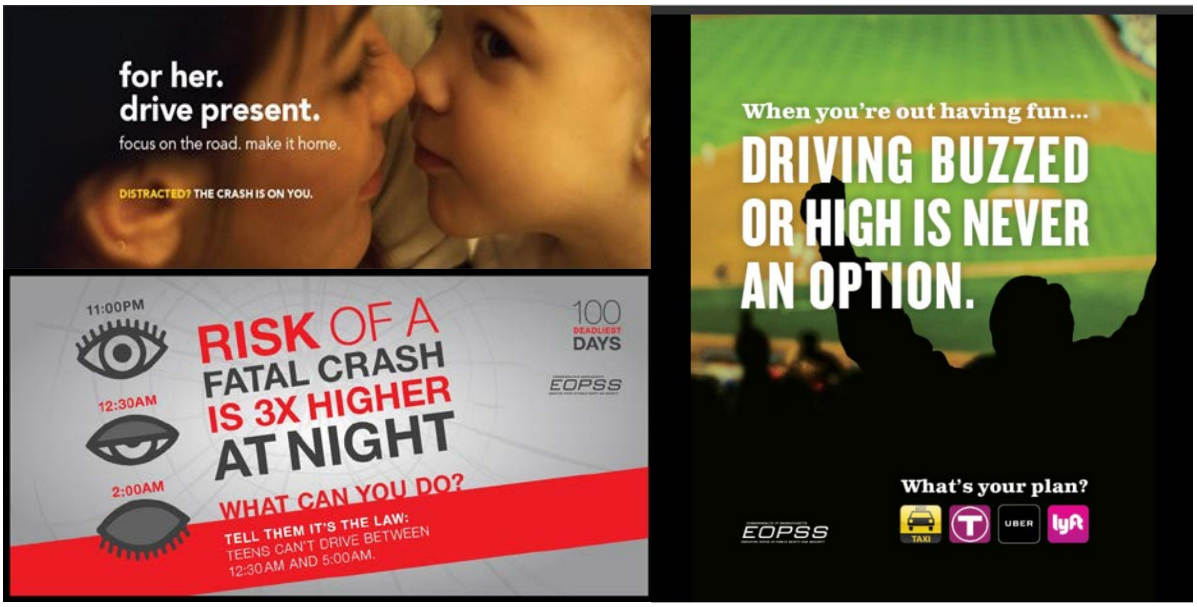
2018 Massachusetts Highway Safety Plan



Presented by:

The Executive Office of Public Safety and Security
Office of Grants and Research
Highway Safety Division

Submitted to:

U.S. Department of Transportation
National Highway Traffic Safety Administration

Executive Summary

On behalf of Governor Charles Baker and Lt. Governor Karyn Polito of the Commonwealth of Massachusetts, I am pleased to present our Federal Fiscal Year (FFY) 2018 Highway Safety Plan (HSP). This proposal outlines the Executive Office of Public Safety and Security's (EOPSS) Office of Grants and Research (OGR), Highway Safety Division (HSD) program priority areas, identifies performance targets, and discusses proposed initiatives within the agency. This HSP serves as our framework for the implementation of countermeasures with highway safety partners in the Commonwealth.

The EOPSS/OGR/HSD is responsible for the development, implementation, coordination, and ongoing management of the Massachusetts highway safety program. This includes a leadership role in identifying traffic safety priorities, and working with partners to develop programs and initiatives to address ongoing and shifting highway safety needs.

The FFY 2018 Massachusetts HSP recognizes that traffic crashes are preventable and that Massachusetts is committed to reducing the number of fatalities, injuries, and economic losses resulting from these crashes.

The hard work and dedication of the agency's Highway Safety Division has contributed significantly to safer roadways in Massachusetts, including a **20.5**% percent decline in roadway fatalities since 2007. Additionally, alcohol-related ((Blood Alcohol Concentration (BAC) =.08+)) fatalities have declined **38.7**% percent since 2007. Please see the "FFY 2017 Highlights" section for other noteworthy achievements that have taken place. The HSP was developed within the framework of the Strategic Highway Safety Plan (SHSP) and with input from associated steering committees. The Office of Grants and Research Highway Safety Division will continue to prioritize occupant protection and impaired driving as main focus areas with additional resources dedicated to programs such as distracted driving, motorcycles, bicycles, pedestrians, and traffic records. Low seat belt usage rates continue to be an issue for Massachusetts, despite rising 12% since 2007. Increasing the five-year average of seat belt use rate to **79**% is a key performance target for 2018. A main strategy to accomplish this will be the continuation of both high-visibility mobilizations and sustained enforcement. We anticipate that this will also help to lower the Commonwealth's overall death and injury rates.

Massachusetts has been successful in implementing many critical statewide highway safety program initiatives. Because of our proactive partnerships and the commitment of executive level leadership, Massachusetts will continue developing new and innovative programs to improve safety conditions for all road users. We will through statewide effort, continue to build upon Massachusetts' already successful highway safety program.

The National Highway Safety Act of 1966 provides federal grants to states to support highway safety programs. The EOPSS/OGR/HSD is responsible for administering these federal highway safety funds and performs the following functions:

Problem Analysis/Identification: Identification of current traffic safety issues through data analysis and monitoring performance targets and forecasting of potential road safety problems as well.

Public Awareness: The development and implementation of media campaigns, events and programs focusing on key issue areas.

Grants Management: Includes management of the highway safety programs, development of federal safety proposals, and distribution of federal funds to state and local agencies.

Monitoring and Evaluation: Monitoring and evaluation of approved highway safety projects and the development of safety countermeasures. The agency provides grants for programs which are designed to reduce crashes, injuries, fatalities, and related economic losses. Local and state law enforcement agencies, state agencies, academic institutions, and non-profit organizations can apply through the Office of Grants and Research for NHTSA grant funds to support projects related to highway safety. Massachusetts highway safety officials analyze highway safety problems and corrective strategies. Based on the result of this analysis, it has been determined that Massachusetts can make a positive impact on improving highway safety by placing a major emphasis on the enforcement of these traffic safety program areas:

Occupant Protection: Seat belt use is a proven method to improve safety in crashes. The Massachusetts seat belt use rate is low (78.2%) compared to the national average of 90%. Despite this poor use rate, Massachusetts consistently ranks among the nation's best for our low crash fatality rate.

Impaired Driving: Driving under the influence of alcohol, marijuana, and other drugs are persistent problems that contribute to fatal and serious injury crashes. Massachusetts has legalized the sale of both medical and recreational-use marijuana. Retail recreational-use marijuana sales are expected to begin in July of 2018. As such, the agency has already begun adjusting the focus of its Impaired Driving Programs to address traffic safety concerns related to these recently legalized drugs. As part of those efforts we participated in the NHTSA Regions 1 and 2 Impaired Driving Summit in Suffern, NY and subsequently convened a two-day Massachusetts Impaired Driving Summit in Boston in April 2017.

The Boston summit brought together governmental, academic, non-profit and business leaders who developed a core foundation of recommendations to address impaired driving due to alcohol, marijuana, opioids, and other substances. Discussion included DRE and ARIDE training, the need for increased education, prevention, and research related to drugged driving

behavior. We will continue to monitor and support the enforcement of the state's impaired driving statutes, and strengthen and enhance existing programs.

Traffic Records: Traffic Records are the foundation of every state highway safety program. The accuracy, completeness, timeliness, and uniformity of data is essential to valid problem identification and the analysis needed in the development of evidence-based targets, performance measures, strategies, and to help communicate the issues to Massachusetts residents.

Distracted Driving: Distracted Driving continues to be an epidemic among drivers in Massachusetts and throughout the nation. We will continue to expand outreach and support enforcement initiatives that have proven successful in limiting the scope of damage that results from drivers being distracted by their electronic devices.

Pedestrian and Bike Safety: As Massachusetts has a high percentage of people who commute and travel on foot or bike, this is a significant area of focus. Since 2003, there has been a gradual rise in the proportion of fatalities in the U.S. that were pedestrian. Massachusetts has reflected this trend with a 31% increase in pedestrian fatalities over the past decade.

Economic Losses: The data relating to the loss of life and injuries are absolute. The economic costs of crashes can be only be estimated. According to NHTSA's report "The Economic and Societal Impact of Motor Vehicle Crashes, 2010 (Revised)", the cost of traffic crashes in Massachusetts for the year 2010 was $5.835 billion, almost $900 per capita.

The cost components in the report included productivity losses, property damage, medical costs, rehabilitation costs, congestion costs, legal and court costs, insurance administration costs, costs to employers, and emergency services such as medical, police and fire services. Our agency recognizes that progress made in improving traffic safety will have a direct correlation to reducing the associated economic losses. Investing in improving traffic safety will improve the financial strength of the Commonwealth and its citizens.

Daniel Bennett, Secretary

Executive Office of Public Safety and Security

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1.0 Introduction

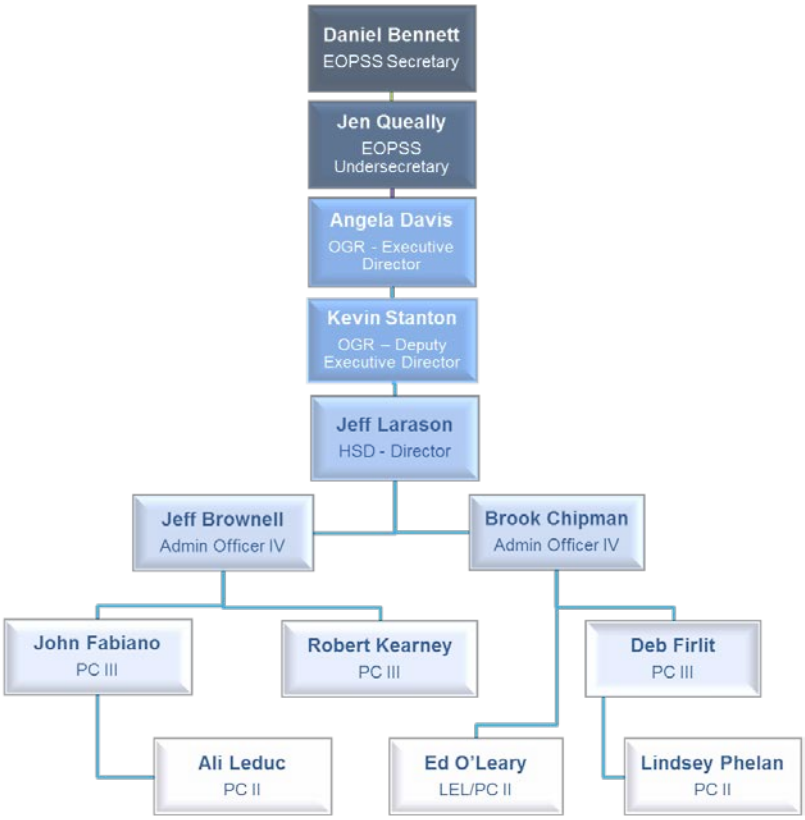
■ 1.1 HSP Calendar

January to March	The agency reviews progress of FFY 2017 programs; analyzes federal, state, and local data to identify FFY 2018 key program areas; reviews National Highway Traffic Safety Administration (NHTSA) Region I response to the FFY 2017 HSP, FFY 2016 Annual Report, and recent NHTSA assessments; reviews spending patterns and revenue estimates.
January to May	Staff at the Office of Grants and Research (OGR)/Highway Safety Division (HSD) conducts strategic planning/meetings with key stakeholders to present recent data analyses and discuss the issues facing constituencies. The agency issues solicitations in order to identify subrecipients for inclusion in the HSP. Agency reviews proposals for funding consideration resulting from the website postings at www.mass.gov/highwaysafety.
March to June	The agency drafts the FFY 2018 HSP and submits draft version to NHTSA Region I for review and comments. The agency obtains any updates to previously reviewed federal, state, and local data and analyses. With review and approval of the Secretary or EOPSS, the Secretary submits final HSP to NHTSA on behalf of the Governor and Lt. Governor.
September to October	EOPSS/OGR/HSD begins to implement and award grants and contracts and begins work on the FFY 2017 Annual Report.
November to December	EOPSS/OGR/HSD oversee grants and projects in the HSP, finalize the FFY 2017 Annual Report, and submit it to NHTSA.

■ 1.2 State Highway Safety Office Organization

In Massachusetts, the Highway Safety Division is one area within the Office of Grants and Research (OGR) agency, which is part EOPSS. EOPSS is a Secretariat in the Governor's cabinet. The Secretary of Public Safety and Security reports directly to the Governor and serves as the Governor's Representative for Highway Safety.

Figure 1.1 EOPSS/OGR/Highway Safety Division Organizational Chart



Staffing Updates

Joined:

Alisa (Ali) Leduc, Program Coordinator II, in August 2016. Ali came to the Office of Grants and Research Highway Safety Division from the Massachusetts Rehabilitation Commission. Ali oversees the Child Passenger Safety (CPS) program, Pedestrian Grant, and Data Driven Approaches to Crime and Traffic Safety (DDACTS) programs.

Jeffrey Brownell, Administrative Officer IV, in December 2016. Jeff joined the agency after several years as a Program Coordinator III in the Homeland Security Division of Grants and Research. Jeff is responsible for general programmatic and fiscal strategy, administrative policy, as well as the motorcycle safety program.

Brook Chipman, Administrative Officer IV, in March 2017. Brook came aboard after several years as an Administrative Officer IV in the Homeland Security Division. Brook had previously been a part of the Highway Safety Division over sixteen years before moving to Homeland Security. Brook will oversee the Traffic Records program, traffic enforcement-related programs, and general programmatic and administrative strategy.

Promoted: John Fabiano, Program Coordinator II to Program Coordinator III, in October 2016. John is responsible for all media efforts and contracts.

Deb Firlit, Program Coordinator II to Program Coordinator III, in March 2017. Deb oversees the STEP program as well as all MSP-related projects.

Left: Barbara Rizzuti, Administrator Officer IV, was hired by NHTSA Region I in October 2016. Barbara left EOPSS/OGR/HSD after nearly nine years with the division.

1.3 Mission Statement

The mission of the Office of Grants and Research Highway Safety Division is to facilitate the development and implementation of policies, programs, and partnerships to help reduce fatalities, injuries, and economic losses resulting from motor vehicle crashes on the roadways of the Commonwealth of Massachusetts. The agency administers the federally and non-federally funded highway grant programs of EOPSS.

1.4 Highway Safety Program Overview

Within the Commonwealth of Massachusetts, the agency is responsible for planning, implementing, and evaluating highway safety projects with federal and non-federal funds. The agency also works to coordinate the efforts of federal, state, and local organizations involved with highway safety in Massachusetts.

This HSP for FFY 2018 serves as the Commonwealth of Massachusetts' application to NHTSA for federal funds available under the Fixing America's Surface Transportation (FAST) Act transportation bill. The HSP also reflects programs that will be conducted with grant funds previously received but unspent under the Moving Ahead for Progress in the 21st Century (MAP-21) transportation bill and the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Other sources of funds include cooperative agreements with NHTSA for the Fatality Analysis Reporting System (FARS) project and private funds donated to the Highway Safety Trust Fund.

To identify the issues to be addressed in the FFY 2018 Highway Safety Program, the agency relied primarily on 2011 to 2015 trend data but also considered preliminary 2016 data when possible.

The changes in the total number of crashes and other data in recent years is attributed not only to different reporting rates by different police jurisdictions, but also to the declining number of operator-only reports (reports submitted by motorists who are involved in crashes for which no police report was submitted) that were entered in the crash data system by the Registry of Motor Vehicles (RMV) previously.

The program planning throughout this HSP may be altered depending on the levels of funding received or evolving priorities. The agency will submit any changes to the HSP to NHTSA Region 1 for review and approval.

FFY 2017 Highlights

- The Traffic Enforcement program awarded $2,490,000 to 202 eligible law enforcement agencies for FFY 2017. As of May 30, 2017, the program had resulted in 11,733.75 patrol hours leading to 28,872 traffic stops – a 2.46 stop per hour average. The stops led to 10,811 citations issued and 596 arrests/criminal summons.

- The FFY 2017 Child Passenger Safety (CPS) Equipment Grant Program awarded $171,470 in total funds to 68 municipal departments, hospitals, and non-profit agencies. Subrecipients purchased 2,030 certified child safety seats for distribution and installation free of charge to families in need.

- Our agency awarded Sustained Traffic Enforcement Program (STEP) grants totaling $1.6 million in FFY 2017 to the MSP and 16 selected police departments – Barnstable, Boston, Brockton, Cambridge, Chicopee, Fall River, Framingham, Holyoke, Lowell, Lynn, New Bedford, Quincy, Springfield, Taunton, Westfield and Worcester - for enhanced traffic enforcement in their communities.

- The FFY 2017 Pedestrian and Bicycle Enforcement and Equipment Grant Program awarded $222,555 to 79 local law enforcement agencies.

- Baystate Medical Center, our agency's vendor for the statewide CPS Training and Program Administration grant, is expected to conduct at least 25 CPS technician-related classes during FFY17, including Special Health Care Needs, Ambulance, and School Bus. As of June 1, 2017, there are 803 certified technicians, including 46 who have Special Health Care Needs certification, and 22 instructors, including 14 with Special Health Care Needs certification.

- The number of Drug Recognition Experts (DRE) in the Commonwealth increased from 114 in FFY 2016 to 127 in FFY 2017. The DREs represent over 50 municipalities across the state along with MSP, Massachusetts Environmental Police, and Bridgewater State University Campus Police.

- The Underage Alcohol Enforcement Program awarded $256,000 to 75 eligible law enforcement agencies for FFY 2017.

- The Alcoholic Beverages Control Commission was awarded $390,000 for 4 programs during FFY 2017.

- The Massachusetts Police Training Committee was awarded $764,246.36 for 3 programs during FFY 2017.

- From April 7 to April 28, 2017, over 140 police departments participated in a Distracted Driving mobilization to help enforce Massachusetts' no texting law.

- The MSP participated in a Distracted Driving mobilization and issued 5,202 citations of which 32% (1,702) were attributed to Hand Held Electronic Device violations which include texting and impeded operation. The written citations were down from 2016 *(5,596 total citations; 2,224 Hand Held Electronic Device)*. This most likely was due to about a 12% reduction in deployment hours because of staffing issues. For the Distracted Driving mobilization, the MSP employs special patrol strategies that include working in teams, roving and stationary cruisers and use of spotters.

- Governor Baker proclaimed May 2017 to be "Seat Belt Awareness Month" in Massachusetts.

- Our agency continues to utilize social media as a platform for pushing traffic safety messaging and highlighting the work of our grant partners. As of June 1, 2017, we have 9,132 Facebook followers and 1,274 Twitter followers.

- We developed a theme to tie together all of our FFY17 media campaigns, "The Crash Is on You," which places responsibility on the driver for the behavior leading to a crash. This theme and the ensuing campaign concepts were developed as a result of a series of focus groups we conducted with 18-34 year old male participants.

- For the May 2017 *Click It or Ticket* media campaign, we mimicked an outreach strategy developed by the Colorado Department of Transportation. Our agency fostered a partnership with AAA and created a crashed car display, showing an unbelted dummy ejected through the windshield and a belted dummy in the front passenger position, along with signage around the car promoting belt usage. Our agency worked with AAA to locate the vehicle in high visibility areas, including AAA branches, high schools, and non-profit agencies. This display helped broaden the reach of our paid and earned media campaign and provided an impactful visual for the consequences of not buckling up.

- We conducted a series of editorial board meetings with regional newspapers in western, northeastern, and southeastern Massachusetts ahead of the launch of the April 2017 distracted driving mobilization and paid media campaign. In addition to producing several print and online articles, the meetings allowed us to make a push for reporters to use the term "crash" instead of "accident" and to cite seat belt usage when reporting on a crash.

- For the FFY 2017 Holiday *Drive Sober or Get Pulled Over* media campaign, we created ads with a MSP trooper delivering the message of "If you're drunk or high, don't tell me it

was an accident. The crash is on you." The paid media buy accompanying the ads targeted 18-34 year old males and delivered 8 million impressions via TV, online, radio, cinema, and gas pumps. Our earned media campaign was kicked off with a press conference at MSP Headquarters and an ensuing press release generated significant print and online news coverage.

Partnerships

To help further enhance highway safety in Massachusetts, our agency engages in many partnerships including, but not limited to:

AAA Northeast
Alcoholic Beverages Control Commission (ABCC)
Beth Israel Hospital
Boston Emergency Medical Services (EMS)
Brain Injury Association
Boston Medical Center
Boston Transportation Department
Colonial Auto Group
Councils on Aging
Department of Elder Affairs
Department of Health and Human Services
Division of Sleep Medicine at the Harvard Medical School
Driving School Association
Emerson Hospital
Executive Office of Energy and Environmental Affairs
Fisher College
Governors Highway Safety Association (GHSA)
Impaired Driving Advisory Board
Insurance Companies
Junior Operator License Advisory Committee
LivableStreets Alliance
Local Police Departments
Mass in Motion
Massachusetts Bay Transit Authority
Massachusetts Chiefs of Police Association (MCOPA)
Massachusetts Department of Public Health (MDPH)
Massachusetts Department of Transportation (MassDOT)
Massachusetts District Attorneys Association (MDAA)
Massachusetts Executive Level Traffic Records Coordinating Committee (METRCC)
Massachusetts Major City Chiefs Association
Massachusetts Medical Society
Massachusetts Motorcycle Association
Massachusetts Office for Victim Assistance (MOVA)
Massachusetts Prevent Injury Now! Network (MassPINN)

Massachusetts Safety Officers League
Massachusetts Department of State Police (MSP)
Massachusetts Trial Court
MassBike
MassRIDES
McLean Hospital
Merit Rating Board (MRB)
MIT Age Lab
Mothers Against Drunk Driving (MADD)
Municipal Police Training Committee (MPTC)
Office of the Commissioner of Probation
Regional Transit Authorities
Registry of Motor Vehicles (RMV)
Sage Naturals
Safe Kids of Boston
Safe Kids of Western MA
Safe Roads Alliance
Safe Routes to Schools
Safety Institute
SHSP Plan Executive Leadership Committee
Sleep Health Institute at the Brigham and Women's Hospital
State and Regional Planning and Development Agencies
Traffic Records Coordinating Committee (TRCC)
UMass, Boston
UMass Gerontology
UMass Memorial Health Care
UMassSAFE
WalkBoston
Work Zone Safety Committee

2.0 Highway Safety Problem Identification

This HSP for FFY 2018 has been developed in coordination with the following documents:

- Massachusetts' Highway Safety Improvement Plan (HSIP) (2013)
- NHTSA's 2013 Management Review and 2016 Management Review
- NHTSA's Impaired Driving Assessment for Massachusetts (FFY 2005)
- NHTSA's Occupant Protection Assessment for Massachusetts (FFY 2007)
- NHTSA's Occupant Protection Special Management Review (FFY 2009)
- NHTSA's Motorcycle Safety Program Technical Assessment (FFY 2010)
- Strategic Plan for Traffic Records Improvement (FFY 2017)
- NHTSA's Massachusetts Traffic Records Assessment Report (FFY 2014)
- NHTSA's Standardized Field Sobriety Test (SFST) Assessment Report for Massachusetts (FFY 2012)
- NHTSA's Countermeasures That Work (CTW) Volume Eight
- Centers for Disease Control's Community Guide

2.1 Problem Identification Process

The process EOPSS/OGR/HSD use to pinpoint program areas warranting attention from Massachusetts highway safety professionals in FFY 2018 is outlined below:

General Problem Identification. This step begins by outlining the data sources used to identify problems and the persons or organizations responsible for collecting, managing, and analyzing relevant data. These data sources are described in Table 2.1. We will also use the Massachusetts Traffic Records Analysis Center (MassTRAC) for crash records analysis, mapping, and reporting. The software provides user access to crash data, tabulations, maps, and counts of crashes, vehicles, drivers, passengers, and non-motorists. This allows law enforcement and other stakeholders to more effectively identify high-risk locations and times so human and financial resources can be dedicated to the areas of greatest need. Results of the data are coordinated with the HSIP through the SHSP, analyzed, and gaps are identified. This step also uses ongoing exchanges with key federal, state, and local partners (such as the MSP, local police departments, MassDOT, MDPH, MCOPA, TRCC and the GHSA) to identify major highway safety areas of concern and to try to gain consensus of priority areas. We also initiated two additional approaches to problem identification. First, a statewide series of five Law Enforcement partnership forums were held. NHTSA was very helpful in helping to facilitate the discussions. The forums were attended by 84 police department personnel from 55 law enforcement agencies (primarily local) whose representatives brought a wealth of information related to the traffic safety problems that exist in their jurisdictions along with substantive suggestions about potential solutions to address them.

Secondly, In April of 2017, our agency hosted an Impaired Driving summit in Boston that was facilitated by NHTSA and the Transportation Safety Institute (TSI). This event was another great example of the strong partnerships between EOPSS, NHTSA, non-profit organizations, state agencies, and academia. As a result of the summit, impaired driving challenges were discussed.

The agency's site visits have been especially useful in monitoring specific traffic concerns of local and state partners. The information is also used for guiding subsequent analyses. The programs outlined in this section allow for continuous follow-up and adjustment based on new data and the effectiveness of existing and on-going projects.

Selection of Program Areas. This step uses analyses of available data sources to identify on-going and emerging problem areas and to verify the general decisions regarding major areas of concern made in the first step. We continue to collaborate with partners and safety stakeholders to gain input and agreement about the problem areas. Focus is not only on the size and severity of the problem but also where the greatest impact in terms of reducing crashes, injuries and fatalities can be made. Program selection criteria are established with the help of partners and the assessments and other documents listed above that provide evidence and support for selected projects. Organizations are usually selected for funding based on a competitive grant application that is data-driven and evidence-based. For example, the traffic enforcement grant countermeasure is awarded based on problem identification. Starting in FFY 2012, only municipalities that meet certain thresholds for crash data and performance are invited to participate in the program. Specifically, only communities with an above average crash rate that met the previous year's grant requirements are eligible. From there, funds are distributed based on population. Agency procedures also must be in place to ensure federal highway safety funds are being properly expended. Enforcement activity reports are required as part of the grant and include information about traffic stops, arrests, citations, and verbal and written warnings.

Determination of Performance Measures, Performance Targets, and Tasks. During this step and in conjunction with the SHSP, all of the above work is used to set reasonable performance measures, performance targets, and to develop tasks for the program areas in order to allocate our resources where they may be most effective. This step requires knowledge of the demographics, laws, policies, and partnering opportunities and limitations that exist in the Commonwealth. Selected programs and projects are explicitly related to the accomplishment of performance targets. For the most part, performance targets are based upon five-year trend data, the same as was done for the FFY 2017 HSP. All efforts are made to harmonize the performance measures and projects in the HSP with the SHSP. We work with MassDOT closely to ensure that the performance measures for fatalities, fatality rate, and serious injuries are identical. Our agency works with the SHSP Steering Committee and program area subcommittees to ensure that projects in the HSP and HSIP are coordinated.

For the most part, we relied on data pulled from the Fatality Analysis Reporting System (FARS) to determine year-to-year and five-year averages for performance targets. The exceptions were for the three core elements tied to the SHSP – fatality, fatality rate, and serious injuries; and the seat belt usage rate, which is derived from the annual statewide seat belt survey.

To arrive at the 2018 projections for the fatality, fatality, rate and serious injuries, we worked with MassDOT to arrive at the performance target. MassDOT used data derived from the Registry of Motor Vehicles crash database as those numbers will ultimately be part of the final 2015 data file sent to FARS. Using trendline analysis and five-year period comparisons, our agency and MassDOT arrived at the agreed upon projections to meet by December 30, 2018.

Table 2.1 Data Used for FFY 2018 HSP Problem Identification

Data Type	Data Set	Source/Owner	Year(s) Examined
Fatality and Injury	Fatality Analysis Reporting System (FARS), Massachusetts Crash Data System, Injury Surveillance Program, Massachusetts Traffic Records Analysis Center (MassTRAC)	NHTSA, State Traffic Safety Information (STSI), RMV, Massachusetts Department of Public Health, EOPSS/OGR/HSD	2011 to 2016
Violation	Massachusetts Citation Data	RMV/MRB	2012 to 2017
Seat Belt Use	Massachusetts Seat Belt Use Observation Data	EOPSS/OGR/HSD	2011 to 2016
Licensed Drivers, Registrations and Vehicle Miles Traveled (VMT)	Highway Statistics	Federal Highway Administration (FHWA), U.S. Census Bureau, RMV	2011 to 2016
Operating Under the Influence	Crime Statistics	RMV/MRB, Federal Bureau of Investigation	2011 to 2016

The crash data used in this HSP may not be consistent with the data reported by NHTSA's FARS due to variations in data availability and data quality improvements.

Coordination with the HSIP through the SHSP

Initiated in 2006, the SHSP was developed in consultation with federal, state, local, and private sector safety stakeholders using a data-driven, multi-disciplinary approach involving engineering, education, enforcement, and emergency response. The SHSP has statewide goals, objectives and emphasis areas. Goals are organized by three tiers – Strategic, Proactive, and Emerging - to focus on the traffic safety problems in each area. The Emphasis Areas are Impaired Driving, Intersection Crash Prevention, Lane Departures, Occupant Protection,

Speeding/Aggressing Driving, Young Drivers, Older Drivers, Pedestrians, and Motorcycles. The Proactive Emphasis Area represents less than 10 percent of annual fatalities or severe injuries: Bicycles, Truck and Bus-Involved Crashes, At-Grade Crossings, and Traffic Incident Management Safety (formerly work zone safety). The Emerging Emphasis Area focuses on improving the data systems used to analyze traffic safety patterns and for safety topics where data is inconclusive – Data Systems, Drowsy Driving, and Driver Inattention.

In 2012, the SHSP Executive Leadership Committee, the Steering Committee, and the Emphasis Area Teams collaborated on the development and implementation of the SHSP. A review was conducted in FFY 2013 with MassDOT contracting services with Cambridge Systematics and UMassSAFE at UMass Amherst. The Committees identified and recruited new stakeholders; reviewed available data; developed new strategies; conducted stakeholder meetings; and completed an evaluation of transportation safety, crash data, and emphasis area strategies. Emphasis area stakeholders include but are not limited to: AAA; UMass Gerontology; Executive Office of Health and Human Services (EOHHS); MDPH; regional transit authorities; insurance companies; MassRIDE; WalkBoston; hospitals; emergency medical services; driving schools; motorcycle associations; Safer Roads Alliance; state and local police agencies; MADD; and SADD.

Our agency is a key contributor serving on the Executive Leadership and Steering Committees and multiple Emphasis Team Areas. The SHSP is coordinating with the efforts of the agency as well as the 2013 updated SHSP, which was submitted to FHWA in September 2013.

The Massachusetts Highway Safety Improvement Program (HSIP) performance measures were developed by MassDOT and were submitted to FHWA in September 2013 for review and approval for FFY 2014. The performance measures in the HSP and HSIP (fatalities, fatality rate, and serious injuries) are identical as coordinated through the state SHSP. The HSD will continue to work with NHTSA Region 1 to ensure coordination with the SHSP and HSIP.

FFY2018 Highway Safety Problem for Massachusetts

The identification of current traffic safety issues across the Commonwealth for FFY 2018 was made using data analysis of fatalities and fatal crashes over the last five-year period of available data (2011-2015) across numerous elements including, but not limited to, county, cities, time-of-day, month, day-of-the-week, road type, gender, and age. Furthermore, data derived from grant-funded activity reports over the past few years provided another source to determine possible trends in traffic safety. Lastly, information gleaned from communications with state and local law enforcement departments through phone calls, face-to-face meetings, and organized conferences add another layer of analysis to the determination of traffic safety issues in Massachusetts.

Comparing the five-year period (2006-2010) to the five-year period (2011-2015) across the 11 core performance measures, plus seat belt usage, finds all but three of the measures showing a decrease (or in the case of seat belt usage, an increase) in the five-year average from 2006-2010 to 2011-2015. This means along with its partners and subrecipients, our agency has been steadily making positive strides towards safer roadways in Massachusetts.

Two of the three performance measures that did not show a decline were pedestrian fatalities and bicyclist fatalities. Both saw increases in the five-year average from 2006-2010 to 2011-2015. To counter this troubling trend, we have dedicated more funding to the Pedestrian and Bicyclist Grant program in order to increase the number of subrecipients participating and also allow for subrecipients to spend more funds on pedestrian and bicyclist safety equipment such as reflective roadway tape and crosswalk signs.

With the recent legalization of recreational marijuana, EOPSS/OGR/HSD allocated more funding for the Massachusetts Police Training Committee (MPTC) to conduct Drug Recognition Experts (DRE) classes to help increase the number of certified DREs across the state. DREs are fast becoming an important ally for prosecutors in the courtroom in helping determine if a driver was under the influence of drugs at the time of crash. In the future, we may look to include a state Judicial Outreach Liaison (JOL) as well as adding a second Traffic Safety Resource Prosecutor (TSRP) who will all work to educate criminal justice and law enforcement professionals about effective prosecution tools.

Seat belt usage has always been a significant concern for Massachusetts. With one of the lowest fatality rates per VMT in the country, the state also has one of the lowest seat belt usage rates (78%) in the nation, which seems to contradict the low fatality/VMT rate. To help continue the upwards trend in seat belt usage – up 4% from 2015 – the agency has expanded the possible pool of Child Passenger Seat Grant recipients to include applicants from the law enforcement organizations of state colleges and universities. In doing so, we will be reaching more potential young parents and minority groups that are in most need of quality car seats and increased knowledge on car seat safety.

There are plans to implement many of the same projects for FFY 2018 that were conducted during FFY 2017. While the projects may be the same, we have taken the information derived from data analysis to better assist subrecipients with utilizing awarded funding. For example, the traffic enforcement grant has typically been awarded to local police departments to fund mobilization patrols. For FFY 2018, we have added the option of purchasing allowable items, up to a certain percentage of the subrecipients' award, to help enhance enforcement efforts. The addition of equipment gives subrecipients more options to approach traffic enforcement effectively.

Furthermore, we also provide subrecipients with key data trends to improve the effectiveness of their activities. Data related to alcohol- and drug-impaired driving shows that impaired drivers tend to be males between the ages of 21 – 34 and impaired driving takes place more often on arterial and local roadways. With this data, local police can target key establishments that tend to be visited by males in that age range along main roads and local roads within their respective communities. Also, alcohol-impaired fatal crashes happen with more frequency over the weekend between midnight and 3 a.m. Traffic enforcement subrecipients will be directed to conduct a majority of their planned enforcement patrols during this time frame to better target potential impaired drivers.

Overall, the agency seeks to effectively utilize grant funding for maximum impact across the Commonwealth. With slight changes and additions in FFY 2018 to long-standing programs,

coupled with detailed data analysis of traffic safety trends on both a macro-level (statewide) and micro-level (county and city), we look to further improve the safety of all users of the roads in Massachusetts.

2.2 Massachusetts Characteristics

Located in the northeastern United States, Massachusetts is the 6th smallest state with a land area of 7,800 square miles and 351 cities and towns. According to the U.S. Census, in 2015, the Commonwealth's estimated population was 6,811,779, resulting in a density of approximately 873 persons per square mile. Massachusetts is the most populous of the six New England states. The highest population concentrations are in the eastern part of the Commonwealth. Boston is the capital and the most populated city in Massachusetts. Smaller pockets of population density also exist around the second and third largest cities, Worcester in central Massachusetts and Springfield in western Massachusetts.

Massachusetts has 76,657 road miles. Of these, 63,734 are urban and 12,922 are rural. Interstates, freeways, and expressways account for 4,565 of these miles and 49,043 miles are considered local roads. Major roadways include Interstates 90 (the Massachusetts Turnpike), 91, 93, 95, and 495. In 2015, motorists in Massachusetts traveled over 59 billion miles.

Boston is the seventh largest media market in the country. This market has spillover into southern New Hampshire and parts of Connecticut as well. Massachusetts has 17 full power television stations, 304 newspapers, and 219 broadcast and college radio stations.

Based on the most recently available RMV information, in 2014 there were 4,984,838 licensed drivers. The breakdown of MV operator by age: 321,279 (21 and under); 3,770,181 (22 – 64 years old); and 893,378 (65 and older).

Other demographics for Massachusetts based on estimated 2015 U.S. Census Bureau data include:

Age distribution:

Children (under 18 years old) – 20.4%

Adults (18 to 64 years old) – 64.2%

Older persons (65+) – 15.4%

Non-Caucasians account for 17.9 percent of the population compared with 22.9 percent nationally.

The three largest minority populations in Massachusetts as of 2015 (estimated) are Hispanic or Latino (11.2%), African American (8.4%), and Asian (6.6%). Compared to estimated 2014 census data, each of these three minority populations increased slightly during 2015.

The Massachusetts economy is primarily reliant on academic/research, tourism, technology, and financial services. Tourist destinations on Cape Cod and in the Berkshires as well as over 120 public and private colleges and universities create significant seasonal increases in the population both statewide and regionally. County government is virtually non-existent except as geographic definitions and for prosecutorial and correctional jurisdiction. In general, at the local level, administrative and legislative powers rest with mayors and city councils, town managers, town administrators, and boards of selectmen. The counties detailed in Table 2.2 have been used in this HSP for purposes of localizing the traffic safety statistics.

Table 2.2 Counties of Massachusetts – Population, VMT, & VMT Rate

County	2015 Population Estimate	2015 VMT (100 M)	2015 Fatalities	Fatalities per VMT
Barnstable	214,333	18.71	10	0.53
Berkshire	127,828	9.15	12	1.31
Bristol	556,772	49.83	40	0.80
Dukes	17,299	0.67	1	1.49
Essex	776,043	68.78	19	0.28
Franklin	70,601	6.21	9	1.45
Hampden	470,690	32.53	28	0.86
Hampshire	161,292	10.62	6	0.56
Middlesex	1,585,139	147.02	46	0.31
Nantucket	10,925	0.32	1	3.13
Norfolk	696,023	69.26	35	0.51
Plymouth	510,393	44.03	35	0.79
Suffolk	778,121	40.33	15	0.37
Worcester	818,963	75.57	49	0.65

(**Sources:** U.S. Census – Quickfacts; MA DOT; and FARS)

As Table 2.2 shows, having the highest population and/or VMT does not automatically mean having the most fatalities. Worcester, with the most fatalities in 2015 at 49, has a population and VMT nearly half that of Middlesex County – the top county by both population and VMT. In terms of regions, the Mass Pike corridor (Worcester-Hampden) and southeastern Massachusetts (Bristol-Plymouth) are the areas with the highest combined Fatality/VMT rates. We have reached out to local law enforcement and non-profit public safety-focused agencies in these two regions to promote the availability of grant funding to help decrease the number of traffic fatalities through education and enforcement in FFY 2018.

■ 2.3 Normalizing Data and Major Statistics

The values identified in Table 2.3 are used in the remainder of the report to normalize Massachusetts and national safety data.

Table 2.3 Base Data for Massachusetts and United States

	2011		2012		2013		2014		2015	
	MA	U.S.	MA	U.S.	MA	U.S.	MA	U.S.	MA	U.S.
Population (100K)	66.01	3,116	66.45	3,139	66.93	3,161	67.45	3,188	67.94	3,214
VMT (100M)	547.92	29,629	559.40	29,688	563.11	29,880	575.52	30,256	573.04	30,953
Licensed Drivers (100K)	46.83	2,118	47.33	2,118	47.65	2,121	49.84	2,140	50.41	2,181
Total Fatalities	337	32,367	349	33,561	351	32,719	354	32,675	345	35,092

Source: U.S. Census May 2017; RMV July 2016; FHWA May 2017; NHTSA Traffic Safety Facts 2011 to 2015; FARS May 2017

Key Massachusetts crash data and trends are provided in Table 2.4. Nationwide comparisons are provided in some areas.

