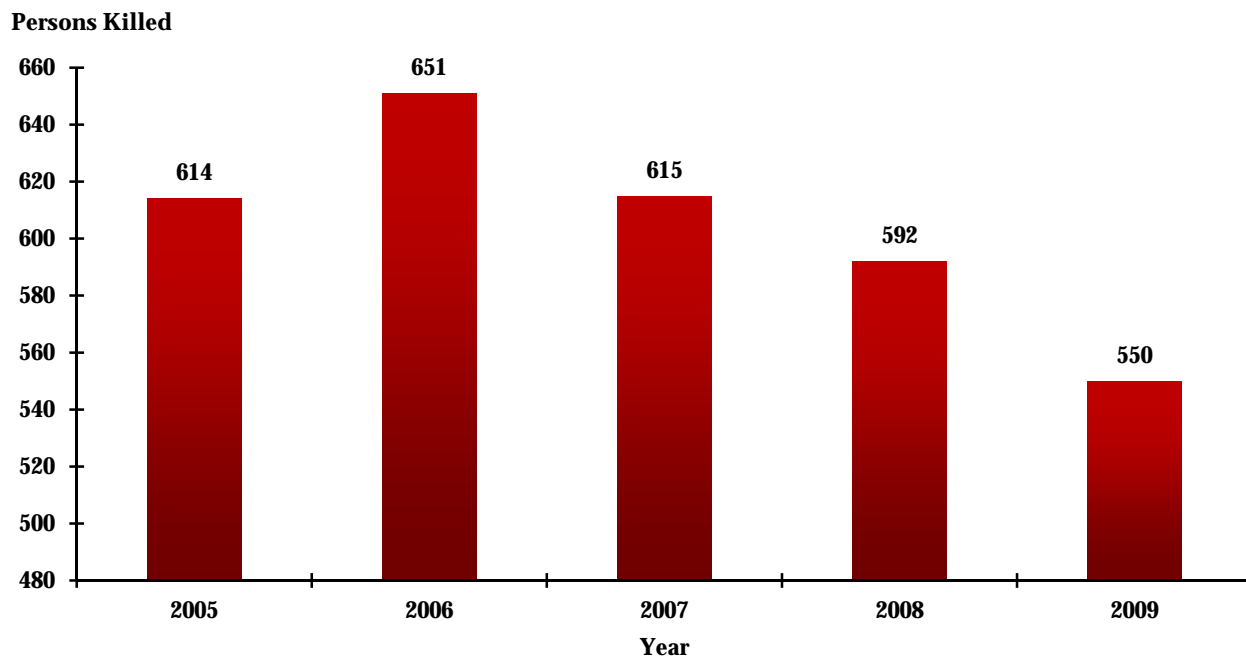


Figure 3. Statewide Motor Vehicle Injuries
2005 to 2009

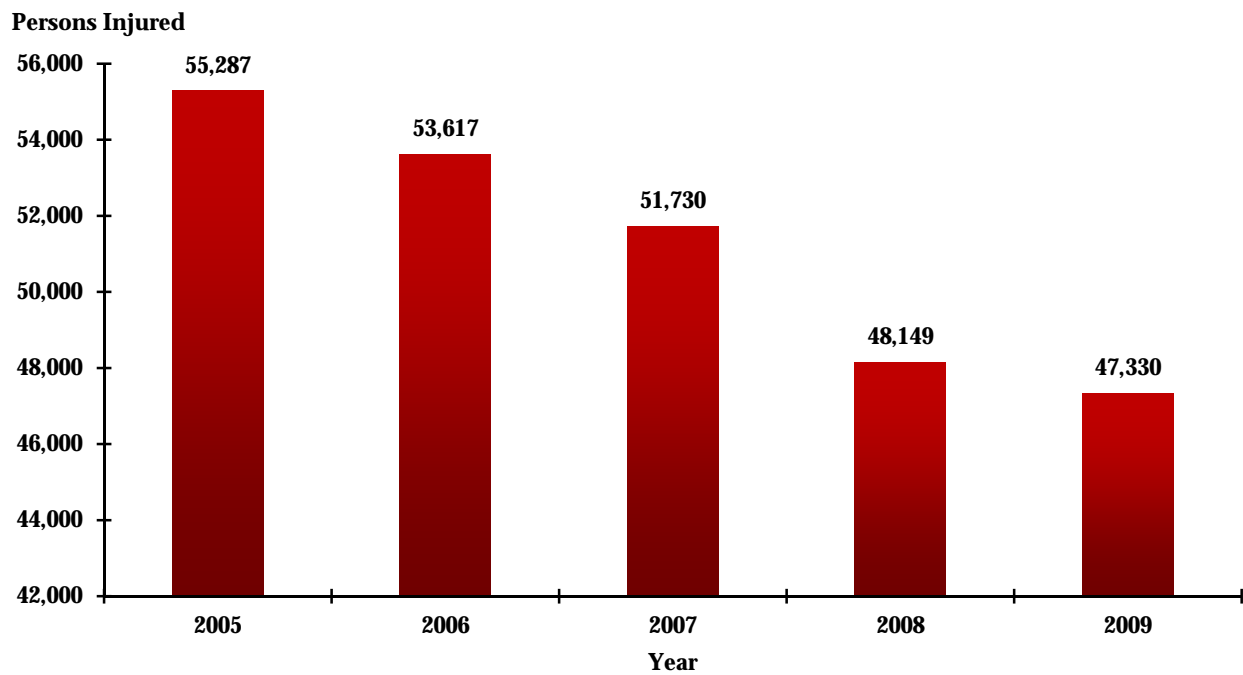
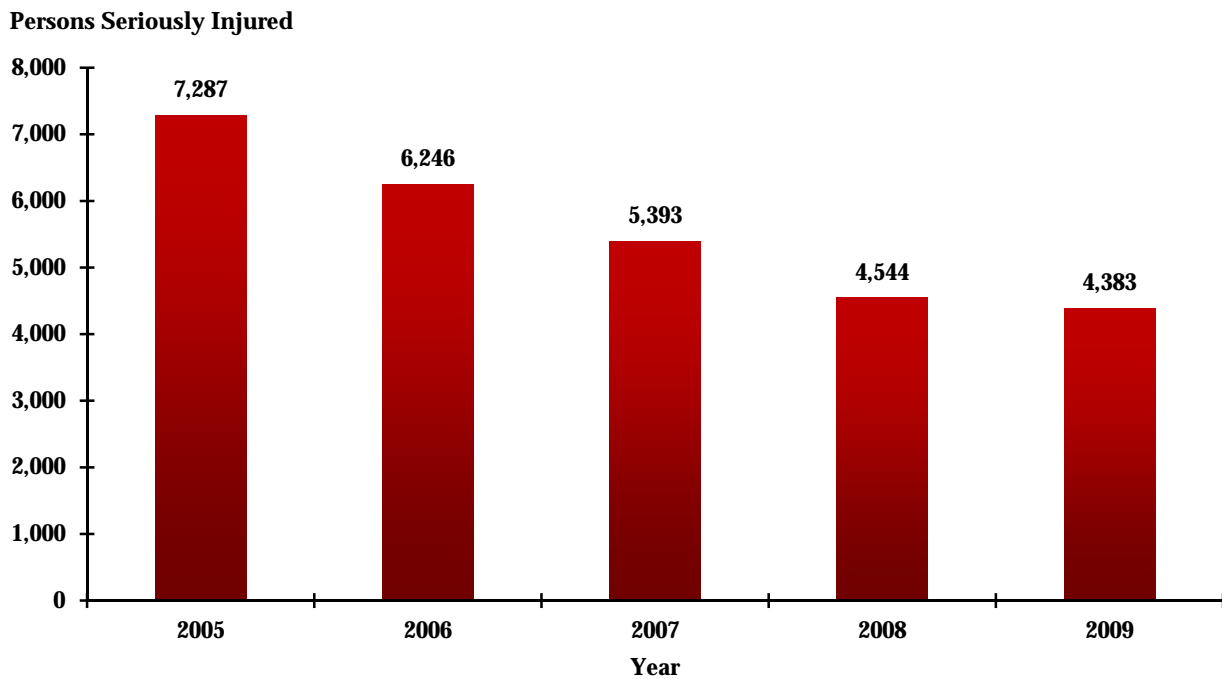


Figure 4. Statewide Motor Vehicle Serious Injuries
2005 to 2009



The SHSP Update Process

In 2010, Maryland moved forward on an update of the SHSP to accomplish several important goals:

- Enhance collaboration across public sector agencies and private sector organizations;
- Narrow the focus of the SHSP to the areas of greatest need and potential for success as identified through a detailed data analysis process;
- Use science-based research approaches to quantify the effectiveness of both engineering and behavioral safety countermeasures;
- Foster collaboration among stakeholders at the state, regional, and local levels; and
- Focus on countermeasure evaluation.



Members of the Maryland SHSP Implementation Team, which include representatives from the 2006 plan emphasis area teams, the regional implementation teams, Federal agencies, and SHA, oversaw the update process. A complete list of Implementation Team members appears in the Appendix.

The Implementation Team determined the updated plan would focus on all road users: drivers, bicyclists, motorcycle riders, and pedestrians. The term “road user” puts a more humane face to the problem and relates the problems to the individuals who use the roadways.

Zero Fatalities

Maryland joined other states and organizations in adopting the **goal of the national initiative *Toward Zero Deaths: A National Strategy on Highway Safety***, to reduce traffic fatalities by half by 2030.

Maryland supports the long-term goal of zero deaths and is committed to adopting strategies to achieve that purpose. To establish a benchmark for progress for the SHSP, Maryland approved interim goals for fatality and injury reduction by 2015.

To establish a goal for the SHSP in-line with the long-range goal to reduce fatalities by 50 percent (592 in 2008 to 296 in 2030), the National Study Center for Trauma and Emergency Medical Systems (NSC) at the University of Maryland School of Medicine applied a reduction of 3.1 percent to each calendar year for subsequent estimates. The NSC calculated this percentage as the geometric mean reduction over the entire 22-year period. This methodology set fatality goals for each emphasis area.

To set goals for reducing total injuries, the NSC used the most recent eight years of Maryland traffic crash data to calculate the annual ratio of fatalities to total injuries (0.011), and applied the ratio to the 2030 fatality goal to determine the expected number of injuries. The resulting injury total indicated a 44 percent decrease from the 2008 number, which corresponds to an annual reduction of 2.6 percent. The NSC used the same methodology used for fatality calculations to determine the estimations for a 2015 goal.

Statewide Fatality Goal

Reduce the annual number of traffic-related fatalities on all roads in Maryland from 592 in 2008 to fewer than 475 by December 31, 2015 (19.8 percent reduction).

Statewide Injury Goal

Reduce the annual number of traffic-related injuries on all roads in Maryland from 48,149 in 2008 to fewer than 40,032 (16.8 percent reduction) by December 31, 2015.

Figures 5 and 6 show interim goals fatality and injury goals through 2015.

Figure 5. Maryland Fatality Goals through 2015

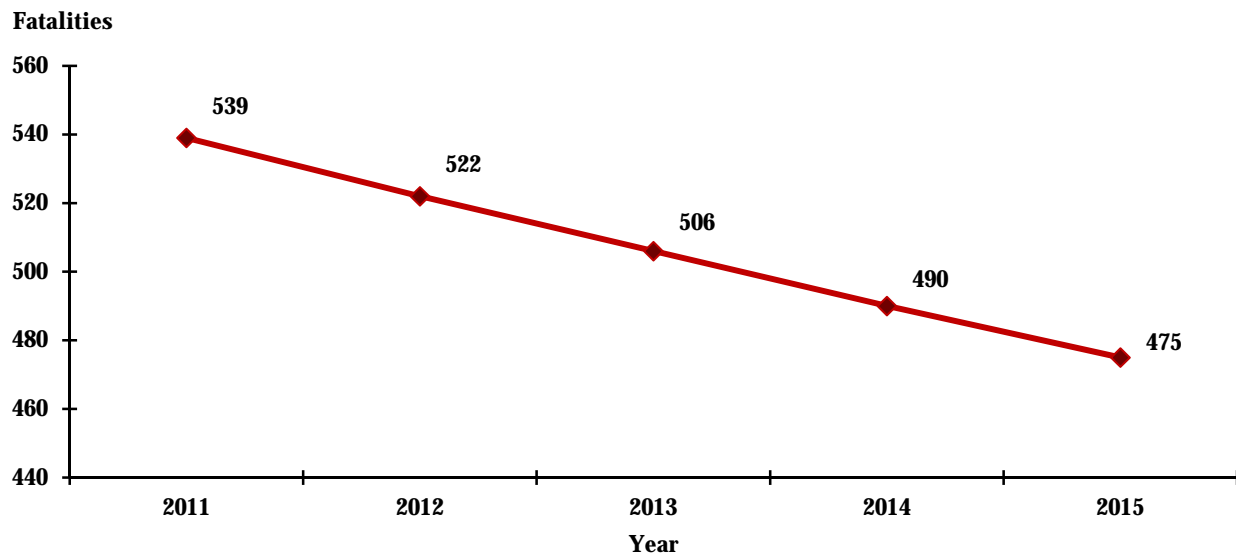
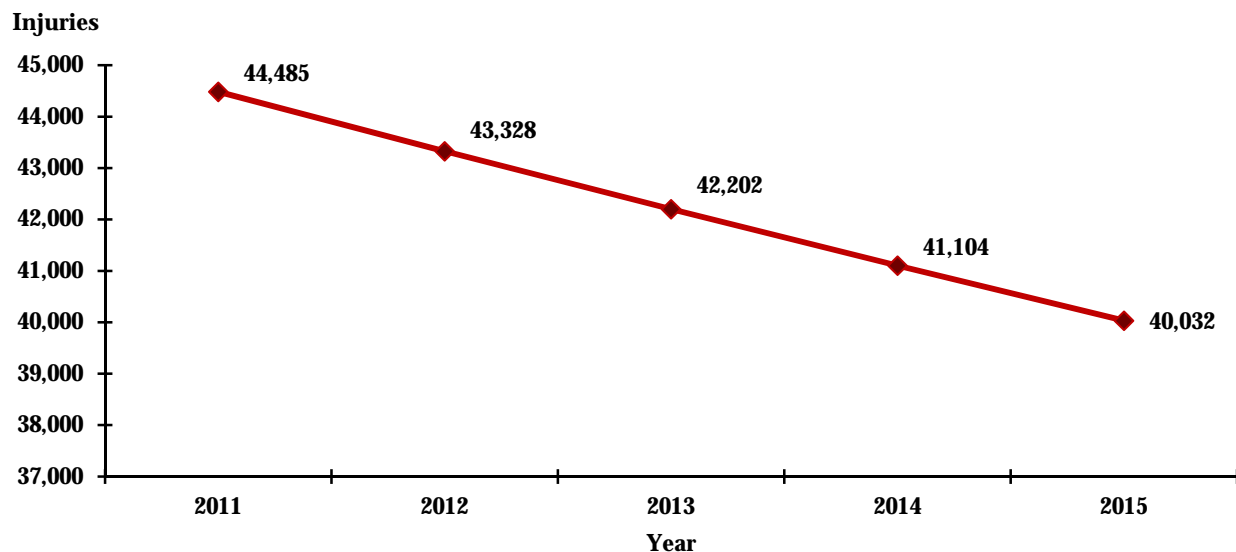


Figure 6. Maryland Injury Goals through 2015



Updated Approach

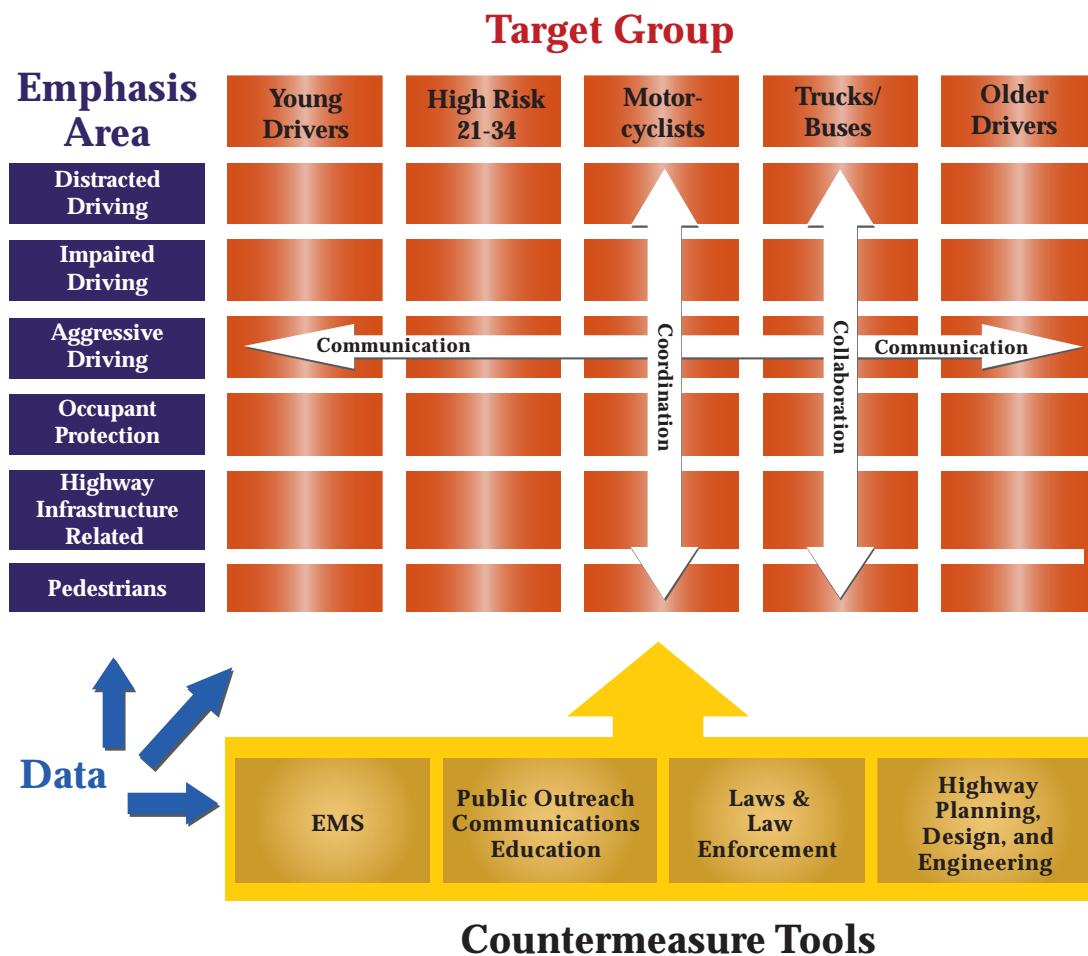
In updating the SHSP, a key consideration was to make the plan strategic rather than comprehensive. The prior SHSPs developed by Maryland covered a broad range of emphasis areas. This broad focus resulted in plans that were more comprehensive in nature touching on virtually every traffic safety issue. The 2003 plan included 22 emphasis areas reduced to 14 in the 2006 version. The SHSP Implementation Team decided to reduce the number of emphasis areas in the 2011-2015 plan to six:

- Reduce Distracted Driving;
- Reduce Impaired Driving;
- Reduce Aggressive Driving;
- Increase Occupant Protection Use;
- Reduce Highway Infrastructure Crashes; and
- Improve Pedestrian Safety.

A planning matrix was developed to guide the selection of strategies and action steps. Figure 7 shows the updated plan emphasis areas, the target groups each emphasis area team considered, and the countermeasure tools available from the 4 Es of safety.

The matrix illustrates how data collection and analysis are used both to identify critical emphasis areas and to select appropriate countermeasures in the areas of EMS, outreach and education, enforcement and engineering. Quality data analysis is crucial for emphasis area teams to properly identify target groups, adapt and refine countermeasures, and to evaluate the effectiveness of implemented strategies.