Table 2.4 Massachusetts and Nationwide Crash Data Trends

Fatalities	2011	2012	2013	2014	2015	% change: 2015 vs 2011	% change: 2015 vs 2011-2014 avg.
MA Fatalities	374	383	351	354	345	-8%	-6%
US Fatalities	32,479	33,782	32,893	32,744	35,092	8%	6%
MA Fatalities – Male	262	269	233	259	210	-20%	-18%
MA Fatalities – Female	112	114	118	95	95	-15%	-13%
MA Fatalities - Urban	330	333	300	317	287	-13%	-10%
MA Fatalities - Rural	44	50	50	37	19	-57%	-58%

Fatality Rate	2011	2012	2013	2014	2015	% change: 2015 vs 2011	% change: 2015 vs 2011-2014 avg.
MA Fatality Rate/ 100 Million VMT	0.68	0.68	0.62	0.62	0.6	-12%	-8%
US Fatality Rate/ 100 Million VMT	1.1	1.14	1.1	1.08	1.03	-6%	-7%

MA Urban Fatality Rate/100 Million VMT	0.65	0.62	0.56	0.58	0.51	-22%	-15%
MA Rural Fatality Rate/100 Million VMT	1.08	1.97	1.93	1.42	0.67	-38%	-58%

Fatal Crashes	**2011**	**2012**	**2013**	**2014**	**2015**	**% change: 2015 vs 2011**	**% change: 2015 vs 2011-2014 avg.**
MA Fatal Crashes	356	365	334	336	291	-18%	-16%
US Fatal Crashes	29,867	31,006	30,202	30,056	32,166	8%	6%
MA Fatal Crashes - Urban	314	317	286	299	273	-13%	-10%
MA Fatal Crashes - Rural	42	48	48	37	18	-57%	-59%
MA Number of Young Drivers (age 16-20) Involved in a Fatal Crash	50	45	37	27	33	-34%	-17%
MA Number of Older Drivers (age 65+) Involved in a Fatal Crash	71	82	76	52	64	-10%	-9%

Crashes and Injuries	**2011**	**2012**	**2013**	**2014**	**2015**	**% change: 2015 vs 2011**	**% change: 2015 vs 2011-2014 avg.**
MA Number of Motor Vehicle Crashes of All Types	120,632	122,646	125,294	130,233	137,037	14%	10%
MA Number of Serious Injuries	3,577	3,587	3,197	3,031	2,867	-20%	-14%
MA Number of Crash Injuries (excluding fatalities)	43,779	43,858	43,242	44,284	45,851	5%	5%

Alcohol	**2011**	**2012**	**2013**	**2014**	**2015**	**% change: 2015 vs 2011**	**% change: 2015 vs 2011-2014 avg.**
MA Number of Fatalities Involving Driver or Motorcycle Operator w/ .08 BAC or higher	126	129	125	143	95	-25%	-27%
US Number of Fatalities Involving Driver or Motorcycle Operator w/ .08 BAC or higher	9,865	10,336	10,110	9,967	10,265	4%	2%
MA Alcohol-Related Fatalities (Actual) BAC = 0.01+	162	162	158	154	110	-32%	-31%
MA Percent of All Fatalities that are Alcohol-Related BAC 0.08+)	34%	34%	36%	40%	28%	-18%	-23%
US Percent of All Fatalities that are Alcohol-Related BAC 0.08+)	30%	31%	31%	30%	29%	-4%	-4%

Occupant Protection	**2011**	**2012**	**2013**	**2014**	**2015**	**% change: 2015 vs 2011**	**% change: 2015 vs 2011-2014 avg.**
MA Percent Observed Belt Use for Passenger Vehicles – Front Seat Outboard Occupants	73%	73%	75%	77%	74%	1%	-1%

US Percent Observed Belt Use for Passenger Vehicles – Front Seat Outboard Occupants	84%	86%	87%	87%	89%	6%	3%
MA Unrestrained Passenger Vehicle Occupant Fatalities	122	103	100	113	89	-27%	-19%
US Unrestrained Passenger Vehicle Occupant Fatalities	10,215	10,370	9,622	9,385	10,086	-1%	2%
MA Percent of Vehicle Occupant Fatalities Unrestrained	49%	41%	46%	52%	26%	-47%	-45%
US Percent of Vehicle Occupant Fatalities Unrestrained	31%	31%	29%	29%	29%	-7%	-4%

Motorcycles	2011	2012	2013	2014	2015	**% change: 2015 vs 2011**	**% change: 2015 vs 2011-2014 avg.**
MA Number of Motorcyclist Fatalities	40	56	42	47	60	50%	30%
US Number of Motorcyclist Fatalities	4,630	4,986	4,692	4,586	4,976	7%	5%
MA Percent of all Fatalities that are Motorcyclists	11%	15%	12%	13%	17%	58%	36%
US Percent of all Fatalities that are Motorcyclists	14%	15%	14%	14%	14%	1%	0%
MA Number of Unhelmeted Motorcyclist Fatalities	5	3	5	4	7	40%	65%
MA Motorcyclist Serious Injuries (As measured by hospitals stays)	654	500	617	578	590	-10%	0%

Pedestrians	**2011**	**2012**	**2013**	**2014**	**2015**	**% change: 2015 vs 2011**	**% change: 2015 vs 2011-2014 avg.**
MA Number of Pedestrian Fatalities	69	82	79	74	80	16%	5%
US Number of Pedestrian Fatalities	4,457	4,818	4,779	4,884	5,376	21%	14%
MA Percent of all Fatalities that are Pedestrians	16%	21%	23%	21%	23%	45%	15%
US Percent of all Fatalities that are Pedestrians	14%	14%	15%	15%	15%	9%	6%
MA Pedestrian Serious Injuries (as measured by hospital stays)	740	566	602	610	603	-19%	-4%

Bicycles	**2011**	**2012**	**2013**	**2014**	**2015**	**% change: 2015 vs 2011**	**% change: 2015 vs 2011-2014 avg.**
MA Bicyclist Fatalities	5	16	6	8	12	140%	37%
US Bicyclist Fatalities	682	734	749	726	818	20%	13%
MA Percent of all Fatalities that are Bicyclists	1%	4%	2%	2%	3%	248%	55%
US Percent of all Fatalities that are Bicyclists	2%	2%	2%	2%	2%	17%	17%
MA Bicyclist Serious/Incapacitating Injuries	147	131	145	154	124	-16%	-14%

Distracted Driving	2011	2012	2013	2014	2015	% change: 2015 vs 2011	% change: 2015 vs 2011-2014 avg.
MA Number of Distracted Driving Fatalities	54	55	53	31	64	19%	33%
US Number of Distracted Driving Fatalities	3,331	3,328	3,154	3,179	3,467	4%	7%
MA Percent of all Fatalities with Distracted Driving	14%	14%	15%	9%	19%	33%	43%
US Percent of all Fatalities with Distracted Driving	10%	10%	10%	10%	10%	-1%	-1%

Speed	2011	2012	2013	2014	2015	% change: 2015 vs 2011	% change: 2015 vs 2011-2014 avg.
MA Number of Speed-Related Fatalities	121	114	89	85	92	-24%	-10%
US Number of Speed-Related Fatalities	10,001	10,329	9,696	9,262	9,557	-4%	-3%
MA Percent of All Fatalities that are Speed-Related	32%	30%	25%	24%	27%	-17%	-4%
US Percent of All Fatalities that are Speed-Related	31%	31%	29%	28%	27%	-12%	-8%

Younger Drivers	2011	2012	2013	2014	2015	% change: 2015 vs 2011	% change: 2015 vs 2011-2014 avg.
MA Fatalities involving a Younger Driver (age 16-20)	51	50	40	30	33	-35%	-23%
US Fatalities involving a Younger Driver (age 16-20)	4,726	4,596	4,248	4,192	4,604	-3%	4%
MA Percent of all Fatalities that involve a Younger Driver	14%	13%	11%	8%	10%	-30%	-18%
US Percent of all Fatalities that involve a Younger Driver	15%	14%	13%	13%	13%	-10%	-3%
MA Number of Younger Driver (age 16-20) Fatalities	24	20	13	12	15	-38%	-13%

Older Drivers	2011	2012	2013	2014	2015	% change: 2015 vs 2011	% change: 2015 vs 2011-2014 avg.
MA Fatalities Involving an Older Driver (age 65+) Involved	69	84	79	49	53	-23%	-25%
US Fatalities Involving an Older Driver (age 65+)	5,636	5,940	6,057	6,052	6,608	17%	12%
MA Percent of all Fatalities that Involve an Older Driver	18%	22%	23%	14%	15%	-17%	-20%
US Percent of all Fatalities that Involve an Older Driver	17%	18%	18%	18%	19%	9%	5%
MA Number of Older Driver (age 65+) Fatalities	47	47	51	34	34	-28%	-24%

Traffic Enforcement Grants	2012	2013	2014	2015	2016	% change: 2015 vs 2011	% change: 2015 vs 2011-2014 avg.
MA Number of Seat Belt Citations Issued During Grant-Funded Enforcement Activities*	11,622	7,329	14,338	8,917	7,878	-32%	-25%
MA Number of Impaired Driving Arrests Made During Grant-Funded Enforcement Activities*	635	639	869	390	344	-46%	-46%
MA Number of Speeding Citations Issued During Grant-Funded Enforcement Activities*	9,959	9,183	10,485	9,985	8,013	-20%	-19%

* Based on Calendar Year (CY) activity

Source: STSI May 2016; RMV July 2016; FARS April 2017; 2010 to 2016 Massachusetts Seat Belt Use Observation Surveys; HSD grant data 2009-2016, Health Injury Surveillance Program February 2017; MA Crash Data System February 2017

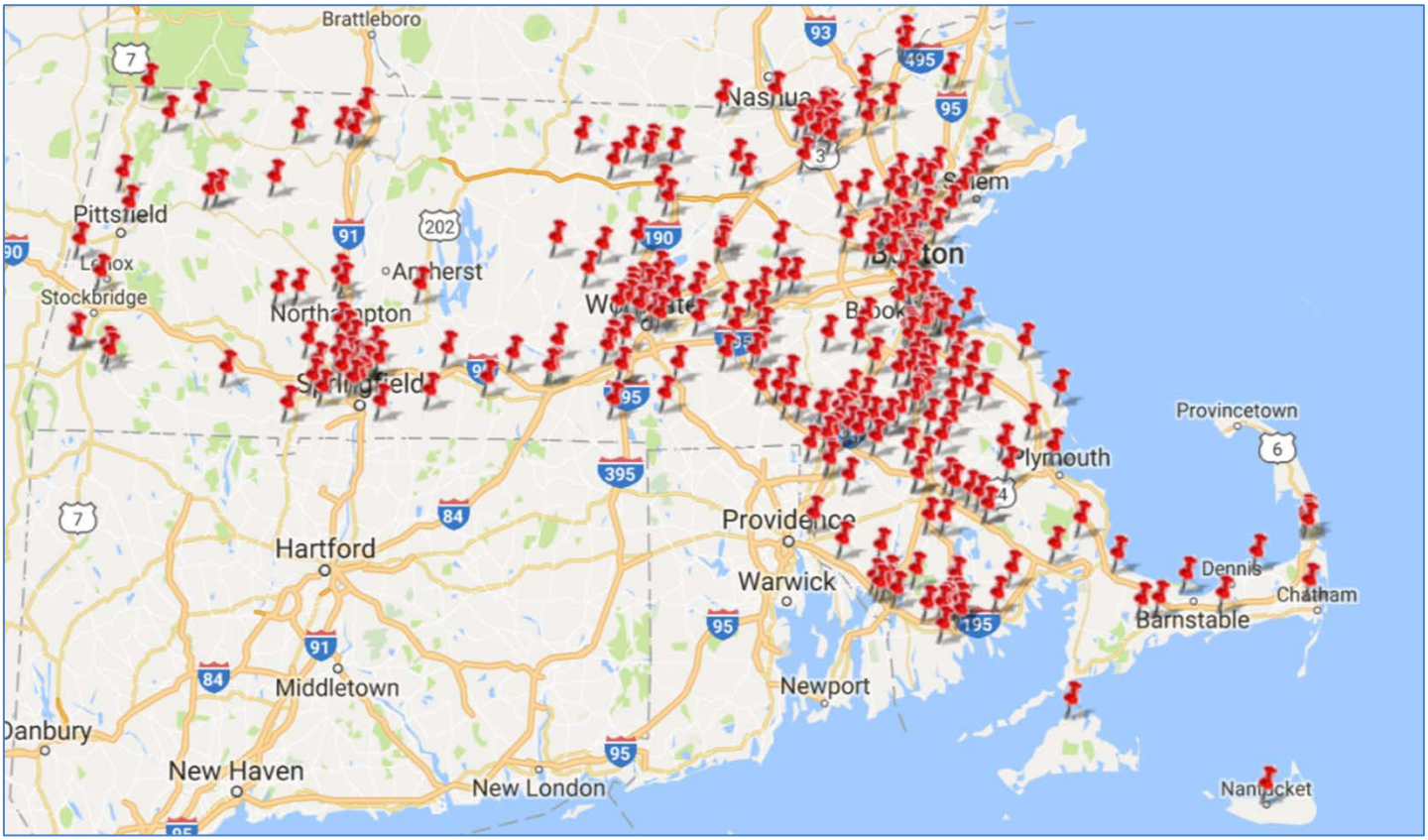
*Based on FFY activity

Note: 1) Some numbers reported in this FFY 2018 Highway Safety Performance Plan may differ from the same categories reported in previous reports due to changes in data availability and data quality improvements. 2) Any inconsistencies between total of male/female fatalities and overall reported fatalities for given year are due to gender that was either not reported or was unknown on crash report.

An Overview of Fatal Crashes and Fatalities in Massachusetts

During 2015, Massachusetts recorded 291 fatal crashes resulting in 345 fatalities. This represented a 13% decrease in fatal crashes and a 3% decline in fatalities from 2014. Fatal crashes occurred in 160 towns (up from 151 in 2014) throughout the Commonwealth, approximately 46% of all municipalities. Below is a map of all communities with a fatal crash in 2015:

Figure 2.1 Fatal Crashes in Massachusetts - 2015



The top five communities for fatal crashes were:

- → Boston (Suffolk County) – 12 fatal crashes
- → Worcester (Worcester County) – 11 fatal crashes
- → New Bedford (Bristol County) – 7 fatal crashes
- → Springfield (Hampden County); Middleboro (Plymouth County); Lowell (Middlesex County) – each with 6 fatal crashes

The top five accounted for 16% of all fatal crashes in Massachusetts during 2015.

The map on the previous page (Figure 2.1) shows how fatal crashes are clustered mostly in areas of dense population – Boston, Springfield, Worcester, Lowell, Fall River, and New Bedford – which also have more vehicle miles traveled compared to less populated towns. Further on in this analysis, a look at longitudinal activity within each county will be provided. This will help reveal long-term trends within the different regions of the Commonwealth.

Figure 2.2 through 2.6 shows fatal crashes for 2015 broken down by month, day of week, time, road type, and lastly, fatalities by age group.

During 2015, fatal crashes occurred with the most frequency in July, accounting for 11% of all fatal crashes. On the other end of the spectrum, February had the lowest percentage of fatal crashes (4.8%). By quarterly periods, both the 2nd (April – June) and 3rd Quarters (July – September) both had 27.5% of all fatal crashes. By season, summer (June – August) accounted for 30.3% of all fatal crashes, while spring (March – May) had the lowest percentage with 23.3%.

Most fatal crashes occurred on Sunday (17.2%), followed by Saturday (16.5%); while Tuesday (10%) had the lowest percentage. Fatal crashes occurred most frequently between the hours of 6:00 p.m. and 8:59 p.m., as shown in Figure 2.4. This is a big shift from 2014, where 18.2% of all fatal crashes took place between 12:00 a.m. and 2:59 a.m. It is unknown why this shift occurred, but the 6pm-9pm time frame covers rush hour as well as the time parents are going to/from after-school events with children (i.e. sport practice, dance class, music lessons). In 2015, the period from 3pm to midnight represented 55% of fatal crashes.

Figure 2.2 Percent of Massachusetts Fatal Crashes by Month-of-Year in 2015
Source: FARS

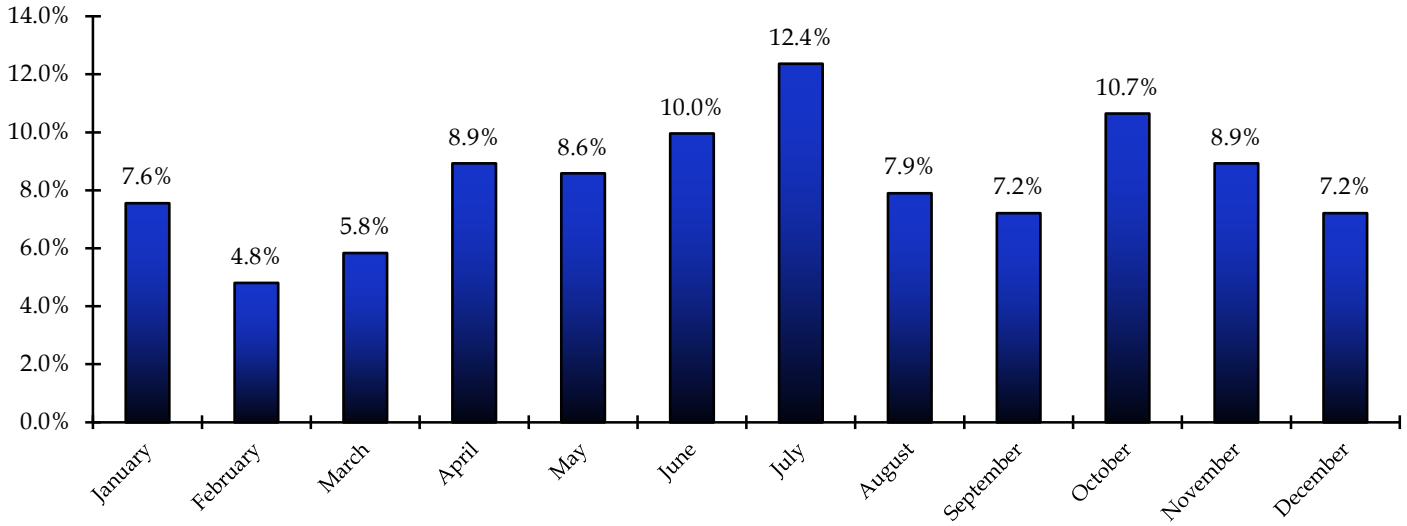
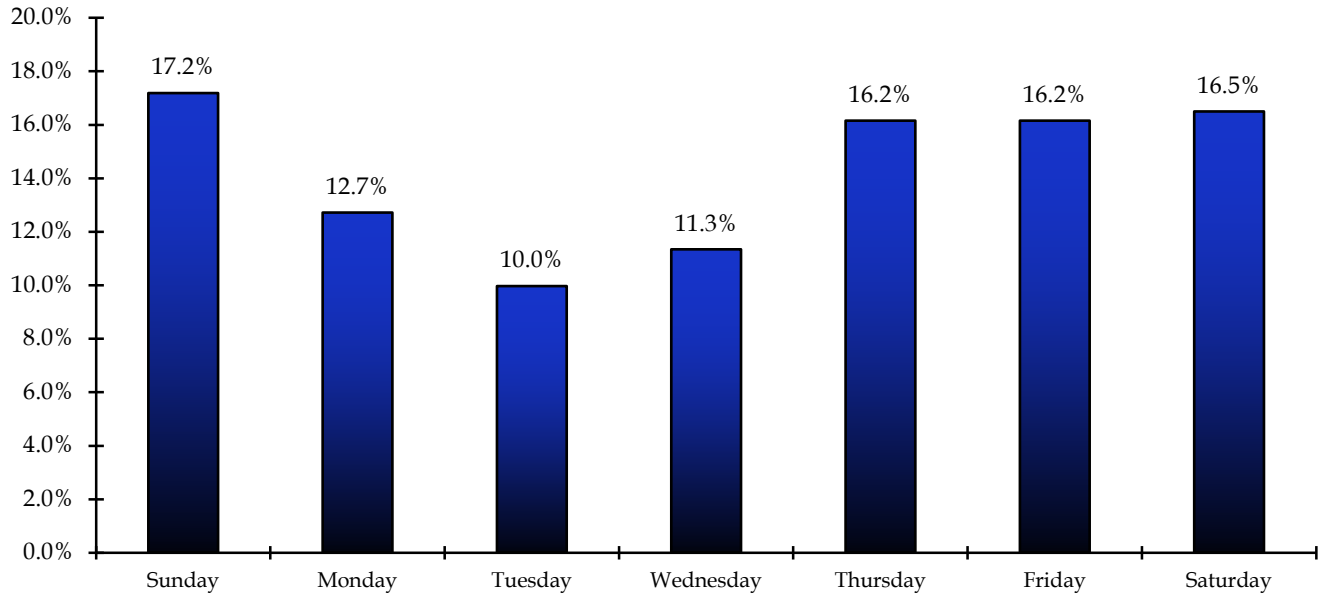
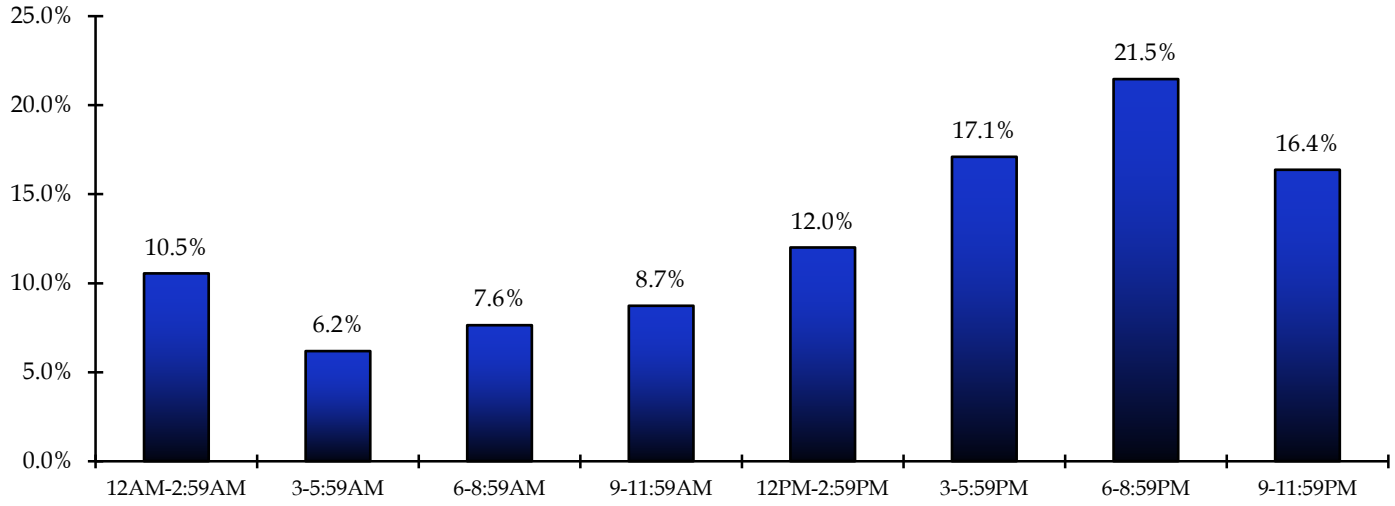


Figure 2.3 Percent of Massachusetts Fatal Crashes by Day-of-Week in 2015



Source: FARS

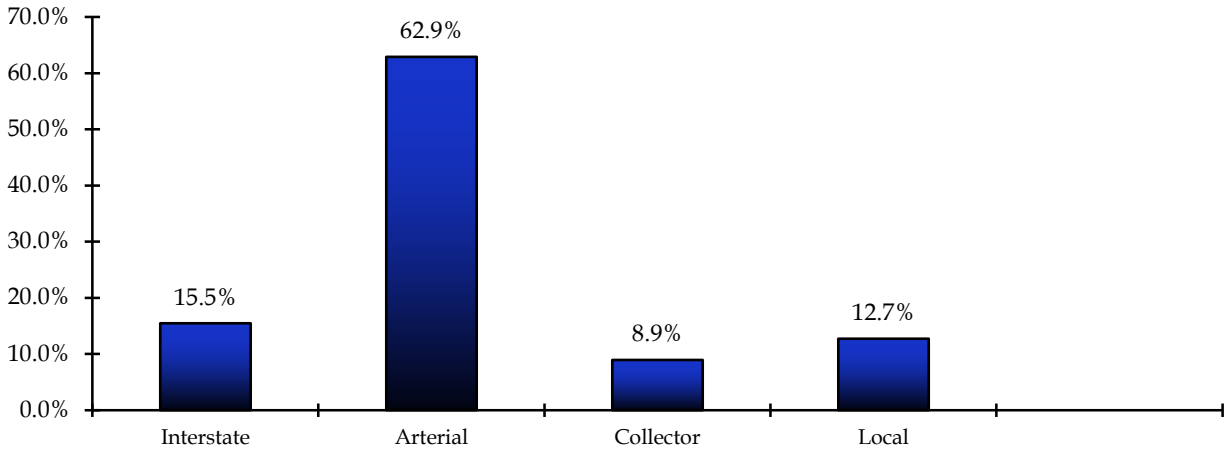
Figure 2.4 Percent of Massachusetts Fatal Crashes by Time-of-Day in 2015



Source: FARS

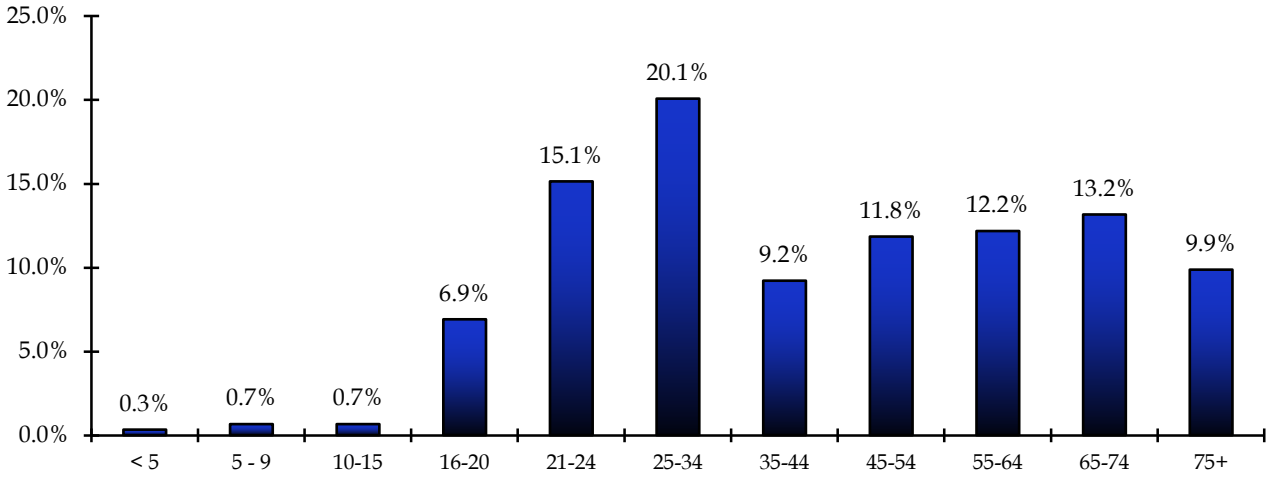
In terms of road type, 2015 data shows that arterial (62.9%) and interstate (15.5%) roads were more likely to be the location for a fatal crash, accounting for 78.4% of fatal crash locations. Urban roadways were involved in 93.8% of those fatal crashes, compared with 6.2% of rural roads. Of the 291 fatal crashes reported in 2015, only 18 took place on a rural roadway.

Figure 2.5 Percent of Massachusetts Fatal Crashes by Road Type in 2015



Lastly, fatalities in 2015 occurred most often among those aged 25-34. This age group saw its percentage of fatalities increase to 20.1%, up from 19.8% in 2014. At the same time, the young driver age group, 16-20, slightly increased to 6.9% from 6.8% in 2014. The number of fatalities of children under 10 continues to remain low, due in part to the tremendous outreach efforts both in enforcement and media on the need for proper car seats and safety belt usage for children, toddlers, and infants.

Figure 2.6 Percent of Massachusetts Fatalities by Age Group in 2015



While the drop in fatalities and fatal crashes from 2014 to 2015 is a positive development, taking a longitudinal view of the last five years of available data (2011-2015) will better show how Massachusetts has progressed in making the roadways safer and provide trends that will support the rationale for pursuing the projects listed for FFY 2018.

From 2011-2015, the top three counties for both fatalities and fatal crashes were Worcester, Middlesex, and Bristol, respectively. These three counties represented 41% of all fatalities and 42% of all fatal crashes.

The top three cities by population in Massachusetts – Boston, Worcester, and Springfield – accounted for 11% of all fatalities. Unsurprisingly, these three cities also are the top three locations for fatal crashes from 2011-2015 and accounted for 11% of all reported fatal crashes.

Figure 2.7 (Source: FARS)

Total Fatalities by County (2011-2015)	
Worcester	264
Middlesex	238
Bristol	223
Plymouth	197
Norfolk	174
Essex	167
Hampden	162
Suffolk	117
Barnstable	92
Berkshire	56
Hampshire	40
Franklin	31
Dukes	5
Nantucket	1

Total Fatal Crashes by County (2011-2015)	
Worcester	253
Middlesex	230
Bristol	212
Plymouth	172
Norfolk	168
Essex	161
Hampden	153
Suffolk	109
Barnstable	89
Berkshire	54
Hampshire	36
Franklin	29
Dukes	4
Nantucket	1

Top 10 Cities - Fatalities (2011 - 2015)	
Boston	102
Worcester	47
Springfield	44
Brockton	39
New Bedford	34
Middleboro	23
Fall River	22
Lowell	21
Quincy	21
West Springfield	21

Top 10 Cities - Fatal Crashes (2011-2015)	
Boston	93
Worcester	46
Springfield	44
Brockton	35
New Bedford	31
Middleboro	20
Fall River	20
Lowell	19
Westfield	19
Taunton	19

What is surprising is the fact that even though Boston, Worcester, and Springfield led all communities in fatalities and fatal crashes, only Worcester had its respective county in the top three of all counties for either fatalities or fatal crashes. Neither Suffolk (Boston), nor Hampden (Springfield) was in the top five for both categories.

This shows that fatalities and fatal crashes were primarily concentrated in the major metropolitan areas of Suffolk and Hampden counties, while it is more spread out across the many communities of Worcester County.

Five of the 23 towns in Hampden County – Chicopee, Holyoke, Springfield, West Springfield, and Westfield – account for over 70% of all fatalities and fatal crashes from 2011-2015. In Suffolk County, Boston is responsible for over 85% of all fatalities and fatal crashes. In comparison to the concentration of fatalities and fatal crashes in Hampden and Suffolk counties, Worcester County had at least one fatality or fatal crash in 95% of its communities (56 of 59). The top five towns for fatalities and fatal crashes (Worcester, Fitchburg, Shrewsbury, Leominster, and Auburn) account for only 26% of reported fatalities and fatal crashes from 2011-2015.

The southeastern region of Massachusetts, which comprise Barnstable, Bristol and Plymouth counties, four of the top ten communities for fatalities (Brockton, New Bedford, Middleboro, and Fall River) and five of the top ten for fatal crashes (Brockton, New Bedford, Middleboro, Fall River, and Taunton) reside here. In Bristol County, the cities of Fall River, New Bedford, and Taunton make up over a third of all fatalities and fatal crashes. Adding in Dartmouth, which lies between Fall River and New Bedford and has I-195 running east to west through it, these four communities account for over 40% of all fatalities and fatal crashes in Bristol County from 2011-2015.

Neighboring Plymouth County which also has I-195 as well as state highways Route 3 and Route 24 and major arterials such as Route 18 and Route 44, has half of its fatalities and fatal crashes occurring in four communities – Brockton, Middleboro, Plymouth, and Wareham.

As a popular summer location, Barnstable County – also known as Cape Cod – tends to see more of its fatalities and fatal crashes occurring during the tourist season of late May (Memorial Day weekend) to early September (Labor Day weekend). Of the 92 reported fatalities from 2011-2015, 40% took place during this period. The towns of Barnstable, Falmouth, and Yarmouth represent 46% of all fatalities and 38% of all fatal crashes in Barnstable County from 2011-2015.

Middlesex, the county with the largest population, is similar to Worcester in distribution of fatalities. The top three communities – the only ones with double-digits totals for 2011-2015 – were Lowell, Framingham, and Waltham. Together, the communities accounted for 21% of all fatalities in Middlesex County. The remaining 79%of fatalities took place across 45 different towns during the same time period.

Essex County and Norfolk County accounted for 19% of all fatalities and 20% of all fatal crashes from 2011-2015, respectively. Despite representing nearly 1/5 of all fatalities, only one community from either county – Quincy – was in the top 10. Essex County has 35 towns within it, of which eight account for 67% of all fatalities in the county from 2011-2015. The top five towns for fatalities were Andover (19), Lynn (16), Haverhill (15), Methuen (15), and Peabody (14). Norfolk County, with 28 communities, has nearly one-third of its fatalities located in three places – Quincy (21), Randolph (15), and Weymouth (15).

The bottom five counties for fatalities and fatal crashes from 2011-2015 were Berkshire, Hampshire, Franklin, Dukes, and Nantucket. The combined fatalities of these five counties

accounted for 8% of all fatalities across Massachusetts. The combined fatal crashes represented 7% of all fatal crashes. In comparison, Worcester County was the location for 15% of all fatalities, and 15% of all fatal crashes in Massachusetts.

The leading towns for fatalities across these five counties were Pittsfield (Berkshire, 15 fatalities); Northampton (Hampshire, 9); Greenfield (Franklin, 7), and Edgartown (Dukes, 3). Nantucket has only one town – Nantucket – and exactly one motor vehicle-related fatality occurred there.

From 2011-2015, at least one motor vehicle-related crash fatality occurred in 288 of the 351 communities across the Commonwealth – a rate of 82%. Bristol, Norfolk, and Plymouth had at least one fatality in 100% of its towns, while Worcester and Barnstable had over 95%. Middlesex saw at least one fatality across 88% of its communities.

What this overview shows is that motor vehicle crashes and fatalities were not simply limited to the areas of Massachusetts with the highest populations or the most highways. Every community was affected and Massachusetts continues to work towards zero fatalities on the roadways of the Commonwealth through the combined efforts of federal, state, and local agencies. Most fatalities were due to poor decisions made by those either behind the wheel or sharing the road as a pedestrian or bicyclist. For FFY 2018, our agency will focus on educational outreach and enforcement of key factors involved in fatal crashes including, but not limited to occupant protection (seat belt use, child safety seats); impaired driving; speeding; distracted driving; motorcyclists; and bike/pedestrian safety.

FFY 2018 Funding Distribution

During FFY 2017, the agency distributed funding to 219 communities across the Commonwealth as well as non-profit organizations and state agencies. For FFY 2018, we hope to increase the number of communities receiving funding through the addition of new programs and the revamping of current programs to attract more applicants. Grant applications for FFY 2018 projects will be posted in July 2017 and we expect to have selected subrecipients for funding by August 2017.

Below are some changes in place for FFY 2018:

- **Traffic Enforcement Grant** – funding provided to local law enforcement entities in support of mobilizations such as "Drive Sober or Get Pulled Over" (DSOGPO) and "Click it or Ticket" (CIOT) has included language in the 2018 AGF allowing a percentage of awarded funding to be used towards allowable equipment purchases. Departments will also be permitted to conduct activities at any time of year, per their community needs, with a minimum number of 8 participation hours during each of the national mobilizations. The allowable amount for equipment is pro-rated based upon the level of funding received. The determination to include equipment and to ease time restrictions as part of the FFY 2018 Traffic Enforcement Grant came from our engagement with members of the law enforcement community through a series of five "Law Enforcement

Partnership Forum" listening sessions held across the Commonwealth in January and February of 2017.

- **Child Passenger Safety Grant** – funding will now be offered to qualified applicants from state colleges and universities in Massachusetts. This will expand the pool of applications as well as expand the reach of CPS to all corners of the Commonwealth. Again, this additional pool of applicants came about through our agency listening sessions held throughout January and February of 2017.

Using the data provided within this HSP, we have worked to attract more interested applicants from regions with the most need. Yet, as seen in previous years, our outreach to local municipalities may not translate into more applicants from regions in need. While the reasons not to apply for funding are varied, the most common reason is the lack of personnel available to meet the demands of the grant.

Once all FFY 2018 grant recipients have been identified, we will send an updated list of FFY 2018 subrecipients to NHTSA for review.

■ 2.4 FFY 2018 Performance Targets

The performance targets identified in this section were established as part of the problem identification process described in Section 2.1. Performance targets for each program area were established by reviewing available data trends from reliable sources. These performance targets are shared with subrecipients.

Our agency and MassDOT work collaboratively to ensure that the performance measures for fatalities and serious injuries are identical to the HSIP as coordinated through the SHSP.

The Massachusetts SHSP adopted a five-year goal (2013-2017) to reduce fatalities by 20 percent from 367 fatalities to 294 and hospitalizations by 20% from 4,834 to 3,867 by 2017. The SHSP also adopted an interim goal which recognizes the 2007 American Association of State Highway and Transportation Officials goal of reducing the number of fatalities and serious injuries by one-half over two decades.

For FFY 2018, based on available data, MassDOT and our agency have adopted goals for calendar base year 2014-2018 along three key performance measures:

- To reduce **motor vehicle fatalities** 2.5% from the 2011-2015 calendar base year average of 361 to 352 by December 31, 2018
- To reduce **serious injuries** (based on state crash files) 11% from the 2011-2015 calendar base year average of 3,252 to 2,896 by December 31, 2018
- To reduce the **fatality/VMT** rate 4.5% from the 2011-2015 calendar base year average of 0.64 to 0.61 by December 31, 2018

With regards to serious injuries, we have moved from using hospitalization counts as provided by the Department of Public Health (DPH) to using serious injuries counts submitted by the Registry of Motor Vehicles (RMV). Not only will this move be in line with §1300.11(c) requirement to use state crash data files for serious injuries but also complies with the switch to the Model Minimum Uniform Crash Criteria (MMUCC), 4th edition, definition for 'Suspected Serious Injuries (A)'. Since RMV has to be in compliance with MMUCC, 4th edition standards on crash reports, using RMV's crash data will provide the proper serious injury results. 'Suspected Serious Injuries' has replaced 'Incapacitating Injuries,' which was used in MMUCC, 3rd edition.

Our agency monitors national traffic safety trends to ensure that its priorities are in line with NHTSA's, unless state or local data and analyses show the need for a different approach. Based on the problem identification information presented above, we have prioritized its FFY 2018 performance targets and programs for the following program areas: Impaired Driving, Occupant Protection, Pedestrians/Bicyclists, Traffic Records, Distracted Driving, Speeding, Young Drivers (16-20 year old), Older Drivers (65+), and Motorcycles.

On page 31 (Table 2.5) are the FFY 2018 Core Performance Measures, Five-Year Results, and Projected Targets. For the Core Measures, C-1 through C-11, data was derived from FARS as of May 2017. Core Measure B-1 data came from the Annual Statewide Safety Belt Observational Survey. Non-Core Measures A-1 through A-3 come from calendar year grant-funded activity data derived from STEP and Traffic Enforcement mobilizations.

FFY 2018 Core Performance Measures Targets and Five-Year Results

				2011	2012	2013	2014	2015
C-1	Traffic Fatalities	Decrease MV fatalities **2.5%** from the five-year average of 361 in 2011-2015 to a five-year average of 352 by December 31, 2018	Annual	374	383	351	354	345
			5-year average	*372*	*362*	*359*	*362*	*361*
C-2	Serious Injuries (state crash data files)	Decrease serious injuries (per state crash data files) **11%** from the five-year average 3,252 in 2011-2015 to a five-year average of 2,896 by December 31, 2018	Annual	3,577	3,587	3,197	3,031	2,867
			5-year average	*3,714*	*3,595*	*3,438*	*3,366*	*3,252*
C-3	Fatalities/VMT	Decrease fatality/VMT rate **4.5%** from the five-year average of 0.64 in 2011-2015 to a five-year average of 0.61 by December 31, 2018	Annual	0.68	0.68	0.62	0.62	0.60
			5-year average	*0.68*	*0.66*	*0.65*	*0.65*	*0.64*
C-4	Unrestrained Passenger Vehicle Occupant Fatalities, All seat positions	Decrease unrestrained passenger vehicle occupant fatalities **10%** from the five-year average of 105 in 2011-2015 to a five-year average of 95 by December 31, 2018	Annual	122	103	100	113	89
			5-year average	*122*	*113*	*109*	*108*	*105*
C-5	Alcohol-Impaired Driving Fatalities	Decrease alcohol-impaired driving fatalities **5%** from the five-year average of 124 in 2011-2015 to a five-year average of 118 by December 31, 2018	Annual	126	129	125	143	95
			5-year average	*126*	*121*	*122*	*129*	*124*
C-6	Speed-Related Fatalities	Decrease speed-related fatalities **5%** from the five-year average of 100 in 2011-2015 to a five-year average of 95 by December 31, 2018	Annual	121	114	89	85	92
			5-year average	*104*	*98*	*97*	*98*	*100*
C-7	Motorcyclist Fatalities	Decrease motorcycle fatalities **5%** from the five-year average of 49 in 2011-2015 to a five-year average of 46 by December 31, 2018	Annual	40	56	42	47	60
			5-year average	*52*	*51*	*51*	*49*	*49*
C-8	Unhelmeted Motorcyclist Fatalities	Decrease unhelmeted motorcycle fatalities **20%** from the five-year average of 5 in 2011-2015 to a five-year average of 4 by December 31, 2018	Annual	5	3	5	4	7
			5-year average	*4*	*4*	*5*	*5*	*5*
C-9	Young Driver (U21) Involved in a Fatal Crash	Decrease number of young drivers (age 20 or under) involved in fatal crashes **10%** from the five-year average of 38 in 2011-2015 to a five-year average of 34 by	Annual	50	45	37	27	33
			5-year average	*59*	*53*	*48*	*42*	*38*
C-10	Pedestrian Fatalities	Decrease pedestrian fatalities **5%** from the five-year average of 77 in 2011-2015 to a five-year average of 73 by December 31, 2018	Annual	69	82	79	74	80
			5-year average	*65*	*68*	*69*	*74*	*77*
C-11	Bicyclist Fatalities	Decrease bicyclist fatalities 10% from the five-year average of 9 in 2011-2015 to a five-year average of 8 by December 31, 2018	Annual	5	16	6	8	12
			5-year average	*8*	*9*	*8*	*8*	*9*
				2012	**2013**	**2014**	**2015**	**2016**
B-1	Observed Seatbelt Usage	Increase observed seat belt use rate **5%** from the five-year average of 75 in 2012-2016 to a five-year average of 79 by December 31, 2018	Annual	73	75	77	74	78
			5-year average	*72*	*74*	*74*	*75*	*75*
A-1	Seatbelt Citations During Grant-Funded Enforcement	No target necessary	CY	11,622	7,329	14,338	8,917	7,878
A-2	Impaired Driving Arrests During Grant-Funded Enforcement	No target necessary	CY	635	639	869	390	344
A-3	Speeding Citations During Grant-Funded Enforcement	No target necessary	CY	6,990	9,183	10,485	9,985	8,013

CORE SAFETY PERFORMANCE TARGETS for FFY 2018

C-1: Total Traffic Fatalities

FFY 2018 Target: Reduce motor vehicle-related fatalities 2.5% from the five-year average of 361 in 2011-2015 to a five-year average of 352 by December 31, 2018.

It must be noted that the number of fatalities used is based upon RMV's 2015 final crash data file, which will be submitted to FARS. If current FARS data was used, the number of fatalities would have been 306 and the 2011-2015 calendar base year average would be 354.

Basis of Performance Measure: Number of motor vehicle-related fatalities

Analysis: Massachusetts saw total traffic fatalities decrease by nearly 3% in 2015 to 345 from 354 in 2014. The five-year average also declined slightly to 361 (2011-2015) from 362 (2010-2014).

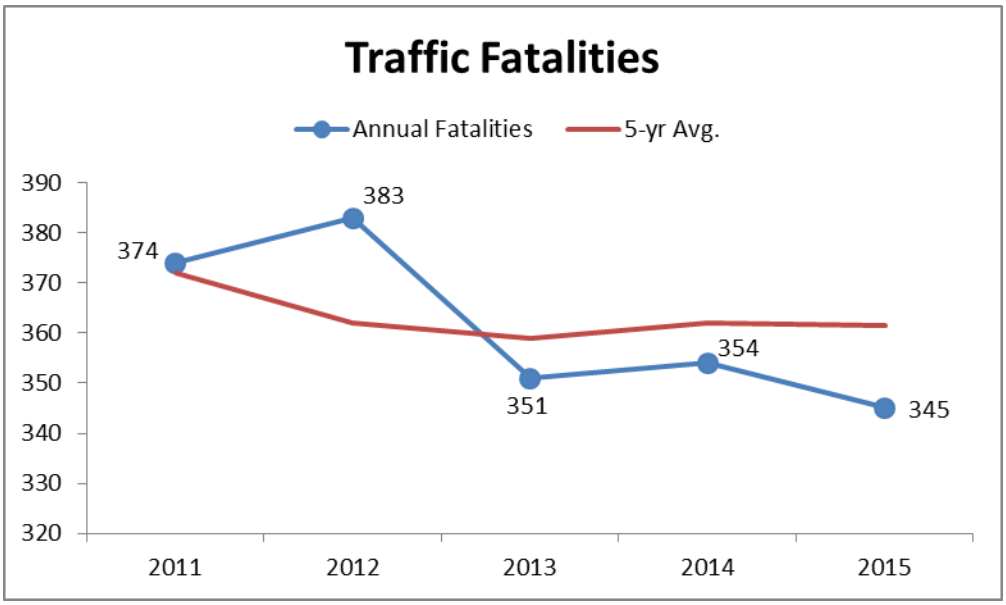


Figure 2.8 (Source: FARS)

Since 2011, traffic fatalities have decreased 8% and the five-year average from 2010 to 2015 has shown a 3% reduction. This provides evidence that EOPSS/OGR/HSD programs, outreach efforts, and local partnerships are making an impact on roadway behaviors across the Commonwealth.

The projected 5-year average for 2018 is 352, a 2.5% decrease from 2010-2014 average of 361. This projection would represent a 5% decrease from the 2011 average of 372 and would be in line with the five-year trendline projection for 2018.

The R-squared value for both annual and 5-year average, 0.7159 and 0.4443, respectively, indicates the continued downward trend in traffic fatalities will continue. The decline will likely

be in the 2-3% range due to current estimates from RMV for 2016 traffic fatalities will be higher than what was reported in 2015.

Target Analysis Summary:

Traffic Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -8.7x + 387.5	374	345	-8%	318	-8%	0.7159
5-year Avg.	y = -2.12x + 369.64	372	361	-3%	353	-2%	0.4443

5-year Period Comparison	
2006-2010	383
2011-2015	361
Change	-5.59%

C-2: Serious Traffic Injuries (State crash data)

FFY 2018 Target: Reduce motor vehicle-related serious injuries (based on State crash data) 11% from the five-year average of 3,252 in 2011-2015 to a five-year average of 2,896 by December 31, 2018.

Basis of Performance Measure: Number of motor vehicle-related serious injuries (State crash data files)

Analysis: Massachusetts saw serious injuries (as reported in the State crash data files) drop 5% from 3,031 in 2014 to 2,867 in 2015. Since 2011, serious injuries have declined 20%.