Figure 7. SHSP Update Matrix



Throughout the update process and later during implementation, teams were urged to communicate, coordinate, and collaborate among themselves and the various safety stakeholders who will bring the SHSP to life. Volunteers stepped forward to assume leadership of the revised emphasis areas and others agreed to be responsible for each of the plan's strategies and action steps. In selecting the appropriate strategies for the plan, the teams did the following:

- Reviewed strategies in the current SHSP;
- Reviewed the research to determine effective countermeasures from each of the 4 Es of Engineering, Enforcement, Education and EMS; and
- Reviewed the data to determine areas of focus (target groups, locations, etc.).



The teams reviewed current SHSP strategies to determine whether they should be carried over to the updated plan, including the *Click It or Ticket*, *Checkpoint Strikeforce*, and *Smooth Operator* enforcement and education campaigns. The teams also examined the National Cooperative Highway Research Program's (NCHRP) Report 500 series on effective countermeasures, the National Highway Traffic Safety Administration (NHTSA) publication, *Countermeasures That Work*, and the *NCHRP Report 622, Effectiveness of Behavioral Highway Safety Countermeasures*. Since the plan's emphasis areas were limited to six, each team also carefully reviewed the statistics on the nature and extent of the problem among various target groups, including:



- Young Drivers (16 to 20 years old);
- High-Risk Drivers (21 to 34 years old);
- Motorcyclists;
- Truck and Bus Drivers; and
- Older Drivers (65+).

This data review also helped the teams determine the need for any strategies or action steps aimed at these target groups. For instance, according to the data, high-risk drivers (21 to 34 years) account for a significant percentage of traffic crashes and consequently are responsible for large proportion of traffic deaths and injuries. Pedestrians were originally a target group, but a review of the data revealed that 20 percent of all fatalities in Maryland involve pedestrians and a decision was made to make pedestrians a specific emphasis area in the plan.

In addition to target group analysis, the teams also reviewed the data to determine if there were certain areas of the State, certain times of the day, or times of the year when crashes, fatalities, and injuries were more prevalent. This comprehensive data analysis enabled teams to pinpoint problems and develop appropriate solutions. Finally, the emphasis area teams applied a test to each strategy to determine the following:

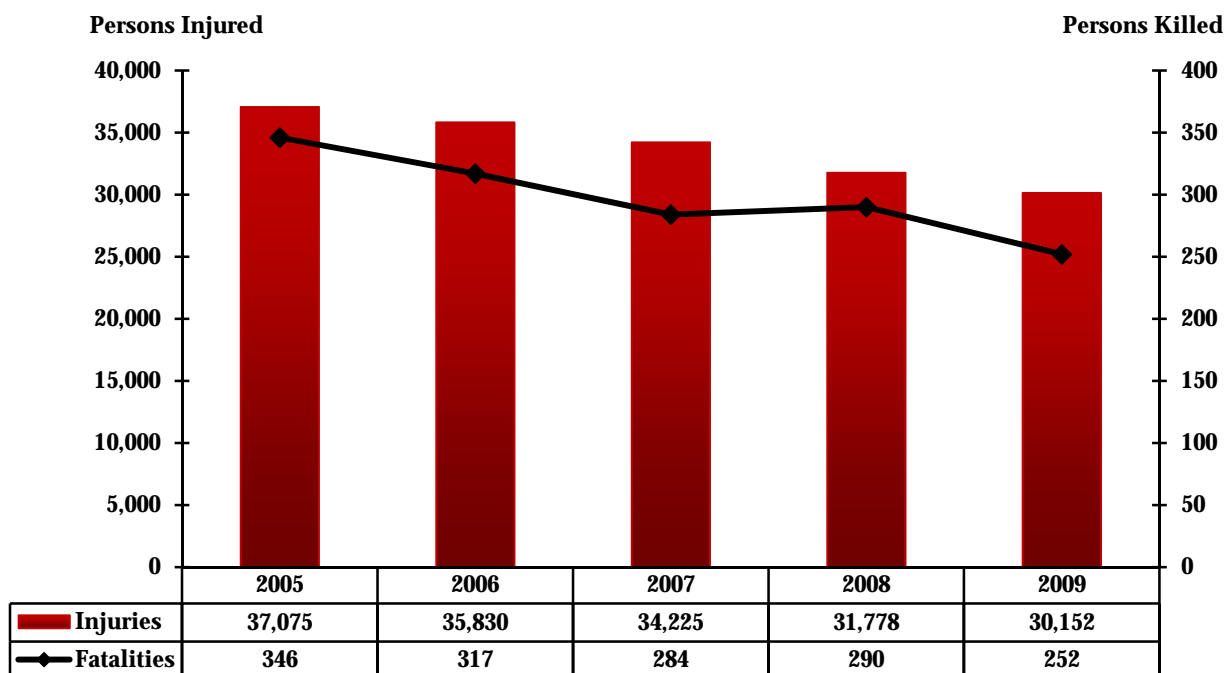
- Is the strategy feasible in terms of the time it will take to get it accomplished and the amount of money and resources that are required for implementation?
- Does the strategy require legislative approval, and if yes, does that eliminate this strategy as a possibility in the plan?
- Does the strategy have support from at least one key safety stakeholder?

Once the strategies were complete, the teams developed the action steps to implement each strategy along with the output and outcome measures to determine success. Output measures, which are quantitative in nature, will provide the emphasis area teams with information on specific activities, such as the number of citations given during a high visibility enforcement initiative. Outcome measures are qualitative and provide teams with information on whether completion of the action step resulted in a positive impact. The 2011-2015 SHSP focuses on countermeasures that are effective through research and implementation in the field. They will be coordinated across different emphasis areas within the framework of the 4 Es of safety, which will foster greater collaboration, communication, and coordination at state, regional, and local levels that will lead to effective implementation of the SHSP.

Emphasis Area: Distracted Driving

A distracted driving crash occurs when the driver(s) fails to observe due diligence on the road. The cause for shifting attention away from the task can be anything – adjusting a radio, attending to a child, thinking about day-to-day worries, or using a cell phone. In Maryland, a distracted driving crash is defined as at least one driver in the crash either failing to pay full-time attention or using a cell phone. Figure 8 shows the number of distracted driving fatalities and injuries from 2005 to 2009.

Figure 8. Distracted Driving Fatalities and Injuries
2005 to 2009



Distracted Driving Fatality Objective: Reduce the annual number of distracted driving-related fatalities on all roads in Maryland from 290 in 2008 to fewer than 233 by December 31, 2015 (19.8 percent reduction).

Distracted Driving Injury Objective: Reduce the annual number of distracted driving-related injuries on all roads in Maryland from 31,778 in 2008 to fewer than 26,426 by December 31, 2015 (16.8 percent reduction).

Figures 9 and 10 show the performance measures for distracted driving fatalities and injuries up to 2015.

Figure 9. Distracted Driving Fatality Objectives through 2015

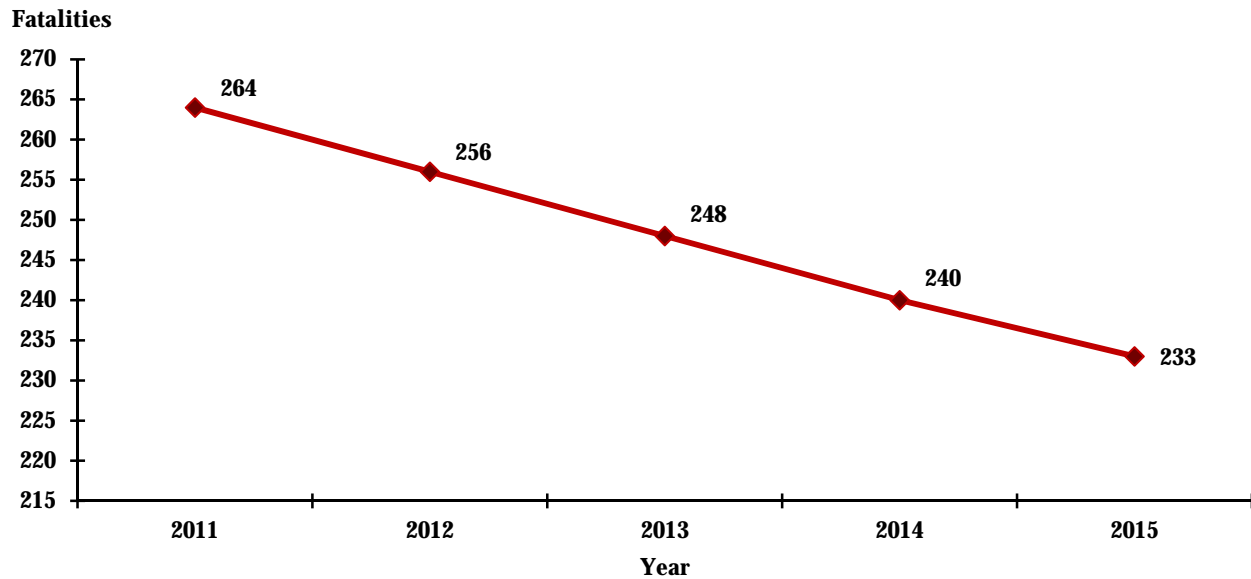
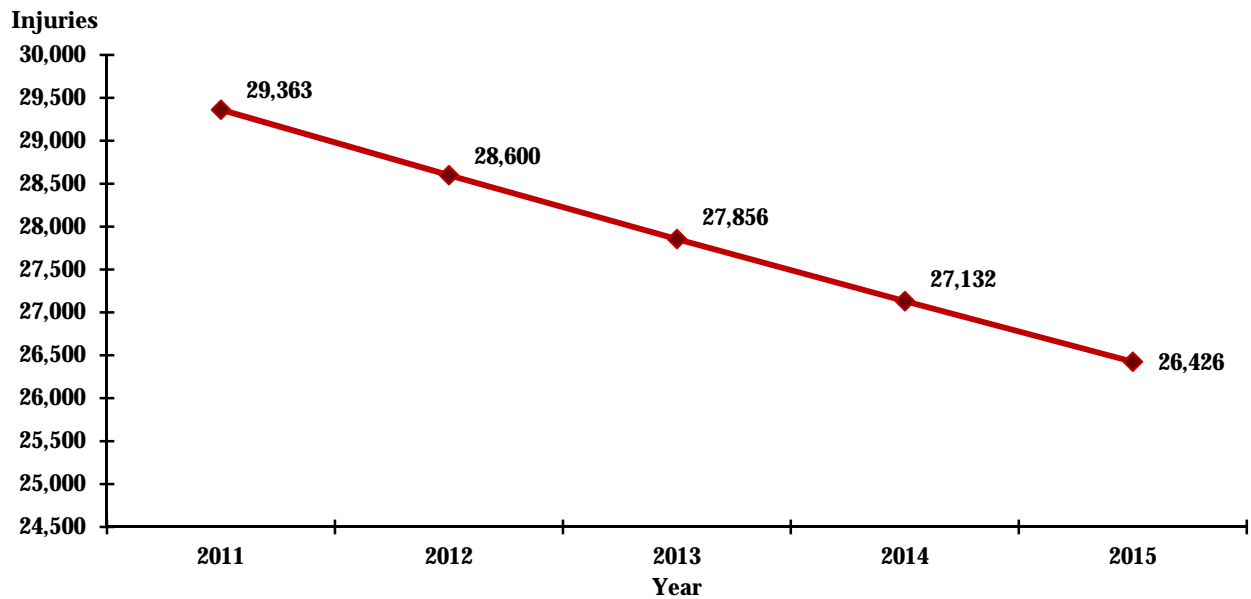