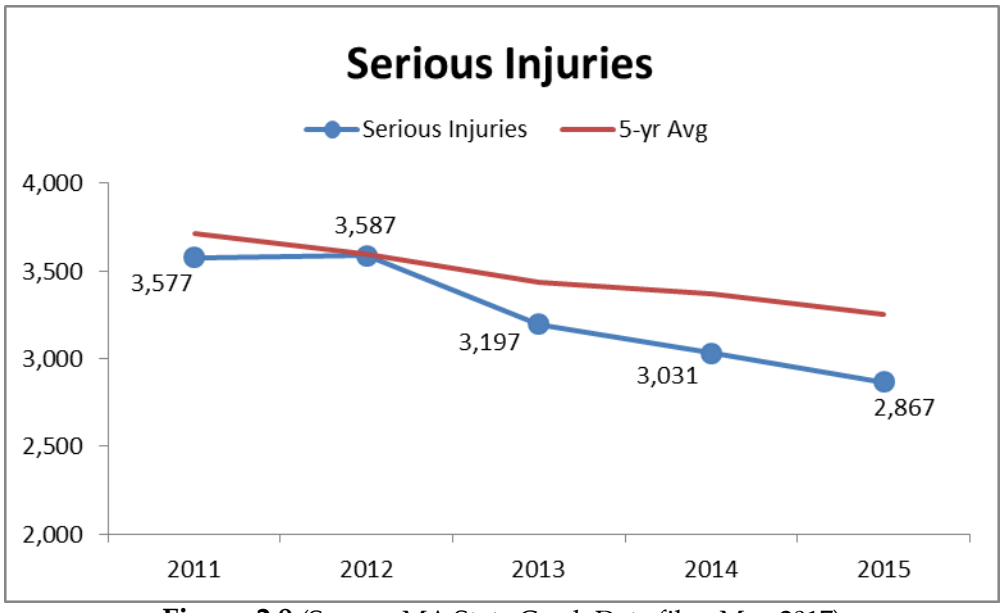


Figure 2.9 (Source: MA State Crash Data files, May 2017)

The trendline projection for serious injuries in 2018 is 2,264, which would be a 21% decrease from 2,867 in 2015. The R-squared value (0.9342) means the likelihood of this projected outcome is high. The five-year estimate for 2014-2018 is 2,896, an 11% drop from 2011-2015. Given the high R-square for the five-year average and the 17% decline from previous five-year periods (2006-2010 to 2011-2015), an 11% projected drop in five-year average by 2018 is in line with the projection.

Our agency performance measures for serious injuries must be identical to the target set in Massachusetts' HSIP for five-year average of serious injuries. Thus, the 10% estimate mirrors the HSIP's target for 2022.

Target Analysis Summary:

Serious Injuries (State Crash Data)	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -197.6x + 3844.6	3577	2867	-20%	2264	-21%	0.9342
5-year Avg.	y = -115.34x + 3819	3714	3252	-12%	2896	-11%	0.9886

5-year Period Comparison	
2006-2010	3915
2011-2015	3252
Change	-16.93%

C-3: Fatalities Per 100M VMT

FFY 2018 Target: Decrease fatality/VMT rate 4.5% from the five-year average of 0.64 in 2011-2015 to a five-year average of 0.61 by December 31, 2018.

Basis of Performance Measure: Fatalities per vehicle miles traveled

Analysis: Massachusetts continues to have one of the lowest fatality/VMT rates in the nation. From 2014 to 2015, the rate dropped 3% from 0.62 to 0.60; while the five-year average declined slightly from 0.65 to 0.64. Since 2011, the yearly fatality/VMT rate has gone down 6%.

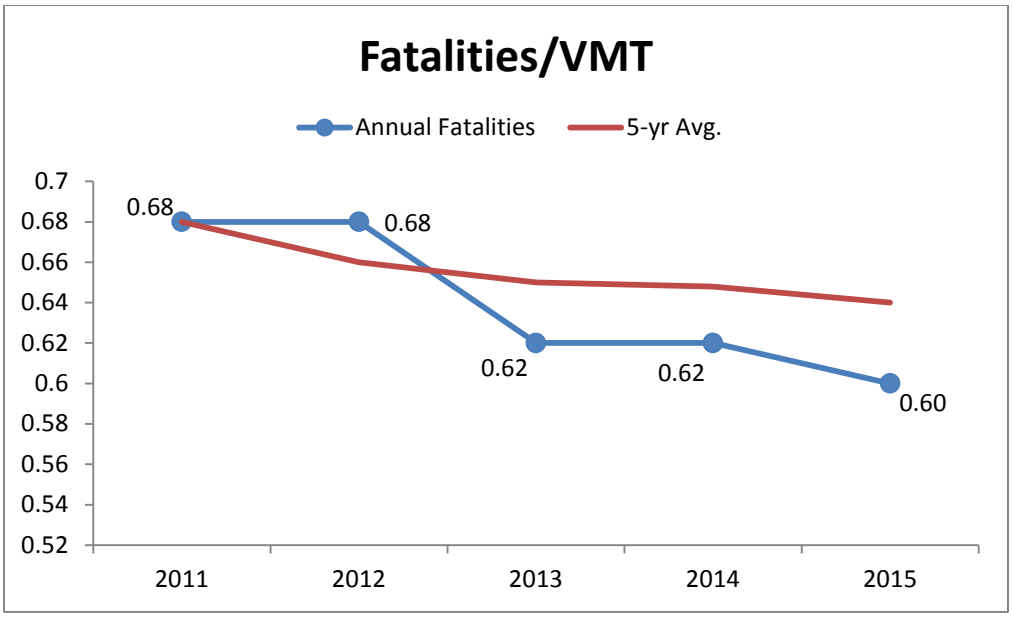


Figure 2.10 (Source: FARS, FHWA)

Over the last five years, the fatality/VMT rate has followed a pattern – two years at a rate, then drop, two years at the new rate – and if the pattern continues, the rate should remain constant in 2016, then drops to a new value for 2017 and 2018. The high R-squared value for both the annual and five-year average trendline equation supports the high probability of this pattern playing out.

By 2018, the fatality rate is expected to drop 12% from 0.58 to 0.51; the five-year average, down 5% from 0.64 to 0.61.

Given the nearly 9% decline in five-year fatality rate averages from 2006-2010 to 2011-2015 as well as the high confidence (R-squared values) in the projected annual and five-year trendline estimates, a 4.5% decrease in five-year average would be reasonable and in line with projected outcome by 2018.

Target Analysis Summary:

Fatalities/VMT	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -0.026x + 0.714	0.68	0.60	-12%	0.53	-12%	0.8643
5-year Avg.	y = -0.01x + 0.6848	0.68	0.64	-6%	0.61	-5%	0.8936

5-year Period Comparison	
2006-2010	0.70
2011-2015	0.64
Change	-8.57%

C-4: Unrestrained Occupant Fatalities

FFY 2018 Target: Decrease unrestrained passenger vehicle occupant fatalities 5% from the five-year average of 105 in 2011-2015 to a five-year average of 95 by December 31, 2018.

Basis of Performance Measure: Unrestrained passenger vehicle occupant fatalities, all seating positions

Analysis: Annual unrestrained occupant fatalities decreased 21% from 113 in 2014 to 89 in 2015; while five-year average decreased from 108 to 105 – a 3% decline. Since 2011, the yearly unrestrained occupant fatalities have dropped 27%.

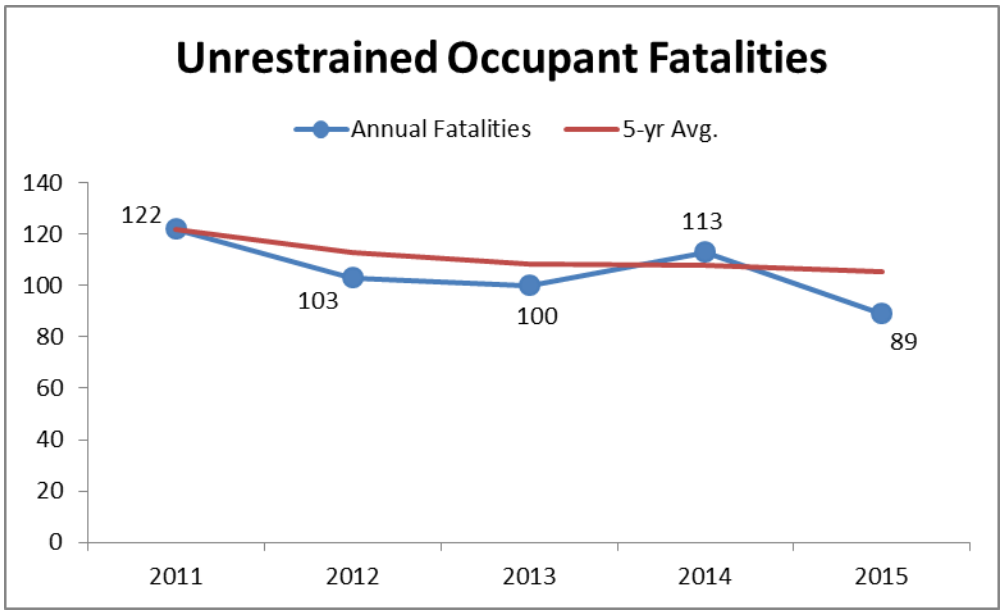


Figure 2.11 (Source: FARS)

Based on the trendline equation, projected annual unrestrained fatalities in 2018 will be 77. This represents a 13% decrease from 2015. Despite the positive estimate, an R-squared value of 0.4922 indicates skepticism in any future projections. The recent positive seat belt survey in 2016 (78%) – highest ever in Massachusetts - shows that drivers across the Commonwealth are becoming more and more accustomed to wearing their seat belts when on the roadways; and could point to continued decreases in unrestrained fatalities in the near future.

Five-year average declined 15% from 2011 to 2015. The trendline equation projects the five-year average in 2018 to be 92, an estimated drop of 12% from 2015. Confidence in the continued downward trend in five-year average is bolstered by a high R-squared value of 0.8568.

Based upon the difference in R-squared value for unrestrained occupant fatalities between yearly and five-year, a moderate projection of a 10% decrease in five-year average from 2015 to 2018 is reasonable.

Target Analysis Summary:

Unrestrained Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -5.6x + 122.2	122	89	-27%	77	-13%	0.4922
5-year Avg.	y = -4.06x + 123.42	122	105	-14%	92	-12%	0.8568

5-year Period Comparison	
2006-2010	129
2011-2015	105
Change	-18.73%

C-5: Alcohol-Impaired Driving Fatalities

FFY 2018 Target: Decrease alcohol-impaired driving fatalities 5% from the five-year average of 124 in 2011-2015 to a five-year average of 118 by December 31, 2018.

Basis of Performance Measure: Alcohol-impaired driving fatalities

Analysis: From 2014 to 2015, alcohol-impaired driving fatalities decreased 34% from 143 to 95. The five-year average for 2015 was 4% lower than the five-year average in 2014, dropping from 129 from 124. Since 2011, yearly alcohol-impaired driving fatalities have declined 25% and the five-year average has decreased 2%.

Trendline equation estimates annual alcohol-impaired fatalities will increase from 2015 with a projected 2018 fatalities of 100. Given the substantial fluctuations in annual alcohol-impaired fatalities over the past three years, and the near-zero R-squared value (0.1871), it is highly likely the next three years will be just as unpredictable.

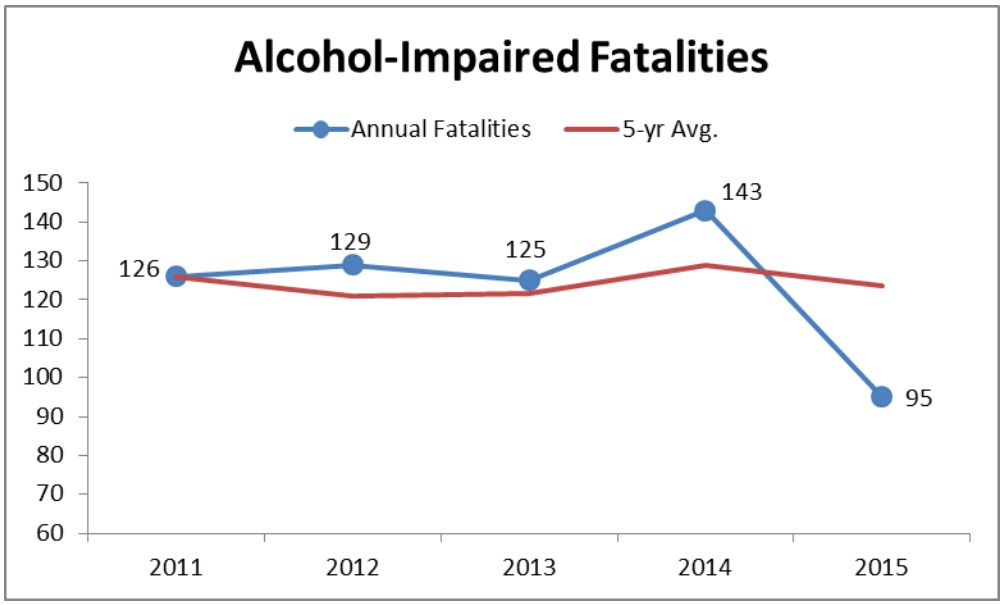


Figure 2.12 (Source: FARS)

Similar to annual alcohol-impaired fatalities, the five-year average has near-zero R-squared trendline equation. According to the trendline equation, projected five-year average fatalities for 2018 are 126 – a 2% increase from 2015. As with annual alcohol-impaired fatalities, a low R-squared value (0.0235) reveals extremely low confidence in the projection.

With low R-squared values for trendline estimates and a recent 24% decrease in annual alcohol-impaired fatalities, a conservative 5% reduction in alcohol-impaired driving fatalities for the five-year average is a reasonable target for December 31, 2018. This would also be in line with the near 5% decline between two prior five-year periods (2006-2010; 2011-2015).

Target Analysis Summary:

Alcohol-Impaired Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -4.8x + 138	126	95	-25%	100	5%	0.1871
5-year Avg.	y = 0.32x + 123.28	126	124	-2%	126	2%	0.0235

5-year Period Comparison	
2006-2010	129
2011-2015	124
Change	-4.48%

C-6: Speed-Related Fatalities

FFY 2018 Target: Decrease speed-related fatalities 5% from the five-year average of 100 in 2011-2015 to a five-year average of 95 by December 31, 2018.

Basis of Performance Measure: Speed-related driving fatalities

Analysis: From 2014 to 2015, speed-related fatalities increased 8% from 85 to 92. Five-year average rose slightly from 98 to 100 during the same period.

Since 2011, annual speed-related fatalities have declined 24% from 121 to 92 in 2015.

Buoying this positive trend, the trendline equation for annual speed-related fatalities has a fairly positive R-squared value indicating the trend is highly likely to continue downward. Projected 2018 speed-related fatalities are 57, which would represent a 38% decline from 2015.

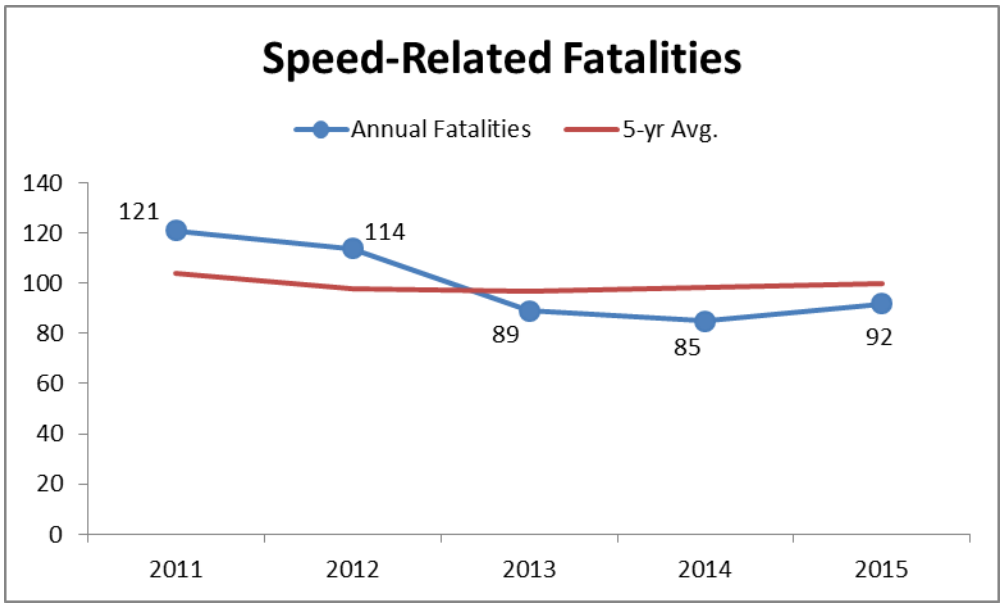


Figure 2.13 (Source: FARS)

For the five-year average, the trendline projection for 2018 is 96 – a 4% decline from 100 in 2015. Despite this positive estimate, it should be treated with caution due to low confidence in the trendline equation with an R-squared value of 0.1703.

Taking into account the wide disparity in percentage decline between annual and five-year average for speed-related fatalities (-38% v -4%) as well as the disparate R-squared values, a conservative target of a 5% decrease from the 2011-2015 calendar base year average of 100 to 95 in speed-related fatalities by December 31, 2018 is acceptable.

Target Analysis Summary:

Speed-Related Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -8.7x + 126.3	121	92	-24%	57	-38%	0.7231
5-year Avg.	y = -0.72x + 101.68	104	100	-4%	96	-4%	0.1703

5-year Period Comparison	
2006-2010	110
2011-2015	100
Change	-8.58%

C-7: Motorcyclist Fatalities

FFY 2018 Target: Decrease motorcycle fatalities 5% from the five-year average of 49 in 2011-2015 to a five-year average of 46 by December 31, 2018.

Basis of Performance Measure: Motorcycle fatalities

Analysis: From 2014 to 2015, motorcyclist fatalities increased 28% from 47 to 60, while the five-year average remained the same at 49. Since 2011, annual motorcycle fatalities have increased 50% from 40 to 60 in 2015. During the same period, the five-year average saw a 6% reduction from 52 to 49.

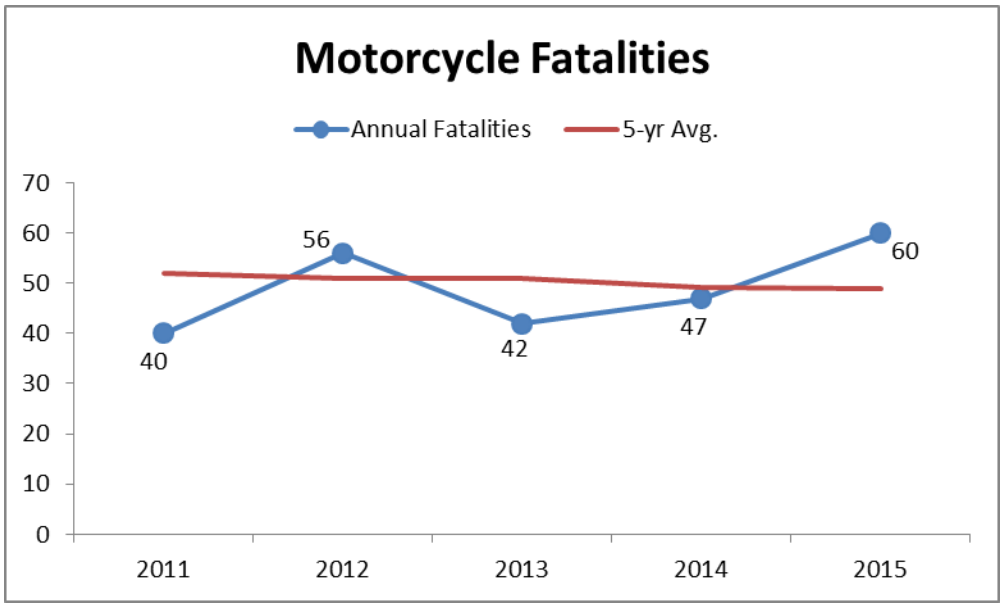


Figure 2.14 (Source: FARS)

The trendline equation projects annual motorcycle fatalities to increase 8% by 2018, while the five-year average trendline estimates a 7% decline during the same time frame. Given that the

five-year average has decreased 6% since 2011, the high R-squared value (0.8547) for the trendline equation supports a continued downward trend.

With the near-zero R-squared value for annual motorcycle fatalities, which points to complete uncertainty on whether it will rise or fall, a conservative target of a 5% decline in the five-year average by 2018 is prudent.

Target Analysis Summary:

Motorcyclists Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = 3.1x + 39.7	40	60	50%	65	8%	0.3161
5-year Avg.	y = -0.78x + 52.78	52	49	-6%	47	-4%	0.9119

5-year Period Comparison	
2006-2010	54
2011-2015	49
Change	-9.26%

C-8: Unhelmeted Motorcyclist Fatalities

FFY 2018 Target: Decrease unhelmeted motorcyclist fatalities 20% from the five-year average of 5 in 2011-2015 to a five-year average of 4 by December 31, 2018.

Basis of Performance Measure: Unhelmeted motorcycle fatalities

Analysis: Unhelmeted motorcyclist fatalities increased from 4 in 2014 to 7 in 2015, which pushed the five-year average up slightly from 4 to 5. Since 2011, unhelmeted motorcyclist fatalities have risen from 5 to 7.

The trendline equation for annual unhelmeted fatalities estimates in 2018 the number will remain unchanged at 7; whereas, the trendline equation for the five-year average projects a 20% increase to 6 by 2018.

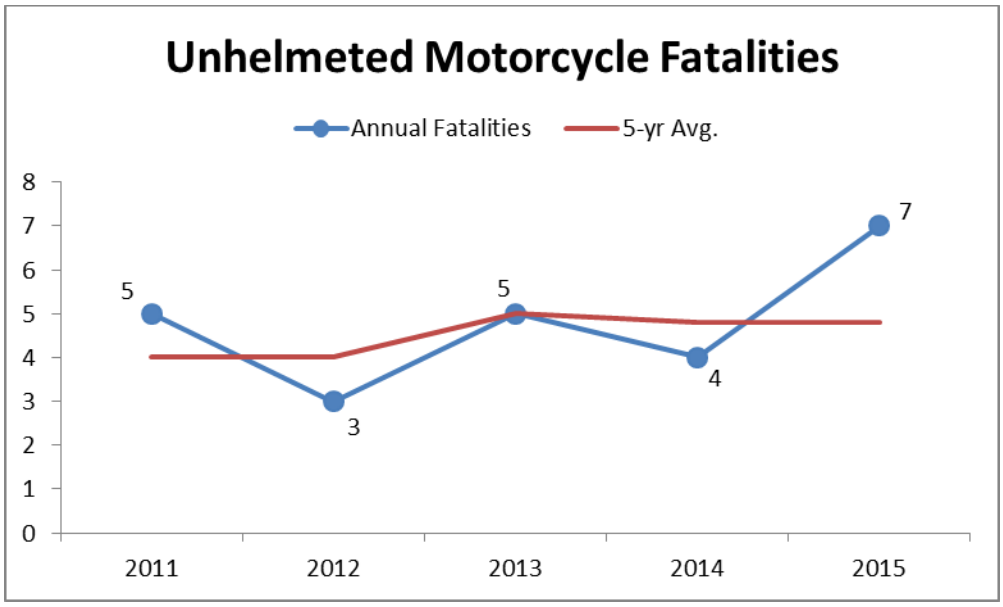


Figure 2.15 (Source: FARS)

Given the fluctuations in annual unhelmeted fatalities, it is unsurprising the associated trendline equation has a low R-squared value. The five-year average trendline has a higher R-squared value (0.6207), but it only provides moderate support in the probability of the 2018 estimate occurring.

Despite the unfavorable projections for annual unhelmeted and five-year averages for unhelmeted motorcycle fatalities, the fluctuations in fatalities must be taken into consideration. Furthermore, a motorcycle safety campaign underway in spring 2017 will have a positive impact on motorcyclist behavior. The target goal for unhelmeted motorcycle fatalities will be a 20% decline from 2011-2015 average of 5 to 4 by December 2018.

Target Analysis Summary:

Unhelmeted MC Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = 0.5x + 3.3	5	7	40%	7	0%	0.2841
5-year Avg.	y = 0.24x + 3.8	4	5	25%	6	20%	0.6207

5-year Period Comparison	
2006-2010	4
2011-2015	5
Change	9.09%

C-9: Young Driver (Age 20 or under) Involved in a Fatal Crash

FFY 2018 Target: Decrease number of young drivers (age 20 or under) involved in fatal crashes 10% from the five-year average of 38 in 2011-2015 to a five-year average of 34 by December 31, 2018.

Basis of Performance Measure: Number of young drivers (age 20 or under) involved in a fatal crash

Analysis: From 2013 to 2014, young drivers involved in a fatal crash increased 22% from 27 to 33. The five-year average dropped 5% from 40 to 38 during the same period. The successful implementation of improved Junior Operator License (JOL) Law in Massachusetts has continued to positively impact the driving habits of young drivers.

Since 2011, young drivers involved in a fatal crash have declined 34% from 50 to 33. The trendline equation projection for annual young driver involvement continues this decline with 12 drivers estimated in 2018. The fairly high R-squared value (0.7972) means there is confidence in the equation and projected figure for 2018.

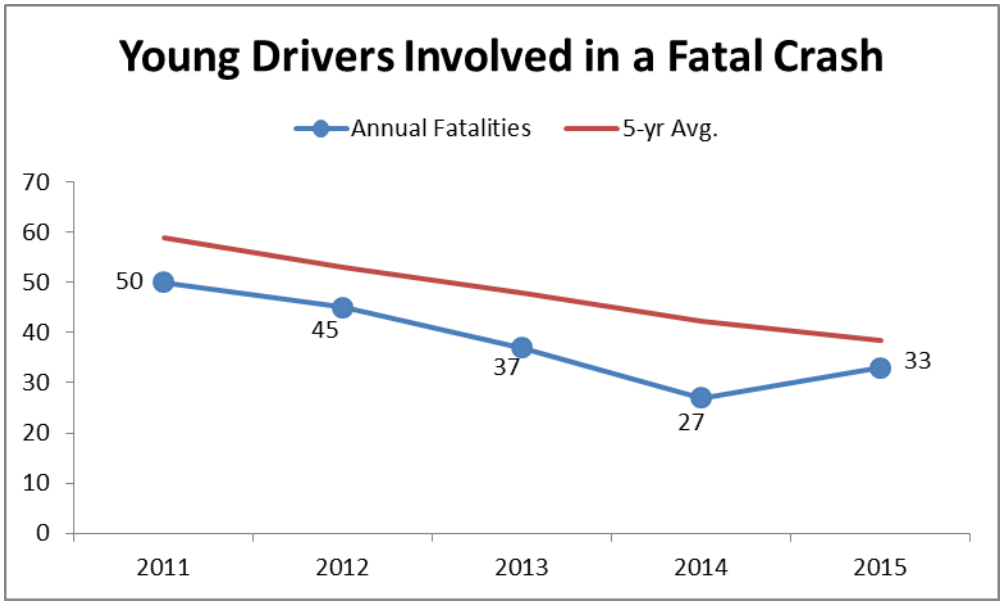


Figure 2.16 (Source: FARS)

From 2011 to 2015, the five-year average dropped 36% from 59 to 38. With an even higher R-squared value (0.996) than annual young driver involvement, there is much confidence in the projected outcome for 2018 of 22, which would be a 42% drop from 2015.

Given the high confidence in both trendline equations but tempered by possible plateauing of annual young driver involvement, it is more likely the number of young drivers involved in a fatal crash will decline at a slower pace than is projected. A moderately conservative projection of a 10% decrease in the five-year average by 2018 is reasonable.

Target Analysis Summary:

Young Drivers Involved in FC	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -5.2x + 54	50	33	-34%	12	-64%	0.7972
5-year Avg.	y = -5.18x + 63.7	59	38	-36%	22	-42%	0.996

5-year Period Comparison	
2006-2010	63
2011-2015	38
Change	-39.05%

C-10: Pedestrian Fatalities

FFY 2018 Target: Decrease pedestrian fatalities 5% from the five-year average of 77 in 2011-2015 to a five-year average of 73 by December 31, 2018.

Basis of Performance Measure: Pedestrian fatalities

Analysis: In 2015, pedestrian fatalities increased 8% from 74 in 2014 to 80. The five-year average for pedestrian fatalities rose 3% from 74 in 2014 to 77. It was the fifth consecutive year the five-year average has increased.

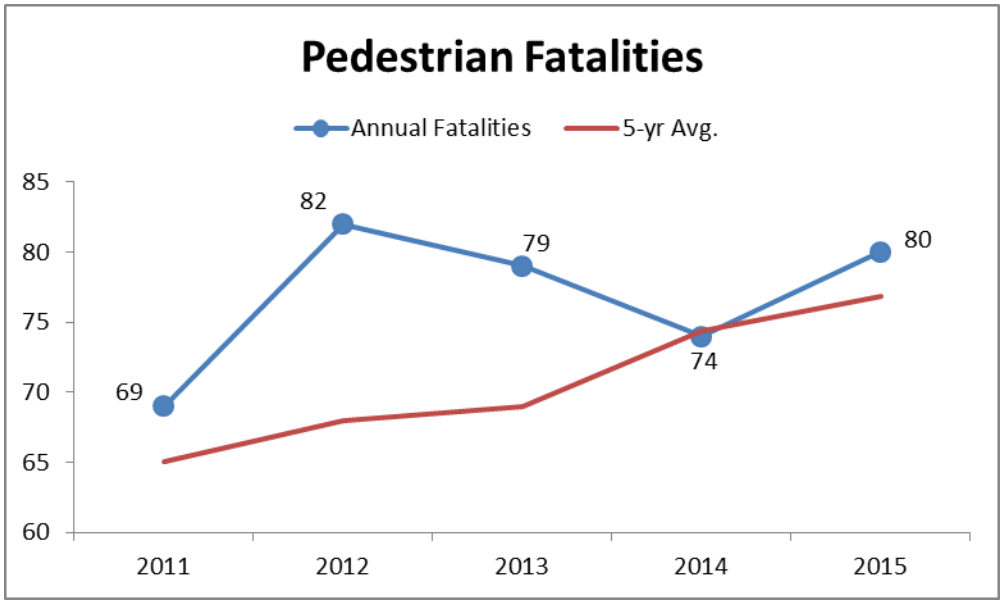


Figure 2.17 (Source: FARS)

Since 2011, annual pedestrian fatalities have risen 16% from 69 to 80. Despite this negative trend, the trendline equation for annual fatalities has very low R-squared value. This means future annual pedestrian numbers will be very unpredictable. It could rise, it could drop, or it could remain the same over the next couple of years.

Five-year average of pedestrian fatalities rose from 65 in 2011 to 77 in 2015, an 18% increase. Trendline projects five-year average in 2018 to increase by 12% to 86. With an R-squared value much higher than for annual pedestrian fatalities, the level of confidence in the future outcome is much greater.

The contrasting R-square values for pedestrian fatalities and five-year average means very little predictability in near-term numbers. Due to this unknown, a conservative reduction of 5% from the 2011-2015 calendar base year average of 77 to 73 is proposed.

Target Analysis Summary:

Pedestrian Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -0.2x + 75.8	69	80	16%	84	5%	0.1769
5-year Avg.	y = 2.68x + 62.28	65	77	18%	86	12%	0.962

5-year Period Comparison	
2006-2010	63
2011-2015	77
Change	21.14%

C-11: Bicyclist Fatalities

FFY 2018 Target: Decrease bicyclist fatalities 10% from the five-year average of 9 in 2011-2015 to a five-year average of 8 by December 31, 2018.

Basis of Performance Measure: Bicyclist fatalities

Analysis: In 2015, bicyclist fatalities rose 50% from 8 in 2014 to 12. The five-year average increased slightly from 8 to 9. From 2011 to 2015, bicyclist fatalities increased 140% from 5 to 12, while the five-year average in the same time frame rose from 8 to 9.

With 12 bicyclist fatalities in 2015, the results from 2012 can no longer be considered an outlier as hoped. Combined with the recent rise in pedestrian fatalities, our agency will need to increase efforts at outreach to non-motorists using the roadways of the Commonwealth.

The trendline equation for annual bicyclist fatalities projects no change in fatalities by 2018. But, confidence in the projection is nil with an R-squared value of 0.0433.

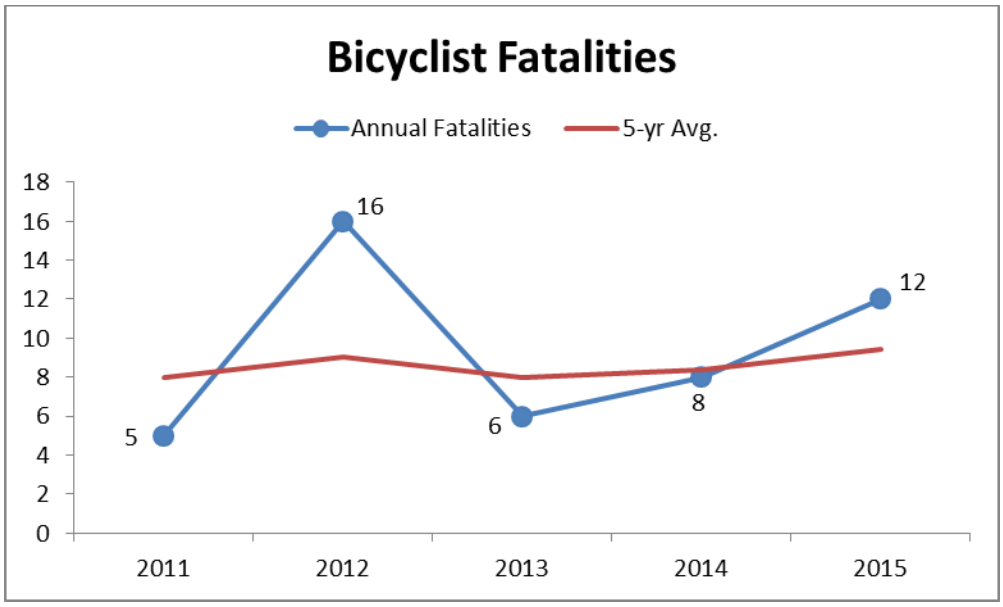


Figure 2.18 (Source: FARS)

Five-year average for bicyclist fatalities has remained fairly consistent from 2011-2015. Trendline projects the five-year average to increase to 10 in 2018. Yet, like the trendline for annual bicyclist fatalities, the low R-squared value (0.3119) dissuades one from having confidence in the equation.

Going forward, the target for 2018 will be conservative given the consistency of the five-year average since 2011 as well as the low R-squared values of each trendline. For 2018, a 10% decrease from the five-year average of 9 in 2015 to 8 is projected.

Target Analysis Summary:

Bicyclist Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = 0.6x + 7.6	5	12	140%	12	0%	0.0433
5-year Avg.	y = 0.22x + 7.9	8	9	13%	10	11%	0.3119

5-year Period Comparison	
2006-2010	8
2011-2015	9
Change	17.50%

B-1: Observed Seat Belt Use (Passenger Vehicles – Front Seats)

FFY 2018 Target: Increase observed seat belt use rate 5% from the five-year average of 75 in 2012-2016 to a five-year average of 79 by December 31, 2018.

Basis of Performance Measure: Observed seat belt usage

Analysis: From 2015 to 2016, observed seat belt usage increased four percentage points from 74% to 78%. Five-year average inched up slightly from 74 to 75 during the same time frame. Despite the fluctuations in seat belt usage over the past few years, the five-year period of 2012-2016 has a 75 average compared to 71 for the previous five-year period of 2007-2011. This represents an increase of nearly 6%, showing that seat belt usage is slowly but surely increasing.

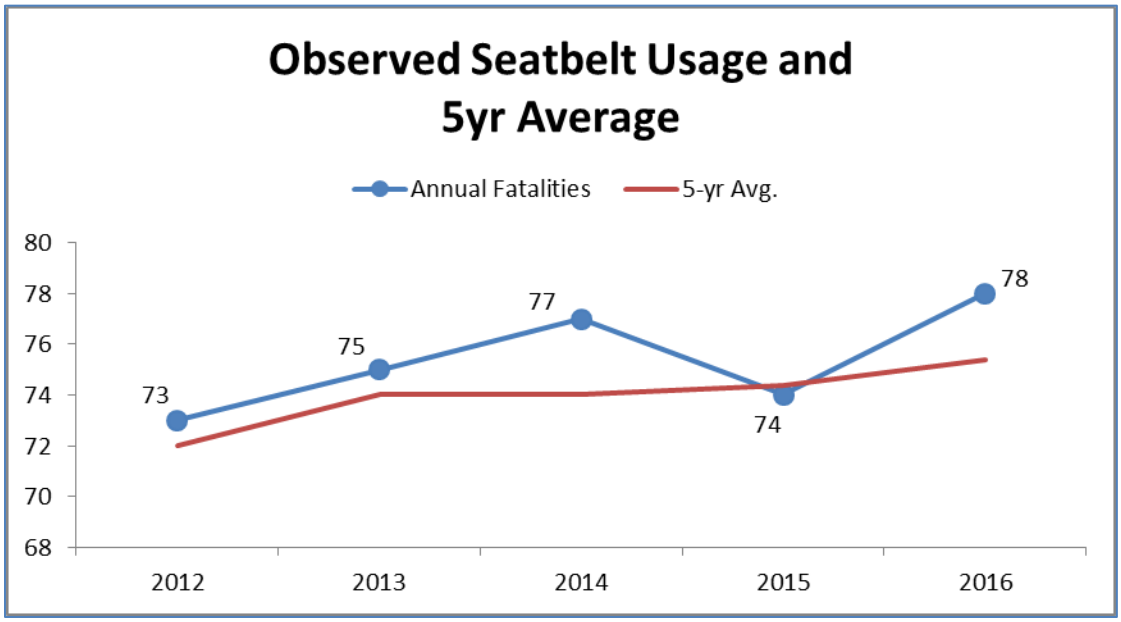


Figure 2.19 (Source: Annual Statewide Seat belt Survey)

The trendline equation for five-year averages estimates the five-year average for 2018 to be 77, a 3% rise from the 2012-2016 five-year average. With an R-squared value of 0.8482, there is high confidence in the equation's outcome. Given this confidence in the five-year projection, a 5% increase by 2018 is reasonable.

Target Analysis Summary:

Seatbelt Usage	Trendline Equation	2012	2016	% chg from 2011-2015	2018 Trend Estimate	% chg from 2016	R-squared value
Annual	y = 0.9x + 72.7	73	78	7%	79	1%	0.4709
5-year Avg.	y = 0.72x + 71.8	72	75	4%	77	3%	0.8482

5-year Period Comparison	
2007-2011	71
2012-2016	75
Change	5.63%

Additional Non-Core Performance Measures:

Overall Fatalities: Urban Fatalities/VMT

FFY 2018 Target: Decrease urban fatalities/VMT rate 5% from the five-year average of 0.58 in 2011-2015 to a five-year average of 0.55 by December 31, 2018.

Basis of Performance Measure: Urban fatality/VMT

Analysis: In 2015, urban fatalities made up 94% of total fatalities across the Commonwealth, up from 90% in 2014. Total urban fatalities decreased 9% from 317 in 2014 to 287 in 2015. Overall, urban fatalities have declined 13% since 2011.

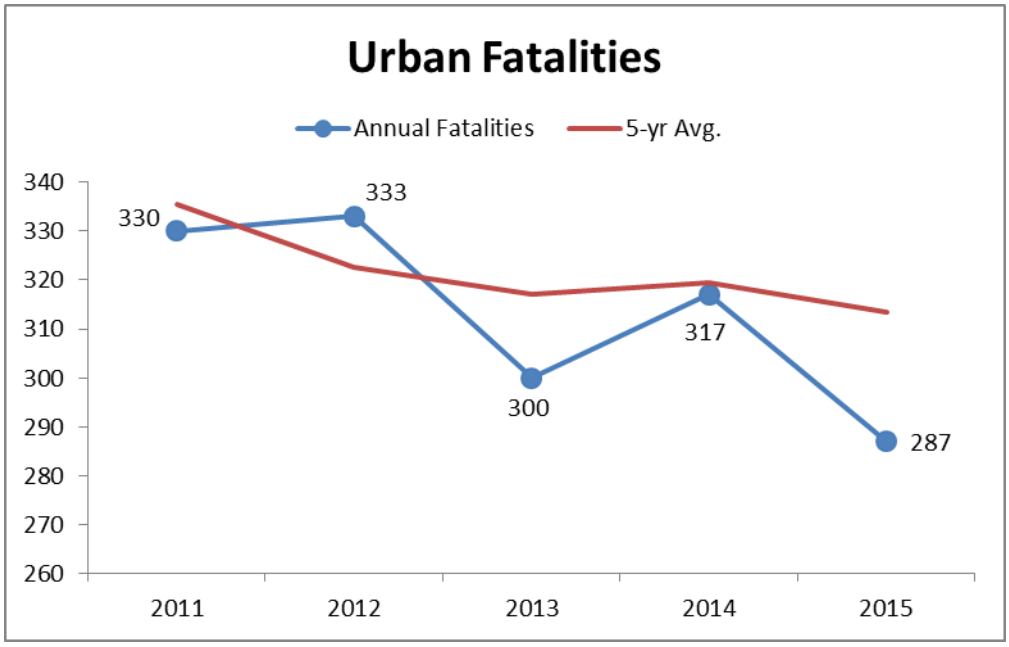


Figure 2.20 (Source: FARS)

The projected annual urban fatalities for 2018 are 262, which would be 9% lower than in 2015. A moderate R-squared value (0.6716) indicates that confidence in the equation outcome is cautiously positive.

The five-year average for annual urban fatalities dropped 7% between 2011 and 2015 from 336 to 313. The trendline equation projects the five-year average to decline 5% by 2018 to 298. This estimation is accompanied by an extremely high R-squared value (0.9429), which indicates strong confidence in the projected outcome for 2018.

From 2011 to 2015, urban VMT increased 11% from 50,719 million to 56,257 million. Coupled with the decline in urban fatalities, the resulting urban fatality/VMT rate dropped 22% in the same period from 0.65 to 0.51. The five-year average for urban fatality/VMT declined 12%. The trendline equations for both annual (0.8822) and five-year average (0.9429) urban fatality/VMT indicate high confidence in the 2018 projections.

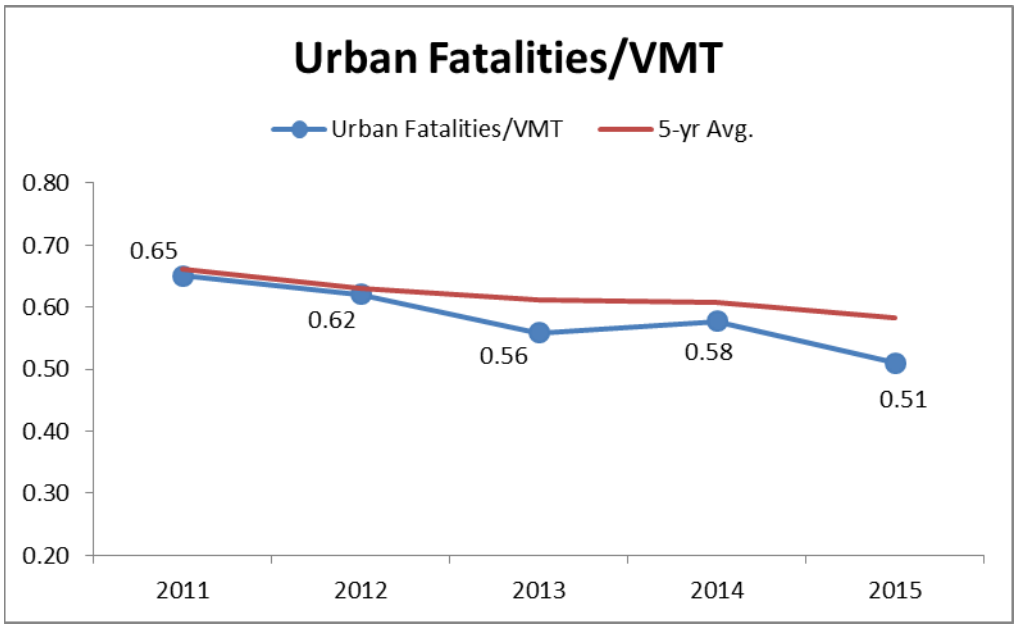


Figure 2.21 (Source: FARS)

Despite the positive outlook, the projected urban fatalities/VMT for 2018 will be a conservative 5% reduction from 2011-2015 calendar base year average to keep in line with the 2% decrease targeted for overall traffic fatalities. Furthermore, the Registry of Motor Vehicles (RMV) has warned that overall traffic fatalities are currently expected to rise in 2016, which, if true, will impact the five-year average going forward.

Target Analysis Summary:

Urban Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -10.2x + 344	330	287	-13%	262	-9%	0.6716
5-year Avg.	y = -4.76x + 335.88	336	313	-7%	298	-5%	0.9429

5-year Period Comparison	
2006-2010	346
2011-2015	313
Change	-9.37%

Urban Fatalities/VMT	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -0.0323x + 0.68	0.65	0.51	-22%	0.42	-17%	0.8822
5-year Avg.	y = -0.018x + 0.673	0.66	0.58	-12%	0.53	-9%	0.9429

5-year Period Comparison	
2006-2010	0.68
2011-2015	0.58
Change	-14.37%

Overall Fatalities: Rural Fatalities/VMT

FFY 2018 Target: Decrease rural fatalities/VMT rate 5% from the five-year average of 1.41 in 2011-2015 to a five-year average of 1.34 by December 31, 2018.

Basis of Performance Measure: Rural fatality/VMT

Analysis: Rural fatalities continued to decline in 2015, dropping 49% from 37 in 2014 to 19. For 2015, rural fatalities accounted for 6% of all traffic fatalities across the Commonwealth. Despite the recent slide in rural fatalities, the five-year average has increased 11% from 36 in 2011 to 40 in 2015. This is due to the amounts for 2012 and 2014 being the highest totals since 2006. If rural fatalities continue to remain low, the five-year average should eventually decline.

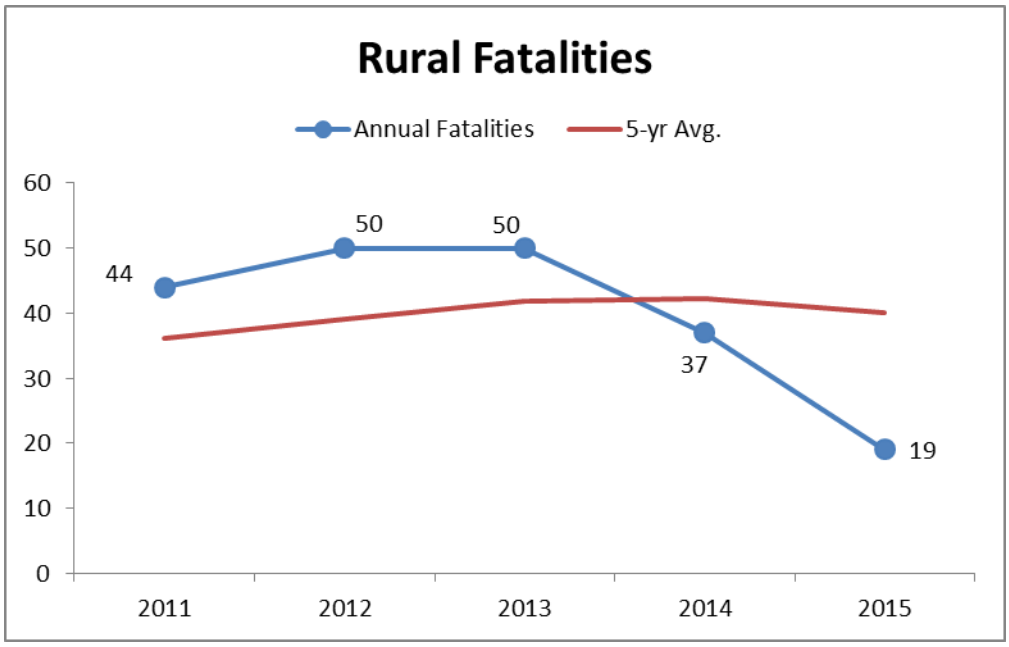


Figure 2.22 (Source: FARS)

The projected annual rural fatalities for 2018 are 9, which would be 55% lower than in 2015. An R-squared value (0.5959) indicates that confidence in the equation outcome is neutral. It remains to be seen if the sharp decline to 19 in 2015 is an outlier or an indication of a general trend towards lower rural fatalities.

The five-year average trendline equation projects a 13% increase by 2018 to 45. This estimation is accompanied by a low R-squared value (0.4986), which indicates confidence is either neutral or negative in the projected outcome for 2018.

From 2011 to 2015, rural VMT decreased 31% from 4,073 million to 2,822 million. Coupled with the decline in rural fatalities, the resulting annual urban fatality/VMT rate dropped 38% in the same period from 1.08 to 0.67. In contrast, the five-year average for urban fatality/VMT increased 63% from 0.87 to 1.41. This is due to high rural fatality/VMT rates in 2012 and 2013 as a result of FHWA changing how rural roadways are determined. This led to a drop in VMT, coupled with higher than usual rural fatalities, which resulted in high rural fatality/VMT rates.

The trendline equations for both annual (0.1513) and five-year average (0.8949) rural fatality/VMT indicate there is much unpredictability in the rural fatality/VMT rate in the near term.

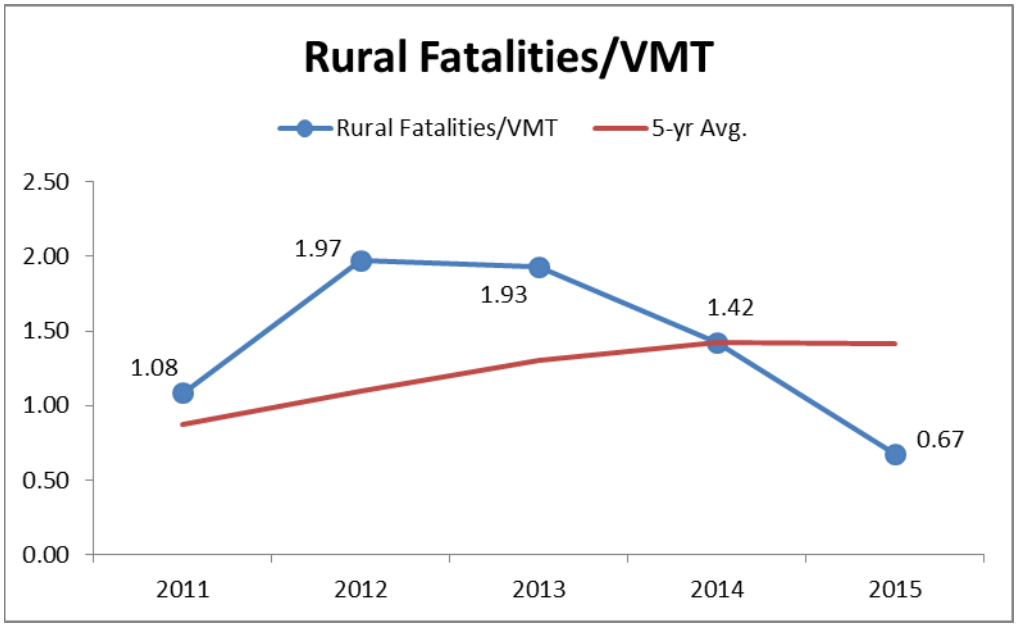


Figure 2.23 (Source: FARS)

The projected rural fatalities/VMT for 2018 will be a conservative 5% reduction from 2011-2015 calendar base year average to keep in line with the 2% decrease targeted for overall traffic fatalities. This also will help maintain a cautious yet positive outlook despite the seemingly incongruous data showing rural fatalities dropping while rural fatalities/VMT rises. Furthermore, the Registry of Motor Vehicles (RMV) has warned that overall traffic fatalities are currently expected to rise in 2016, which, if true, will impact the five-year average going forward.

Target Analysis Summary:

Rural Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -6.3x + 58.9	44	19	-57%	9	-55%	0.5959
5-year Avg.	y = 1.08x + 36.6	36	40	10%	45	13%	0.4986

5-year Period Comparison	
2006-2010	37
2011-2015	40
Change	8.11%

Rural Fatalities/VMT	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -0.137x + 1.825	1.08	0.67	-38%	0.73	9%	0.1513
5-year Avg.	y = 0.1424x + 0.7932	0.87	1.41	63%	1.93	37%	0.8949

5-year Period Comparison	
2006-2010	0.88
2011-2015	1.41
Change	60.68%

Impaired Driving: Alcohol-Related Fatalities/VMT

FFY 2018 Target: Decrease alcohol-related fatalities/VMT rate 5% from the five-year average of 0.22 in 2011-2015 to a five-year average of 0.21 by December 31, 2018.

Basis of Performance Measure: Alcohol-related fatalities/VMT

Analysis: The alcohol-related fatality/VMT rate decreased 32% from 0.25 in 2014 to 0.17 in 2015. The drop in alcohol-related fatality rate per VMT can be attributed to the 34% reduction in alcohol-related fatalities from 143 in 2014 to 95. Since 2011, alcohol-related fatalities/VMT has declined 26%.

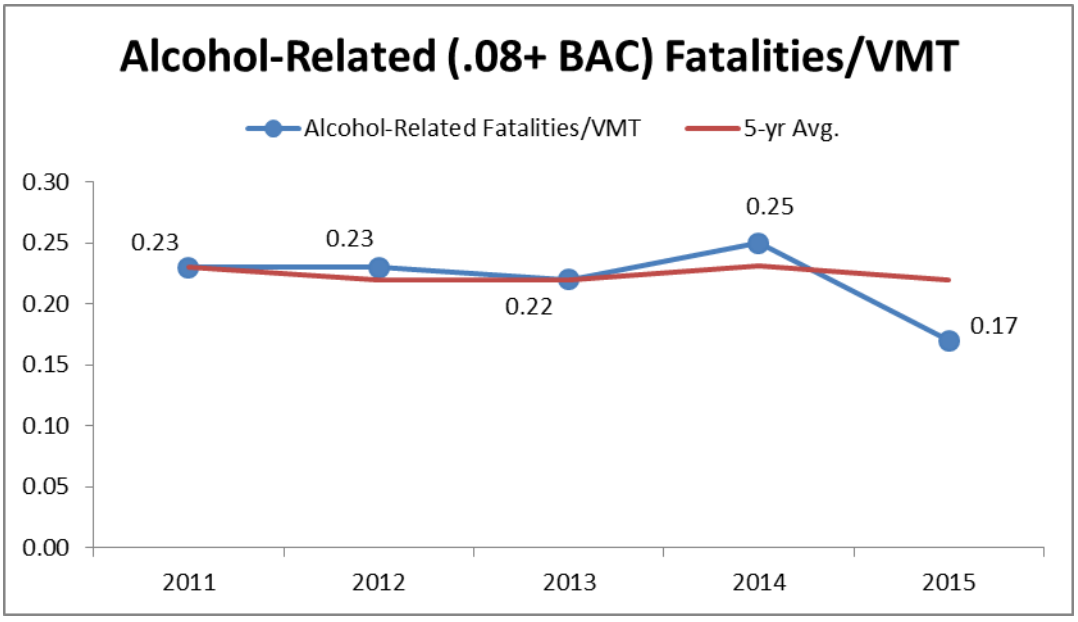


Figure 2.24 (Source: FARS, FHWA)

The trendline equation for alcohol-related fatalities/VMT projects a no real change from 2015 by 2018. Despite the recent positive reduction in annual alcohol-related fatalities/VMT, the low R-squared value (0.2778) puts little confidence in near term projections.

As for the five-year average for alcohol-related fatalities/VMT, the rate has remained fairly constant (0.22 to 0.23 range) since 2011. For 2018, the trendline equation projects no change from 0.22 in 2015. The trendline's extremely low R-squared value indicates there is very little confidence in the projection. Surprisingly, the trendline equation results in 0.22 for each year from 2016 – 2020.

In light of the consistency of the 5-year average along with concerns over whether the alcohol-related fatalities reported in 2015 is part of a downward trend or an outlier, the 2018 target for alcohol-related fatality rate will be a conservative 5% decrease from the 2011-2015 calendar base year average of 0.22 to 0.21.

Target Analysis Summary:

Alcohol-Related Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -0.01x + 0.25	0.23	0.17	-26%	0.17	0%	0.2778
5-year Avg.	y = -0.0008x + 0.2265	0.23	0.22	-4%	0.22	0%	0.0525

5-year Period Comparison	
2006-2010	0.24
2011-2015	0.22
Change	-7.67%

Distracted Driving: Distracted Driving-Related Fatalities

FFY 2018 Target: Decrease distracted driving-related fatalities 10% from 64 in 2015 to 58 by December 31, 2018.

Basis of Performance Measure: Distracted driving-related fatalities

Analysis: Distracted driving-related fatalities increased 121% from 29 in 2014 to 64 in 2015. It remains to be seen if the substantial drop to 29 in 2014 is merely an outlier as the average for the prior three years (2011-2013) was 54. The trendline equation for distracted driving-related fatalities projects a 25% decline from 2015 to 48 in 2018. Unfortunately, a near-zero R-squared value (0.0053) negates any confidence one may have in this estimated outcome by 2018.

Distracted driving-related fatalities have been tracked since 2010, so a five-year average comparison can only be made between 2014 and 2015. In 2014, the five-year average was 45. It rose to 51 in 2015, a 13% increase.

While much of the media attention has been on drivers and cellphone/smartphone distraction, from 2010-2015, distractions associated with cellphones was involved in only 9% of all distracted driving-related fatal crashes in Massachusetts. In fact, a large majority of the distracted driving fatalities involved driver inattention or carelessness. It also must be pointed out that determining if a driver was distracted can be difficult to ascertain in the aftermath of a crash.

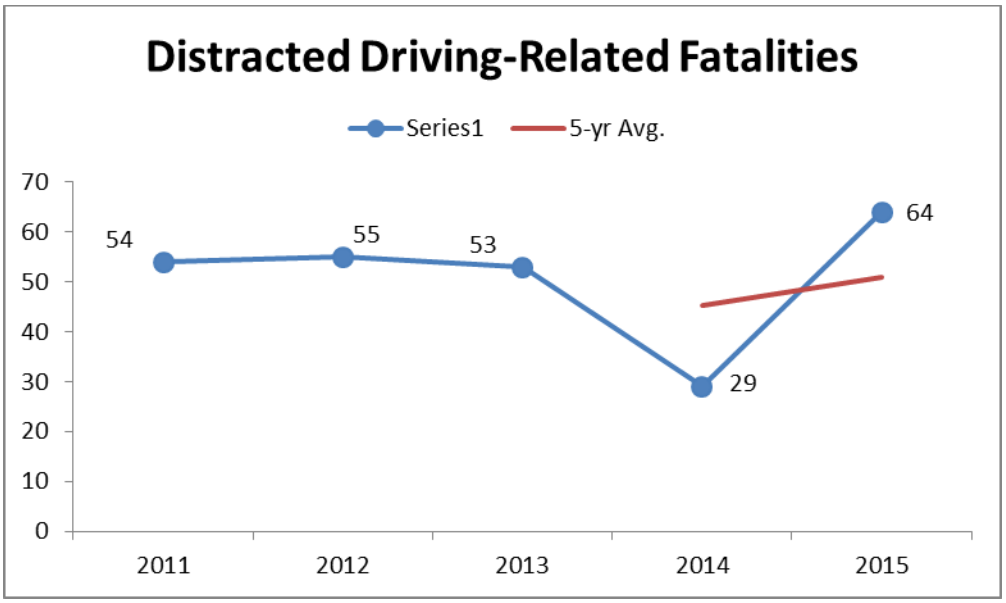


Figure 2.25 (Source: FARS)

Despite the uncertainty surrounding distracted driving reporting, it is clear that distracted driving is an issue for drivers throughout the Commonwealth.

The combination of the recent increase in distracted driving-related fatalities and a near-zero R-squared value makes for a moderate target of a 10% decrease in distracted driving-related fatalities from 64 to 58 by 2018.

Target Analysis Summary:

Distracted Driving Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -0.6x + 52.8	54	64	19%	48	-25%	0.0053
5-year Avg.	n/a	n/a	51	-	-	-	-

5-year Period Comparison	
2010-2014	45
2011-2015	51
Change	12.33%

Younger Drivers: Young Driver (Age 20 or under) Fatalities

FFY 2018 Target: Decrease young driver fatalities 15% from the five-year average of 17 in 2011-2015 to a five-year average of 14 by December 31, 2018.

Basis of Performance Measure: Young driver fatalities

Analysis: Since 2011, the number of young driver (Ages 20 or under) fatalities in Massachusetts has dropped 38% from 24 to 15. From 2014 to 2015, it rose 25% from 12 to 15.

Drivers age 20 accounted for the highest percentage of all young drivers from 2011-2015 with 30%, followed by 19 year olds (26%) and 18 year olds (25%). Young drivers of legal adult age represented 81% of all fatalities from 2011-2015. Males disproportionately accounted for 82% of all fatalities during the same period.

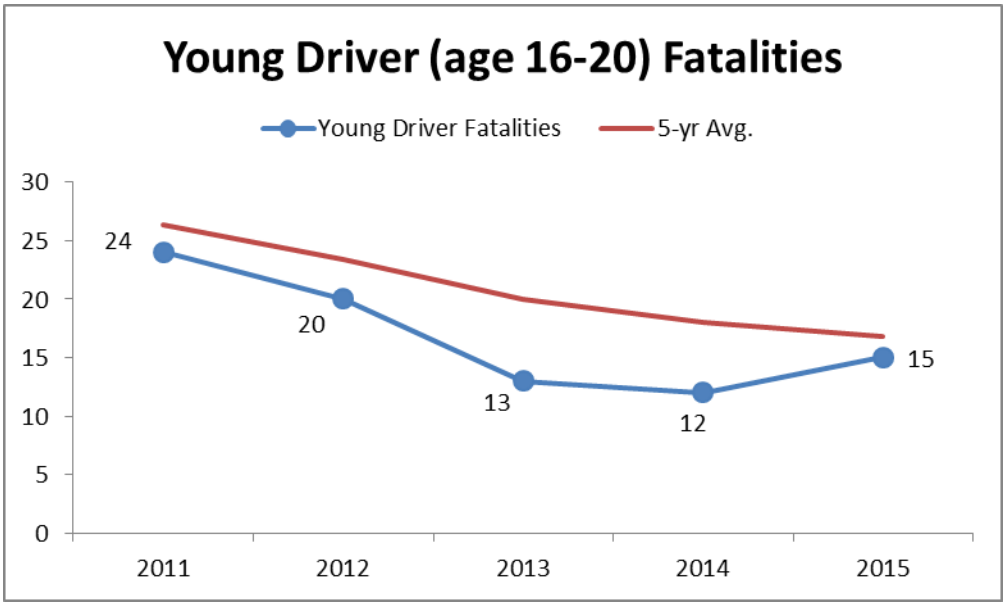


Figure 2.26 (Source: FARS)

The trendline equation projects annual young driver fatalities to drop to 4 by 2018. Based on the fairly high R-squared value (0.6576) confidence in young driver fatalities dropping further by 2018 is cautious but positive.

The five-year average trendline projects an average of 9 young driver fatalities by 2018. With a very high R-squared value (0.9678), it lends more support to the possibility of annual young driver fatalities dropping by 2018.

Furthermore, the implementation of the Safer Driver Law in 2010, which prohibits the usage of electronic devices by drivers under the age of 18, will continue to help increase safe driving habits by young drivers throughout the Commonwealth.

Target Analysis Summary:

Young Driver Fatalities	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -2.6x + 24.6	24	15	-38%	4	-75%	0.6576
5-year Avg.	y = -2.46 + 28.3	26	17	-36%	9	-49%	0.9678

5-year Period Comparison	
2006-2010	28
2011-2015	17
Change	-40.43%

Older Drivers: Older Drivers (65+) Involved in Fatal Crashes

FFY 2018 Target: Decrease older drivers (65+) involved in fatal crashes 5% from the five-year average of 69 in 2011-2015 to a five-year average of 65 by December 31, 2018.

Basis of Performance Measure: Older drivers (65+) involved in fatal crashes

Analysis: Older drivers (65+) involved in a fatal crash decreased 10% from 2011 to 2015. During the same period, the five-year average rose 8%. After a drop in driver involvement from a high of 82 in 2013 to a low of 52 in 2014, it picked up again in 2015 – rising 23% to 64. The annual trendline equation projects 2018 older driver involvement to be 47, a 27% decline from 2015. Despite the projected increase, the low R-square value (0.3612) shows little confidence in this outcome.

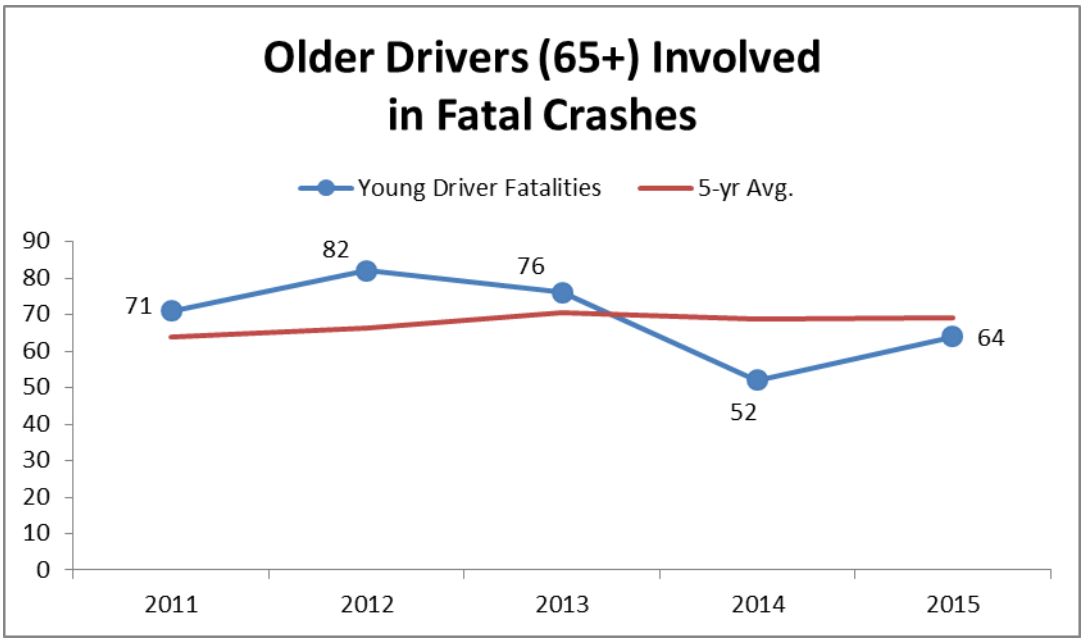


Figure 2.27 (Source: FARS)

The five-year average trendline also projects 2018 older driver involvement to be 47, a 32% drop from 2015. Its R-square value is slightly higher (0.5875) than that of the annual older driver involvement, but still doesn't inspire much confidence in the 2018 outcome.

With the recent uptick in older driver involvement from 2014 to 2015 as well as the rise in five-year averages since 2010, projecting a very conservative target in 2018 of a 5% decrease from the 2011-2015 calendar base year average is reasonable.

Target Analysis Summary:

Older Drivers Involved in FC	Trendline Equation	2011	2015	% chg from 2011-2015	2018 Trend Estimate	% chg from 2015	R-squared value
Annual	y = -2.6x + 24.6	71	64	-10%	47	-27%	0.3612
5-year Avg.	y = -2.46 + 28.3	64	69	8%	47	-32%	0.5875

5-year Period Comparison	
2006-2010	61
2011-2015	69
Change	12.38%

Traffic Records: Performance Targets for FFY 2018

To determine the performance targets for 2018, EOPSS/OGR/HSD reviewed FFY 2015, 2016 and 2017 Traffic Records project proposals, previous Strategic Plans for Traffic Records Improvement and data from DPH and the RMV.

Traffic Records Performance Target #1

To improve the integration of traffic records systems by increasing the number of linked Massachusetts EMS/crash reports from 0% to 75% from June 30, 2017 to June 30, 2018.

Target #1 was set based upon information provided in a data linkage project from UMassSAFE (TR-18-07). Previously, Massachusetts utilized NHTSA's Crash Outcome Data Evaluation System (CODES) probabilistic linkage method to link crash, hospital, and emergency medical service datasets. Massachusetts ended CODES in 2011 and the last linkage was conducted with 2007 data. At that time, there were 91,000 crash reports linked to hospital inpatient records. UMassSAFE has received funding to investigate improved data linkage processes and strategies for linking highway safety data including crash, roadway inventory, citation, driver history (if available), emergency room, hospital and emergency medical services data.

Traffic Records Performance Target #2

To increase by 5% the number of agencies able to access MassTRACs (or any successor system) from 305 in May 2017 to 335 in May 2018.

The numbers in Performance Target #2 will be tracked through an analysis report provided through MassTRAC that covers the period to be measured. Traffic enforcement programs require departments to allocate resources to high crash locations. Unfortunately, many departments are unable to use their records management systems to analyze this information so many departments will rely on MassTRAC. In turn, the number of agencies to access MassTRAC is expected to rise in the near future.

Traffic Records Performance Target #3

To improve the timeliness of crash data by decreasing the average number of days from crash incident to receipt of crash report by the RMV from 47.13 days between April 1, 2016 to March 31, 2017 to less than 45 between April 1, 2017 to March 31, 2018.

To determine Performance Target #3, the agency reviewed past timeliness information from the RMV and information from current and planned programs that may impact crash reporting. In early 2014, the MPTC began implementing a new online training for the updated crash report. Training participants receive information about the importance of timely reporting to the RMV. This training coupled with the move towards electronic crash reporting should decrease the average number of days from crash incident to receipt of crash report by the RMV.

Traffic Records Performance Target #4

To improve completeness of the Massachusetts emergency medical services (EMS)/injury database, the Massachusetts Ambulance Trip Record Information System (MATRIS), this project will seek to increase the system's Version 2 validation score from 86.8 for year ending December 31, 2016 to 89 for December 31, 2017.

To determine Performance Target #4, the agency relied on information from DPH about their work to improve their data quality. With increased outreach by DPH through their Traffic Records projects (TR-18-15 and TR-18-19), DPH will likely improve their validity scores.

Traffic Records Performance Target #5

To improve the completeness of the MATRIS, the project will increase the number of ambulance services submitting Version 2 reports to the state. MATRIS accepts only electronically submitted and fully NEMSIS (Version 2) compliant EMS run reports. The number will be increased from 323 as of December 31, 2016 to 329 as of December 31, 2017.

To determine Performance Target #5, the agency relied on information from DPH about the progress made on the MATRIS project to date. With continued work on MATRIS through the Traffic Records project TR-18-15, DPH will keep making strides in increasing the number of ambulance services submitting.

Traffic Records Performance Target #6

To improve the completeness of the Massachusetts statewide road inventory database by increasing the number of intersections with Fundamental Data Elements (FDEs) from 0 as of June 30, 2017 to 5,400 as of June 30, 2018.

To determine Performance Target #6, the agency relied on data from the Central Transportation Planning Staff's project (TR-18-17). Central Transportation Planning Staff is confident that they will be able to review 5,400 intersections and add the required elements to the roadway inventory file.

■ 2.5 Traffic Safety Enforcement Plan (TSEP)

The agency has developed strategies and processes to ensure that enforcement resources are used efficiently and effectively to support the goals of the state's highway safety program. Massachusetts incorporates an evidence-based approach in its statewide enforcement program through the following elements:

Data-Driven Problem Identification

The statewide problem identification process used in the development of the HSP was described earlier in this section. Extensive data analyses were used to identify not only safety programs to focus on, but also on locations, regions and population segments of the Commonwealth that have a high level of motor vehicle crashes and fatalities. Key results summarizing the problems identified are described in detail within the program areas of this HSP. Highlights from the data presented thus far:

- → In 2015, all core performance measures five-year averages (2011-2015), except Pedestrian Fatalities and Bicyclist Fatalities, showed significant improvement compared to the previous five-year period (2006-2010).
- → Observed seat belt usage increased four percentage points from 2015 to 78%. Concurrently, the five-year average of unrestrained passenger vehicle occupant fatalities dropped from 108 in 2014 to 105 in 2015, a 3% decline. Occupant protection outreach and education continues to be a key priority.
- → From 2011-2015, 57% of all fatal crashes took place between July and December (July, August and November were top three months for fatal crashes); the weekend period (Friday-Saturday-Sunday) accounted for 49% of all fatal crashes (if only Sat-Sun, 34%).
- → From 2011-2015, the time period from 3pm – 5:59pm saw the greatest number of fatal crashes (17.6%), followed by 12am – 2:59am (15.9%) and lastly, 6pm – 8:59pm (15.6%).
- → From 2010-2014, Worcester County led all Massachusetts counties with 15% of fatal crashes recorded followed by Middlesex (13.8%) and Bristol (12.7%). By region, Western Massachusetts (Berkshire, Franklin, Hampden, Hampshire) had 16% of all fatal crashes; Southeastern Mass (Barnstable, Bristol, Plymouth), 29%; Northern Mass (Essex, Middlesex), 24%; Central Mass (Worcester), 15%; and Boston-region (Suffolk, Norfolk), 17%. In terms of cities, the top five for fatal crashes were: Boston, Springfield, Worcester, Brockton and New Bedford.
- → From 2011-2015, 46% of fatal crashes occurred along an arterial road in Massachusetts, 32% occurred on local roads and 14% on interstate/freeways.
- → From 2010-2014, the 25-34 age group represented highest percentage of all fatalities (16.2%) followed by 45-54 (13.42%) and 75+ (13.31%).
- → Males accounted for more than 60% of driver fatalities

All enforcement agencies receiving EOPSS/OGR/HSD grant funding must also use a data-driven approach to identify enforcement issues within their jurisdictions. Data are required in an enforcement agency's application for grant funding and must support the agency's request for funding. The data must further detail the key areas or demographics the agency plans to target with grant funding. While funding eligibility is based on crash data, most funding levels

are based on population. This is because the population size generally corresponds with the number of crashes and associated data within a city or town. However, as part of the Bike and Pedestrian Enforcement Program, applicants are able to request funding for any amount between $1,000 and $7,500.

Implementation of TSEP Strategies

When determining key areas to fund for FFY 2018, EOPSS/OGR/HSD utilizes data and stakeholder feedback not only to ascertain the size and severity of the problem but also where the greatest impact in terms of reducing crashes, injuries, and fatalities can be made. With over 100 different charts, graphs and tables in the FFY 2018 HSP, all planned tasks are supported by data and justify the need for funding to reduce traffic fatalities and crashes across the Commonwealth.

Potential or prospective subrecipients for funding are usually selected based on a competitive grant application that is data-driven and evidence-based. Each applicant is required to provide data on the level of crashes and fatalities within their respective community or region.

The Commonwealth of Massachusetts evidence-based traffic safety enforcement methodology will also include enforcement of traffic laws as pertaining to impaired driving, seat belt usage and pedestrian safety coupled with numerous sobriety checkpoints held throughout the state. The combined effort among local and state law enforcement agencies along with several non-profit organizations will help promote traffic safety and increase public awareness of pedestrians on the roads and of the risk involved with impaired driving and failure to wear a seat belt.

Based on the data contained in this section, EOPSS/OGR/HSD will make recommendations to local police departments and MSP so they can make more informed decisions about where to deploy resources. For instance, a recommendation to conduct seat belt enforcement during the work week and during afternoon hours and rush hour periods will be made.

Continuous Monitoring

To ensure traffic safety enforcement projects remain focused on their respective objectives – namely, decreasing traffic safety-related fatalities, a two-pronged approach to oversight will be employed. First, EOPSS/OGR/HSD will conduct both pre- and post-award assessments of each grant funded agency. The assessments will determine the level of oversight likely required of the subrecipient to ensure all grant requirements as well as fund expenditures are properly accounted for. EOPSS/OGR/HSD will make site visits to keep enforcement agencies from lagging in their efforts as well as to ensure subrecipients are making efforts to reach desired objectives of their grant-funded project. These visits will not only be to ensure subrecipients are adhering to the requirement of the grant, but also to target towns or cities with a disconcerting increase in motor vehicle-related crash fatalities in recent years to see what the subrecipient is (or is not doing) to fight the rising tide of deaths in their respective municipality.

During FFY 2017, program coordinators will be making over 50 site visits across the Commonwealth. From Pittsfield to Orleans, Lawrence to Oak Bluffs, the breath of visits is to ensure all regions of the state are represented. All visits are documented through a standard reporting form and copies of the completed reports placed in the current files for the visited subrecipient.

Secondly, all grant funded agencies will be required to submit monthly reports covering activity, hours of enforcement, and expenditures. All data collected from these monthly reports are aggregated by EOPSS/OGR/HSD in order to detect any trends, whether positive or negative. If necessary, changes to the program will be made.

EOPSS/OGR/HSD reserve the right, based upon the reporting data collected from grant funded agencies, to reduce or stop funding if a subrecipient has shown a failure to adhere to the requirements of the grant.

High-Visibility Enforcement (HVE) Strategies for FFY 2018

For FFY 2018, a subrecipient will be participating in at least three national mobilizations:

- Drive Sober or Get Pulled Over (August)
- Click It or Ticket (May)
- Drive Sober or Get Pulled Over (Christmas to New Year's Holiday Season)

To support the national mobilizations during these three enforcement periods, 203 eligible law enforcement organizations will conduct enforcement patrols across the Commonwealth. Per the FFY 2018 Traffic Enforcement Grant parameters, each police department that participates in a mobilization has to, at a minimum, conduct at least 8 hours of enforcement patrols per mobilization. With 203 departments eligible to participate over the three national mobilizations, Massachusetts law enforcement could potentially conduct over 4,800 hours of enforcement patrols. The list of eligible law enforcement departments are provided in the Appendix of this document.

The MSP will also participate in HVE patrols during national mobilizations as well. Through coordinated checkpoints across the state, sometimes in cooperation with local police departments, MSP will provide further support of EOPSS/OGR/HSD and NHTSA's traffic safety messaging on DSGPO and CIOT.

Concurrently, EOPSS/OGR/HSD will mount a media campaign during each of the national mobilization periods aforementioned. The media campaign will include social media – Facebook, Twitter, and YouTube – as well as television, radio, and print to get the messages out. The television and radio campaign will target areas which have both high alcohol-impaired fatalities and unrestrained fatalities such as Worcester, Middlesex, and Bristol Counties. EOPSS/OGR/HSD's social media reach includes 9,132 followers on Facebook and 1,274 followers on Twitter. Among these followers are local Massachusetts police departments, allowing for instantaneous messaging that is consistent across the Commonwealth's law enforcement community.

Table 2.6 below presents progress on the performance targets set in the FFY 2017 HSP. The time period for most of the performance targets is still open so this is a progress report only.

Table 2.6 Progress for FFY 2017 Highway Safety Performance Targets

Program Area	Performance Target	Performance Measure	Update
Overall	Reduce motor vehicle-related fatalities 2% from the 2010-2014 calendar base year average of 362 to 355 by December 31, 2017.	Number of motor vehicle related crash fatalities	The five-year average for 2011-2015 for MV fatalities was 361, down 0.17% from 2010-2014. From 2014 to 2015, fatalities decreased from 354 to 345. ***Progress trending positively at this time.***
Overall	Reduce motor vehicle-related serious injuries (requiring hospitalization) 13% from the 2010-2014 calendar base year average of 4,451 to 3,867 by December 31, 2017.	Number of serious traffic injuries	The five-year average for 2011-2015 was 4,243, down 2% from 2010-2014 average of 4,350. Serious injuries were 3,818 in 2015, a 5% decrease from 2014. ***Progress trending positively at this time.***
Overall	Decrease fatality/VMT rate 10% from the 2010-2014 calendar base year average of 0.65 to 0.58 by December 31, 2017.	Fatality rate per 100 M VMT	The five-year average for 2011-2015 was 0.64, down 2% from 2010-2014. From 2014 to 2015, fatalities/VMT decreased 6% from 0.62 to 0.60. ***Progress trending positively at this time.***
Overall	Decrease rural fatalities/VMT rate 5% from 1.42 in 2014 to 1.35 by December 31, 2017.	Rural fatality rate per 100 M VMT	Rural fatalities/VMT for 2015 was 0.67, a 53% decline from 1.42 in 2014. ***Progress trending positively at this time.***
Overall	Decrease urban fatalities/VMT rate 5% from 0.58 in 2014 to 0.55 by December 31, 2017.	Urban fatality rate per 100 M VMT	Urban fatalities/VMT for 2015 was 0.51, a 12% decrease from 0.58 in 2014. ***Progress trending positively at this time.***

Impaired Driving	Decrease alcohol impaired driving fatalities 5% from the 2010-2014 calendar base year average of 129 to 123 by December 31, 2017.	Number of fatalities involving a driver or motorcycle operator with a BAC of 0.08 or greater	The five-year average for 2011-2015 was 124, a 4% decrease from 2010-2014. From 2014 to 2015, alcohol impaired driving fatalities decreased from 143 to 95. ***Progress trending positively at this time.***
Impaired Driving	Decrease alcohol-related fatalities/VMT 5% from 0.24 in 2014 to 0.24 by December 31, 2017.	Alcohol-related (+0.08 BAC) fatalities rate per 100 M VMT	Alcohol-related fatalities/VMT for 2015 was 0.17, a 32% decrease from 0.25 in 2014. ***Progress trending positively at this time.***
Occupant Protection	Increase observed seat belt use rate 5% from 2011-2015 calendar base year average of 74 to 78 by December 31, 2017.	Percent of front seat outboard vehicle occupants who are observed to be using seat belts	The 2012-2016 average was 75, up 1% from 2010-2014. From 2015 to 2016, seat belt use rate increased four percentage points (74 to 78). ***Progress trending positively at this time.***
Occupant Protection	Decrease unrestrained vehicle occupant fatalities 5% from the 2010-2014 calendar base year average of 108 to 103 by December 31, 2017.	Number of unrestrained passenger vehicle occupant fatalities (all seat positions)	The five-year average for 2011-2015 was 105, a decrease of 2% from 2010-2014. From 2014 to 2015, unrestrained vehicle occupant fatalities dropped from 113 to 89. ***Progress trending positively at this time.***
Distracted Driving	Decrease distracted driving-related fatalities 15% from 31 in 2014 to 26 by December 31, 2017.	Number of fatalities with one or more distractions	Distracted driving-related fatalities were 64 in 2015, a 121% increase from 29 in 2014. **Note** – 2014 may be an outlier as the prior three-year (2011-2013) average was 54. ***Progress trending negatively at this time.***

Speed and Aggressive Driving	Decrease speed-related fatalities 5% from the 2010-2014 calendar base year average of 98 to 93 by December 31, 2017.	Number of speed-related fatalities	The five-year average for 2011-2015 was 100, a 2% increase from 2010-2014. From 2014 to 2015, speed-related fatalities increased from 85 to 92. ***Progress trending negatively at this time.***
Young Drivers	Decrease number of young drivers (age 20 or under) involved in fatal crashes 10% from 2010-2014 calendar base year average of 42 to 38 by December 31, 2017.	Number of younger driver (age 20 or younger) involved in a fatal crash	The five-year average for 2011-2015 was 38, a 5% decrease from 2010-2014. From 2014 to 2015, young drivers involved in fatal crashes rose from 27 to 33. ***Progress trending positively at this time.***
Young Drivers	Decrease young driver (age 20 and under) fatalities 20% from 10 in 2014 to 8 by December 31, 2017.	Number of young driver fatalities	Young driver (20 and under) fatalities for 2015 were 15, a 25% increase from 12 in 2014. ***Progress trending negatively at this time.***
Older Drivers	Decrease older drivers (65+) involved in fatal crashes by 5% from the 2010-2014 calendar base year average of 69 to 65 by December 31, 2017.	Number of older driver (age 65 or older) involved in a fatal crash	2011-2015 calendar base year average was 69, no change from 2010-2014. Older drivers (65+) involved in fatal crashes for 2015 were 64, up 23% from 52 in 2014. ***Progress trending negatively at this time.***
Pedestrians	Decrease pedestrian fatalities 5% from 2010-2014 calendar base year average of 74 to 70 by December 31, 2017.	Number of pedestrian fatalities	The five-year average for 2011-2015 was 77, a 3% increase from 2010-2014. From 2014 to 2015, pedestrian fatalities decreased from 74 to 80. ***Progress trending negatively at this time.***

Bicyclists	Decrease bicycle fatalities 10% from 2010-2014 calendar base year average of 8 to 7 by December 31, 2017.	Number of bicyclist fatalities	The five-year average for 2011-2015 was 9, up 12% from 2010-2014. From 2014 to 2015, bicyclist fatalities increased from 8 to 12. ***Progress trending negatively at this time.***
Motorcyclists	Decrease motorcycle fatalities 5% from the 2010-2014 calendar base year average of 49 to 46 by December 31, 2017.	Number of motorcycle fatalities	The five-year average for 2011-2015 was 49, unchanged from 2010-2014 average. From 2014 to 2015, motorcycle fatalities increased from 47 to 60. ***Progress trending negatively at this time.***
Motorcyclists	Decrease motorcycle fatalities involving a motorcycle operator with BAC +0.08 or higher from 2010-2014 calendar base year average of 11 to 10 by December 31, 2017.	Number of motorcycle fatalities where the motorcycle operator has a +0.08 BAC	The five-year average for 2011-2015 was 11, no change from 2010-2014. From 2014 to 2015, fatalities increased from 9 to 11. ***Progress trending negatively at this time.***
Motorcyclists	Decrease unhelmeted motorcycle fatalities 20% from 2010-2014 calendar base year average of 5 to 4 by December 31, 2017.	Number of unhelmeted motorcyclist fatalities	The five-year average for 2011-2015 was 5, up 25% from 2010-2014. From 2014 to 2015, unhelmeted fatalities increased from 4 to 5. ***Progress trending negatively at this time.***

Traffic Records	Ensure key highway safety stakeholders have accessible, accurate, complete, consistent, integrated, and timely data and analyses from the local, state, and federal systems involving citation/adjudication, crash, driver, injury surveillance, roadway, and vehicle data to conduct cost-effective and successful highway safety planning, programs, and evaluations.	1. To improve the integration of traffic records systems by increasing the number of linked crash reports to hospital inpatient records by 10% from 91,000 in 2007 to 100,100 by September 2017 2. To increase by 5% the number of agencies able to access MassTRAC from 160 in April 2016 to 176 in June 2017 3. To improve the timeliness of crash data by decreasing the average number of days from crash incident to receipt of crash report by the RMV from 56.14 days in 2013 to fewer than 50 days in 2016 4. Improve the completeness of the Massachusetts EMS injury database, the Massachusetts Ambulance Trip Record Information System (MATRIS), by increasing the validation score from 83.64 in March 2015 to 85 in March 2017. 5. Improve the completeness of the Massachusetts road inventory database by increasing the number of intersections with Fundamental Data Elements (FDEs) from 0 in FFY 2016 to 5,400 in FFY 2017.	1. The project to link data sets is still in the beginning stage. UMassSAFE is still in the process of accessing health data. 2. As of May 2017, there are 186 agencies with access to MassTRAC. ***Progress trending positively at this time.*** 3. The average number of days between crash occurrence and the time it is entered into the crash data system for 2014 was 41 days and approximately 56% of the crash reports were received within 30 days. ***Progress trending positively at this time.*** 4. From April 2016 to March 2017, the validation score was 87.7. ***Progress trending positively at this time.*** 5. As of April 2017, the data elements project is finally underway.