Figure 10. Distracted Driving Injury Objectives through 2015



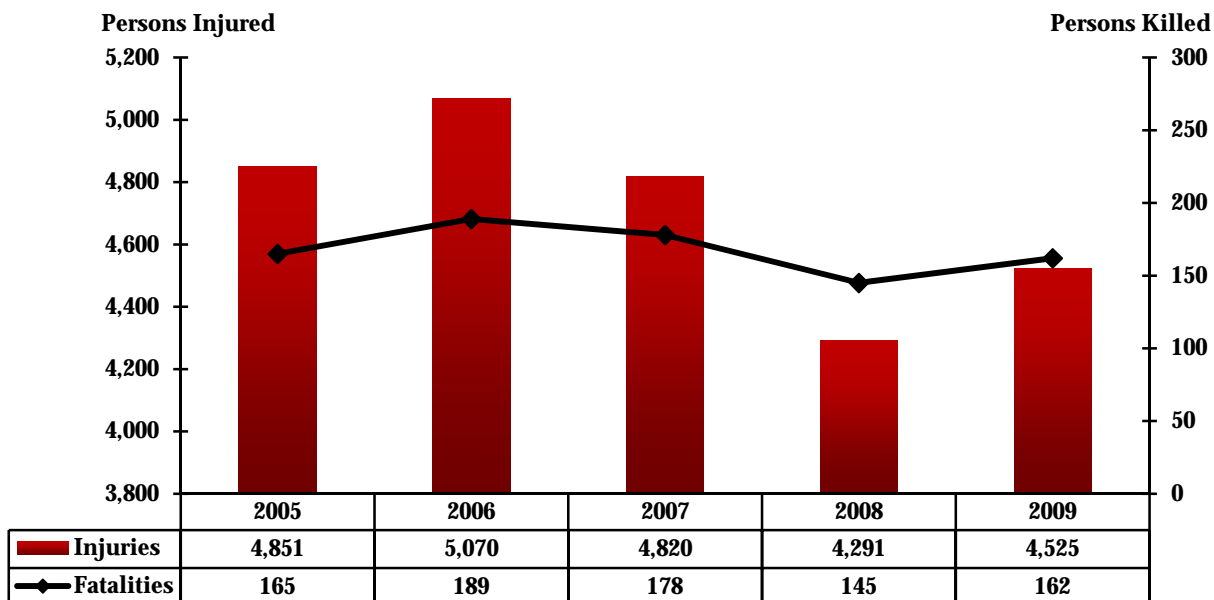
To accomplish these objectives, the Distracted Driving Emphasis Area Team identified three strategies:

- Evaluate and recommend legislation and /or regulations that limit the use of electronic devices while driving;
- Improve reporting of distracted driving incidents across multiple disciplines, i.e., citation and crash reports from law enforcement, surveys from the RTSP's, information from EMS personnel, etc.; and
- Conduct an education campaign on distracted driving prevention.

Emphasis Area: Impaired Driving

According to NHTSA, drivers are considered to be alcohol-impaired when their blood alcohol concentration (BAC) is .08 grams per deciliter (g/dL) or higher. Thus, any fatality occurring in a crash involving a driver with a BAC of .08 or higher is considered to be an alcohol-impaired-driving fatality. The term “driver” refers to the operator of any motor vehicle, including a motorcycle. Maryland Code (*Transportation Article Section 21-902*) defines driving while under the influence of drugs and alcohol as “driving while under the influence of alcohol, while under the influence of alcohol per se, while impaired by alcohol, or while impaired by a drug, a combination of drugs, a combination of one or more drugs and alcohol, or while impaired by a controlled dangerous substance.” Alcohol related fatalities shown herein are provided by NHTSA’s FARS. All other crash, injury, and fatality data are taken from crash reports submitted by law enforcement agencies throughout the state. Figure 11 shows the fatalities and injuries related to impaired driving (BAC 0.08+) crashes.

Figure 11. Impaired Driving Fatalities and Injuries: 2005-2009



Impaired Driving Fatality Objective: Reduce the annual number of impaired driving-related fatalities (BAC 0.08+) on all roads in Maryland from 145 in 2008 to fewer than 116 by December 31, 2015 (20% reduction).

Impaired Driving Injury Objective: Reduce the annual number of impaired driving-related injuries on all roads in Maryland from 4,291 in 2008 to fewer than 3,568 by December 31, 2015 (16.8% reduction).

Figures 12 and 13 show the performance measures for impaired driving fatalities and injuries up to 2015.

Figure 12. Impaired Driving Fatality (BAC 0.08+) Objectives through 2015

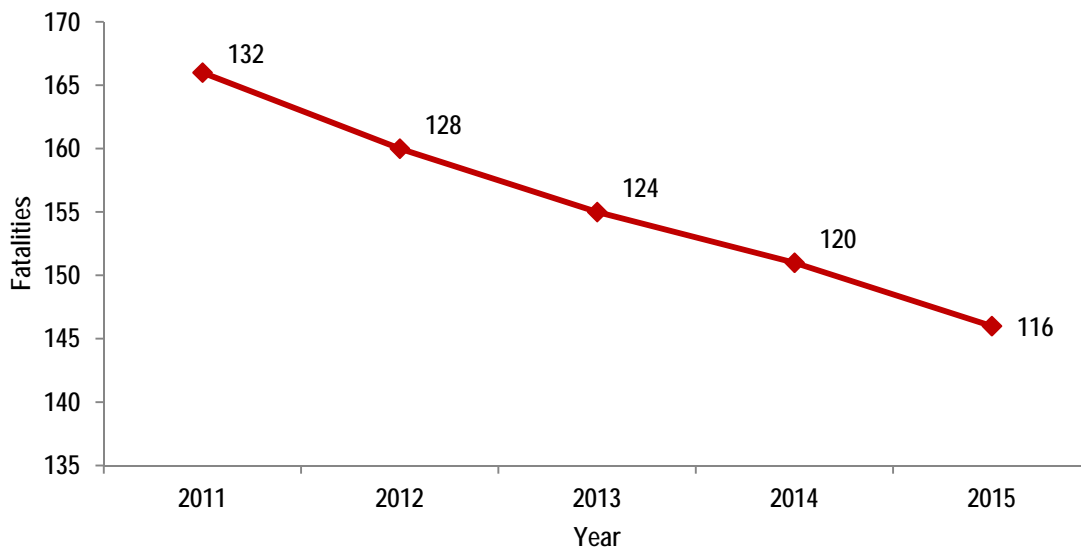
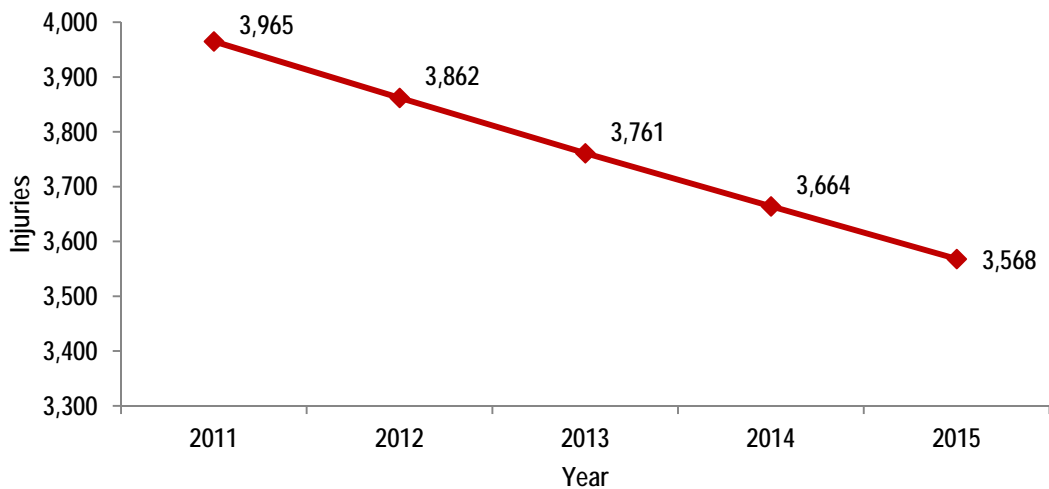


Figure 13. Impaired Driving Injury Objectives through 2015



To accomplish these objectives, the Impaired Driving Emphasis Area Team identified five strategies:

- Increase enforcement of alcohol and drug impaired driving laws;
- Enhance the prosecution and adjudication of alcohol and drug impaired driving cases;
- Conduct public awareness initiatives including education and media programs to reduce alcohol and drug impaired driving;
- Support implementation of programs to reduce underage drinking and driving; and
- Integrate DUI data sources to ensure offender information is available to judges, prosecutors, and probation and parole.

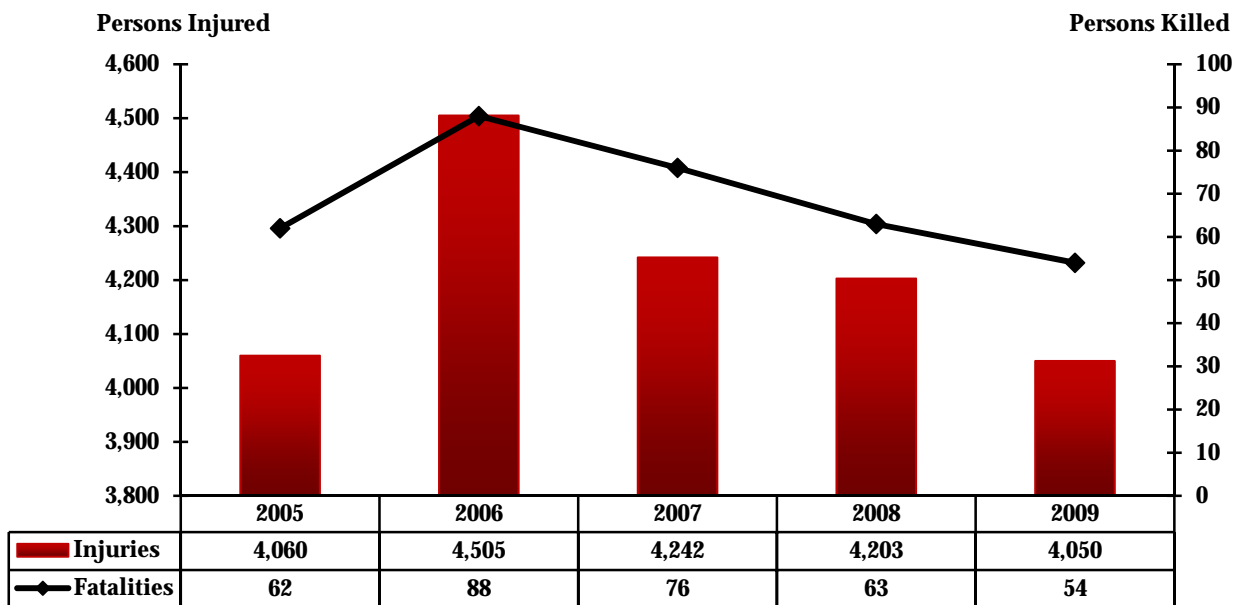
Emphasis Area: Aggressive Driving

An aggressive driving crash occurs when at least two or more of the following contributing factors are identified as causing the crash.

- Failed to yield right-of-way;
- Failed to obey stop sign;
- Failed to obey traffic signal;
- Failed to obey other traffic control;
- Failed to keep right of center;
- Failed to stop for a school bus;
- Wrong way on a one way street;
- Exceed speed limit;
- Too fast for conditions;
- Followed too closely;
- Improper lane change; and
- Improper passing.

Figure 14 shows the fatalities and injuries sustained during such crashes from 2005 to 2009.

Figure 14. Aggressive Driving Fatalities and Injuries
2005 to 2009



Aggressive Driving Fatality Objective: Reduce the annual number of aggressive driving-related fatalities on all roads in Maryland from 63 in 2008 to fewer than 51 by December 31, 2015 (19.8 percent reduction).

Aggressive Driving Injury Objective: Reduce the annual number of aggressive driving-related injuries on all roads in Maryland from 4,203 in 2008 to fewer than 3,495 by December 31, 2015 (16.8 percent reduction).

Figures 15 and 16 show the performance measures for aggressive driving fatalities and injuries up to 2015.

Figure 15. Aggressive Driving Fatality Objectives through 2015

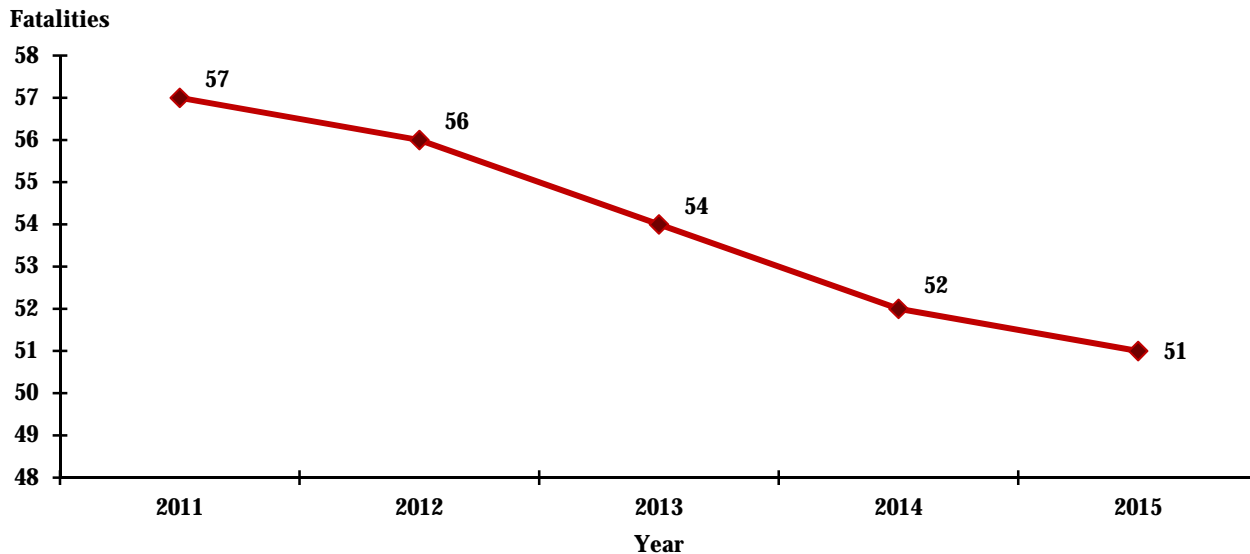
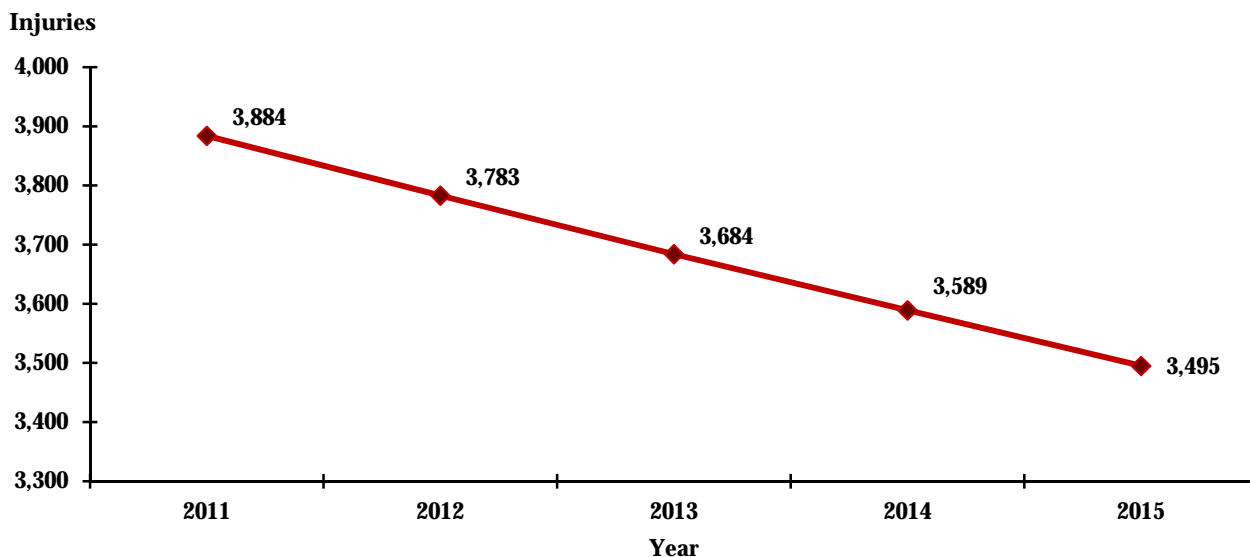


Figure 16. Aggressive Driving Injury Objectives through 2015



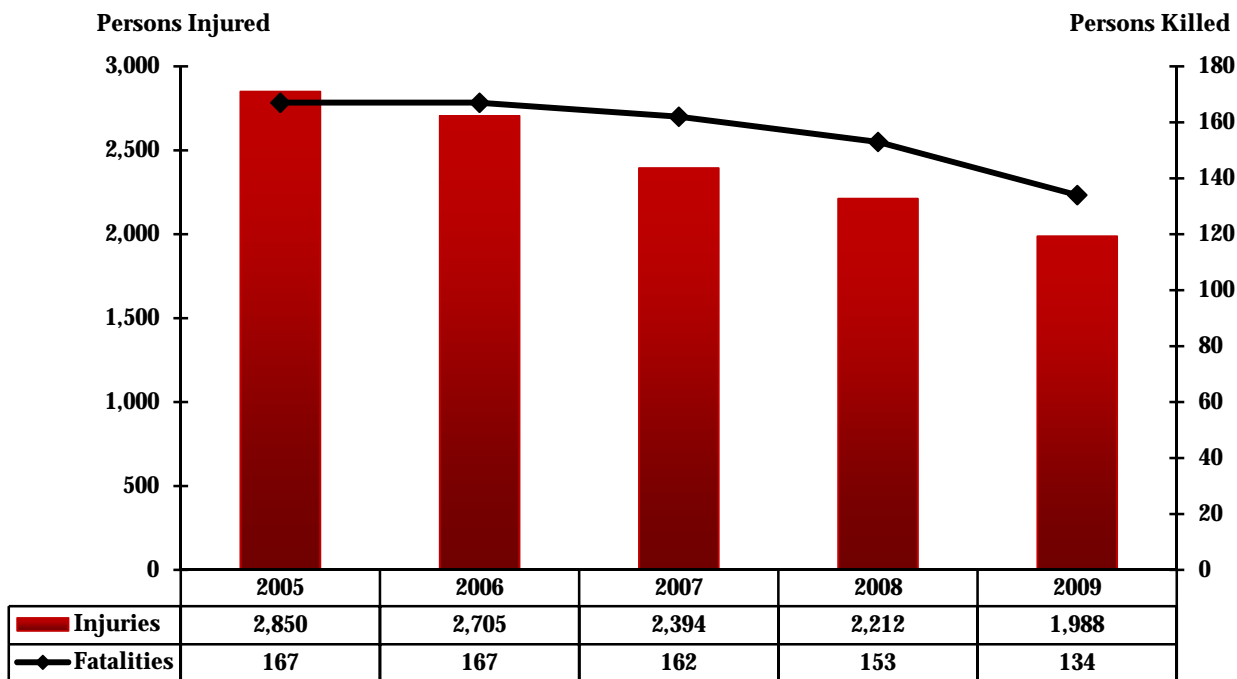
To accomplish these objectives, the Aggressive Driving Emphasis Area team identified five strategies:

- Identify behaviors and target audiences by corridor, based on crash, citation, and Severity Rating Index data to focus aggressive driving enforcement, education, and engineering strategies;
- Continue Maryland’s involvement in the regional aggressive driving initiative such as the *Smooth Operator*;
- Develop and implement year round, long-term public awareness and education campaigns identifying the dangers and consequences of aggressive driving behavior;
- Develop and implement a statewide aggressive driving enforcement strategy that will be utilized throughout the year; and
- Identify effective engineering solutions to eliminate or minimize aggressive driving in targeted corridors.

Emphasis Area: Occupant Protection

Non-use of safety equipment is not a contributing factor to crashes; however, in case a crash occurs, the injury sustained is more likely to be severe if safety equipment designed for occupant protection is not in use. Figure 17 shows the number of fatalities in such cases.

Figure 117. Unrestrained Fatalities and Injuries
2005 to 2009



Occupant Protection Fatality Objective: Reduce the annual number of unrestrained fatalities on all roads in Maryland from 153 in 2008 to fewer than 123 by December 31, 2015 (19.8 percent reduction).

Occupant Protection Injury Objective: Reduce the annual number of unrestrained injuries on all roads in Maryland from 2,212 in 2008 to fewer than 1,839 by December 31, 2015 (16.8 percent reduction).

Figures 18 and 19 show the performance measures unrestrained fatalities and injuries up to 2015.

Figure 18. Unrestrained Fatality Objectives through 2015

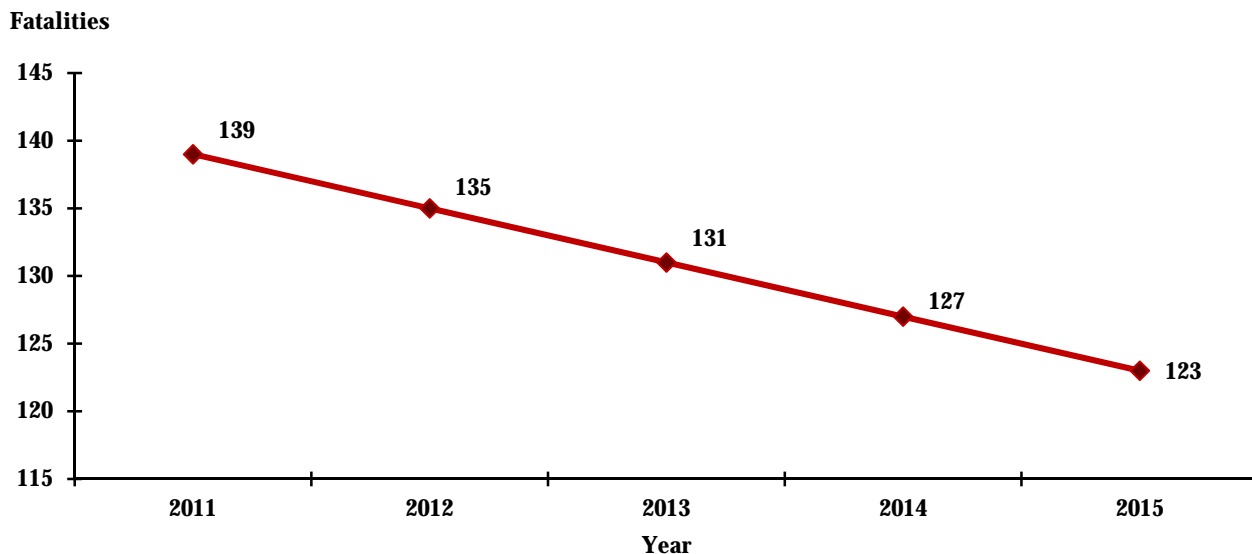
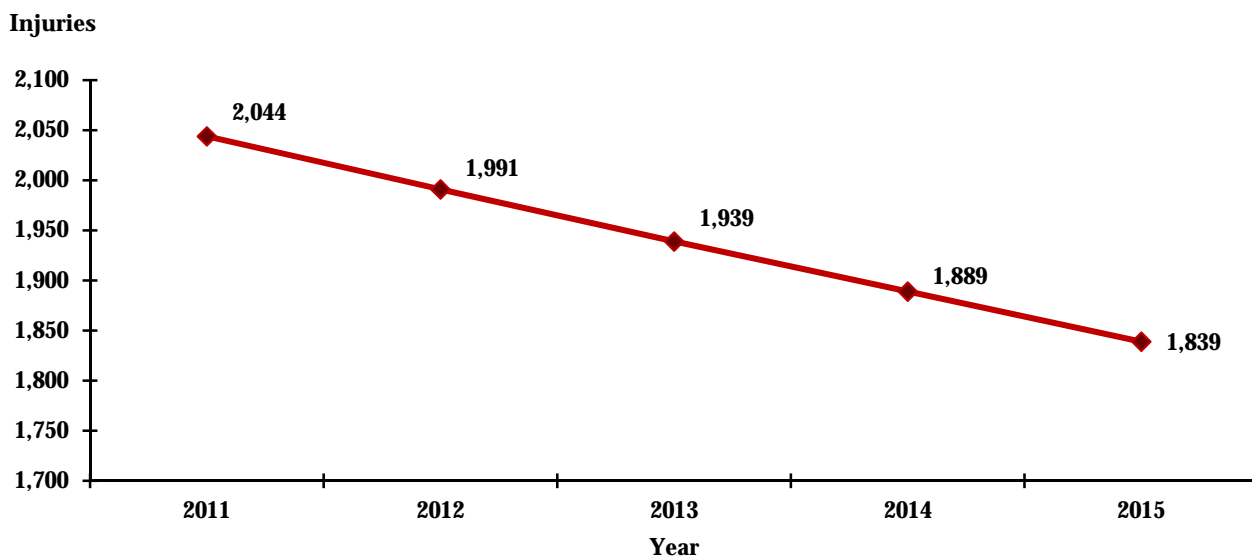


Figure 19. Unrestrained Injury Objectives through 2015



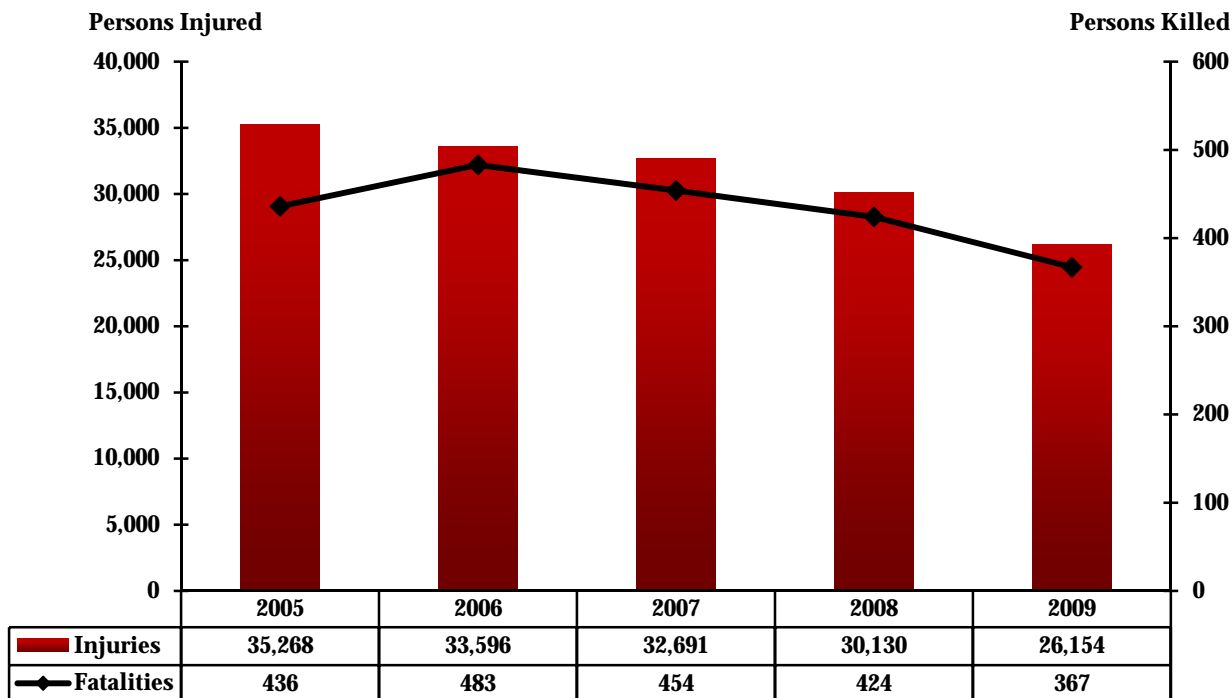
To accomplish these objectives, the Occupant Protection Emphasis Area Team identified four strategies:

- Expand and refine *Click It or Ticket* and Law Enforcement Challenge;
- Conduct a year round nighttime seatbelt enforcement and education program;
- Increase the awareness of child passenger safety best practice recommendations for infants, children, and pre-drivers (up to age 16); and
- Evaluate and recommend legislation and/or regulations that require the use of safety devices in all seating positions, with higher fines and points on the driver's license for noncompliance.