Overall, for the FFY 2017 HSP targets, Massachusetts achieved the target prior to December 31, 2017 or is making progress on 13 of the 24 listed targets. For the remaining 11 targets, progress has been delayed.

The targets that have not been met as of June 2017:

- **Decreasing distracted driving-related fatalities**
  - → For FFY 2018, the projected percentage decrease was lowered from 15% to 10%. EOPSS/OGR/HSD has promoted safe driving habits through its "Be Present" advertising campaign in the first half of 2017 which utilized social media, online advertising and print to influence driver behavior.
  - → Furthermore, there was a Distracted Driving mobilization in April 2017 involving well over 100 police departments across the Commonwealth. This effort should positively impact driver behavior.

- **Decreasing speed-related fatalities**
  - → For FFY 2018, the projected percentage decrease remained at 5%. EOPSS/OGR/HSD plans to utilize its traffic enforcement mobilizations and STEP enforcement patrols to target speeding among other driver behaviors.

- **Decreasing young driver (under 21) fatalities**
  - → For FFY 2018, the projected percentage decrease for young driver fatalities was lower from 20% to 15%. EOPSS/OGR/HSD hope that our young driver educational outreach program involving In Control and the continued efforts by law enforcement to uphold JOL laws will contribute to lower fatalities in the near term.

- **Decreasing older drivers (65+) involved in a fatal crash**
  - → For FFY 2018, the projected percentage decrease for older drivers involved in a fatal crash remained the same at 5%. There was no change in the five-year average from 2014 to 2015 and EOPSS/OGR/HSD are looking for that number to decline in the near term.

- **Decreasing pedestrian fatalities**
  - → For FFY 2018, the projected percentage decrease for pedestrian fatalities remained the same at 5%. EOPSS/OGR/HSD expect the traffic enforcement patrols, STEP enforcement patrols and pedestrian grant enforcement patrols will positively impact the number of pedestrian fatalities.
  - → Funding for the FFY 2018 Pedestrian and Bicyclist Grant was increased to $546,000, a 23% increase from FFY 2017, to allow for more subrecipients as well as more funds to purchase equipment related to pedestrian safety.

- **Decreasing bicyclist fatalities**
  - → For FFY 2018, the projected percentage decrease for bicyclist fatalities remained at 10% due to the low numbers involved. A 10% decrease in the five-year average of 9 is only a 1 fatality reduction.
  - → The increased funding set aside for the FFY 2018 Pedestrian and Bicyclist Grant will allow more subrecipients to be involved.

- **Decreasing motorcyclist fatalities**
  - → For FFY 2018, the projected percentage decrease for motorcycle fatalities remained at 5% as the five-year average was unchanged from 2014 to 2015. We were unable to make much progress on the Motorcycle Safety Program Enhancements project (MC-17-01) in FFY 2017 due to delay in funding.
  - → RMV, which helps run the enhancements program, is more than ready to assist with the program in FFY 2018.

- **Decreasing motorcyclist fatalities involving MC operator w/BAC 0.08+**
  - → For FFY 2018, this target has been removed because it has become too difficult to determine alcohol impairment among motorcyclists as FARS has begun combining motorcyclist drivers under the 'operator' title, which would include drivers too.

- **Decreasing number of unhelmeted motorcyclist fatalities**
  - → For FFY 2018, the projected percentage decrease of unhelmeted motorcyclist fatalities remained at 20% due to the low numbers involved. A 20% decline from five-year average of 5 is 1 fatality.
  - → EOPSS/OGR/HSD expects the motorcycle enhancements project (MC-18-01) will have a positive impact on motorcyclist operator and passenger behavior.

- **Improving integration of traffic records systems**
  - → In FFY 2017, the project used to measure improved integration had not begun yet due to funding issues as well as the subrecipient's (UMassSafe) inability to access health data provided by DPH.
  - → For FFY 2018, the project will be underway and any integration will be measured.

- **Increasing road inventory database**
  - → In FFY 2017, the project used to measure road inventory was not funded until early January/February 2017. With the project finally underway, increases to the road inventory is expected in the near future.

3.0 Impaired Driving Program Area

Problem Identification and Analysis

Preventing impaired driving deaths has always been a top priority for the Commonwealth. Massachusetts continues to make progress in its efforts to reduce impaired driving. In recent years, the Office of Grants and Research has funded projects such as the Educational Outreach to Young Drivers (aimed at high school students); MSP Drug Recognition Expert (DRE) Training (to increase ability of State police to identify drug usage during a traffic stop); the SOURCE investigations pilot program by ABCC (focusing on where impaired drivers in fatal crashes had their last alcoholic drink); and the purchase of two state-of-the-art Blood Alcohol Testing (BAT) mobiles for the MSP in an effort to stem impaired driving crashes across the Commonwealth.

During 2015, the number of alcohol-impaired fatalities (involving driving with BAC 0.08% or higher) decreased from 143 in 2014 to 95 – a drop of 34%. Alcohol-impaired fatalities occurred with frequency in Worcester and Middlesex County. The two counties accounted for 34% of the fatalities.

Since 2011, the number of alcohol impaired fatalities has declined 25%. The alcohol impaired fatalities/VMT rate went down 28% during the same period, falling from 0.23 to 0.17.

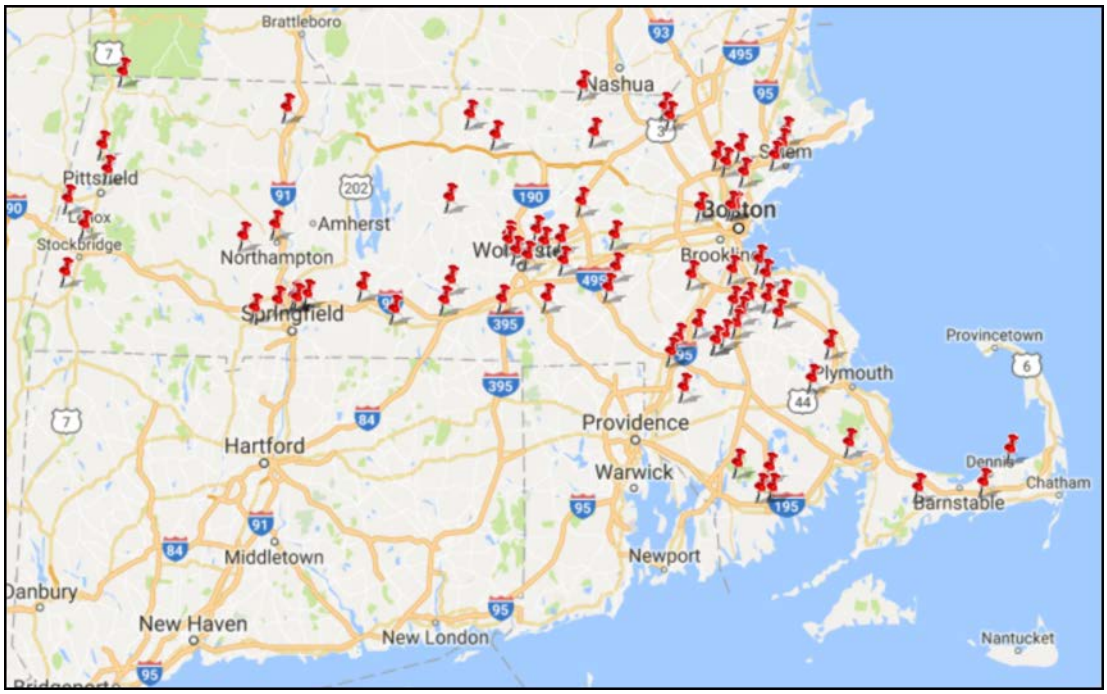


Figure 3.1 Alcohol-Impaired Fatalities in 2015 (Source: FARS)

From 2011-2015, Boston was the top city for alcohol-impaired fatalities with 27. Brockton was second with 11, Springfield third with 10 fatalities. The leading county for alcohol-impaired

fatalities during the same period was Worcester, followed by Bristol and Plymouth. These three counties make up 40% of all BAC 0.08+ fatalities from 2011-2015.

2011 -2015	Total 0.08+ Fatalities	Total MV Fatalities	% 0.08+ Fatalities
Barnstable	30	92	33%
Berkshire	21	56	38%
Bristol	78	223	35%
Essex	56	167	34%
Franklin	6	31	19%
Hampden	56	162	35%
Hampshire	12	40	30%
Middlesex	66	238	28%
Norfolk	54	174	31%
Plymouth	70	191	37%
Suffolk	44	117	38%
Worcester	83	264	31%

Table 3.1 (Source: FARS)

As a percentage of all motor vehicle fatalities within their respective county, Berkshire and Suffolk led all counties with 38%. Out of the 12 counties listed (Dukes and Nantucket excluded due to minimal fatalities), 10 have alcohol-impaired fatalities accounting for at least 30% of fatalities. Despite best efforts over the years to educate drivers on the dangers of driving impaired, people are still choosing to get behind the wheel under the influence.

Figure 3.3 below shows the breakdown of fatal crashes involving a driver with BAC 0.08+ from 2011 to 2015 by time-of-day. What stands out is the number of fatal crashes from midnight to 2:59am accounting for 34% of the total fatal crashes reported during the time period. The time frame from 6am to 3pm has very little activity with fatal crashes picking up after 3pm.

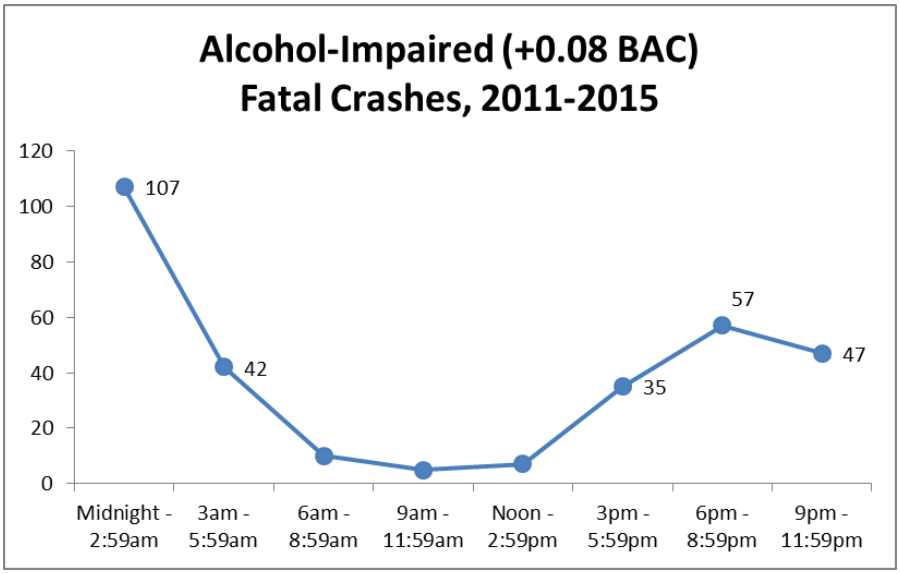


Figure 3.2 (Source: FARS)

With most drinking and driving occurring at nighttime, it makes sense that the time frame from 6pm – 6am would represent 81% of the fatal crashes.

By day of week, the weekend (Saturday/Sunday) accounts for nearly half of all alcohol-impaired fatal crashes from 2011-2015. Adding in Friday, the percentage rises to 65%.

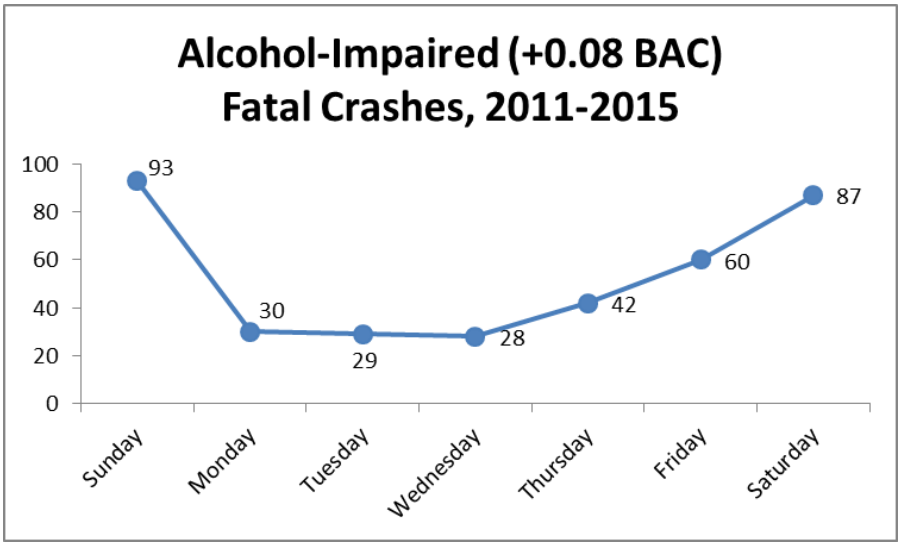


Figure 3.3 (Source: FARS)

Between 2011-2015, 82% drivers with BAC 0.08+ in a fatal crash were male.

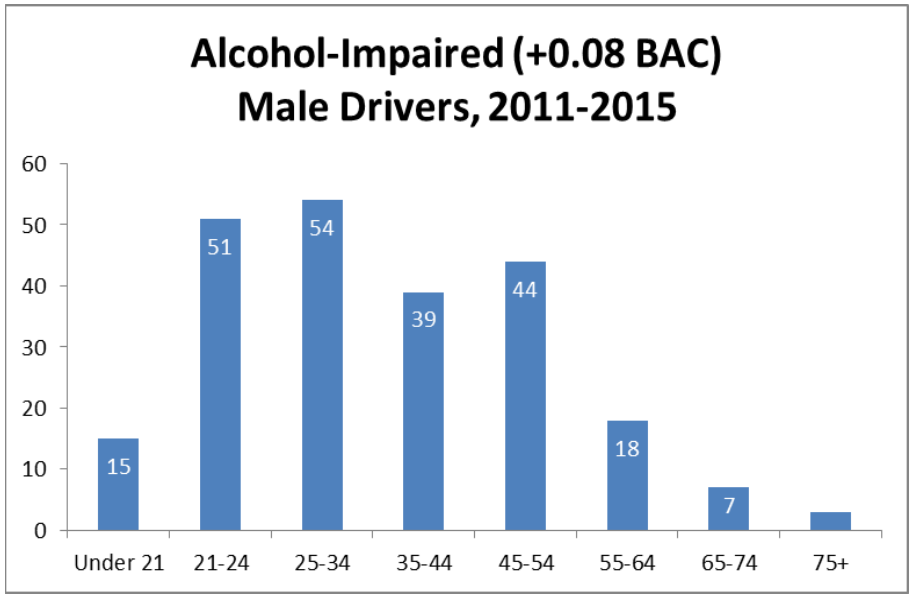


Figure 3.4 (Source: FARS)

With male drivers responsible for over 80% of drivers in a fatal crash involving alcohol-impairment, a review of the age of the drivers shows that 45% were between the ages of 21 and 34.

Male drivers between 35 and 54 years of age accounted for 36% of fatal crashes. In all, male drivers between 21-54 accounted for 81% of the crashes.

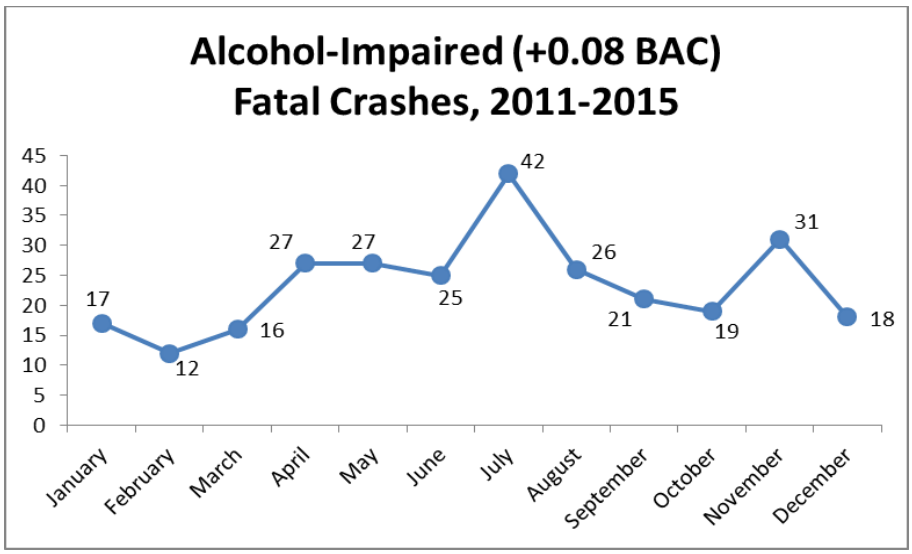


Figure 3.5 (Source: FARS)

By month, alcohol-impaired fatal crashes occurred most often in July, accounting for 15% of all fatal crashes. The three summer months – June, July, August – represented 33% of the crashes from 2011-2015.

The average number of fatal crashes per month is 23. The months that fall below that – January, February, March, September, October and December – account for 37% of all fatal crashes.

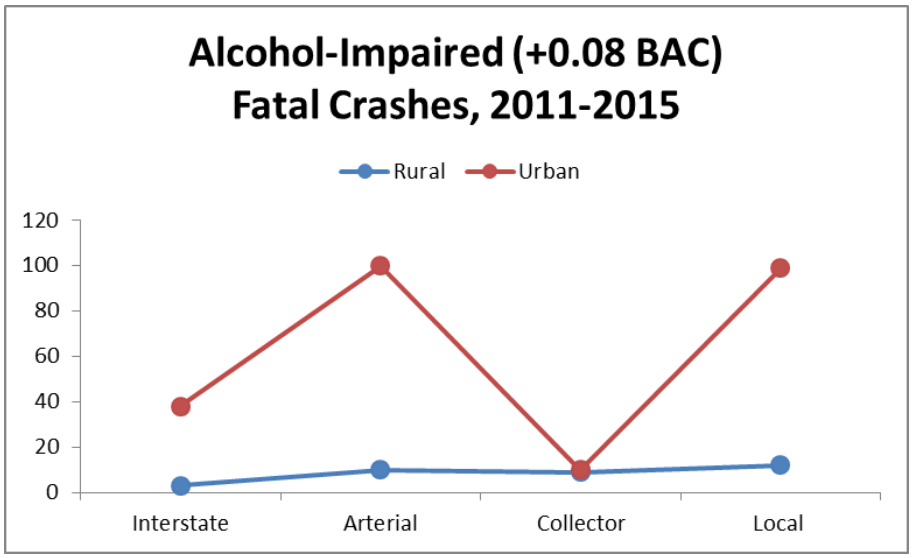


Figure 3.6 (Source: FARS)

By roadway location, urban roads were by far the majority of fatal crashes from 2011-2015 (88% of all crashes).

By roadway type, arterial and local roads were the top roadway locations for fatal crashes from 2011-2015. Most drinking establishments are located along major or minor

arterials, and homes are along local roads. These roadways would be the first type encountered by inebriated drivers upon leaving the last place they had a drink.

Taking into account all the data presented, prioritized funding will be marked for projects aimed at reducing alcohol-related fatalities and fatal crashes in Berkshire, Suffolk and Plymouth Counties. Given those counties have over 37% of their motor vehicle fatalities attributed to alcohol impairment, priority will be to fund departments and non-profit agencies residing in those areas. Furthermore, cities with high impaired driving fatalities such as Boston, Brockton and Springfield will be considered for additional funding to combat impaired driving through traffic enforcement outreach and mobilizations.

Based upon evidence presented above, enforcement mobilizations would be most effective between 9:00 p.m. and 3:00 a.m. during the spring and summer months along major arterials and local roads. The enforcement should include a component of pedestrian enforcement in areas of the community that have a close proximity to numerous bars and other drinking establishments.

Alcohol-Related Violations and Arrests

Table 3.2 presents alcohol-related violations in Massachusetts between 2012 and 2016. Overall, total violations have decreased 15% since 2012. On a year-to-year basis, impaired driving violations decreased 1% from 2015 to 2016, while underage drinking violations drop 28%.

Table 3.2 Massachusetts Alcohol-Related Violations

	2012	2013	2014	2015	2016
Impaired Driving Violations[a]	21,418	20,446	20,680	19,194	18,933
Underage Drinking Violations[b]	1,396	1,074	995	531	383
Total Violations	**22,814**	**18,964**	**21,675**	**19,725**	**19,316**

Source: MRB Quarterly Violations Report January 2017

[a] Comprising Operating with a suspended License/OUI (90 23 J), DWI Liquor (90 24 DI), DWI Alcohol Program (90 24 D), Motor Vehicle Homicide/OUI Liquor (90 24 GF), Drink Open Container (90 24 I), DWI Serious Injury (90 24 L), Operating without an Ignition Lock (90 24 S), OUI with Child Endanger (90 24 VA), MV Homicide/Liq&Negl (90 24GG) [b] Comprising Minor Attempt Procure Liquor (138 34 A AP) , Minor Procure Liquor (138 34A PR), Liquor Purchase ID Card (138 34 B), Liquor Transported by Minor (138 34 C), Liquor Possession by Minor (138 34 C NS)

Table 3.3 presents alcohol-related arrests in Massachusetts between 2011 and 2015. Overall, Operating under the Influence (OUI) arrests have declined 17% since 2011, while liquor law and drunkenness arrests have decreased 51% and 23%, respectively. For under 18 offenders, arrests dropped for all three alcohol-related offenses between 2011 and 2015. OUI's declined 32%; liquor laws, 52%; and drunkenness, 71%.

Table 3.3 Massachusetts Alcohol-Related Arrests

	2011		2012		2013		2014		2015	
	Under 18	All Others	Under 18	All Others	Under 18	All Others	Under 18	All Others	Under 18	All Others
OUI	66	9,887	74	8,467	57	8,324	49	7,530	45	8,258
Liquor Laws	748	4,311	816	3,295	639	3,025	508	3,047	362	2,137
Drunkenness	175	7,249	152	6,875	201	7,055	169	6,875	50	5,678

Source: http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2015/crime-in-the-u.s.-2015, Table 69 June 2017

The drop in alcohol-related violations along with the sharp decline in alcohol-related arrests over the past few years shows the positive impact recent JOL laws and impaired driving enforcement activities has had on decision-making when it comes to determining whether one should drive or not after have a drink.

Drug-Related Violations

In Massachusetts, as well as across the nation, driving under the influence of drugs has increasingly become an issue of public safety. Since 2012, drug-related driving violations have risen 47%. From 2015 to 2016, violations rose 8%.

Table 3.4

	2012	2013	2014	2015	2016
Total Drug-Related Driving Violations[i]	1,324	1,559	1,774	1,803	1,946

Source: MRB Quarterly Violations Report January 2016

[i]Comprising 90 24 GD (MV Homicide/Drugs & Negligence), 90 24 GE (MV Homicide/Drugs & Recklessness), 90 24 DD (DWI Drugs), and 90 24 DP (DWI Drug Program)

During 2015, DWI Drug (90 24 DD) infractions accounted for 87% (1,695) of all drug-related driving violations. Police are being more vigilant in finding drugged driving perpetrators and more funding has been awarded in recent years to both local and state police to conduct aggressive enforcement programs to combat both alcohol- and drug-impaired drivers across the Commonwealth.

Based on data pulled from FARS for the period of 2011-2015, marijuana or marijuana-type drugs (THC, Delta 9) are the most prevalent types of drugs found in fatally injured drivers. Marijuana-related drugs accounted for 31% of the drugs listed by FARS. Cocaine, opioids such as oxycodone and fentanyl, and benzodiazepines were other leading drugs found in the blood system of deceased drivers.

	Driver (Killed) of Motor Vehicle						
Drug Name	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**	**%**
Buprenorphine (opioid w/d med)			4	1	4	**9**	2%
Codeine (opioid)	1		2	1		**4**	1%
Fentanyl (opioid)	5	3	8	7	6	**29**	7%
Hydrocodone (opioid)	2	1	1	3	2	**9**	2%
Methodone (opioid, herion w/d)	2	1		2	3	**8**	2%
Morphine (opioid, pain med)	1	2	7	3	3	**16**	4%
Oxycodone (opioid, pain med)	7	7	2	6	4	**26**	6%
Alprozolam (Xanax)	2	2		1	1	**6**	1%
Benzodiazepines	6	7	13	3	10	**39**	9%
Diazepam (Valium)	2			1	2	**5**	1%
Midazolam (Sedative)	4				1	**5**	1%
Zolpidem (Ambien, sleep med)			1	1	2	**4**	1%
Amphetamine	4	3			1	**8**	2%
Cocaine (Benzoylecgonine)	9	11	6	5	11	**42**	10%
THC (or Delta 9)	17	7	11	20	18	**73**	17%
Cannobinoid (Pot, type unknown)	10	29	23		1	**63**	14%
Other Drug (caffeine, analgesics)	13	23	15	30	11	**92**	21%
						438	

Table 3.5 (Source: FARS)

It is crucial to understand the importance of the prevalence of marijuana in drug-related fatal crashes as Massachusetts recently (November 2016) passed a public referendum vote to legalize recreational-use marijuana. This followed the legalization several years prior for medical-use marijuana. There is concern that the legalization of marijuana may lead to increased motor vehicle crashes, fatalities, and injuries. Marijuana has been found to decrease one's reaction time to an external stimulus and when that stimulus is another car or person, the results could be deadly.

	Operators Testing Positive for Marijuana in Fatal Crashes						
	2011	**2012**	**2013**	**2014**	**2015**	**Total**	**%**
Barnstable	3	3	2	2	0	10	6%
Berkshire	0	1	0	1	0	2	1%
Bristol	6	4	4	1	4	19	11%
Dukes	0	0	1	0	0	1	1%
Essex	6	4	4	3	0	17	10%
Franklin	0	0	2	0	3	5	3%
Hampden	1	3	5	3	2	14	8%
Hampshire	0	1	0	1	0	2	1%
Middlesex	5	3	5	1	5	19	11%
Norfolk	1	5	5	4	1	16	9%
Plymouth	4	7	6	7	3	27	16%
Suffolk	2	4	4	1	1	12	7%
Worcester	5	5	8	6	4	28	16%
	33	**40**	**46**	**30**	**23**	**172**	

During 2015, 11 of the 19 drivers killed in a drug-related crash were between the ages of 21 and 34. Young drivers, those under 21 years of age, had three fatalities out of the 19. From 2011-2015, operators tested positive for marijuana occurred most often in Worcester and Plymouth County.

Table 3.6 (Source: FARS)

The southeast region – Barnstable, Bristol and Plymouth – accounted for 33% of the operators found with marijuana in their system.

Notably, the counties with a heavy concentration of higher education institutions (Hampshire and Suffolk) have very low operator usage numbers. Going forward, we will work with local and State police on how best to improve public safety as recreational marijuana sales become more prevalent in the Commonwealth. Based on the data presented, drivers between the ages of 21 – 34 would be more likely to engage in driving under the influence of marijuana and any education or enforcement activity should focus on Worcester and Plymouth County.

Performance Targets

Impaired Driving Performance Target #1
Decrease alcohol-impaired driving fatalities 5% from the five-year average of 124 in 2011-2015 to a five-year average of 118 by December 31, 2018.

Impaired Driving Performance Target #2
Decrease alcohol-related fatalities/VMT 5% from the five-year average of 0.22 in 2011-2015 to a five-year average of 0.21 by December 31, 2018.

Performance Measures

Number of alcohol-impaired fatalities
Alcohol-related fatality rate per 100 M VMT

Strategies

1. Provide funds to 203 local police departments to conduct two DSOGPO Mobilizations
2. Fund paid and earned media regarding the dangers of impaired driving
3. Fund 16 selected local police departments and the MSP to conduct sustained enforcement of traffic laws, including impaired driving laws
4. Encourage state and other local law enforcement to participate in sustained enforcement of impaired driving laws
5. Continue to fund MSP Sobriety Checkpoints
6. Enlarge the efforts to reduce impaired driving by younger drivers and underage drinking through grants with local police departments, the ABCC, and campus police
7. Utilize the Traffic Safety Resource Prosecutor (TSRP) to conduct trainings and provide technical support for prosecutors and law enforcement regarding the prosecution of impaired driving cases (task listed in the Police Traffic Services section)
8. Support law enforcement with training and technical assistance aimed at increasing their effectiveness to combat impaired driving and underage drinking
9. Provide funds to train additional DREs and sustain current DRE certifications
10. Provide funds to purchase Preliminary Breath Testing (PBT) Units
11. Provide funds for a part-time SFST coordinator

12. Provide funds to support 3 part-time LEL positions (task listed in the Police Traffic Services section)

Impaired Driving Program Area Projects

AL-18-01 Paid & Earned Media for Impaired Driving Prevention Programs

Utilizing the statewide media contractor, Argus, funds will be used to develop and implement paid and earned media to support anti-impaired driving programs including, but not limited to, DSOGPO Mobilizations December 2017 – January 2018 and August - September 2018. In light of the passing of the recreational marijuana law and the inherent dangers of driving while impaired from marijuana, and other drugs, EOPSS/OGR/HSD's messaging will be directed towards both alcohol and drug impairment. This task will meet the requirements within the Grant Funding Policy Part II E by ensuring that all television public service announcements include closed captioning. In addition, they will be evaluated based on the criteria in the 402 Advertising Space Guidance. EOPSS/OGR/HSD follows a system like the NHTSA Communications Pyramid. Strong internal policies are followed noting that all media and communications activities will support data-driven objectives and will be coordinated with other activities and programs, in particular enforcement. Crash and citation data are used not only for planning enforcement activities but also to determine the target audiences, and media channels used to reach them. This task is supported by CTW Chapter 1, Sections 2.2, 5.2, and 7.1, and Chapter 5 Section 2.1. This task will support all performance targets.

Project Budget/Source – $675,000 (Sec. 405d) [Paid - $615,000; Earned - $60,000]

Match Amount - $168,750 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano

AL-18-02 MSP Sobriety Checkpoint/BAT Mobile Partnership

Provide funds for overtime for approximately 110 Sobriety Checkpoints and saturation patrols for the MSP with support from the two BAT mobile units whenever operationally possible. This project will take place throughout the year in locations throughout Massachusetts chosen by on-going data analysis. The goal will be to deter motorists from driving while impaired and to apprehend impaired motorists. This task is supported by CTW Chapter 1, Section 2.1 and 2.2. This task will support all overall performance targets, impaired driving performance targets 1 and 2, motorcycle performance target 3, and younger driver performance target 2.

Project Budget/Source – $1,500,000 (Sec. 405d)

Match Amount - $375,000 **Indirect Cost** - $507,000

Maintenance of Effort - $5,623,499 **Local Benefit** - $0

Project Staff - Deb Firlit

AL-18-03 Impaired Driving Law Enforcement Specialized Training Program

Provide funds to the MPTC to conduct up to 22 trainings throughout the year focused on Standardized Field Sobriety Testing (SFST). Classes will include SFST Instructor, SFST Refresher, and a three-day SFST course to help law enforcement better detect impaired drivers during OUI checkpoints, traffic stops, and at the scene of motor vehicle crashes. Increased awareness of driver impairment by officers will lead to safer roads. Funding will also be used to fund a part-time SFST Coordinator responsible for implementing and maintaining the SFST training program statewide. Training will take place at various police departments across the Commonwealth. This task is supported by CTW Chapter 1, Section 7.1. This task will support all overall performance targets and impaired driving performance targets 1 and 2.

Project Budget/Source – $138,497 (Sec. 405d) [SFST Coordinator - $24,000; Training - $114,497]

Match Amount - $34,625 **Indirect Cost** - $27,699

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Lindsey Phelan

AL-18-04 Underage Drinking Compliance Checks Program

Provide funds for overtime to the Massachusetts ABCC to conduct enhanced liquor enforcement compliance checks and Cops in Shops to reduce underage drinking and impaired driving. Overtime funds will be provided to ABCC investigators to perform compliance checks in approximately 150 communities. The Compliance Check program is designed to achieve broad geographical coverage throughout the commonwealth in order to develop a deterrence impact created through wider knowledge among the industry retailers that their establishment could be subject to a compliance check at any time. The ABCC will cover all counties and reach the highest number municipalities within each county that is feasible. While maintaining this focus, they will try to re-check municipalities found to have a higher than average failure rate in previous years. The goal of this program is to prevent the sale of alcohol to individuals under 21 years of age and to prevent young drivers from drinking and driving. The program will take place throughout the year. Municipalities and/or liquor establishments selected for compliance checks will either have a high failure rate of less than 50% compliance in 2016 and 2017; or ABCC hasn't conducted checks in that municipality or liquor establishment to date. Since the ABCC is in the process of completing their FFY 2017 program, the ABCC will begin the process of selecting communities for FFY 2018 in September/October. This task is supported by CTW Chapter 1, Section 6.3. This task will support all overall performance targets, impaired driving performance targets 1 and 2, and younger driver performance targets 1 and 2.

Project Budget/Source – $195,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $19,500

Maintenance of Effort - $2,200,321 **Local Benefit** - $0

Project Staff – Lindsey Phelan

AL-18-05 Statewide Underage Drinking Enforcement Training Program

Provide funds to ABCC to conduct trainings throughout the year for up to 900 officers from 150 departments for enforcement of the Massachusetts Liquor Control Act as well as false identification and fraudulent document detection. Trainings will take place at local police departments throughout Massachusetts. The main objective of this program is to prevent underage drivers from driving while intoxicated. This task is supported by CTW Chapter 2, Sections 6.3 and 6.4. This task will support all overall performance targets, impaired driving performance targets 1 and 2 and younger driver performance targets 1 and 2.

Project Budget/Source – $25,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $2,500

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Lindsey Phelan

AL-18-06 Enforcement Program to Prevent Sale of Alcohol to Intoxicated Persons

Provide overtime funds to the ABCC for investigators to participate in undercover operations at licensed establishments in approximately 40 communities to determine if the licensee serves intoxicated individuals. The ABCC will use data analysis to determine municipalities with the highest concentration of establishments that have been identified as the source of last drink for a convicted drunk driver. Factors such as number of alcohol-related fatalities and crashes, OUI violations, and sales to minors violations will be taken into account. Large urban municipalities with a high concentration of liquor establishments (Boston, Worcester) as well as communities with residential colleges or universities will be given priority. The ABCC will focus on the establishments with the largest number of violations, which are listed in their application for funding. The ABCC will also conduct outreach to local police departments to ask if they can identify additional establishments that should be checked. This task is supported by CTW Chapter 1, Section 5.3. This task will support all overall performance targets and impaired driving performance targets 1 and 2.

Project Budget/Source – $195,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $19,500

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Lindsey Phelan

AL-18-07 Breath Test Operator (BTO) Training

Provide funds to the MSP Office of Alcohol Testing (OAT) to conduct up to 86 Breath Test Operator classes for approximately 1,800 local and state police to better detect impaired drivers. Trainings will take place throughout the year at MPTC and other facilities. Funds will also be provided for the purchase of related program equipment including approximately 50 PBT units and/or 10,000 OUI Toxicology Kits. Equipment will be distributed to local police officers and troopers including those who successfully complete a DRE class conducted by MPTC. MSP/OAT will determine how the equipment is divided among agencies based on problem identification and greatest need. Yearly certification will be performed by OAT. This task is supported by CTW Chapter 1, Section 2.3. This task will also support all overall performance targets and impaired driving performance targets 1 and 2.

Project Budget/Source – $125,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $12,500

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

AL-18-08 Drug Evaluation and Classification Program (DEC)

Provide funds to MPTC to conduct up to 37 training classes throughout the year for police officers covering Advanced Roadside Impaired Driving Enforcement (ARIDE) and Drug Evaluation & Classification (DEC). Funding will also support a part-time DRE Coordinator to attend DRE-related conferences and seminars and for out-of-state travel to Maricopa County, Arizona for hands-on oversight of field evaluations for students seeking DRE certification. There are currently 127 certified DREs in Massachusetts. The DREs represent 52 municipalities along with MSP, MA Environmental PD, and Bridgewater State Campus Police. MPTC projects the addition of at least 20 new DREs during FFY 2017. Funding will also be used to develop and maintain a DRE testing database as well as tablets and associated software. The DRE Coordinator will be required to submit an annual report that details all of the activities of the program. This task is supported by CTW Chapter 1, Section 7.1. This task will support all overall performance targets and impaired driving performance targets 1 and 2.

Project Budget/Source – $495,672 (Sec. 405d) [DRE Coordinator - $38,000; Coordinator Travel - $9,500; DRE Student Travel - $105,000; Training - $155,600]

Match Amount - $0 **Indirect Cost** - $80,377

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Lindsey Phelan

AL-18-09 Local Police Impaired Driving Enforcement

Provide funds for overtime enforcement for 203 local police departments for impaired driving initiatives, including DSOGPO mobilizations (December 2017 and August 2018). Enforcement efforts will primarily focus on apprehending impaired motorists, although other violations such as speeding and failure to wear a seat belt will also be targeted. Patrols will be conducted during high-risk times and locations based on the latest available state and local data. Eligibility was based upon 2012-2014 crash data, subtracting crashes the MSP responded to, and then normalized by state population. Any community with a crash rate equal to or above 0.09 is deemed eligible for this program. Under this project, participating departments may request funding for equipment that can be utilized for alcohol-related traffic enforcement and associated messaging measures including, but not limited to, traffic safety message boards/signs; and Preliminary Breath Test (PBT) units, simulators, mouthpieces, and supplies. Equipment will not be offered as incentives to participate, but rather as items that may assist in the apprehension and education of impaired drivers. Eligible departments are listed in the appendix under Table 13.1, and participating departments will be submitted to NHTSA, along with respective equipment requests in late summer 2017. This task is supported by CTW Chapter 1, Sections 2.1, 2.2, and 7.1. The departments were selected based on crash data and past performance. This task will support all performance targets.

Project Budget/Source –$1,250,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Lindsey Phelan

AL-18-10 Local Underage Alcohol and Marijuana Enforcement Grant Program

Provide overtime funds to local police departments for enforcement of underage drinking laws in partnership with ABCC, community organizations, and youth groups. Additionally, local police departments that have licensed non-medical retail marijuana establishments within their jurisdictions may be awarded additional funds to conduct similar enforcement activities focused on those businesses. Eligible activities may include: compliance checks, party patrols, surveillance patrols, Cops in Shops, and shoulder taps.

Subrecipients will provide detailed monthly reports on various elements related to alcohol and marijuana possession, usage, and transportation as well as additional data on any evidence of drugs or drug usage. These activities should lead to a decrease in incidences of drinking and/or drugged driving by young drivers. Grant awards will range from $5,000 to $15,000 per department for overtime enforcement. Award winners will be selected based upon data provided along key problem identification areas for their respective community such as number of alcohol or marijuana-related MV fatalities involving persons under 21, number of OUI arrests, and number of arrests made for alcohol transportation or marijuana possession by

persons under age 21. This task is supported by CTW Chapter 1, Section 6.2, 6.3, and 6.4. This task will support all overall performance targets, impaired driving performance targets 1 and 2, and younger driver performance targets 1 and 2.

Project Budget/Source – $ 512,393.55 (Sec. 405d), $50,000 (Sec. 402 – for marijuana portion)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $50,000

Project Staff – Lindsey Phelan

AL-18-11 Sustained Traffic Enforcement Program

Sustained enforcement of impaired driving laws will be conducted in selected communities. By using detailed data from MassTRAC, RMV and FARS, 16 hot-spot communities were identified as having the highest percentage of crashes in the Commonwealth with fatal or non-fatal injuries. The hot spots are Barnstable, Boston, Brockton, Cambridge, Chicopee, Fall River, Framingham, Holyoke, Lowell, Lynn, New Bedford, Quincy, Springfield, Taunton, Westfield and Worcester. Local police departments in the selected areas will receive additional overtime funding to crack down on impaired driving and other traffic safety areas; a portion of the funding may be used for data entry and/or traffic data analysis. Selected areas are also listed in the Appendix under Table 13.3. This task is supported by CTW Chapter 1, Sections 2.2 and 2.5, Chapter 3 Section 2.2 and all FFY 2018 overall performance targets.

Project Budget/Source – $338,750 (Sec. 405d) and $338,750 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $338,750

Project Staff – Deb Firlit

AL-18-12 MSP Sustained Traffic Enforcement Program

In support of impaired driving laws, this task will provide funds to the MSP to deploy sustained and selective "zero tolerance" traffic enforcement overtime patrols on the day/time/location identified in each respective Troop to augment local police department efforts within the same general location as outlined in support of the STEP program. MSP STEP enforcement patrols will provide maximum visibility for deterrent purposes and saturate target areas taking immediate and appropriate action on all motor vehicle violations, with particular focus on impaired driving. This task is supported by CTW Chapter 1, Sections 2.2 and 2.5, Chapter 3 Section 2.2 and all FFY 2018 overall performance targets.

Project Budget/Source – $125,000 (Sec. 405d) and $125,000 (Sec 402)

Match Amount - $625,000 **Indirect Cost** - $25,000

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

AL-18-13 Stakeholders Conference

Funding will be used to conduct up to two conferences with, and for traffic safety stakeholders. Alcohol and drug impaired driving will be the main foci, but topics will also include other program priorities such as occupant protection, bicycle and pedestrian safety and speeding. The goal will be to initiate a dialogue with key local, state, federal, and private sector leaders to identify highway priorities, supported by problem identification where possible, in order to improve traffic safety and achieve the goals of the HSP. Location and date of conference is yet to be determined. This task is supported by CTW Chapter 1, Section 5.2. This task will support all core performance targets.

Project Budget/Source – $20,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $5,408

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Jeff Brownell

AL-18-14 MSP DRE Training

Funding will be provided to the MSP to expand their Drug Recognition Expert (DRE) program. With the recent legislation for legalization of marijuana and allowing for the distribution of medical marijuana, troopers are seeing a marked increase of people driving under the influence of this drug. Other states that passed similar legislation much earlier than Massachusetts are now facing an epidemic of impaired drivers as a result. The MSP will expand the DRE training and at a minimum have a trained DRE available in every barrack. Coordinating this effort with the state DRE coordinator, MSP will train and equip 12 additional officers as DREs. This task is supported by CTW Chapter 1, Section 2.1, 2.2, 2.5 and 7.1. This task will support core performance targets 1, 2, 3 as well as Impaired Driving targets 1 and 2.

Project Budget/Source – $40,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

AL-18-15 Educational Outreach to Young Drivers

Funding will be provided to selected subrecipients to educate young drivers on the dangers of underage drinking and impaired driving. According to the 2011 Massachusetts Youth Health Survey (MYHS), conducted by DPH, teens are starting to experiment with alcohol earlier. When asked about how many times they have had alcohol in the past 30 days, 21% of high school students reported using alcohol on 1-2 days, 16% on 3-9 days and 4% on 10-30 days. Approximately 15% of high schools students reported driving after drinking alcohol within the past 30 days. Methods for outreach may include, but are not limited to, school presentations, peer-to-peer workshops, safety fairs, and informational campaigns. An evaluation component will be included. Funding will be used to cover expenses related to personnel, educational materials, consultants, travel/driving costs and office supplies. This task is supported by CTW Chapter 1, Sections 5.2, 6.5. This task will support all core performance targets as well as Younger Driver target 2.