Emphasis Area: Highway Infrastructure

Intersection-related crashes, construction zone crashes, and run-off-the road crashes are the prime indicators of hazardous highways and are the data included in the highway infrastructure emphasis area. Figure 20 shows the fatalities and injuries sustained in such crashes.

Figure 20. Highway Infrastructure-Related Fatalities and Injuries
2005 to 2009



Highway Infrastructure Fatality Objective:
Reduce the annual number of highway infrastructure fatalities on all roads in Maryland from 424 in 2008 to fewer than 340 by December 31, 2015 (19.8 percent reduction).

Highway Infrastructure Injury Objective:
Reduce the annual number of highway infrastructure injuries on all roads in Maryland from 30,130 in 2008 to fewer than 25,056 by December 31, 2015 (16.8 percent reduction).

Figures 21 and 22 show the performance measures for highway infrastructure fatalities and injuries up to 2015.

Figure 21. Highway Infrastructure Fatality Objectives through 2015

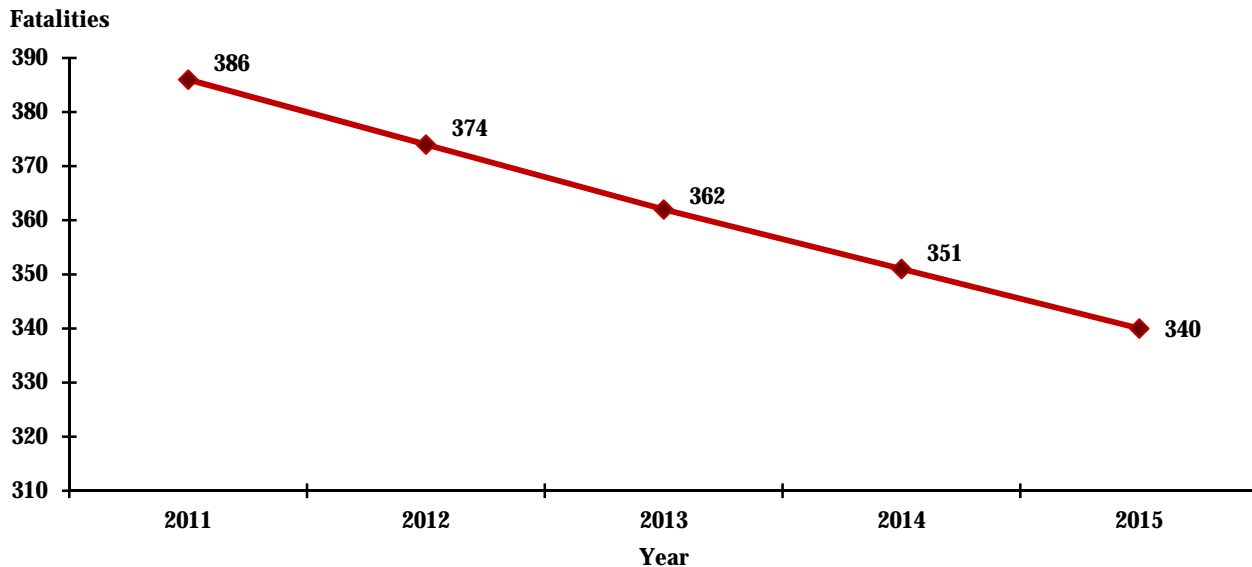
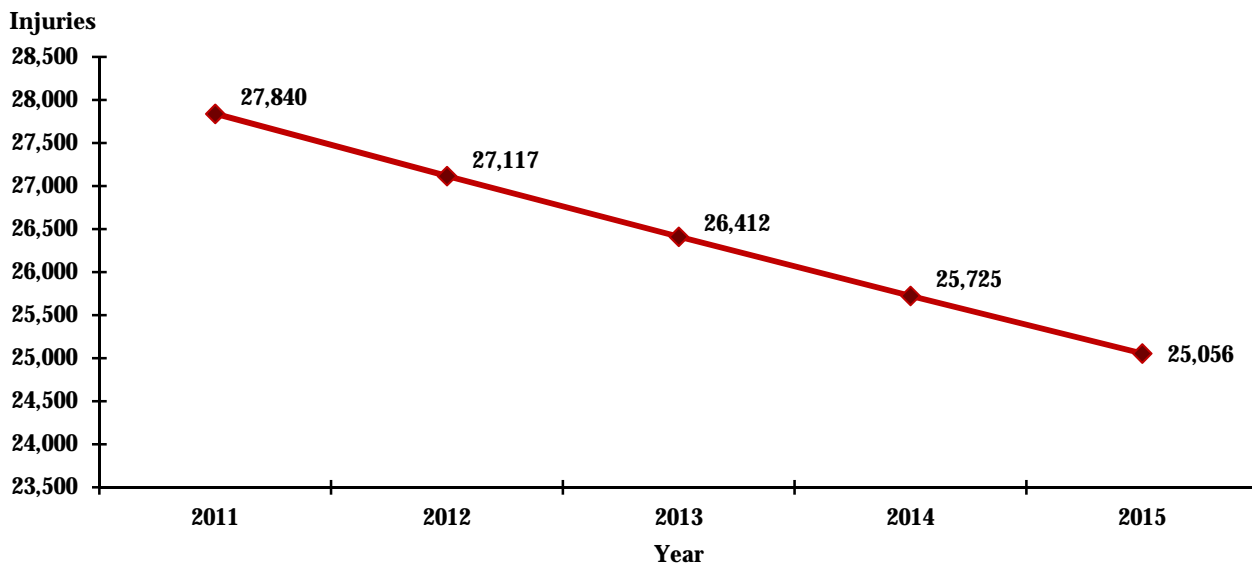


Figure 22. Highway Infrastructure Injury Objectives through 2015



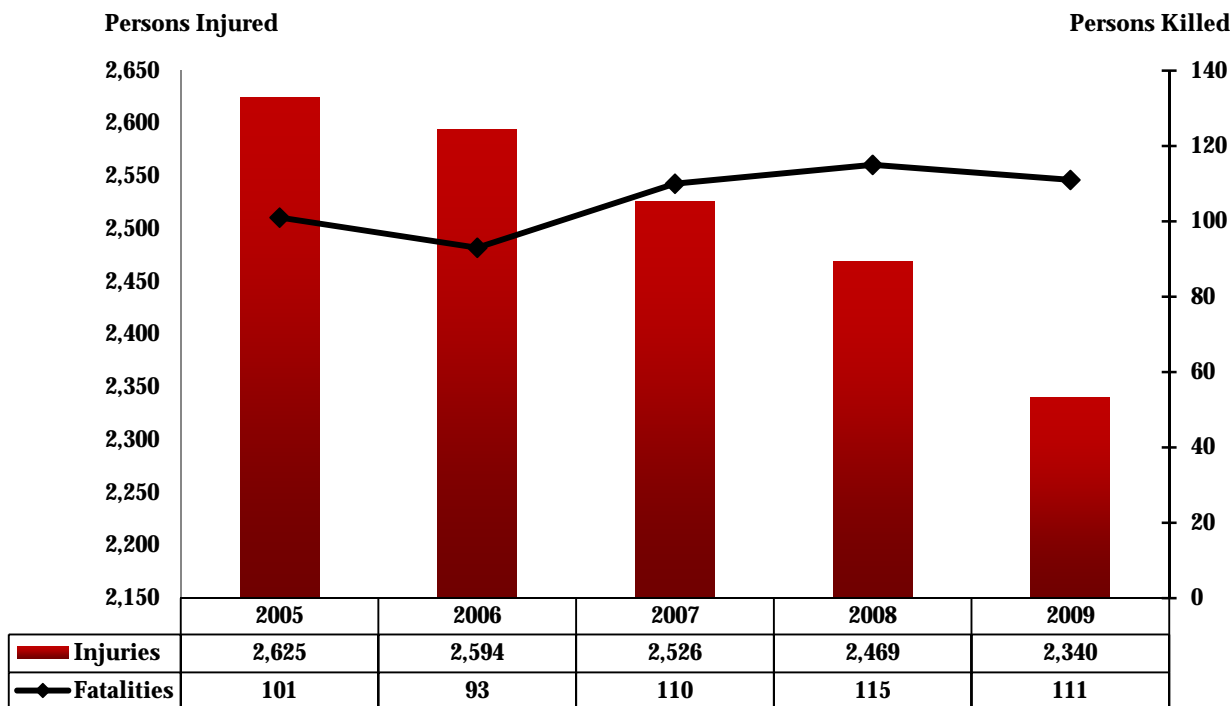
To accomplish these objectives, the Highway Infrastructure Emphasis Area Team identified three strategies. One of those strategies is to develop a corridor program, which will involve strategies and countermeasures from all the emphasis area teams. The team’s strategies include the following:

- Develop a corridor program that targets safety improvements where the severity index is high and that address roadway elements that contribute to crashes;
- Identify high crash locations (intersections and locations) and make safety improvements statewide; and
- Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes, e.g., run-off-the-road, sight distance issues, etc.

Emphasis Area: Pedestrian Crashes

Among road users, pedestrians are probably the most vulnerable, with the proportion of pedestrian fatalities increasing over the last several years. Pedestrian fatalities now account for 20 percent of all fatalities in Maryland. Figure 23 indicates the number of fatalities and injuries sustained by pedestrians in the last five years.

Figure 23. Pedestrian Fatalities and Injuries
2005 to 2009



Pedestrian Fatality Objective: Reduce the annual number of pedestrian fatalities on all roads in Maryland from 115 in 2008 to fewer than 92 by December 31, 2015 (19.8 percent reduction).