Project Budget/Source – $50,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Bob Kearney

AL-18-17 Judicial Education Relating to Highway Safety Strategies

This program will seek to design, organize and promote specific traffic safety judicial education programs in-state, region-wide, or both, that include judge moderators on defense-prosecution panel presentations addressing best-practices, and evidentiary, procedural and constitutional issues arising from traffic safety enforcement prosecutions. The New England Association of drug Court Professionals (NEADP) and the MA Judicial Institute have offered DRE sessions at the annual conference at Marlborough, MA in November 2017.

Additionally, dedicated funding will be provided to the Court Administrator's Office to pay for travel expenses for such presenters and, when public salaries do not pay for their time, to compensate them. Lastly, the program will provide dedicated funding to the Court Administrator's Office to fund **only** travel expenses for six or more judges to attend out-of-state programs in New England on the topics relevant to highway safety enforcement, particularly in connection with the NHTSA publication "Countermeasures that Work," Eighth Edition, 2015, such as:

- DRE procedures and toxicology related to drugged driving;

- The pros and cons on admissibility of testimony from specially trained police officers absent medically or toxicologically trained experts;

• Electronic monitoring and judicial supervision, early-intervention, DWI Courts and alternative DUID/DUIA sentencing, and pre-trial release options;

• Constitutional challenges, search & seizure and any other topical judicial/factual/ legal issues arising in court out of traffic safety enforcement, such as, but not limited to, distracted driving and passenger protection.

This task is supported by CTW Chapter 1, Section 3.1, 3.3. This task will support all overall performance targets and impaired driving performance targets 1 and 2.

Project Budget/Source – $10,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $2,704

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Jeff Brownell

AL-18-18 Program Management

Provide sufficient staff to conduct related programming described in plan as well as cover in and out of state travel, professional development expenses, conference fees, postage, and office supplies.

Project Budget/Source – $220,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $63,544

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –Jeffrey Brownell, Brook Chipman, Bob Kearney, Deb Firlit, Lindsey Phelan, and John Fabiano

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Impaired Driving: Budget Summary

Project Number	Project Title	Budget	Source
AL-18-01	Paid and Earned Media	$ 675,000	405d
AL-18-02	MSP Sobriety Checkpoint/BAT Mobile Partnership	$ 1,500,000	405d
AL-18-03	Impaired Driving Law Enforcement Specialized Training Program (MPTC)	$ 138,497	405d
AL-18-04	Underage Drinking Compliance Checks Program (ABCC)	$ 195,000	405d
AL-18-05	Statewide Underage Drinking Enforcement Training Program (ABCC)	$ 25,000	405d
AL-18-06	Prevent the Sale of Alcohol to Intoxicated Persons (ABCC)	$ 195,000	405d
AL-18-07	BTO Training	$ 125,000	405d
AL-18-08	Drug Evaluation and Classification Program (DEC)	$ 495,672	405d
AL-18-09	Local Police Impaired Driving Enforcement	$ 1,245,000	405d
AL-18-10	Local Underage Alcohol and Marijuana Enforcement Grant Program	$ 50,000	402
		$ 512,394	405d
AL-18-11	Sustained Traffic Enforcement Program	$ 338,750	402
		$ 338,750	405d
AL-18-12	MSP Sustained Traffic Enforcement Program	$ 125,000	405d
		$ 125,000	402
AL-18-13	Stakeholders Conference	$ 20,000	402
AL-18-14	MSP DRE Training	$ 40,000	405d
AL-18-15	Educational Outreach to Young Drivers	$ 50,000	405d
AL-18-17	Judicial Education Relating to Highway Safety Strategies	$ 10,000	405d
AL-18-18	Program Management	$ 220,000	402
	Total All Funds	**$ 6,424,063**	

4.0 Occupant Protection Program Area

Problem Identification and Analysis

Occupant protection refers to the use of seat belts, motorcycle helmets, booster seats, and child passenger safety (CPS) seats by motor vehicle drivers and passengers. Massachusetts has a secondary seat belt law which makes enforcement of occupant protection laws more challenging (see Appendix: Occupant Protection - Attachment A for the seat belt law; Attachment B for CPS law).

The statewide seat belt rate (Table 4.1) was 78% in 2016, up from 74% in 2015. The seat belt usage rate in 2016 is the highest ever recorded for Massachusetts – a testament to EOPSS/OGR/HSD's continuous effort to educate and inform vehicle occupants on the importance of using seat belts. As further evidence of our outreach impact, unrestrained fatalities (89) were at the lowest level in the past decade, seat belt/child seat violations have dropped 42% since 2012, and unrestrained fatalities/VMT declined from 0.17 in 2014 to 0.16 in 2015.

Furthermore, the 2016 Seat Belt Observational Survey showed increases in belt usage across all measured elements compared to 2015. Males and teen demographics posted double-digits increases, while the statewide change was three percentage points higher than the national rate (74% to 78% vs 89% to 90%).

Despite the positive gain Massachusetts has made in occupant protection behavior, the Commonwealth still has a secondary enforcement law instead of a primary enforcement law. In 2016, Massachusetts ranked 45th out of 50 states for seat belt usage rate. Georgia was ranked first with a rate of 97.2% and New Hampshire was last with 70.2%. Massachusetts did have the second highest increase in seat belt usage rate from 2015 – a 4.1% rise. Kansas had the highest increase with 4.9%.

The impact of primary vs secondary seat belt law is evidenced by the difference in seat belt rate averages. For the 34 states with a primary law on the books, the average seat belt rate was 90.3%; for the 15 secondary law states, 81.9%- a difference of 8.4 percentage points. Research has found that, when used, seat belts reduce the risk of fatal injury to front-seat passenger car occupants by 45% and the risk of moderate-to-critical injury by 50%. For each percentage point increase in seat belt usage, more and more motor vehicle occupants are less likely to become a fatality or serious injury when involved in a crash. It is likely that Massachusetts legislators will continue working towards a primary seat belt law in an effort to further increase seat belt usage across the Commonwealth.

Because seat belts remain the most effective means of preventing death or injury as a result of a crash and the Massachusetts belt use rate remains below the national average, occupant protection safety will continue to be a major highway safety program area in FFY 2018.

Table 4.1 Massachusetts Seat Belt Use Rates

		2012	2013	2014	2015	2016	Change from 2012-2016
Nationwide Belt Use		86%	87%	87%	89%	90%	5%
MA Statewide Belt Use		73%	75%	77%	74%	78%	7%
Gender	Male	65%	69%	71%	67%	73%	12%
	Female	81%	81%	83%	83%	85%	5%
Age Group	Teen	72%	75%	80%	79%	83%	15%
	Adult	71%	74%	75%	73%	77%	8%
	Elder Adult	83%	82%	82%	80%	86%	4%
Occupant Role	Driver Alone	71%	74%	75%	73%	76%	7%
	Passenger	76%	77%	81%	76%	84%	11%
Vehicle Type	Passenger Car	75%	76%	77%	75%	78%	4%
	SUV	78%	80%	83%	81%	84%	8%
	Van	80%	81%	81%	82%	84%	5%
	Pick-Up Truck	57%	57%	60%	54%	64%	12%
	Commercial Vehicle	44%	51%	55%	46%	56%	27%
Functional Classification	Primary (Interstate)	80%	83%	85%	81%	84%	5%
	Secondary (Arterial)	74%	77%	78%	74%	79%	7%
	Local (All others)	71%	73%	75%	73%	77%	8%
State of Vehicle Registration	Massachusetts	72%	74%	76%	74%	78%	8%
	New Hampshire	73%	66%	69%	71%	77%	5%
	Other States	80%	85%	85%	84%	83%	4%
Region*	Region 1	72%	79%	77%	78%	79%	10%
	Region 2	76%	78%	81%	81%	80%	5%
	Region 3	77%	78%	78%	73%	83%	8%
	Region 4	69%	70%	75%	70%	79%	14%
	Region 5	75%	78%	78%	76%	79%	5%
	Region 6	68%	65%	73%	70%	72%	6%
	Region 7	70%	76%	73%	72%	76%	9%

Source: The Office of Grants and Research 2012 to 2016 Massachusetts Seat Belt Use Observation Surveys
*Region borders changed with the new methodology in 2012
Region 1 – Berkshire, Franklin, Hampden, Hampshire Counties
Region 2 – Worcester County
Region 3 – Middlesex County
Region 4 – Essex County
Region 5 – Norfolk, Suffolk Counties
Region 6 – Bristol County
Region 7 – Barnstable, Plymouth Counties

In 2015, Massachusetts roadways had 81 crashes involving an unrestrained fatality. Figure 4.1 shows the distribution of crashes across the Commonwealth. Of the 81 reported crashes, only 5 of them occurred in rural areas. The rest – 94% of the crashes – took place on an urban roadway. By roadway type, arterial roads accounted for 51% of all unrestrained crash locations in 2015. Interstate represented 25% of crashes, while local roads accounted for 19%.

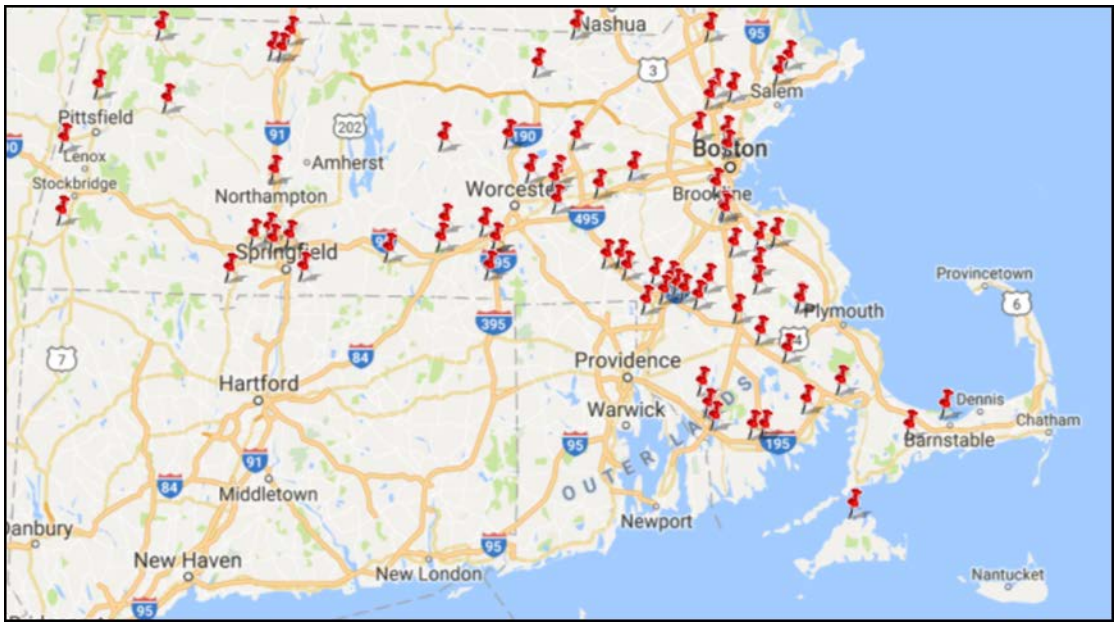

Figure 4.1 Unrestrained Fatal Crashes in 2015 (Source: FARS)

Over the past five years (2011-2015), unrestrained fatalities have occurred more often in the counties of Bristol, Middlesex and Worcester. These three counties account for 44% of all unrestrained fatalities. Less urbanized counties – Berkshire, Dukes, Nantucket, Franklin and Hampshire – represented only 9% of fatalities. The southeastern region of Massachusetts – Barnstable, Bristol and Plymouth – accounted for nearly a third of all unrestrained fatalities. The Metro Boston region – Suffolk, Middlesex and Norfolk – had 28% of all unrestrained fatalities.

	Total Fatalities: 2011-2015	
County	Unrestrained Fatalities	Percent of All Unrestrained Fatalities
Barnstable	25	5%
Berkshire	16	3%
Bristol	74	14%
Dukes	3	1%
Essex	49	9%
Franklin	14	3%
Hampden	45	9%
Hampshire	12	2%
Middlesex	72	14%
Nantucket	0	0%
Norfolk	49	9%
Plymouth	54	10%
Suffolk	25	5%
Worcester	84	16%
Total	**522**	

Table 4.2 (Source: FARS)

More and more drivers and passengers of motor vehicles are using restraints when traveling throughout Massachusetts. Since 2011, unrestrained passenger vehicle occupant fatalities have dropped 27% from 122 to 89. During the same period, unrestrained fatalities as a percentage of all motor vehicle-related fatalities declined from 49% to 29%.

Unrestrained fatalities by time-of-day for the five-year period of 2011-2015 show that fatalities occur most often between 12am and 3am. This time frame accounts for 24% of all unrestrained fatalities. The preceding period of time (9pm – 12am) represents 15% of the fatalities. Together, this six hour stretch from evening to early morning accounts for 39% of all unrestrained fatalities.

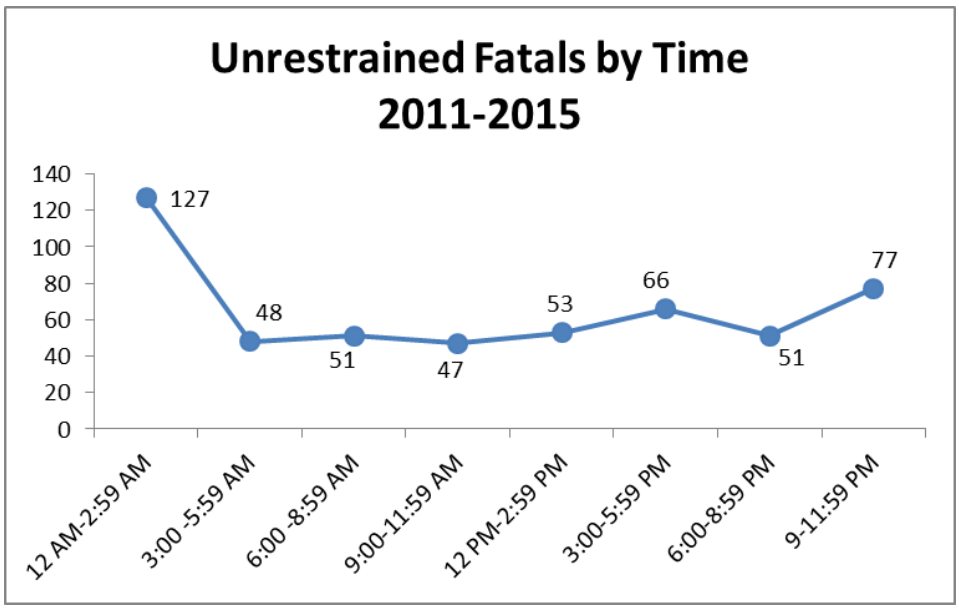

Figure 4.2 (Source: FARS)

By day-of-week, unrestrained fatalities happened more often over the weekend period (Friday through Sunday) than the weekday (Monday through Thursday) – 52% vs 48%, respectively. For Saturday/Sunday only, 37% of all unrestrained fatalities occurred. As Figure 4.3 shows, unrestrained fatalities tend to take place less often during midweek (Tuesday – Thursday) and rise significantly from Friday to Sunday.

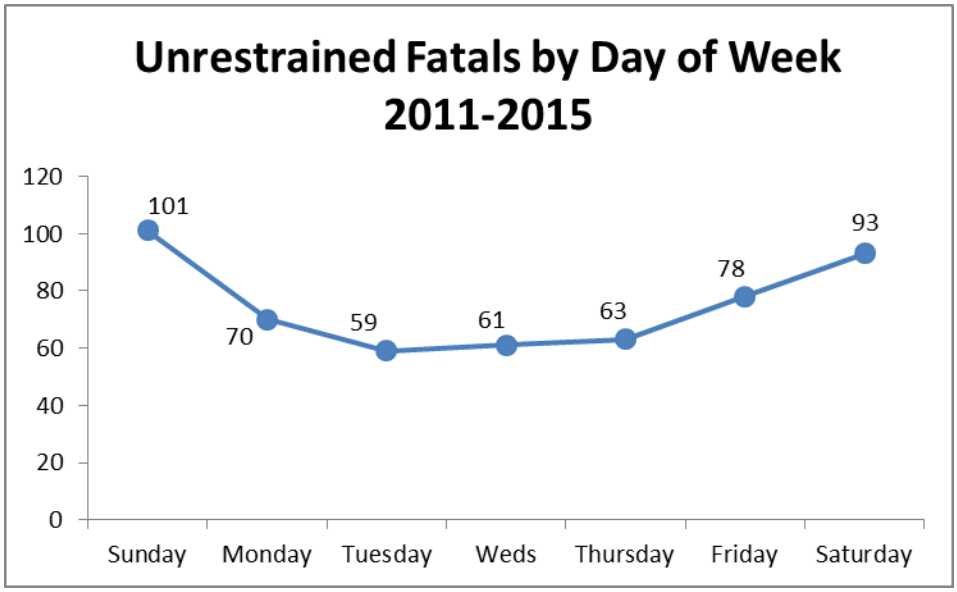

Figure 4.3 (Source: FARS)

By gender, males accounted for 70% of all unrestrained fatalities from 2011-2015 compared to 30% for females. Of the unrestrained male fatalities, 80% were drivers; female drivers, by comparison, accounted for 63% of all female unrestrained fatalities. Overall, across both genders, drivers were 75% of all unrestrained fatalities.

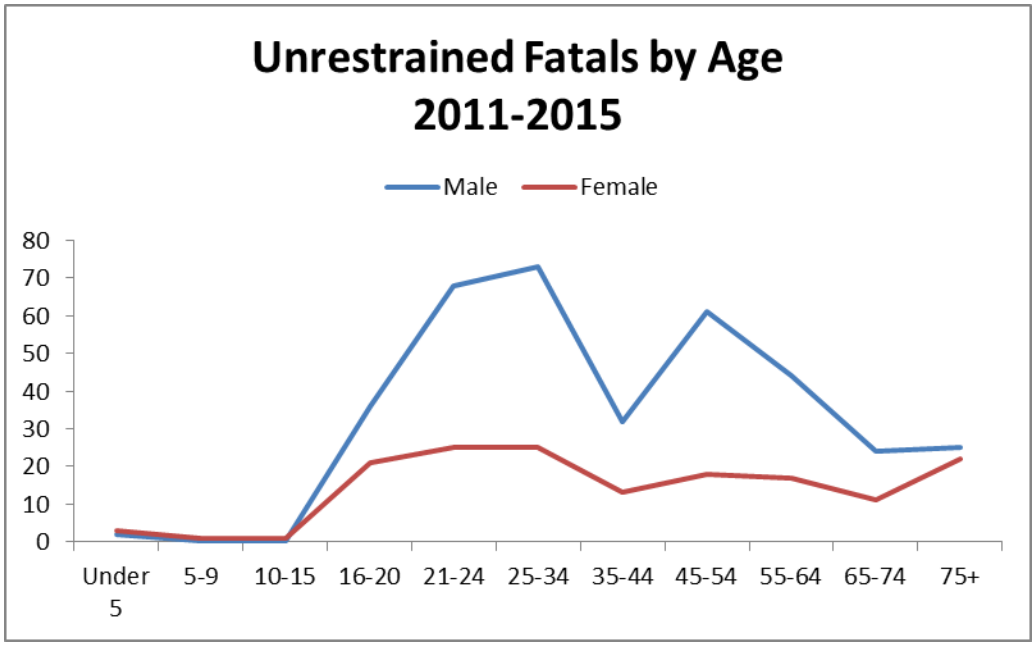

Figure 4.4 (Source: FARS)

When comparing males and females by age, both genders follow a similar trajectory with a spike at 16-20 that remains steady through age 25-34. The age group for 25-34 had the most fatalities for both genders – 39% of all male fatalities and 32% of all female deaths. Interestingly, both genders dipped down at age group 35-44.

After a slight drop, unrestrained fatalities rose again for the 45-54 age group and then slowly declined through 55-64, 65-74. The only age grouping where males and females diverged was the last one, age 75 or older. For this five-year period, the 75+ age group accounted for 14% of all female fatalities compared to 7% for male. One possibility for this divergence is the fact women tend to outlive men and are more likely to be still driving after 75 years of age.

By month of year (Figure 4.5), unrestrained fatalities from 2011-2015 are surprisingly similar from month to month. The average number of unrestrained fatalities per month is 43.58 and only four months – February, March, August, and October – fall below that. October seems to be the only real outlier with 29 total fatalities during this five-year period but there is a lack of evidence as to why this would be the case. In short, there is no 'good' month for unrestrained fatalities.

Lastly, the top communities for unrestrained fatalities from 2011-2015 were Boston (22), Springfield (11), New Bedford (10), Holyoke (9), and Taunton (9). In the previous five-year period (2010-2012), Worcester was in the mix with 12 fatalities but had dropped to 7 for 2011-2015.

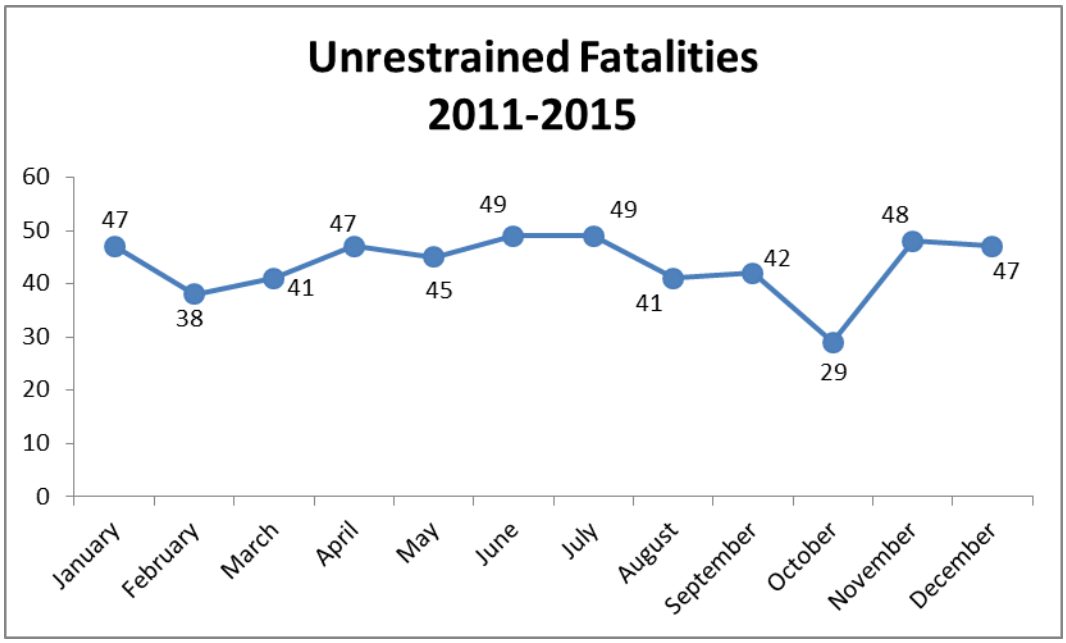

Figure 4.5 (Source: FARS)

Based on the data provided in this section on unrestrained fatalities, EOPSS/OGR/HSD will work with police departments, both local and state, to focus more enforcement activities during weekends with focus on times from 9pm-3am. Any media should target ages 16-34 and 45-54 of both genders, with focus on driver behavior. If drivers buckle up, passengers will too. Furthermore, funding Worcester, Bristol, and Middlesex Counties will be critical for increasing enforcement patrols in those areas with high unrestrained fatalities as well as increasing presence along local streets or roads within each community.

Seat Belt Violations

Table 4.3 presents seat belt and child safety violations issued along Massachusetts state- and locally-controlled roadways for all police departments. The number of overall violations has dropped 42% since 2012; and down 19% from 2015 to 2016. The issuance of violations is a good barometer of the impact our occupant protection programs have had on Massachusetts drivers over the past few years. Driver and passenger behavior are improving with regards to seat belt usage.

Table 4.3 Massachusetts Seat Belt and Child Safety Seat Violations

	2012	2013	2014	2015	2016
Seat belt Violations[a]	53,343	46,832	46,417	38,344	31,107
No Child Restraint Violations[b]	3,434	2,919	3,062	2,274	1,914
Total Violations	**56,777**	**49,751**	**49,479**	**40,618**	**33,021**

Source: MRB Quarterly Violations Report, January 2017

[a] Comprising Seat belt Violation (90 13A) and Seat belt (90 7BB), [b] No Child Restraint (90 7AA), No child Car Seat (90 7AA WC)

Occupant Protection Plan

Click it or Ticket (CIOT)

As its primary effort to increase seat belt, booster seat, and child safety seat use in Massachusetts, during May FFY 2018, we will conduct a statewide CIOT Mobilization. This will be based on the NHTSA High-Visibility Enforcement model involving traffic enforcement, paid and earned media, and community education. CIOT and all mobilizations will include traffic enforcement and messaging that will promote seat belt and child safety seat use and compliance with the Commonwealth's related laws.

OGR will award approximately $625,000 in grant funding for CIOT Mobilization overtime for state and local police traffic enforcement. The enforcement is anticipated to take place statewide with the MSP and 203 local police departments. A list of eligible police departments is provided in the Appendix (Table 13.4). Additionally, with the MSP also participating in this mobilization, over 70% of the population of Massachusetts will be impacted.

These saturation patrols will focus on all traffic violations with a special emphasis on seat belt and CPS violations. State and local police will develop deployment plans based on crash data to ensure their enforcement is data-driven and performed on the optimal days, times, and locations to reduce death, injury, and economic losses.

Sustained Occupant Protection Enforcement

In FFY 2018, to complement NHTSA's three national mobilizations, EOPSS/OGR/HSD will continue its sustained traffic enforcement program (STEP) with 16 "hot spots" for traffic injuries and fatalities that were selected based upon key crash data and tracks major citations such as seat belt, OUI and speeding violations.

The 16 selected participants are, by county location (2010 population in parentheses):

Barnstable County – Barnstable (45,189)

Bristol County – Fall River (88,857), New Bedford (95,072), Taunton (55,874)

Essex County – Lynn (90,329)

Hampden County – Chicopee (55,298), Holyoke (39,880), Springfield (153,060), Westfield (41,094)

Middlesex County – Cambridge (105,162), Framingham (68,318), Lowell (106,519)

Norfolk County – Quincy (92,271)

Plymouth County – Brockton (93,810)

Suffolk County – Boston (617,594)

Worcester County – Worcester (181,045)

During FFY 2016, 14 (Barnstable and Westfield were added in FFY 2017) selected 'hot spots' conducted 14,092 hours of patrol resulting in 39,046 traffic stops, which led to 3,256 safety belt citations and 167 child seat citations issued by local police departments. Data for FFY 2017 will be provided in the 2017 Annual Report. No current data from FFY 2017 can be reported at the time of writing this report due to delayed funding, which led to a late start in scheduling patrols by subrecipients.

Participating STEP police departments will continue conducting sustained enforcement year round with their own funding.

According to 2010 data from the U.S. Census Bureau, these 16 communities represent 29% (1,929,372) of the total Massachusetts population (6,547,629). Funding is also provided to the MSP, who are responsible for enforcement throughout the Commonwealth. Taken together, the State Police and 16 'hot spot' communities meet the required 70 percent coverage of the population.

Occupant Protection Media and Targeting High Risk Populations

The agency's statewide paid and earned media efforts during the 2018 CIOT Mobilization will clearly communicate the risks and costs of traffic crashes, the benefits of increased occupant protection use, and enforcement of the Commonwealth's occupant protection laws as a way to address those risks and costs.

A draft paid and earned media plan for the mobilization has been developed with a contractor (see occupant protection attachment D). The media plan will target high-risk population groups including teen and minority drivers. The primary audience for the CIOT Mobilization will be white males 18 to 34. Secondary efforts will be directed at teen drivers and Latino and African-American males ages 18 to 34. Primary and secondary audience targets were determined from the outcome of the 2016 Statewide Seat belt Observational Survey as well as data from the Fatality Analysis Reporting System (FARS).

The 2016 Statewide Seat Belt Observational Survey revealed that the lowest observed belt usage was found among three groups: males (73% usage), African-Americans (74%), and Hispanics (69%). While these demographic groups each saw increases in seat belt usage from 2015, the rates are still lower than those for other key demographics including women (85%), motor vehicle passengers (84%), and elder adults (84%). Teenagers have increased in seat belt usage 15% from 2012 to 2016 which may in part be attributed to our work as well as the RMV's hard work in education and outreach to young drivers.

Data from FARS show that those between the ages of 16 to 34 accounted for 48% of all unrestrained fatalities from 2011 to 2015, with males representing 75% of all fatalities within that age range. The top five cities with the highest unrestrained fatalities during the 2010-2014 period – Boston (22), Springfield (11), New Bedford (10), Taunton (9), and Holyoke (9) – are also locations of current and planned FFY 2018 sustained enforcement efforts, which shows we have year-round countermeasures in place to target high-risk regions and demographics.

While data reveals the 21-34 age group to having the highest unrestrained fatalities from 2011-2015, EOPSS/OGR/HSD will continue efforts at outreach and education of the youngest, newest drivers for long-term impact. Teen driver can be targeted through driver education courses, social media, and educational institutions (high school, college/university); whereas, the 21-34 age group will not have such locations of high concentrations as teen drivers will have for outreach impact.

NHTSA's national paid media campaign is expected to include broadcast and cable television, radio, online media and social media. The plan will support the national buy with digital and television advertisements.

EOPSS/OGR/HSD will conduct earned media work during the 2018 CIOT Mobilization in close cooperation with NHTSA, the MSP's Office of Media Relations, and participating local police. This work will highlight the coordinated effort of state and local police in this campaign. News releases will be developed by agency staff and tailored to participating departments, who will distribute to their local media contacts resulting in up to 203 local and regional newspaper articles. The agency will work with the media contractor to develop an additional news release to announce paid media efforts and will forward video links to all of our traffic enforcement stakeholders for sharing on their social media platforms.

The CIOT media campaign will also target the state's lowest seatbelt usage populations as identified in the annual Seatbelt Survey. Preliminary results of the 2017 Seatbelt Survey indicate African-Americans and Latinos among the lowest usage demographics. During casting and/or production of media in FFY 2018, EOPSS/OGR/HSD will ensure participants/actors reflect target audiences so a better connection can be made with those of African-American and/or Latino decent and the need to buckle up. When planning for media buys, market analysis will be performed to make sure the mediums to be used and the programming being purchased provides a significant reach potential for at-risk groups, including African-Americans and Latinos.

In cooperation with RMV and a non-profit organization called "Promise to Adam," we are developing a short 10-12 minute video on driving safety which will be shown regularly at every driver education organization across the Commonwealth. Funded by a Ford Driving Skills for Life grant through GHSA, the video is slated to be completed by the end of June 2017 and will cover key topics such as distracted driving, occupation protection, and impaired driving. The video will also include testimony from parents and friends of a young man that died several years ago in a one-car crash. The victim was speeding and not wearing a seat belt at the time of the crash.

CPS Plan

Massachusetts has excelled at expanding a very effective CPS program for many years. A 2008 amendment to the Massachusetts CPS law required all children riding in passenger motor vehicles to be in federally-approved child passenger restraints that are properly fastened and secured until they are either eight years of age or 57 inches in height. This is a primary

enforcement law in Massachusetts. Since passage of this law, it has been imperative to ensure that the public is informed of these laws and that CPS technicians are properly trained.

Since FFY 2014, the vendor for administration and training of our CPS program has been Baystate Medical of Western Massachusetts. For FFY 2017, Baystate is expected to conduct at least 25 CPS technician-related classes, including classes on Special Health Care Needs, Ambulances, and School Buses.

Baystate Medical of Western Massachusetts will continue to be the vendor for us in FFY 2018. Responsibilities of the vendor include administering CPS training and certification sessions, scheduling CPS checkup events, and handling day-to-day CPS Hotline inquiries. CPS courses scheduled during FFY 2018 will ensure the opportunity for training new technicians, the recertification of current technicians, and the ability to renew certifications for those technicians whose accreditation has recently lapsed.

At this time, Baystate Medical has not determined the date and location of upcoming FFY 2018 CPS classes. This doesn't happen until the latter part of September 2017, when a contract between EOPSS/OGR/HSD and Baystate Medical for FFY 2018 has been completed. Based upon previous years, as well as last year's efforts, there should be at least five CPS Tech, five CPS Tech Renewal, five CEU Update and one Special Needs along with classes – depending on demand – on Bus and Ambulance Training. Locations are typically spread across the Commonwealth to ensure CPS techs can attend a class regardless of what part of the state they reside in. As for attendance, there will be approximately 300-400 participants across the numerous classes offered during FFY 2018. This is based upon overall attendance averages from the past few years.

The agency expects to award $200,000 in CPS Equipment Grants to municipal public safety agencies and non-profit organizations during FFY 2018 for the purchase of child safety seats. The awards will be based upon several factors including experience with this grant, a certified technician on staff, a commitment to a minimum of two required community checkup events or a commitment to a regular fitting station schedule during the year and the schedule/availability of certified technicians within each organization. Applicants must also demonstrate a need within their community or region and a commitment to serve low-income and diverse populations. For FFY 2018, we are expanding the applicant pool to include public colleges and universities in Massachusetts.

Ongoing media efforts for public education include sample customizable press releases to be used by subrecipients to publicize their CPS activity during the grant period. Additionally, we conduct paid media advertising highlighting CPS tips and resources, and also regularly airs a digital billboard on CPS safety through MassDOT's Office of Outdoor Advertising, which is free through their PSA program.

CPS Technicians

The Massachusetts CPS program consistently recruits, trains and maintains a sufficient number of technicians and instructors. The CPS Program uses the NHTSA-standardized curriculum for instructors and technicians, which is reviewed by the National Child Passenger Safety Board. As of June 1, 2017, there are 803 Certified CPS Technicians, including 46 that have Special

Health Care Needs certification. There are 22 Certified CPS Instructors, of which 14 have Special Health Care Needs certification. The current program coordinator for the CPS program is also a certified CPS technician, which provides expert insight to the oversight of the project.

Over 10 classes are expected to run from October 2017 – September 2018, which will increase not only the number of new CPS technicians but also help recertify current ones. From January 2016 – December 2016, Massachusetts' recertification rate was 63% - above the national average of 59% for the same time frame.

There are over 140 fitting and inspection stations across Massachusetts serving all geographic areas and populations. In FFY 2017, we created a 'site locator' page within the Child Passenger Seat portal on Mass.gov (http://www.mass.gov/eopss/crime-prev-personal-sfty/traffic-safety/cps/site-locator/) The new webpage has eased the burden for site visitors to locate nearby fitting and inspection stations. During FFY 2016, there were 72 publicized checkups across the Commonwealth and so far in FFY 2017, there have been 23 checkups. A list of current Statewide Fitting Stations and Checkups by CPS subrecipients can be found in Attachment C.

Based on the data contained in this section, we will make recommendations to local police departments and MSP so that they can make more informed decisions about where to deploy resources. For instance, a recommendation to conduct seat belt enforcement during the work week and during afternoon hours and rush hour periods will be made.

Performance Targets

Occupant Protection Performance Target #1

Decrease unrestrained vehicle occupant fatalities 10% from the five-year average of 105 in 2011-2015 to a five-year average of 95 by December 31, 2018.

Occupant Protection Performance Target #2

Increase observed seat belt use rate by 5% from the five-year average of 75 in 2012-2016 to a five-year average of 79 by December 31, 2018.

Performance Measures

Number of unrestrained passenger vehicle occupant fatalities

Percent of front seat outboard vehicle occupants who are observed to be using seat belts

Strategies

1. Provide funds to state and 203 local police departments for CIOT enforcement
2. Fund paid and earned media regarding the dangers of driving unbelted
3. Enlarge the impact of efforts to increase seat belt use by white males 18 to 34, teen drivers, Latino males and African American males ages 18 to 34, and those living in urban areas and throughout southeastern Massachusetts
4. Provide funds to 16 selected communities for sustained enforcement of seat belt use

5. Encourage other state and local law enforcement to participate in sustained enforcement of seat belt laws
6. Urge the media to report occupant restraint use when reporting on crashes
7. Expand the impact of efforts to increase proper use of child safety seats, including booster seats
8. Increase the number of CPS equipment grant recipients and continue to require at least two checkup events during the grant period
9. Continue to provide funds to administer the CPS program and provide training
10. Provide a toll free CPS hotline
11. Conduct the annual seat belt observation survey
12. Support law enforcement with training and technical assistance aimed at increasing their effectiveness to increase occupant protection usage for all age groups
13. Provide funding for three part-time LELs (task listed in PT section)

Occupant Protection Program Area Projects

OP-18-01 Paid and Earned Media in Support of Occupant Protection

Develop and implement statewide paid and earned media to support occupant protection efforts specifically during the October 2017 MSP CIOT Mobilization, the May 2018 CIOT Local and State Police Mobilization, and for sustained enforcement. EOPSS/OGR/HSD's communications vendor, Argus, will be handling the media implementation. Media efforts will educate the public, and specifically high-risk populations, about the benefits of seat belt, booster seat, and child safety seat use as well as the importance of compliance with the Commonwealth's occupant protection laws. This task will meet the requirements within the Grant Funding Policy Part II E by ensuring that all television public service announcements include closed captioning. In addition, they will be evaluated based on the criteria in the 402 Advertising Space Guidance. We follow a system like the NHTSA Communications Pyramid. Strong internal policies are followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular enforcement. Crash and citation data, as well as 2017 Observational Seat belt Survey results will be used not only for planning enforcement activities but also to determine the target audiences, and media channels used to reach them. NHTSA's guidelines are followed for messaging, demographics, best practices and target groups for each media effort. This task is supported by CTW Chapter 2, Sections 2.1, 3.1, 3.2, 5.1, and 6.2. This task will support all performance targets.

Project Budget/Source – $675,000 (Sec. 405b) [Paid - $615,000; Earned - $60,000]

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –John Fabiano

OP-18-02 CIOT MSP Enforcement Campaign

Provide funds for overtime by the MSP to participate in two CIOT Mobilizations; one in October/November 2017 and one in May/June 2018. Enforcement efforts will focus on increasing compliance with occupant protection laws during the day and night and will take place at times and locations shown to have high incidence of motor vehicle crashes based on the most current state and local crash and citation data. Other violations such as speeding and texting may also be targeted during this mobilization. Media component to support campaign will include paid and earned media, social media outreach, digital billboards and blog entries. This task is supported by CTW Chapter 2, Sections 2.1, 2.2, 3.1, 3.2, and 5.1 and all overall FFY 2018 performance targets.

Project Budget/Source – $500,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $169,000

Maintenance of Effort - $23,967,110 **Local Benefit** - $0

Project Staff – Deb Firlit

OP-18-03 CIOT Local Police Enforcement Campaign

Provide funds for overtime enforcement to 203 local police departments for occupant protection initiatives, including the CIOT mobilization (May 2018). Enforcement will focus on increasing seat belt use during the day and night. Patrols will be conducted during high-risk times and locations based on the latest available state and local data. Eligibility was based upon 2012-2014 crash data, subtracting crashes the MSP responded to, and then normalized by state population. Any community with a crash rate equal to or above 0.09 is deemed eligible for this program. Under this project, participating departments may request funding for equipment that can be utilized for occupant protection-related traffic enforcement and associated messaging measures. Equipment will not be offered as incentives to participate, but rather as items that may assist in the apprehension and education of unsafe drivers. Eligible departments are listed in the appendix under Table 13.1, and participating departments will be submitted to NHTSA, along with respective equipment requests in late summer 2017. This task is supported by CTW Chapter 2, Sections 2.1, 2.2, 3.1, 3.2, and 5.1. This task will support all performance targets.

Project Budget/Source – $625,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Lindsey Phelan

OP-18-04 CPS Equipment Grants

Provide grants to local municipal entities, University Police Departments, Community College Police Departments and/or regional non-profit organizations to purchase car seats through our agency -selected vendor, Mercury Distributing. Grants are $3,500 for municipalities and $5,000 for non-profit regional organizations. Car seats will be delivered by vendor directly to subrecipients. Award winners were selected based upon clear identification of low-income families in their respective community as well as plans to outreach these populations and the general public. All departments receiving seats provide an active fitting station with at least one certified CPS technician. The CPS Program consists of two sections, one is the CPS equipment grant, and the other is the CPS Administration grant. The CPS equipment grant is OP-18-04 where federally approved car seats are distributed to qualifying agencies. The CPS Administration grant is OP-18-05 and it will provide funding to Baystate Medical Center who oversees the scheduling of all CPS Technician classes and runs the car seat emergency hotline. Subrecipients are listed in the Appendix under Table 13.5. This task is supported by CTW Chapter 2, Sections 7.2 and 7.3. This task will support occupant protection performance targets 1 and 2.

Project Budget/Source – $200,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $200,000

Project Staff – Ali Leduc

OP-18-05 CPS Program Administration and Training

Provide funding to continue using Baystate Medical Center as the administrator of the Statewide CPS program. This is a one-year contract. Baystate will be responsible for recruiting, training and maintaining a sufficient number of certified CPS technicians and instructors in Massachusetts. A minimum of 10 courses will be conducted. Topics will include CPS Technician, CPS Technician Renewal, CPS Update, CPS Special Needs, CPS School Bus, and CPS Ambulance. Baystate Medical will also assist the agency in planning the CPS conference. The CPS telephone information line will also be handled by Baystate. This task is supported by CTW Chapter 2, Sections 3.1, 3.2, 5.1 and 6.1. This task will support occupant protection performance targets 1 and 2.

Project Budget/Source – $200,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Ali Leduc

OP-18-06 CPS Conference

Our agency will utilize funding to conduct a CPS conference for up to 250 attendees, including certified technicians and instructors. Topics will include national and state updates and changes in current CPS laws, regulations, and standards for CPS seats. The conference will take place in Marlborough, MA from October 12-14, 2017. We estimate that speaker fees will be approximately $450 per speaker and conference space will be $20,000. This task is supported by CTW Chapter 2, Section 3.1, 3.2. This task will support occupant protection performance targets 1 and 2.

Project Budget/Source – $30,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $6,760

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Ali Leduc

OP-18-07 Sustained Traffic Enforcement Program

Sustained enforcement of traffic laws will be conducted in 16 selected communities. These 'hot spots' were selected based upon crash and motor vehicle violation data from MassTRAC, RMV and FARS. The selected local police departments will receive additional overtime funding to enforce seat belt laws in addition to speeding, impaired driving, distracted driving and other traffic safety topics; a portion of the funding may be used for data entry and/or traffic data analysis. A list of the selected areas is provided in the Appendix under Table 13.3. This task is supported by CTW Chapter 2, Sections 2.1, 3.1, 3.2, Chapter 3 Section 2.2 and all overall FFY 2018 performance targets.

Project Budget/Source – $338,750 (Sec. 402) and $338,750 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $338,750

Project Staff – Deb Firlit

OP-18-08 Seat Belt Observation Survey

Provide funding for UMassSafe, a research program at UMass-Amherst, to conduct the statewide seat belt observation survey utilizing NHTSA methodology. This survey is required from all states by NHTSA and will take place following the May-June CIOT Mobilization. This survey will capture demographic data to assist measuring performance and targeting future occupant protection programs. A final report will be submitted to us for review and

dissemination. This task is supported by CTW Chapter 2, Section 3.1, 3.2. This task will support occupant protection performance targets 1 and 2.

Project Budget/Source – $100,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $26,000

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Bob Kearney

OP-18-09 Educational Outreach to Young Drivers

Funds will be provided to selected subrecipients to educate young drivers on the importance of wearing seat belts. According to the 2011 MYHS, conducted by DPH, approximately 7% of students reported that they never/rarely wore a seat belt. Methods for outreach can include, but are not limited to, school presentations, peer-to-peer workshops, safety fairs, and informational campaigns. An evaluation component will be included. Funding will be used to cover expenses related to personnel, educational materials, consultants, travel/driving costs and office supplies. This task is supported by CTW Chapter 2, Section 3 and Chapter 6, Section 2.1, 2.2. This task will support all core performance targets as well as Younger Driver target 2.