Pedestrian Injury Objective: Reduce the annual number of pedestrian injuries on all roads in Maryland from 2,469 in 2008 to fewer than 2,053 by December 31, 2015 (16.8 percent reduction).

Figures 24 and 25 show the performance measures for pedestrian fatalities and injuries up to 2015.

Figure 24. Pedestrian Fatality Objectives through 2015

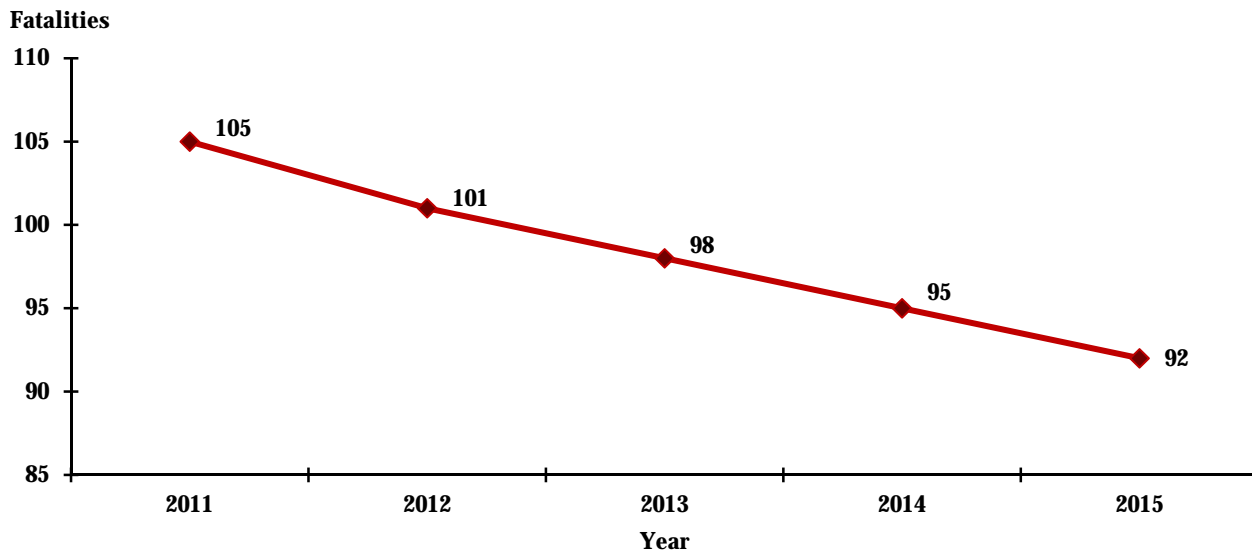
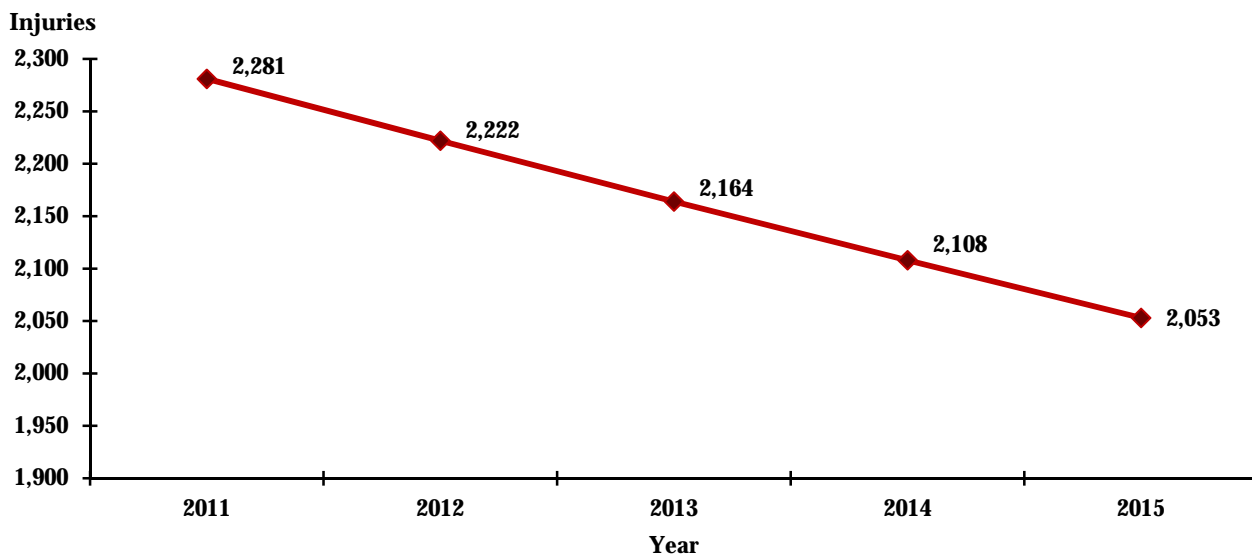


Figure 25. Pedestrian Injury Objectives through 2015



To accomplish these objectives, the Pedestrian Emphasis Area Team identified the following four strategies:

- Develop model processes to identify and prioritize high-incident locations and system-wide pedestrian safety issues;
- Develop and evaluate model approaches to engineering built environments that accommodate safe pedestrian travel;
- Develop and evaluate model approaches to improving pedestrian and motorist awareness and behavior, including education and enforcement efforts; and
- Create partnerships among state, regional, and local stakeholders to develop action plans that address high-priority locations and system wide issues using comprehensive approaches to pedestrian safety.

Implementation

Implementation of the 2011-2015 SHSP will involve the collaborative work of professionals representing the disciplines of transportation planning, engineering and operations, public outreach and education, legislation and law enforcement, and emergency medical service systems. Each of these disciplines has a critical role to play in defining the optimal combination of countermeasures that will yield the best traffic safety outcomes.

Implementation of the 2011-2015 SHSP takes a new approach by focusing not only on the issues that cause the greatest number of traffic safety problems, but on the locations as well. A key strategy in the Highway Infrastructure Emphasis Area Team plan is to identify the top 20 non-interstate corridors in the State that have the highest number of traffic-related fatalities and serious injuries.

A special Task Force, including representatives from each emphasis area team, will review data to determine the causes of crashes, fatalities, and serious injuries along these corridors, and then select the appropriate SHSP strategies and action steps to develop a coordinated implementation plan for each corridor. Focusing on these corridors, however, does not mean the entire state is not involved in efforts to improve traffic safety. SHA Districts, the MHSO grant program, and the RTSP provide comprehensive traffic safety programs statewide.



In addition, each emphasis area team will review statewide data to identify other locations that have a high number of fatalities and serious injuries, identify statewide issues that affect traffic safety outcomes, determine where there is a need for a joint effort with other emphasis area teams and develop implementation plans for each targeted location. A coordinated action among local implementing units, including law enforcement agencies, transportation agencies, outreach and education organizations, and emergency medical service responders may be required.

As with any plan, it can only be a success if used to drive decision-making and guide specific actions. To ensure that plan implementation occurs, Maryland assigned lead agency responsibility for each strategy and action step. The SHSP calls for agencies and organizations to stand up and provide leadership for a strategy or action step for which they have expertise, interest, or current responsibility. On a quarterly basis, emphasis area teams will meet to track progress, identify barriers or problems, and discuss next steps. Maryland has developed a tool to assist these teams in tracking progress on implementation of specific actions, as well as tracking progress toward achieving the emphasis area's measurable objectives. There will be an update of fatality and injury performance measures as new data becomes available to determine whether sufficient progress is being made in each of the plan's emphasis areas.

The SHSP Implementation Team will meet quarterly during the five-year life of the SHSP to:

- Review progress in each of the emphasis areas;
- Provide assistance, when appropriate, to overcome barriers or solve problems;
- Receive updates on SHSP-related campaigns, trainings, or other programs; and
- Provide guidance on future programs, activities, etc.

A yearly report will provide specific information on how well each team is meeting their measurable fatality and injury objectives, along with the level of progress for each action step. Members of the Implementation Team appear in the Appendix.

Appendix

Maryland Strategic Highway Safety Plan Implementation Team

Bala Akundi, Baltimore Metropolitan Council
Kevin Anderson, Maryland Transportation Authority Police
April Armstrong, Science Applications International Corporation (SAIC)
Michelle Atwell, Maryland Highway Safety Office (MHSO)
Pam Beer, Cambridge Systematics, Inc.
Vernon F. Betkey, Maryland Highway Safety Office (MHSO)
Tom Bryer, Science Applications International Corporation (SAIC)
Cindy Burch, National Study Center (NSC)
Lora Byala, Four Square Integrated
Jessica Capuano, Science Applications International Corporation (SAIC)
Mary Dietz, State Highway Administration (SHA), Planning
Kurt Erickson, Washington Regional Alcohol Program (WRAP)
Lolita Fullard, Maryland Highway Safety Office (MHSO)
Tom Gianni, Maryland Highway Safety Office (MHSO)
Valerie Gompf, National Highway Traffic Safety Administration (NHTSA)
Jeremy Gunderson, Maryland Highway Safety Office (MHSO)
Larry Harmel, Maryland Chiefs of Police Association
Breck Jeffers, Federal Highway Administration (FHWA)
Patrick Kennedy, Federal Highway Administration (FHWA)
Andy Krajewski, Motor Vehicle Administration (MVA)
Liza Lemaster, Maryland Highway Safety Office (MHSO)
Ron Lipps, State Highway Administration (SHA), Office of Traffic Safety
Captain John McKissick, Howard County Police Department
Jackie Milani, National Study Center (NSC)
Peter Moe, Maryland Highway Safety Office (MHSO)
Doug Mowbray, Maryland Highway Safety Office (MHSO)
Lora Rakowski, State Highway Administration (SHA)
Tim Richards, Maryland Highway Safety Office (MHSO)
Nanette Schieke, Motor Vehicle Administration (MVA)
Randall Scott, Baltimore City Department of Transportation