Program Budget/Source – $50,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Program Staff – Bob Kearney

OP-18-10 MSP Car Seat Checkpoints

Funds will be provided to the MSP for conducting approximately 6-8 child car seat safety checkpoints throughout Massachusetts. These checkpoints will provide the public information on the latest CPS laws, regulations and standards for CPS seats as well as assisting the public with proper car seat adjustments if necessary. Checkpoint locations and date are yet to be determined. Low-income and car seat violation analysis will be used to assist MSP in selecting the location and duration for the checkpoints. Funding for this task is for MSP overtime pay only. No car seats will be purchased with this funding. This task is supported by CTW Chapter 2, Section 7.2. This task will support occupant protection performance targets 1 and 2.

Project Budget/Source - $27,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $9,126

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

OP-18-11 MSP Young Drivers Education Program

Funds will be provided to the MSP for educating young drivers as well as the general public on the importance of wearing a seat belt and the dangers of impaired driving. MSP will conduct demonstrations of the Rollover Simulator, SIDNE vehicle (Simulated Impaired Driving Experience) and a Marijuana Simulation Kit at high schools, on weekends and, highly populated events in Massachusetts. This task will also provide funds for the purchase of a new Rollover Simulator, replacing the present one that is over 10 years old and the purchase of a SIDNE vehicle upgrade to conduct demonstrations that relate to advanced automobile technology. Additionally, this task will provide funds for the purchase of a Marijuana Simulation Kit to help educate the community about the potential dangers that can result from recreational marijuana use. Before the purchase of any equipment greater than $5,000, prior authorization will be received from NHTSA. The MSP will abide by all BAA requirements. This task is supported by CTW Chapter 2, Section 7.1 and Chapter 6 Section 2.1, 2.2. This task will support occupant protection performance targets 1 and 2 and impaired driving performance targets 1 and 2.

Project Budget/Source - $76,500 (Sec. 405b) and $2,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $26,533

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

OP-18-12 MSP STEP Enforcement

In support of occupant protection laws, this task will provide funds to the MSP to deploy sustained and selective "zero tolerance" traffic enforcement overtime patrols on the day/time/location identified in each respective Troop to augment local police department efforts within the same general location as outlined in support of the STEP program. MSP STEP enforcement patrols will provide maximum visibility for deterrent purposes and saturate target areas taking immediate and appropriate action on all motor vehicle violations, with particular focus on seat belt usage, child passenger safety infractions and speed. Funds will also be provided to MSP for the purchase of 100 Radar Units and ALPR Software Upgrades. Purchase of radar unit and ALPR software will enhance MSP enforcement efforts. This task is supported by CTW Chapter 2, Sections 2.1, 3.1, 3.2, and Chapter 3 Sections 1.1, 1.2, 2.2. This task will support all performance targets.

Project Budget/Source – $125,000 (Sec. 405b) and $125,000 (Sec 402); 100 Radar Units $215,000 (402); ALPR Software Upgrades $5,000 (402)

Match Amount - $0 **Indirect Cost** - $84,500

Maintenance of Effort - $11,983,555 **Local Benefit** - $0

Project Staff – Deb Firlit

OP-18-13 Statewide CPS Information Line

Provide funding for designated CPS Administrator to respond to all calls made to the Statewide CPS Information Line (previously called the CPS Hotline). The CPS Administrator, Baystate Medical Center, will keep a log of all calls which will be submitted to HSD monthly. This task is supported by CTW Chapter 2, Section 6.2. This task will support occupant protection performance targets 1 and 2.

Project Budget/Source – $550 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $271

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Ali Leduc

OP-18-14 Occupant Safety and Impaired Driving Awareness Display Vehicle

This program will build upon a successful pilot that took place in the spring and summer of 2017. During the pilot, a mock crashed vehicle with crash test dummies was used to visually display the consequences of not using safety belts during the CIOT campaign. One dummy used the belt; the other did not and was projected halfway through the broken windshield. As part of the CIOT campaign the vehicle was moved to several locations including a AAA office; a high school in Arlington; the City of Worcester where it was integrated into a CIOT High Visibility Enforcement Mobilization; and the City of Fall River Boys and Girls Club. Funds may be used for supplies, vehicle transport, storage, and media expenses. This task is supported by CTW Chapter 1 Sections 2.1, 2.2, 5.2, and 6.5; and Chapter 2, Sections 2.1, 3.1, 3.2, 6.1 and 7.1. This task will support occupant protection performance targets 1 and 2 and impaired driving performance targets 1 and 2.

Project Budget/Source – $2,500 (Sec. 405d), $2,500 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Ed O'Leary

OP-18-15 "Buckle Up" Road Signage

This program will install permanent "Buckle Up" road signs. Although there have been small improvements, Massachusetts still ranks well below the national average for seat belt use. With over 500 unbelted fatalities from 2011-2015, it is clear that the state has much more work to do and needs to try new approaches. The FAST Act has made a project that promotes public awareness of highway safety matter or enforces highway safety laws no longer eligible under

HSIP. Between 150 and 500 signs, which will be to USDOT code, will be installed across the Commonwealth. The most recent seat belt usage data and other key research data will be used to determine locations. Based on current understanding of use, the signs will likely be placed on non-interstate state roadways with a focus on more urban population centers. DOT information regarding vehicle counts and data on driving populations/demographics, when available, will help further customize sign locations. This task is supported by CTW Chapter 2, Section 3.1, 3.2, and 4.1. This task will support occupant protection performance targets 1 and 2.

Project Budget/Source – $250,000 (Sec. 405b)

Match Amount - $0 **Indirect Cost** - $2,275

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano

OP-18-16 Traffic Safety Excellence Recognition Awards

Funds will be provided to purchase awards and support the costs associated with a recognition ceremony that recognizes public and private sector individuals and/or entities such as police departments that demonstrate superior performance or exceptional contributions to the purposes served by established highway safety programs regarding the benefits of all traffic safety topics including but not limited to seat belt usage, impaired and distracted driving, through education and messaging. Award recipients will be selected by EOPSS/OGR/HSD staff based on various traffic safety data and information provided by select subject matter experts.

"Employee recognition is…acknowledgement of a person's or team's behavior, effort or business result that supports the organization's goals and values", says Kim Harrison, Principal, Cutting Edge PR, Australia. He continues to say, "…recognition has a huge communication component! Recognizing people for their good work sends an extremely powerful message to the recipient, their work team and other employees through the grapevine and formal communication channels. Employee recognition is therefore a potent communication technique."

This task is supported by CTW Chapter 1, Section 5.1, 5.2; Chapter 2, Section 3.1, 3.2; Chapter 4, Section 2.1, 2.2. This task will support all performance targets.

Project Budget/Source – $5,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $5,000

Project Staff – Bob Kearney

OP-18-17 Program Management

Provide sufficient staff to conduct related programming described in plan as well as cover in and out of state travel, professional development expenses, conference fees, postage, and office supplies.

Project Budget/Source – $250,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $67,600

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Ali Leduc, Bob Kearney, Deb Firlit, Lindsey Phelan, John Fabiano, Jeffrey Brownell and, Brook Chipman

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Occupant Protection: Budget Summary

Project Number	Project Title	Budget	Budget Source
OP-18-01	Paid and Earned Media in Support of Occupant Protection	$ 675,000	405b
OP-18-02	CIOT MSP Enforcement Campaign	$ 500,000	405b
OP-18-03	Local Police Enforcement Campaign	$ 625,000	405b
OP-18-04	CPS Equipment Grants	$ 200,000	402
OP-18-05	CPS Administration and Training	$ 200,000	405b
OP-18-06	CPS Conference	$ 30,000	405b
OP-18-07	Sustained Traffic Enforcement Program (STEP)	$ 338,750	402
		$ 338,750	405b
OP-18-08	Seatbelt Observation Survey	$ 100,000	405b
OP-18-09	Educational Outreach to Young Drivers	$ 50,000	405b
OP-18-10	MSP Car Seat Checkpoints	$ 17,000	405b
OP-18-11	MSP Young Drivers Education Program	$ 67,000	405b
		$ 2,000	405d
OP-18-12	MSP STEP Enforcement	$ 125,000	402
		$ 125,000	405b
OP-18-13	Statewide CPS Information Line	$ 550	405b
OP-18-14	Occupant Safety and Impaired Driving Awareness Display Vehicle	$ 2,500	405b
		$ 2,500	405d
OP-18-15	"Buckle Up" Road Signage	$ 250,000	405b
OP-18-16	Traffic Safety Excellence Recognition Awards	$ 5,000	402
OP-18-17	Program Management	$ 250,000	402
	Total All Funds	**$ 3,904,050**	

5.0 Motorcycle Program Area

Problem Identification and Analysis

The popularity of motorcycling continues to grow as vehicle miles traveled by motorcyclists across the nation has doubled since 2004. In 2015, motorcycle-related fatalities comprised 17% of the total motor vehicle fatalities in Massachusetts, up from 13% in 2014. Despite this small rise in fatalities, motorcyclist's deaths have dropped 23% since 2010 – from 61 to 47.

Data from 2015 revealed that in Massachusetts, 88% of operators involved in fatal crashes were wearing helmets, compared to 53% nationwide. The high helmet usage and low unhelmeted rate are due mainly to Massachusetts' mandatory helmet law. However, helmet use is only part of the educational efforts that must be conducted in order to ensure motorcyclist safety in Massachusetts; riders statewide must be further trained and educated about all aspects of motorcycle safety, including roadway rules and regulations, licensing requirements, and proper equipment usage.

The RMV is the lead agency at the state level for administrative, management, operational oversight and control of the Massachusetts Rider Education Program (MREP). EOPSS/OGR/HSD receives funding from NHTSA for the Massachusetts Motorcycle Safety Program and provides this funding through an interdepartmental service agreement to the RMV for additional programming, which includes media campaigns, training Rider Coaches, and conducting a pilot sport bike program.

Although the MREP is not housed in the state highway safety office, the RMV and EOPSS/OGR/HSD work very closely on the Motorcycle Safety Program and collaborate on applications that are submitted to NHTSA. For instance, we partnered with the RMV to submit a proposal for a grant through NHTSA to help increase proper motorcycle licensing in Massachusetts. Massachusetts was awarded this grant and as part of this initiative, EOPSS/OGR/HSD and the RMV created posters for display and flyers for dissemination at RMV branches and motorcycle dealerships to show the importance of training and being properly licensed. To help law enforcement better understand the many types of registration and licensing requirements for motorcycles, limited use vehicles, mopeds and motorized scooters, along with the RMV, we created pocket guides and a roll-call video for law enforcement.

In 2015, motorcyclist fatalities occurred in all but four counties across Massachusetts. Worcester County had the most fatalities with 9, followed by Plymouth and Middlesex – both with 7 fatalities. These three counties accounted for nearly 40% of all motorcycle fatalities in 2015.

From 2011-2015, Worcester County led all counties with 38 motorcycle fatalities – 16% of the 230 reported fatalities during this five-year period. Plymouth and Bristol were close behind with 30

and 29 fatalities, respectively. These three counties represented 42% of all motorcycle fatalities from 2011-2015.

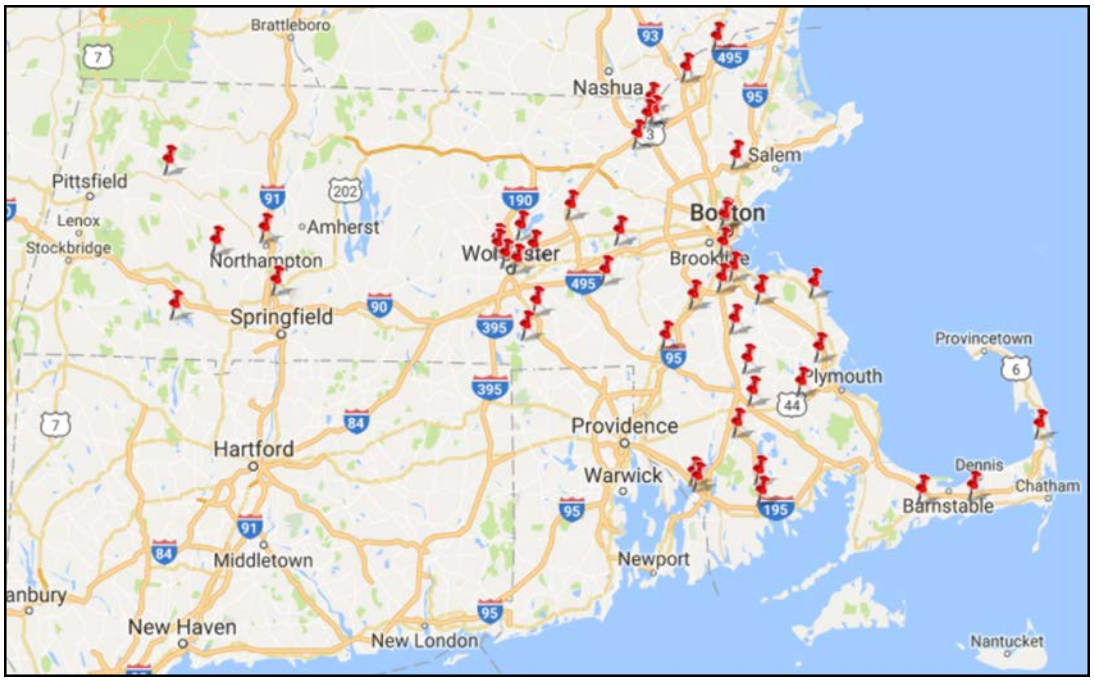


Figure 5.1 Motorcycle Fatalities in 2015 (Source: FARS)

As the map above and Figure 5.2 below shows, most motorcycle fatalities occurred in central through eastern Massachusetts. Surprisingly, the counties with less traffic and more scenic routes (Berkshire, Barnstable, Franklin, and Hampden) had the lowest motorcyclist fatalities.

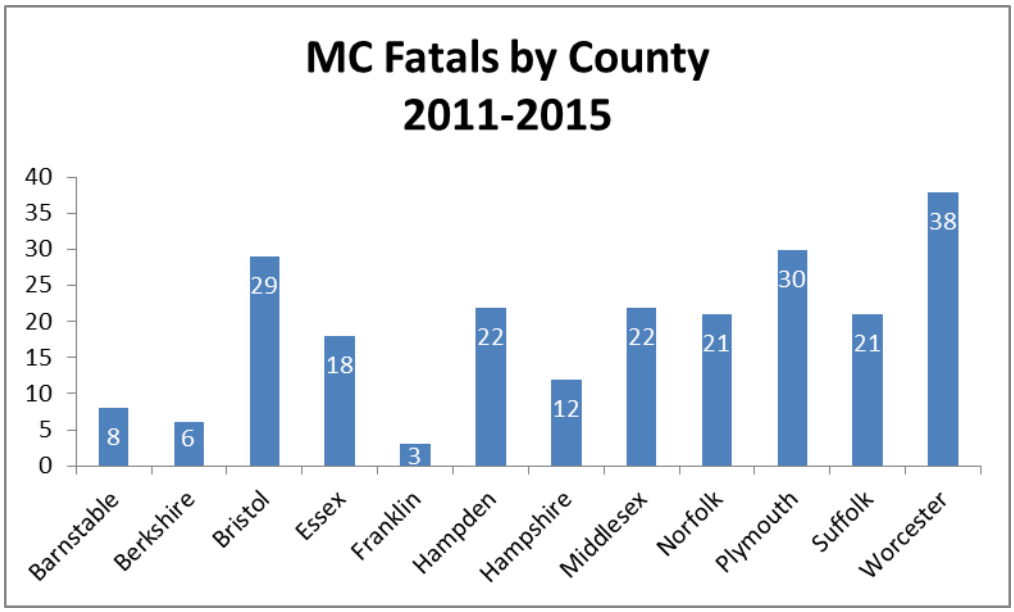


Figure 5.2 (Source: FARS)

Speeding was involved in 38% of the motorcycle fatalities from 2011-2015 and males accounted for 93% of all fatalities.

By day of week, motorcycle fatalities occurred most often over the weekend – Saturday and Sunday – representing 40% of the fatalities. If Friday is included as part of the weekend fatality count, then the three-day period would account for 54% of the total motorcycle fatalities from 2011-2015.

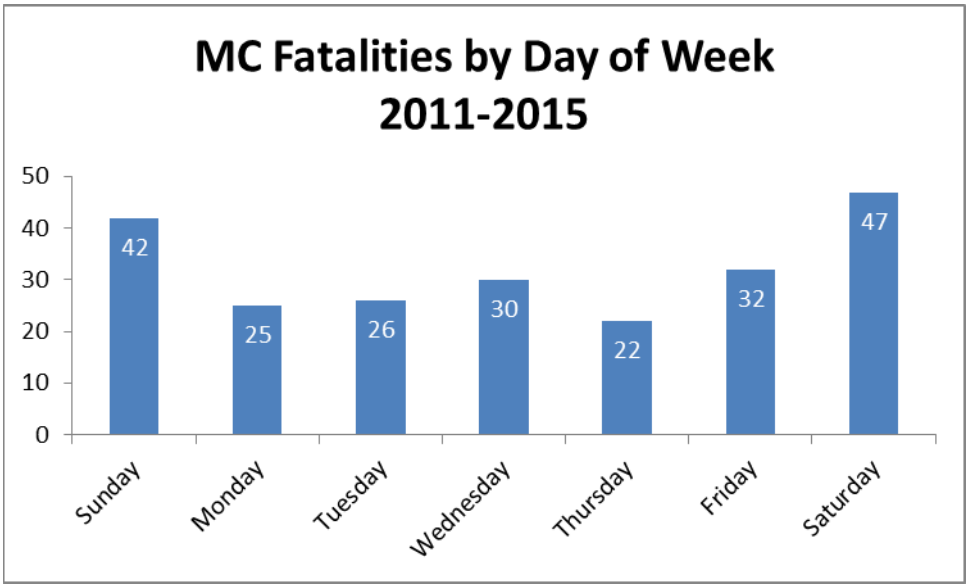
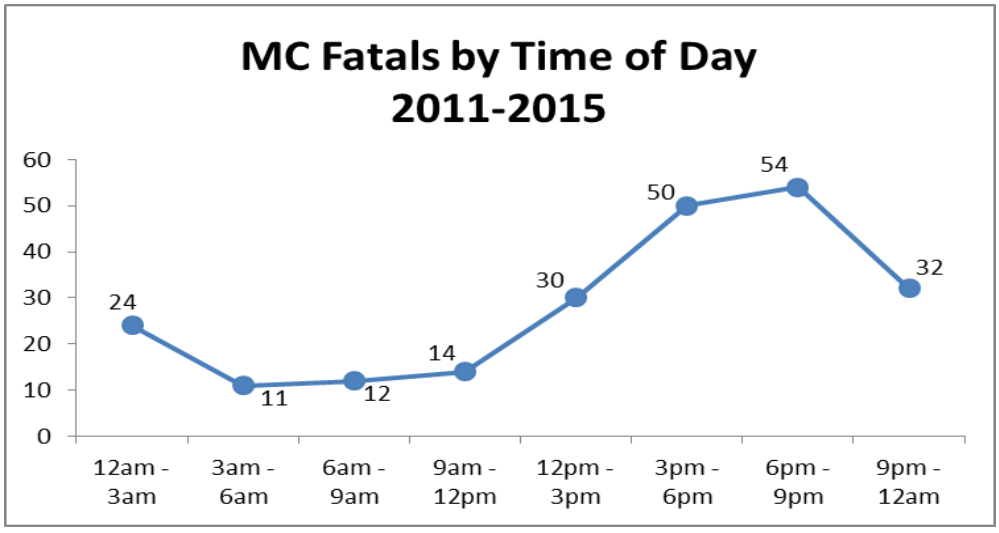


Figure 5.3 (Source: FARS)

By time of day, motorcycle fatalities occurred more regularly during the 3pm – 9pm period, same as during 2010-2014. This time frame accounted for 46% of total fatalities reported. The higher amounts are likely due to increased traffic (rush hour), poor visibility (nighttime), and alcohol-impaired driving among other factors.

Figure 5.4 (Source: FARS)



By age group, motorcycle fatalities among the 25-34 years of age group accounted for 26% of all fatalities from 2011-2015, followed by the 21-24 and 35-44 age groups at 18% and 17%, respectively. Motorcycle fatalities weren't limited to younger riders as motorcyclists age 45 or older represented 32% of all fatalities.

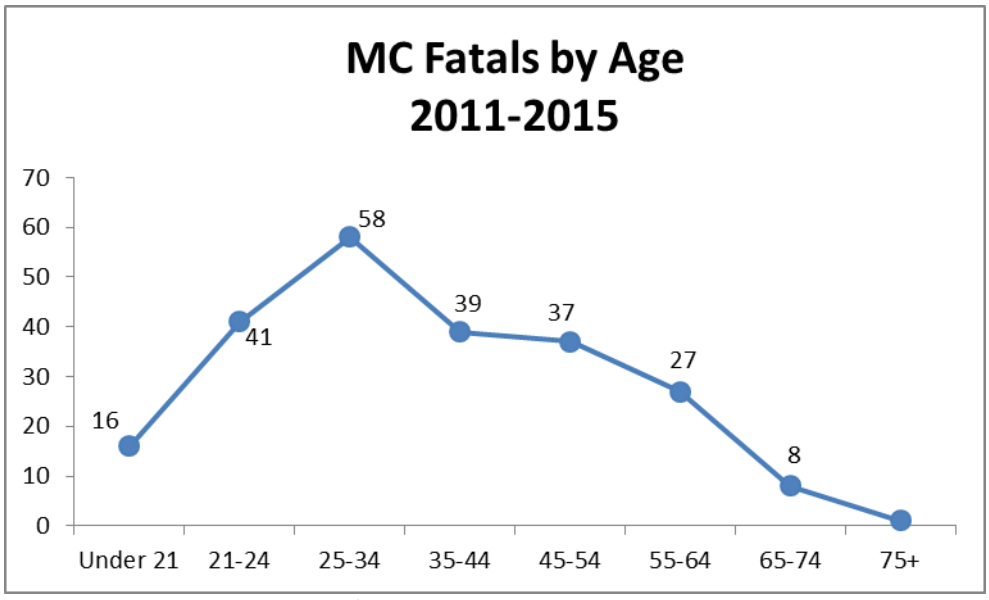


Figure 5.5 (Source: FARS)

By operator age at time of involvement in a fatal crash, the 25-34 age group led the way with 24% of all motorcycle operators involved. Like motorcycle fatalities, the 21-24 and 35-44 age groups were not far behind with 19% and 18% of all operators. These three age groups accounted for 61% of all motorcycle operators

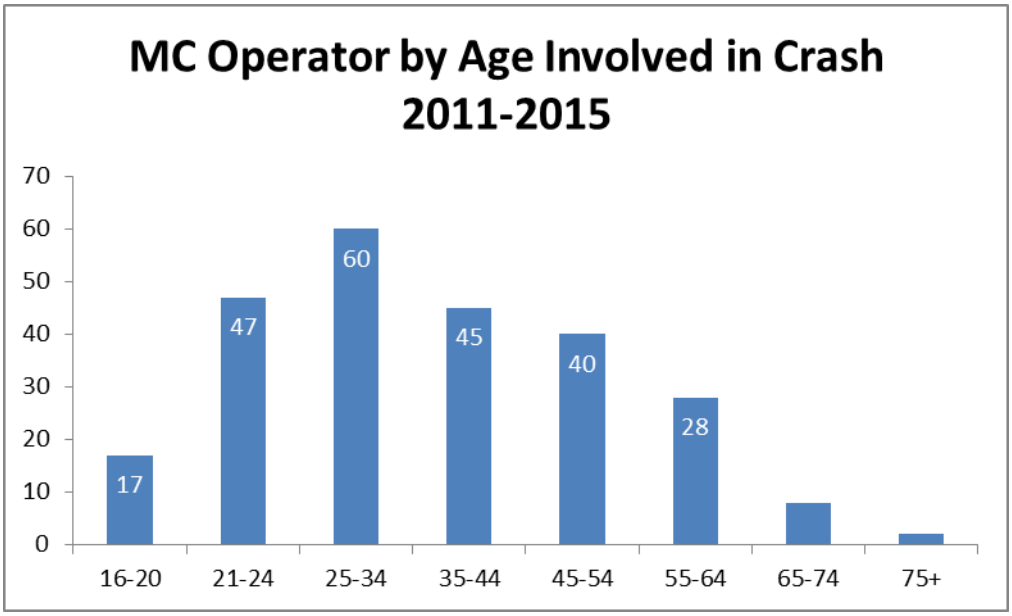


Figure 5.6 (Source: FARS)

The EOPSS/OGR/HSD will work with RMV to increase focus of motorcycle training curricula on the dangers of impaired riding. Furthermore, we will work with our marketing vendor to include messages on the dangers of impaired riding in upcoming motorcycle media campaign. The marketing message will be universal (for ages 16+) rather than customized for a younger or older demographic.

Based on the data provided, any traffic enforcement activity to improve motorcycle safety, by either local or state police, should take place during the weekend during the 3pm – midnight time frame. The best months for activities would be May through September and should be in urban areas of counties such as Worcester, Plymouth and Bristol. Any enforcement activity could be done in conjunction with speed enforcement mobilization as speeding was a factor in over a third of all motorcycle fatalities.

Although not specifically noted in the tasks below, enforcement of motorcycle laws will also take place during the mobilizations and sustained enforcement program listed earlier. EOPSS/OGR/HSD will present data to participating departments to encourage enforcement during peak times and locations. More localized data and resource availability will also factor into where resources are deployed. This enforcement plan may be adjusted based on new data and effectiveness of ongoing activities.

Performance Targets

Motorcycle Performance Target #1
Decrease motorcycle fatalities 5% from the five-year average of 49 in 2011-2015 to a five-year average of 46 by December 31, 2018.

Motorcycle Performance Target #2
Decrease unhelmeted motorcycle fatalities 20% from the five-year average of 5 to a five-year average of 4 by December 31, 2018.

Performance Measures

Number of motorcycle fatalities
Number of unhelmeted motorcycle fatalities

Strategies

1. Enhance motorist awareness of motorcycles through communication efforts
2. Increase the recruitment of motorcycle training instructors
3. Improve training curricula
4. Conduct media campaign to target impaired riders
5. Provide information to motorcyclists and law enforcement about the importance of full motorcycle licensure and enforcement

6. Conduct two DSGPO Mobilizations

Motorcycle Program Area Projects

MC-18-01 Motorcycle Safety Program Enhancements

Funds will be provided to the RMV to enhance their motorist communications efforts to make drivers more aware of the need to share the road with motorcyclists, increase the recruitment of motorcycle training instructors, and improve motorcycle training curricula. Television and radio may be utilized for communication mediums. The awareness campaign will be focused in Middlesex, Worcester, Essex, Bristol, Plymouth and Hampden counties since they account for over 75% of serious motorcycle crashes involving another motor vehicle. The awareness campaign will focus on the importance of paying attention and yielding to the right of way. The campaign will take place from April to December. This task is supported by CTW Chapter 5 Sections 3.1, 3.2, 4.1, and 4.2. This task will support all motorcycle performance targets.

Project Budget/Source – $250,000 [$125,000 (Sec. 405f – Training); $125,000 (Sec. 405f – Awareness)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano

MC-18-02 Motorcycle Media Program

Funds will be for the implementation of a media program to educate riders and drivers about the importance of rider safety and the dangers of impaired riding. A combination of earned and paid media will center on education and enforcement of impaired riding laws through press releases and op-eds. EOPSS/OGR/HSD's communications vendor, Argus, will be handling the media implementation. Advertising space purchases will be evaluated based on the criteria in the 402 Advertising Space Guidance. We follow a system like the NHTSA Communications Pyramid. Strong internal policies are followed noting that all media and communications activities should be in support of our data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data are used not only for planning enforcement activities but also to determine the target audiences, and media channels used to reach them. EOPSS/OGR/HSD, along with Argus, as well as internal and external stakeholders, will determine when these campaigns will be implemented. NHTSA's guidelines are followed for messaging, demographics, best practices and target groups for each media effort. This task is supported by CTW Chapter 5 Sections 2.2, 4.1 and 4.2. This task will support all motorcycle performance targets.

Project Budget/Source – $75,000 (Sec. 402) [Paid - $70,000; Earned - $5,000]

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano

MC-18-03 Program Management

Provide sufficient staff to conduct motorcycle-related programming described in this plan as well as cover in and out of state travel, professional development expenses, conference fees, postage and office supplies.

Project Budget/Source – $52,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $14,061

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano, Jeffrey Brownell

Motorcycles: Budget Summary

Project Number	Project Title	Budget	Budget Source
MC-18-01	Motorcycle Safety Program Enhancements	$ 250,000	405f
MC-18-02	Motorcycle Media Program	$ 75,000	402
MC-18-03	Program Management	$ 30,000	402
	Total all Funds	$ 355,000	

6.0 Pedestrian and Bicycle Program Areas

Pedestrian Safety

Problem Identification and Analysis

As would be expected in a more urbanized state, pedestrian fatalities represent a higher proportion of total fatalities in Massachusetts than at the national level. In 2015, pedestrian fatalities represented 23% of the total motor vehicle fatalities in Massachusetts, up from 21% in 2014. The nationwide rate remained unchanged at 15% from 2013 to 2014.

To decrease the number of pedestrian fatalities and incapacitating injuries, drivers and pedestrians need to improve upon sharing the road. This can be made easier by engineering, enforcement, and public information endeavors.

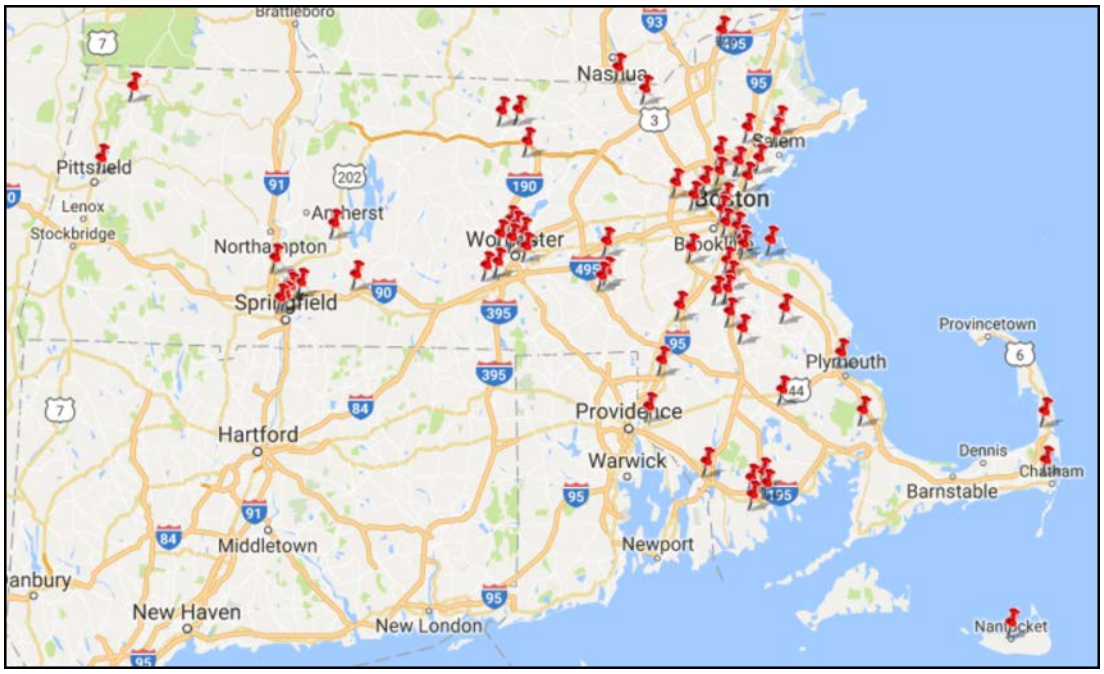


Figure 6.1 Pedestrian Fatalities in 2015
(Source: FARS)

In Figure 6.1, the location of all pedestrian fatalities during 2015 is shown. Many of the fatalities take place in highly urban areas such as Springfield, Worcester, Boston and New Bedford. This is not surprising as from 2011-2015, the top communities for pedestrian fatalities were: Boston (38 fatalities), Worcester (25), Springfield (16), Brockton (11), Lynn (9) and Quincy (8). Even though pedestrian fatalities were more prevalent in urbanized areas, 2015 showed that rural,

less urbanized communities such as Greenfield, Nantucket, and Eastham can also have pedestrian deaths on its roadways.

From 2011-2015, Middlesex and Worcester were the leading counties for pedestrian fatalities. Nearly 30% of all pedestrian fatalities occurred within these two counties. Suffolk and Essex followed, both with 12% of fatalities.

Pedestrian Fatalities by County			
	2010-2014	2011-2015	chg
Barnstable	18	15	-16.7%
Berkshire	9	8	-11.1%
Bristol	38	36	-5.3%
Essex	42	43	2.4%
Hampden	32	35	9.4%
Hampshire	5	4	-20.0%
Middlesex	64	64	0.0%
Norfolk	40	39	-2.5%
Plymouth	30	35	16.7%
Suffolk	51	44	-13.7%
Worcester	43	52	20.9%
	372	**375**	**0.8%**

Table 6.1 shows the change in five-year totals for counties in Massachusetts from 2010-2014 to 2011-2015.

Table 6.1 (Source: FARS)

Overall, total five-year fatalities increased a mere 0.8% from 2010-2014 to 2011-2015. Worcester County had the biggest increase in pedestrian deaths, up 20.9%. Suffolk's decrease of seven fatalities is significant as annual fatalities fell from 12 in 2014 to 5 in 2015. The impact of pedestrian grant enforcement by the Suffolk communities of Chelsea and Revere – 126 hours of enforcement during CY 2015 – could be attributed to this positive decline.

By gender, 2015 saw males account for 65% of all pedestrian fatalities, up from 58% in 2014. After three years (2011-2014) of over 40%, female fatalities dropped from to 35% in 2015. Males topped each age category with the exception of 65-44 (women +7). For the five-year period of 2011-2015, the ratio of male-to-female pedestrian deaths was 3:2.

Pedestrian Fatalities, 2011-2015			
Age	Male	Female	Total
< 5	2	1	**3**
5-9	4	1	**5**
10-15	3	0	**3**
16-20	14	8	**22**
21-24	14	10	**24**
25-34	27	11	**38**
35-44	27	17	**44**
45-54	31	19	**50**
55-64	36	24	**60**
65-74	23	30	**53**
75+	45	27	**72**
Totals	*226*	*148*	*374*
	60.4%	***39.6%***	

Table 6.2 (Source: FARS)

By age, pedestrian fatalities in 2015 saw those 55 years old or older account for over 50% of all fatalities. The 55-64 age group led with 13, followed by both 65-74 and 75+ with 12 fatalities each. Over the five-year period of 2011-2015, the older age groupings (45 or older) had the top four spots in fatalities and accounted for 63% of all pedestrian fatalities. As it was for the previous five-year period (2010-2014), the 75+ age group had the highest amount of fatalities with 72.

From 2011-2015, pedestrian fatalities were highest on Thursday, followed by Wednesday and Friday. These three days accounted for 48% of all pedestrian fatalities. Monday had the lowest total of fatalities. The weekend period – Friday through Sunday – was responsible for 43% of all reported pedestrian fatalities.

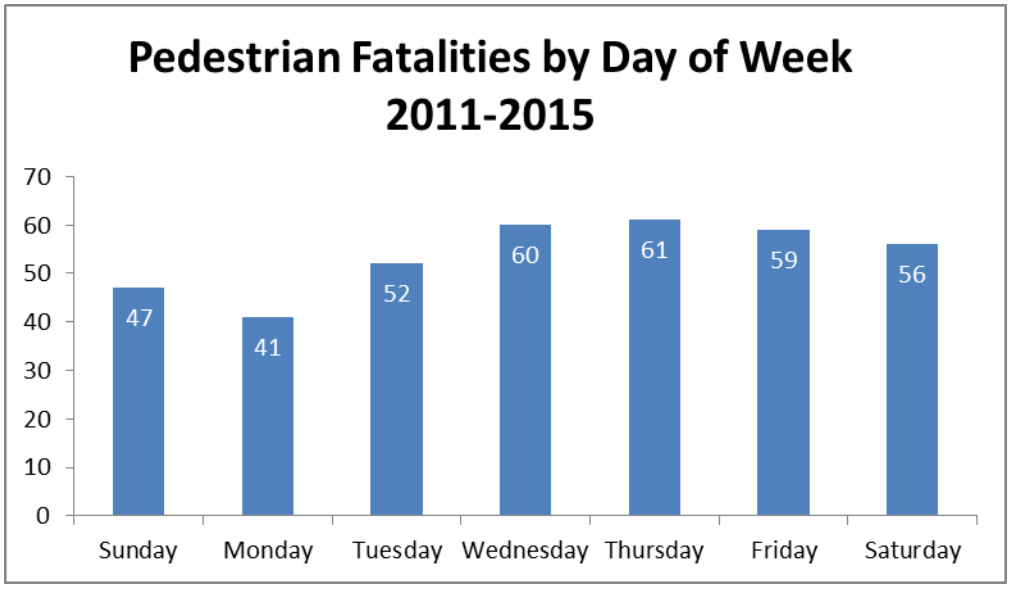


Figure 6.2 (Source: FARS)

By time of day, pedestrian fatalities (2011-2015) occurred the most often between 6:00 p.m. – 8:59 p.m. This time frame accounted for 28% of all pedestrian fatalities. The next two time frames by total fatalities – 3:00 p.m. to 5:59 p.m. and 9:00 p.m. to 11:59 p.m. – were responsible for 34% of fatalities.

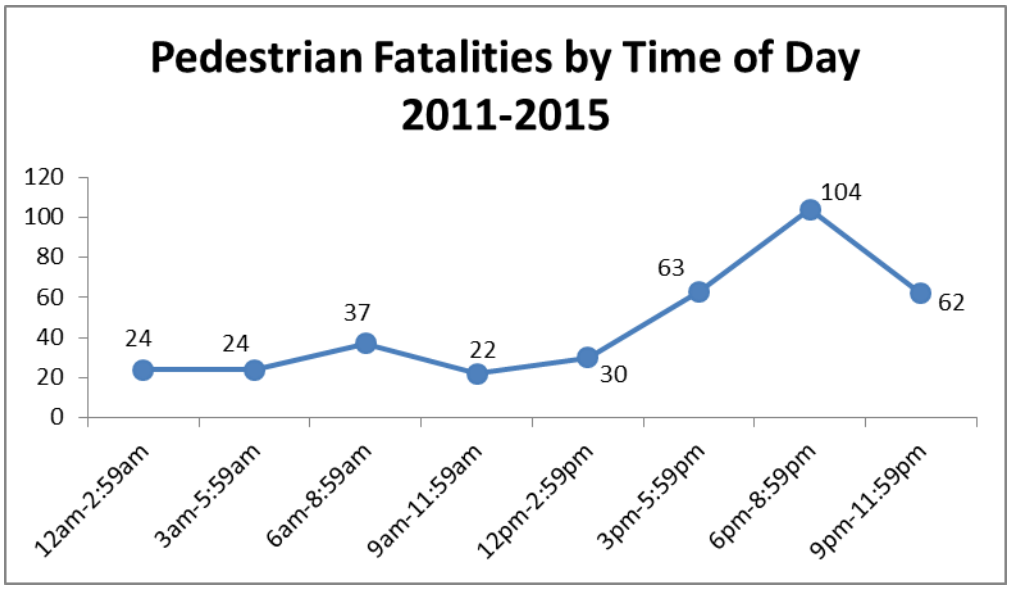


Figure 6.3 (Source: FARS)

Taken together, these three time frames represented 62% of all pedestrian fatalities, up 1% from 2010-2014. The lowest times for pedestrian fatalities were 12:00 a.m. – 2:59 a.m., 3:00 a.m. –

5:59 a.m., and 9:00 a.m. – 11:59 a.m.. These time periods accounted for 19% of all fatalities.

Total Pedestrian Fatalities by Month			
	2010-2014	2011-2015	% Change
January	34	34	0%
February	18	21	17%
March	21	22	5%
April	26	25	-4%
May	20	22	10%
June	23	25	9%
July	28	29	4%
August	27	25	-7%
September	24	25	4%
October	39	39	0%
November	52	50	-4%
December	60	59	-2%
Total	**372**	**376**	**1%**

Table 6.3 (Source: FARS)

By month, pedestrian fatalities were highest during the last quarter of the calendar year. For 2011-2015, October through December accounted for 39% of all fatalities. If January is included – as it the month has the fourth highest fatality total – then the four-month period (Oct-Jan) would rise to 48% of all fatalities. When the weather gets colder, the number of fatalities increases due to factors such as poor road conditions, especially after a snowstorm; lack of daylight, more hours of darkness from daylight savings time; and the increased risk of injury or death for pedestrians walking along roads because the sidewalk may be icy or not shoveled in aftermath of a storm.

Based on the data presented in this section, EOPSS/OGR/HSD plan to work with police departments to focus future enforcement activity regarding pedestrian safety and education during FFY 2018. An effort will be made to increase pedestrian enforcement grant patrols during periods of high risk of pedestrian fatalities such as the peak shopping time from Thanksgiving to Christmas.

Performance Targets

Pedestrian and Bicycle Performance Target #1

Decrease pedestrian fatalities 5% from the five-year average of 77 to a five-year average of 73 by December 31, 2018.

Performance Measures

Number of pedestrian fatalities

Strategies

1. Provide funds to local police departments for the Pedestrian and Bicycle Enforcement and Equipment grants

2. Enhance pedestrian safety expertise among state and local enforcement, public health, highway planners, engineers, and other traffic safety advocates
3. Participate in Statewide Pedestrian and Bicycle Safety "Moving Together" Conference for over 200 attendees in FFY 2018
4. Enhance motorist awareness of bicyclists and pedestrians on roadways through communication efforts. This effort will highlight demographics, geography and circumstances that data has shown to have high incident rates, including older adult pedestrians.

Bicycle Safety

Problem Identification and Analysis

Bicyclist fatalities increased slightly from 2014 to 2015. The five-year average also rose incrementally from 8 in 2014 to 9 in 2015. As the map for 2015 shows below, bicyclist fatalities were spread out across the state.

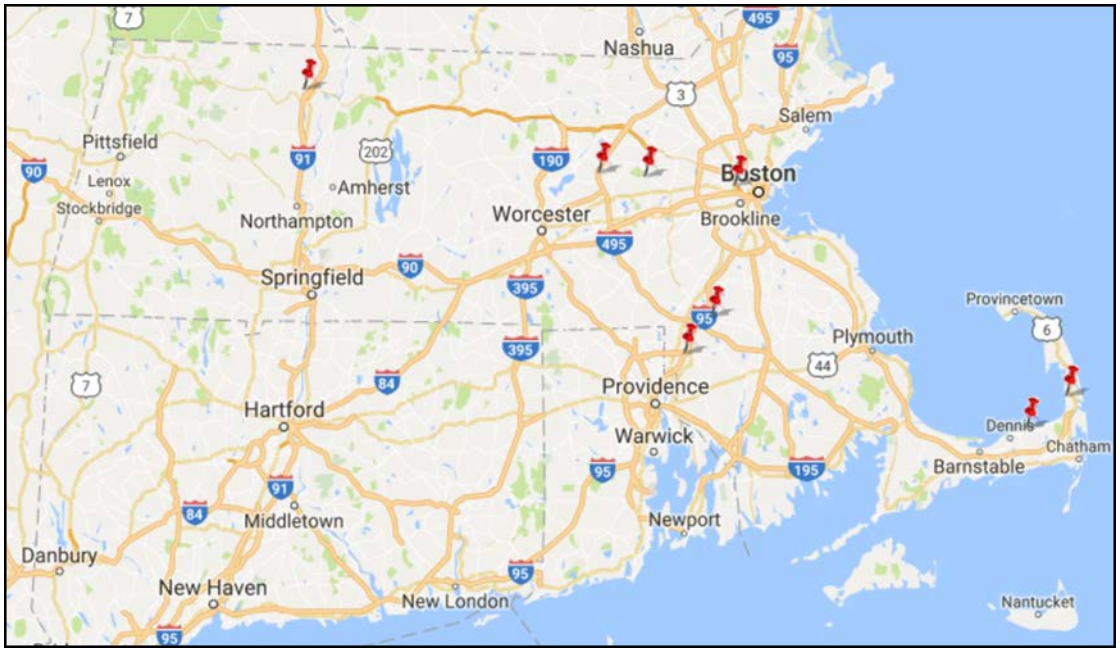


Figure 6.4 Bicyclist Fatalities in 2015
(Source: FARS)

Bicycle Fatalities by County		
County	**2011-2015**	**%**
Barnstable	5	11%
Berkshire	1	2%
Bristol	4	9%
Dukes	0	0%
Essex	1	2%
Franklin	2	5%
Hampden	4	9%
Hampshire	2	5%
Middlesex	7	16%
Nantucket	0	0%
Norfolk	3	7%
Plymouth	5	11%
Suffolk	9	20%
Worcester	1	2%
Total	**44**	

Over the last five-year period (2011-2015), bicyclist fatalities occurred most often in Suffolk County, followed by Middlesex County. Together, these counties accounted for 36% of all bicyclist fatalities in Massachusetts.

Table 6.4 (Source: FARS)

By region, the southeastern area (Bristol, Plymouth and Barnstable) was the leading sector with 31% of all bicyclist fatalities. By community, Boston had the most fatalities with 8, followed by Westfield with 3. These two cities accounted for 25% of fatalities from 2011-2015. In all, over 32 different towns and cities had at least one bicycle fatality during this five-year period.

By gender, males are disproportionately represented with 80% of all bicyclist fatalities from 2011-2015, up from 78% for 2010-2014. Of the 35 male fatalities, no helmet use was found in 14

(40%) deaths. For females, 4 (44%) of the 9 reported fatalities were found without a helmet.

By age, one might think that younger bicyclists would be more prevalently represented due to the fearlessness associated with youth, but over the last five-year period (2011-2015), the age group of 45-64 accounted for 37% of all fatalities. Those under 25 represented 23% of fatalities.

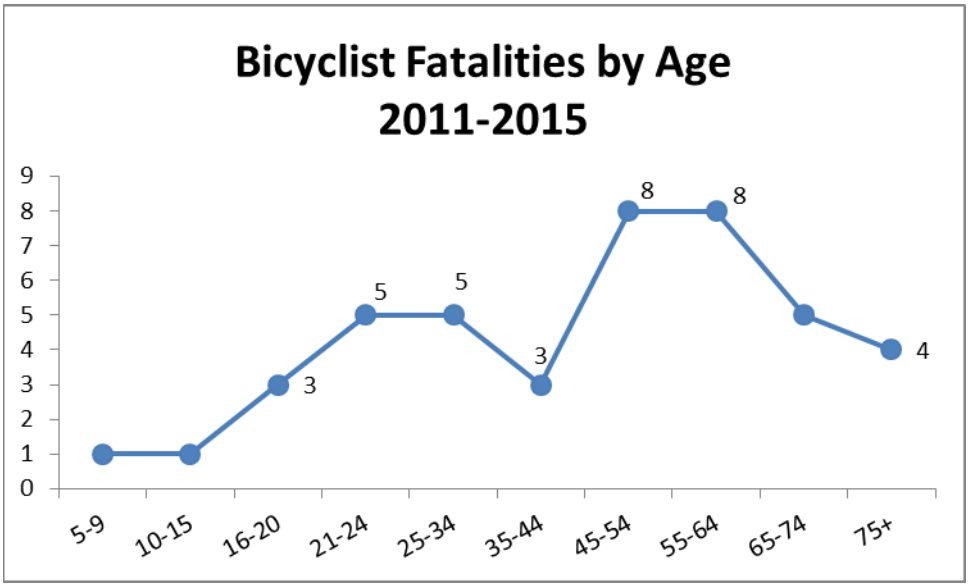


Figure 6.5 (Source: FARS)

During 2015, one fatality was under 45 years of old. It is unknown why bicyclist fatalities have shifted towards older riders over the last five-year period compared to 2010-2014 in which 21-24 riders lead the death tally. Our agency will monitor this trend and seek more outreach and bicycle education aimed at older riders going forward.

By time of day, bicyclist fatalities occur more often between 12:00 p.m. and 9:00 p.m.. From 2011-2015, 72% of all fatalities took place during this time frame. Bicycle fatalities were least likely to take

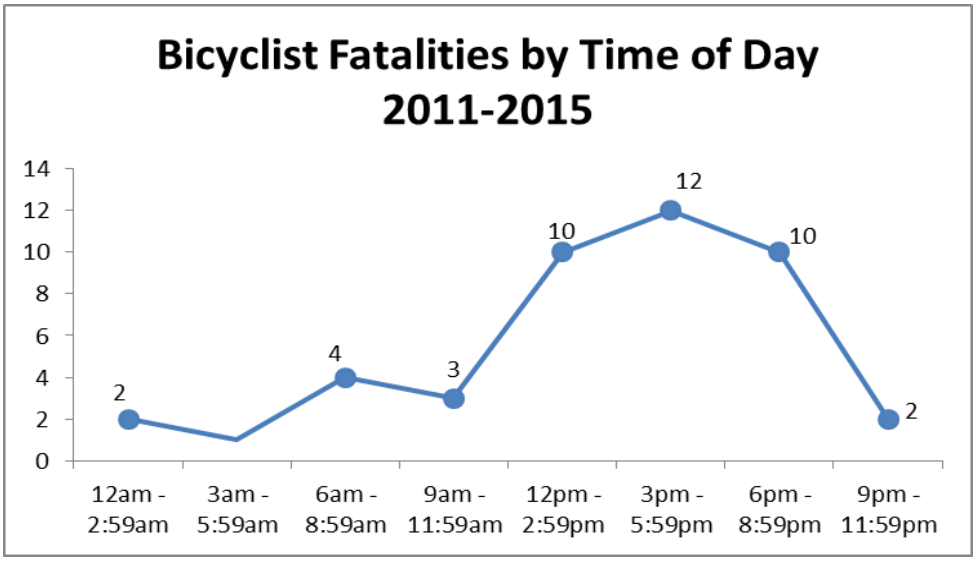


Figure 6.6 (Source: FARS)

place during the hours of 9:00 p.m. to 3:00 a.m.. This is likely the result of fewer riders being on the road at night when reduced visibility is more of an issue. By month, bicyclist fatalities occurred most often in October, followed by May and July. These three months accounted for 43% of all fatalities. Of the 44 reported fatalities, all but two took place on urban-designated roadways. Weather-wise, 66% of the fatalities took place on days with clear skies; 20% cloudy; 9% rain; and 2% snow.

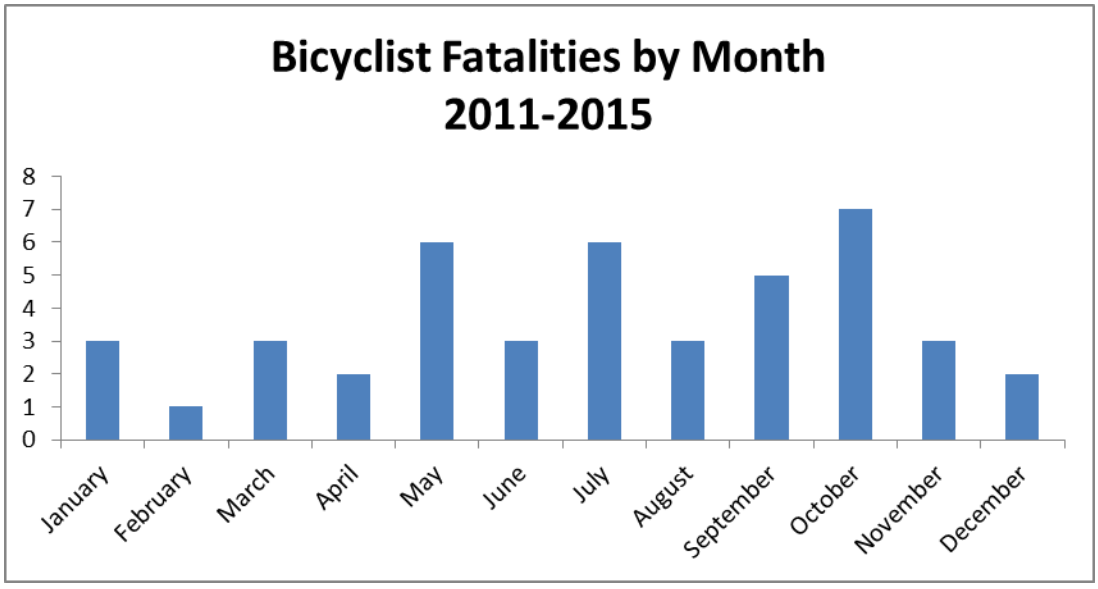


Figure 6.7 (Source: FARS)

By day of the week, three days – Monday, Wednesday, and Friday – were tops for fatalities from 2011-2015. Those three days represented 55% of all fatalities. Saturday was the day with the least amount of fatalities.

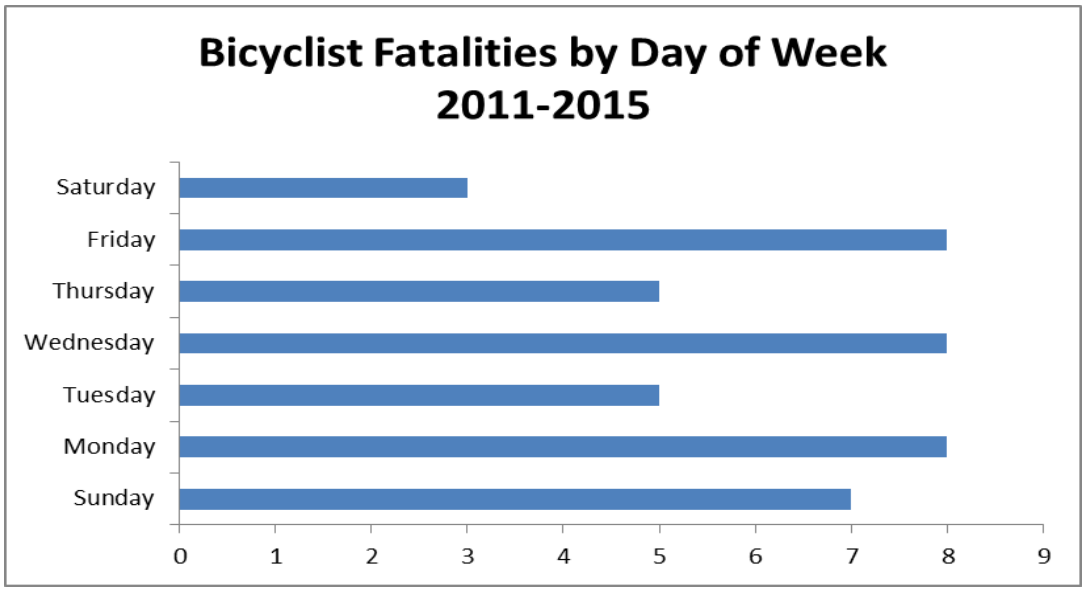


Figure 6.8 (Source: FARS)

In order to decrease the number of bicyclist fatalities and incapacitating injuries, drivers must become increasingly aware of the need to share the roadways and show consideration for bicyclists and bicycle lanes of travel. Bicyclists need to use helmets and obey applicable rules of the road.

In addition to the traffic enforcement that will take place during CIOT and DSGPO mobilizations as well as the sustained traffic enforcement program, local police departments will be participating in the Pedestrian and Bicycle Safety Enforcement and Equipment Program.

This pedestrian and bicycle data will be utilized by us when working with local police departments to identify times and locations for resource deployment. Pedestrian and Bicycle activities have the flexibility to allow for continuous follow-up and adjustment based on new data and other factors such as the effectiveness of ongoing programs.

Based on the data provided in this section, pedestrian and bicycle enforcements should take place more often between 12:00 p.m. and 9:00 p.m. with focus on urban areas – especially Boston. The optimal months to do enforcement would be May – October for bicycle with emphasis on weekday patrols.

Performance Target

Pedestrian and Bicycle Performance Target #2

Decrease bicycle fatalities 10% from the five-year average of 9 to a five-year average of 8 by December 31, 2018.

Performance Measures

Number of bicyclist fatalities

Strategies

1. Enhance bicycle safety expertise among state and local law enforcement, public health, highway planners, engineers, and traffic safety advocates
2. Award pedestrian and bicycle enforcement, education, and equipment grants to local police departments based on problem identification
3. Participate in Statewide Pedestrian and Bicycle Safety "Moving Together" Conference for over 200 attendees in FFY 2018
4. Fund paid and earned media regarding pedestrian and bicycle safety

Pedestrian and Bicycle Program Area Projects

Note: *These projects address both pedestrian and bicyclist safety.*

PS-18-01 Pedestrian and Bicycle Media

Pedestrian and bicycle related media efforts will focus on messaging primarily to driver behaviors and sharing the road safely combined with education and enforcement of laws relative to pedestrians and bicyclists. This would include pedestrian and bicycle safety tips and press releases announcing the enforcement results of the Pedestrian and Bicycle Enforcement Program as outlined below. EOPSS/OGR/HSD's communications vendor, Argus, will be handling the media implementation. Advertising space purchases will be evaluated based on the criteria in the 402 Advertising Space Guidance. EOPSS/OGR/HSD follow a system like the NHTSA Communications Pyramid. Strong internal policies are followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data are used not only for targeting enforcement activities but also to determine the primary and secondary audiences, and media channels used to reach them. EOPSS/OGR/HSD will work the media vendor, Argus, as well as internal and external stakeholders to determine when this campaign will be implemented. NHTSA's guidelines are followed for messaging, demographics, best practices and target groups for each media effort. This task is supported by CTW Chapter 8 Section 4.4 and Chapter 9 Section 4.2. This task will support pedestrian and bicycle performance targets 1 and 2.

Project Budget/Source – $100,000 (Sec. 402) [Paid - $90,000; Earned - $10,000]

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –John Fabiano

PS-18-02 Pedestrian and Bicycle Enforcement Program

Award grants ranging from $1,000 to $7,500 to municipal police departments to conduct enforcement and education aimed at reducing the incidence of pedestrian and bicycle injuries and fatalities. Enforcement patrols will take place throughout the year, and participating departments will be asked to focus on non-daylight hours as crash data shows those are the most hazardous time for cyclists and pedestrians. Subrecipients will be selected based upon combination of data for their respective community (crashes, injuries, fatalities) and targeted enforcement areas. Purchase of equipment will be limited to 25% of grant award. EOPSS/OGR/HSD will internally track inventory. Equipment to be purchased can include reflective crosswalk tape, impact resistant crosswalk signs, educational materials like bicycle safety coloring and books for children. All equipment requests are required to be pre-approved in writing by EOPSS/OGR/HSD prior to purchase in order to be eligible for reimbursement.

Other equipment requests will be reviewed by EOPSS/OGR/HSD Subrecipients and award amount will be posted on the EOPSS/OGR website. This task is supported by CTW Chapter 8 Sections 3.1, 3.2, 4.1, 4.3, 4.4, and Chapter 9 Section 3.3. This task will support pedestrian and bicycle performance targets 1 and 2.

Project Budget/Source – $546,000.00 (Sec. 405h)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Ali Leduc

PS-18-03 Pedestrian and Bicycle Safety Planning Initiative for High-Fatality Communities

Funds will be provided to a local nonprofit agency to work closely with ten communities that have high levels of pedestrian and cyclist fatalities to develop strategic plans for identifying why those particular communities witness high fatality and injury rates, and what can be done to address the problem locally. Working with MassDOT, EOPSS/OGR/HSD will employ a data-driven approach to identifying communities where crashes resulting in pedestrian and cyclist fatalities and serious injuries occur at a higher rate. The partner agency will then work with regional planning agencies to set up meetings of local stakeholder groups – to include law enforcement - seeking to address the pedestrian/cyclist safety problem. Once established, the subrecipient will lead an effort to conduct safety audits in each selected community to determine what conditions exist that may be contributing to the high crash rate. The audits will help raise awareness about traffic safety hazards cyclists and pedestrians face and educate the community on how safety conditions can be improved. The primary intent of the activities will be to raise awareness, educate the communities, and inform motorists, pedestrians, and bicyclists of state traffic laws applicable to pedestrian and bicycle safety. The partner agency will then facilitate the community groups in assembling a safety plan specifically targeting non-

motorists. This task is supported by CTW Chapter 8 Sections 3.1, 3.2, 4.1, 4.3, 4.4, and Chapter 9 Section 3.3. This task will support pedestrian and bicycle performance targets 1 and 2.

Project Budget/Source – $60,000 (Sec. 405h); $15,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano

PS-18-04 Program Management

Provide sufficient staff to conduct pedestrian- and bicycle-related programming described in this plan as well as cover in and out of state travel, professional development expenses, conference fees, postage and office supplies.

Project Budget/Source – $120,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $32,448

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano, Ali Leduc, and Jeffrey Brownell

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Pedestrian and Bicycle: Budget Summary

Project Number	Project Title	Budget	Budget Source
PS-18-01	Pedestrian and Bicycle Media	$ 100,000	402
PS-18-02	Pedestrian and Bicycle Enforcement Program	$ 546,000	405h
PS-18-03	Pedestrian/Bike Safety Planning for High Fatality Communities	$ 60,000	405h
		$ 15,000	402
PS-18-04	Program Management	$ 120,000	402
	Total all Funds	**$ 841,000**	

7.0 Traffic Records Program Area

Problem Identification and Analysis

Traffic records data are vital to the analysis necessary for successful highway safety planning and programming. Our agency, in coordination with our partners, collects and uses traffic records data to identify problem areas, develop and implement appropriate programs, and evaluate the effectiveness of these programs.

Massachusetts operates a complete set of systems to receive, store, and manage traffic records information. These systems are managed by the following agencies:

- MassDOT/RMV manages the crash, driver history and vehicle registration systems;
- The MRB maintains operator driving history records consisting of at-fault crash claim records, comprehensive claim records, out-of-state incidents and civil and criminal traffic citation information;
- The Administrative Office of the Trial Court manages adjudication information;
- The MassDOT Office of Transportation Planning manages the road inventory file; and
- The MDPH and the Center for Health Information and Analysis (formerly known as the Division of Healthcare Finance and Policy) manage injury surveillance-related information systems

As required by NHTSA's Section 405 C grant program, Massachusetts has a two-tiered active Traffic Records Coordinating Committee (TRCC), which is supported by a Traffic Records Program Coordinator located within the Office of Grants and Research Highway Safety Division. The Executive-level Traffic Records Coordinating Committee (ETRCC), currently chaired by the Undersecretary of Forensic Science and Technology, was established through the coordinated efforts of its member organizations. The ETRCC is comprised of agency heads or senior personnel who set the vision and mission for a Working-level TRCC. The Working-level TRCC is the primary means by which communication is facilitated and perpetuated between the various users and collectors of data, and owners and custodians of the data systems that make up the Commonwealth's traffic records systems. These TRCCs foster understanding among stakeholders and promotes the use of safety data in identifying problems and developing effective countermeasures to improve highway safety. Both committees seek to improve the accessibility, accuracy, completeness, uniformity, integration, and timeliness of the six traffic records systems in Massachusetts: citation/adjudication, crash, driver, injury surveillance, roadway, and vehicle. One way this is accomplished is by ensuring that all Section 405 C funds received by Massachusetts are used for eligible, prioritized projects that will enhance these systems.

The FFY 2018 Section 405 C application and 2018 Strategic Plan for Traffic Records Improvements contains details pertaining to the current capabilities and challenges of the Massachusetts traffic records systems. It also describes the progress made to date on projects

funded with previous Section 405 C funds. In addition, the application details how FFY 2018 Section 405 C funds would be utilized for proposed projects that were prioritized by the ETRCC, with WTRCC input.

Performance Targets

Traffic Records Performance Target #1

To improve the integration of traffic records systems by increasing the number of linked Massachusetts EMS/crash reports from 0% to 75% from June 30, 2017 to June 30, 2018.

Traffic Records Performance Target #2

To increase by 5% the number of agencies able to access MassTRAC (or any successor system) from 305 in May 2017 to 335 in May 2018.

Traffic Records Performance Target #3

To improve the timeliness of crash data by decreasing the average number of days from crash incident to receipt of crash report by the RMV from 47.13 days between April 1, 2016 to March 31, 2017 to less than 45 between April 1, 2017 to March 31, 2018.

Traffic Records Performance Target #4

To improve completeness of the Massachusetts emergency medical services (EMS)/injury database, the Massachusetts Ambulance Trip Record Information System (MATRIS), this project will seek to increase the system's Version 2 validation score from 86.8 for year ending December 31, 2016 to 89 for December 31, 2017.

Traffic Records Performance Target #5

To improve completeness of MATRIS, the project will increase the number of ambulance services submitting Version 2 reports to the state. MATRIS accepts only electronically submitted and fully NEMSIS (Version 2) compliant EMS run reports. The number will be increased from 323 as of December 31, 2016 to 329 as of December 31, 2017.

Traffic Records Performance Target #6

To improve the completeness of the Massachusetts statewide road inventory database by increasing the number of intersections with Fundamental Data Elements (FDEs) from 0 as of June 30, 2017 to 5,400 as of June 30, 2018.

To determine the performance targets for 2018, EOPSS/OGR/HSD reviewed FFY 2015, 2016, 2017 and 2018 Traffic Records project proposals, previous Strategic Plans for Traffic Records Improvement and data from DPH and the RMV.

Performance Measures

EOPSS/OGR/HSD will work with ETRCC and WTRCC member agencies, who are the core system owners and data collectors, in order to improve the overall traffic records system.

Performance measures established by the ETRCC and the WTRCC in its FFY 2018 Section 405 C Grant application including:

- Number of linked records
- Number of MassTRAC users
- Average number of days from crash incident to receipt of crash report by the RMV
- Validation score of ambulance services with NEMSIS Version 2 compliant software submitting data to MATRIS
- Number of ambulance services submitting Version 2 data to MATRIS
- FDEs in the MassDOT's roadway inventory file

Strategies

1. Enhance the workings of the ETRCC and WTRCC
2. Ensure ongoing implementation of the FFY 2018 Strategic Plan for Traffic Records Improvements
3. Expand access to and use of local, state, and federal traffic records data and analyses
4. Enhance the activities of the TRCC subcommittees
5. Fund and monitor the TRCC's 408/405 C funded projects
6. Establish agency access to necessary data sets for key planning, decision-making, program selection, and evaluation purposes through agreements with data owner agencies and ensure the ability to conduct analysis of that data in-house through revitalization of its traffic records data warehouse

Traffic Records Program Area Projects

TR-18-01 MassTRAC

Funding will be provided to a vendor to maintain and improve MassTRAC or explore a possible replacement system. MassTRAC is a web-based solution for crash and citation records analysis, mapping, and reporting. This tool helps EOPSS/OGR/HSD meet federal reporting requirements and supports safety planning processes across the Commonwealth. The software provides quick and easy user access to crash and citation data, tabulations, maps, and counts of crashes, citations, vehicles, drivers, passengers and non-motorists. One of the recommendations of the 2014 Traffic Records Assessment was to maximize the use of traffic records systems data by traffic safety stakeholders. This task will support all performance targets and specifically traffic records performance target 2.

Project Budget/Source – $50,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-02 Statewide DDACTS Program

Data Driven Approaches to Crime and Traffic Safety is an evidence-based law enforcement operation model. The model integrates location based traffic, crime, crash and calls for service and enforcement data to establish effective and efficient, methods for deploying law enforcement resources. Drawing on the deterrent value of highly visible traffic enforcement and the knowledge that crimes often involve the use of a motor vehicle the goals of DDACTS is to reduce the incidence of crash, crime and social harms in communities. Competitively selected departments will participate in a pilot DDACTS program. EOPSS/OGR/HSD will provide selected departments with access to an experience analyst. This analyst will work with the local departments to implement DDACTS within their agency for a determined period. The goals will include (a) instructing the department on continued use of DDACTS after the pilot program(b) to reduce crash AND crime data within that community (c) provide examples of beneficial data drives programs to effectively and efficiently utilize resources. It is anticipated that approximately 10 departments will be selected to participate statewide. Funds will be used to hire 2 contract analysts, and 2 laptop computers and ARC GIS software licensing for the departments. This task is supported by CTW Chapter 3, Sections 2.1-2.3.

Project Budget/Source - $505,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $505,000

Project Staff – Ali Leduc

TR-18-03 FARS

NHTSA will be provided with required fatal crash data for FARS and FastFARS through a dedicated RMV position. The FARS Analyst will collect data concerning traffic related motor vehicle fatalities, utilizing all available resources, in order to develop a database sufficient to meet federal requirements. One of the recommendations of the 2014 Traffic Records Assessment was to maximize the use of traffic records systems data by traffic safety stakeholders. This task supports performance targets 1 through 3.

Project Budget/Source – $82,000 Per Calendar Year of FARS Cooperative Agreement

Match Amount - $0 **Indirect Cost** - $746

Maintenance of Effort - $5,067,081.82 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-04 Motor Vehicle Automated Citation and Crash System (MACCS)

MACCS is a browser-based application that will be available statewide for the purpose of collecting, reconciling, and exchanging motor vehicle incident information including: electronic citation reporting, crash reporting, alcohol test refusal reporting, and traffic stop data collection. The MACCS project is the result of a partnership between EOPSS/OGR/HSD, local and state law enforcement, and MassDOT. The goals of the MACCS project are to ensure greater officer safety by making the reporting process more efficient at the roadside, improve data quality by implementing checks at the point of entry and upon submittal, and eliminate redundant data entry processes for agencies across Massachusetts. This project will ultimately increase the timeliness, completeness, uniformity and accuracy of electronic crash and citation data submissions as called for in the 2014 Traffic Records Assessment. The MACCS pilot commenced in July 2013 to field test the application and in-vehicle hardware (i.e. scanners, printers), identify deficiencies and potential improvements, and support proactive planning in the future potential rollout of the MACCS system statewide.

The MACCS pilot continues to test system functionality and data exchanges with a targeted number of agencies and end-users representing a diverse cross-section of the Commonwealth's public safety community. The pilot sites are being rolled out incrementally, with feedback from users on each new deployment informing changes to be tested in the next iteration. Feedback is gathered through a formal error/enhancement reporting processes, as well as several working group meetings with the project team and the end-user community. Results and feedback from the pilot are instrumental in informing the ongoing development of MACCS, as well the strategy for a future roll-out of MACCS components statewide. To date, the pilot testing has been conducted for the citation, crash, and traffic stop data collection modules.

In FFY 2015 and FFY 2016, extensive progress was made on the development of the Public Safety Data Analytics Platform and Tool (ADAPT), which will provide public safety analysts, managers, and policy-makers with the ability to analyze a range of existing public safety data. Funding in FFY 2017 and 2018 will be used to help with the interface with records management systems, provide printers for state and local law enforcement cruisers, and to develop and implement a Train-the-Trainer course for the MACCS. EOPSS/OGR/HSD will continue working with the courts and Merit Rating Board on outstanding issues related to the processing of criminal citations.

If approved by EOPSS, Section 1906 funding will be used to collect and maintain statistical information on the race and ethnicity of drivers that were stopped by law enforcement using MACCS. However, law enforcement will not be required to collect this information. These data will be collected by MSP, but local law enforcement will have the option of collecting data if they choose. Possible uses of the funding include but are not limited to the following: interfacing records management systems with MACCS, updating ADAPT to help analyze the data, or purchasing servers and other equipment identified by EOPSS/OGR/HSD and law enforcement to help with the collection of data.

This task will support performance targets 1 through 3.

Project Budget/Source –$1,750,000 (Sec. 402), $1,000,000 (Sec. 405c), $197,871 (Sec. 408) and $767,744 (Section 1906 - Pending EOPSS approval)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-05 Investigation of Improved Linkage Strategy towards the Development of a Central and Uniformed Crash Analysis Database

Funding unspent in FFY 2017 will be provided to UMassSAFE to continue to investigate improved data linkage processes and strategies for linking highway safety data - crash, roadway inventory, citation, driver history (if available), emergency room, hospital, and emergency medical services data. Though the exact amounts are not known, funding will cover mainly UMassSAFE personnel costs along with indirect and consultant costs. The project will help to better integrate data in the Massachusetts traffic records systems as recommended in the 2014 Traffic Records Assessment. This task will support traffic records performance target 1.

Project Budget/Source – $106,000 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $27,560

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-06 MSP Traffic Crash Quality Assurance Project

Funding unspent in FFY 2017 will enable MSP to continue to examine the business process of its crash data system from investigation through submission to the RMV to determine data collection, processing, and dissemination challenges. This will help to resolve the integration issues between the MSP and RMV records systems. One of the recommendations from the 2014 Traffic Records Assessment was to establish crash reporting improvement, in particular electronic submission, as a top priority of the TRCC and the member agencies. This task will support traffic records performance target 3.

Project Budget/Source – $32,000 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $10,816

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-07 Crash Data System Stakeholder Needs Assessment Project

Funding unspent in FFY 2017 will assist RMV to continue its efforts to improve its current Crash Data System in conjunction with key stakeholders, in particular those in law enforcement, while it plans for the replacement system to come. This project was originally approved by the Executive-level Traffic Records Coordinating Committee (ETRCC) in 2013 as the Crash Data System Stakeholder Data Improvement Project (TR-17-09), but in January 2017 RMV requested the ETRCC to approve a project scope change. The ETRCC approved this change. As part of this decision, the RMV asked for additional funding for the project and notified the group it was discontinuing its Scanning Solutions for Police Crash Reports Project (TR-17-05) and E-Submission Project (TR-17-06) to provide the funds for the additional project cost. One of the recommendations from the 2014 Traffic Records Assessment was to establish crash reporting improvement, in particular electronic submission, as a top priority of the TRCC and member agencies.

Law Enforcement Liaison will assist RMV efforts to improve the completeness, timeliness, and other performance attributes of the crash data system and conveys these efforts to law enforcement and related stakeholders as well as respond to their feedback.

Law Enforcement Technical Liaison will work with EOPSS, MACCS project, MassDOT IT, police and their Record Management System (RMS) vendors on successful transmission of electronic crash records and system changes to address issues such as crash data completeness, timeliness, and other performance attributes. Create a complete set of validation rules for all vendors from the MACCS set of rules. Though the exact amount is unknown at this time, funding will primarily cover cost of personnel. This task will support traffic records performance target 3.

Project Budget/Source – $130,000 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $1,183

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-08 Data Quality Review of Crash Reports Accepted with Warning and Technical Assistance to Police Departments to Improve Completeness and Reduce Errors

Funding unspent in FFY 2017 will enable RMV to continue its work with UMassSAFE to develop and implement processes for reviewing crash reports that have been "accepted with warning" by the RMV and will work with police departments to improve the completeness of submitted crash reports. Further dialogue with individual police departments would improve crash reporting by expanding their understanding of specific common errors. This project will improve the data quality control program for the crash data system as recommended in the 2014 Traffic Records Assessment. Funding will primarily cover personnel costs and the

remainder for consultant costs (UMassSAFE). This task will support traffic records performance target 3.

Project Budget/Source – $196,802.46 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $1,791

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-09 Tools for Improving Crash Report Reviews Project

UMassSafe will build upon an earlier project, Crash Data Audit, to identify and then implement improvements to the supervisory review of crash reports before submission to RMV. This project will enhance accuracy, completeness, and uniformity of the crash data system. Though the exact amounts are unknown at this time, funding will cover mainly UMassSAFE personnel costs along with indirect and consultant costs. This project will improve the data quality control program for the crash data system as recommended in the 2014 Traffic Records Assessment. This task will support traffic records performance target 3.

Project Budget/Source – $166,768 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $99,227

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-10 Massachusetts Revised Crash Report Form E-Manual and Evaluation

Funding unspent in FFY 2017 will be provided to UMassSAFE to continue two tasks: (1) develop the Massachusetts e-manual for crash reporting information and (2) evaluation of revised Massachusetts crash report fields. The intent of Task 1 is to improve the efficiency, accuracy, and completeness of the Massachusetts crash reporting process. UMassSafe will develop a web based, interactive crash report manual that would function like a toolkit with tabs for different information and links for further information. Task 2 would examine all fields affected by the changes, to look for problematic patterns existing at both the department and vendor levels. This project will improve the procedure/process flows as well as the data quality control for the crash data system as recommended in the 2014 Traffic Records Assessment. This task will support traffic records performance target 3.

Project Budget/Source – $85,000 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $22,100

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-11 Comprehensive Analysis of Accuracy and Completeness of the Crash Data File

Funding unspent in FFY 2017 will allow the Center for Leadership in Public Service of Fisher College to continue to evaluate the RMV crash data file and propose crash system improvements. This project will also result in the development and implementation of appropriate crash file quality control measures based on the Crash Data Improvement Program (CDIP) conducted in September/October 2013 and the 2014 Traffic Records Assessment. This project will improve the procedure/process flows as well as the data quality control for the crash data system as recommended in the 2014 Traffic Records Assessment. This task will support traffic records performance target 3.

Project Budget/Source – $ 151,119 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-12 MATRIS and Trauma Registry Data Accuracy, Completeness, Uniformity and Accessibility

Funding unspent in FFY 2017 will be provided to DPH to continue to analyze and address issues with data quality in areas of accuracy, completeness, consistency/uniformity, timeliness, integration and accessibility of the Massachusetts Department of Public Health's Massachusetts Ambulance Trip Record Information System (MATRIS) and Trauma Registry. This includes analyzing, verifying and addressing data quality issues with the existing standards and migrating to the new national standards for NEMSIS 3.0 and ICD-10-CM. One of the recommendations from the 2014 Traffic Records Assessment was to continue to grow and promote MATRIS and the trauma registry. This task will support traffic records performance targets 4 and 5.

Project Budget/Source – $66,150 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-13 Trauma Registry Vendor and Database Hosting Upgrades

Funding unspent in FFY 2017 will be provided to DPH to continue to enhance the current processing workflow (upload, edit, process, and report back to the hospitals) for its Trauma Registry. These changes require a specific product built for trauma data that would be maintained to include all the national standards updates and quality improvement initiatives that could be used by the customer. Mass IT will be responsible for hosting the application and database for the Bureau of Health Care Safety and Quality. The hosting services will be for the full Trauma Registry Database that may hold the data from 2008 – 2015 and 2015 – onward with the greatest change being the ICD – 9 – CM and ICD - 10 – CM diagnostic codes. The database will need to meet the Mass IT compliance requirements to reside in the host site. One of the recommendations from the 2014 Traffic Records Assessment was to continue to grow and promote the trauma registry. This task will support traffic records performance targets 4 and 5.

Project Budget/Source – $60,000 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-14 Data Uniformity, Accuracy, Completeness and Timeliness

Funding unspent in FFY 2017 would be provided to DPH to continue to make improvements to MATRIS and the Trauma Registry. MATRIS is currently based on the National EMS Information System (NEMSIS) Version 2 (V2) data set standard developed in 2005. MATRIS must migrate to the new standard as NEMSIS will soon no longer collect V2 data. The electronic patient care report (ePCR) vendor software used by ambulance services to collect and submit data to MATRIS will be migrated to the new version in the next year. DPH will need to upgrade the software platform and build out a new server. Funding will also be used to expand and improve upon a process highlighted by the South Shore Hospital using MATRIS as a central location to access trip records and perform quality assurance/quality improvement reviews for 10 ambulance services. The Trauma Registry (as well as all entities covered by the Health Insurance Portability and Accountability Act) must transition from the International Classification of Diseases version 9 to version 10. Funding will also be used for coordination and training with hospitals and vendors. One of the recommendations from the 2014 Traffic Records Assessment was to continue to grow and promote MATRIS and the trauma registry. This task will support traffic records performance targets 4 and 5.

Project Budget/Source – $80,000 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-15 MATRIS and Trauma Registry National Standard Uniformity and Data Quality Project

MATRIS: Is currently based on the National EMS Information System (NEMSIS) Version 2 (V2) data set standard developed in 2005. The NEMSIS Technical Assistance Center developed a major revision to NEMSIS Version 3 (V3) released in 2011 which the industry has adopted and many states and ambulance services have already converted to. MATRIS will migrate to this new standard to continue collecting NEMSIS compliant data from ambulance services as the software vendors are sun-setting their V2 products. This project is in progress but needs additional funding to complete the effort and migrate over 300 ambulance services.

For the MATRIS NEMSIS V3 upgrade, a revised data dictionary incorporating the new national and state requirements of NEMSIS V3 as well as additional data elements and values identified as important for better injury prevention and performance measurement analysis and linkage will be developed.

To implement NEMSIS V3, MATRIS is upgrading the software platform and has built out a new server environment at MassIT. Configuration of an interface for ambulance services to manually enter and view their data in MATRIS will be designed and tested internally and with pilot ambulance services.

Trauma Registry: Hospitals are required to submit data to the Trauma Registry in accordance with Hospital Licensure regulations (105 CMR 130.851 and 105 CMR 130.852) and Circular Letters (DHCQ 08-03-483). Hospitals designated as trauma centers are held to the standards set by the American College of Surgeons' (ACS) National Trauma Data Standards (NTDS). The International Classification of Diseases, Tenth Edition (ICD-10 coding) was first implemented into the hospital coding on October 1, 2016. The ICD-10 coding has revisions to enhance and clarify the codes that are used by the trauma registrars and billing coders. In order to keep current with the industry standards from both the NTDS and ICD-10 codes, this project will enable the Trauma Registry system to implement the annual ACS/NTDS and ICD-10 changes.

An appropriate web-based trauma registry system with sufficient reporting capabilities will be set up to automatically send out timely quarterly reports to the submitting hospitals resulting in an increase in uniformity and quality of data reporting. The new system capabilities will free up resources to prioritize the annual maintenance of the state specification guidelines which will increase the accuracy and integration of the reporting data to meet the national standards and state requirements. As the data quality and accuracy improves over time, the data can be made accessible to internal and external customers as data requests, annual reports, research projects, data linkages, etc. The integration of the trauma registry data with other datasets will help researchers, programs, and policy makers develop informed conclusions thereby helping to keep the Massachusetts population safer with target based interventions.

CDC grant funding is also covering a portion of the MATRIS NEMSIS V3 migration project.

With funding unspent in FFY 2017 the project will continue to enhance the accessibility, accuracy, completeness, integration, timeliness, and uniformity of both systems. One of the recommendations from the 2014 Traffic Records Assessment was to continue to grow and promote MATRIS and the trauma registry. This task will support traffic records performance targets 4 and 5.

Project Budget/Source – $414,779 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-16 Boston Cyclist, Pedestrian and Vehicular Incident Information System Enhancement

Boston EMS began this project in FFY 2013 to address information gaps, inconsistent data gathering and analysis and the lack of usable real time data to guide decisions on traffic safety and transportation policy in Boston. Major project deliverables include: project management and coordination by Boston EMS paramedic serving as project lead, specifically for validating the project's key data components; data vetting for every roadway incident to ensure the data sets have the most accurate data; data analysis to ensure timely reports to meet the unique needs of the intended audience through systems development of the GIS dashboard tool, stakeholder engagement, and data review; project lead to provide training of EMS personnel to support system enhancements; training and professional development of project staff to optimize in-house capabilities for best addressing the project goal and deliverables. The city will cover the cost of on-going public awareness efforts to enhance bicyclist and pedestrian safety. One of the recommendations of the 2014 Traffic Records Assessment was to maximize the use of traffic records systems data by traffic safety stakeholders. This task will support traffic records performance targets 1 and 3.

Project Budget/Source – $118,453 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –Brook Chipman

TR-18-17 Test the Template Developed by Vanasse Hangen Brustlin, Inc. (VHB) for Collecting Model Inventory Road Element (MIRE) Fundamental Data Elements (FDEs) for Intersections on a Subset of the Intersections in Massachusetts

The Federal Highway Administration (FHWA) considers the presence of a traffic control device at an intersection and the device's type, if one is present, as FDEs of a MIRE. The Massachusetts statewide road inventory currently does not contain the required FDEs for intersections.

MassDOT is entering into a contract with VHB to develop a template to be used to collect these FDEs so that they can be added to the Road Inventory. This project will use the VHB template to collect FDEs for a subset of the intersections in the state and evaluate the template. This will allow the template to be modified, if deemed necessary or advisable, before it is used to collect FDEs for intersections statewide. Funding unspent from FFY 2017 will be used to continue this project. This project will collect FDEs for MIREs to improve the roadway data system as recommended in the 2014 Traffic Records Assessment. This task will support traffic records performance target 6.

Project Budget/Source - $82,000 (Sec. 405c)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman

TR-18-18 Program Management

Provide sufficient staff to conduct pedestrian- and bicycle-related programming described in this plan as well as cover in and out of state travel, professional development expenses, conference fees, postage and office supplies.

Project Budget/Source - $112,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $30,285

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Brook Chipman and Ali Leduc

Traffic Records: Budget Summary

Project Number	Project Title	Budget	Budget Source
TR-18-01	MassTRAC	$ 50,000	402
TR-18-02	MassTRAC/DDACTS	$ 505,000	402
TR-18-03	FARS	$ 82,000	Coop Agreement
TR-18-04	MACCS	$ 1,750,000	402
		$ 197,871	408
		$ 1,000,000	405c
		$ 767,744	1906
TR-18-05	Investigation of Improved Linkage Strategy	$ 106,000	405c
TR-18-06	State Police Traffic Crash Quality Assurance Project	$ 32,000	405c
TR-18-07	Crash Data System Stakeholder Needs Assessment Project	$ 130,000	405c
TR-18-08	Data Quality Review of Crash Reports	$ 196,803	405c
TR-18-09	Tools for Improving Crash Reports Reviews Project	$ 166,768	405c
TR-18-10	Massachusetts Revised Crash Report Form E-Manual and Evaluation	$ 85,000	405c
TR-18-11	Comprehensive Analysis of Accuracy and Completeness of Crash Data File	$ 151,119	405c
TR-18-12	MATRIS and Trauma Registry Data Accuracy, Completeness, Uniformity and Accessibility	$ 66,150	405c
TR-18-13	Trauma Registry Vendor and Database Hosting Upgrades	$ 60,000	405c
TR-18-14	Data Uniformity, Accuracy, Completeness and Timeliness	$ 80,000	405c
TR-18-15	MATRIS and Trauma Registry National Standard Uniformity and Data Quality Project	$ 414,779	405c
TR-18-16	Boston Cyclist, Pedestrian and Vehicular Incident Information System Enhancement	$ 118,453	405c
TR-18-17	Test the Template Developed by VHB for MIRE FDEs for Intersections	$ 82,000	405c
		$ 575,000	State Funds
TR-18-18	Program Management	$ 112,000	402
	Total All Funds	**$ 6,728,687**	

8.0 Distracted Driving Program Area

Problem Identification and Analysis

Distracted driving occurs when the driver fails to pay attention to the driving task. It occurs anytime a driver diverts their attention from the task of driving to something else. While this does include traditional distractions such as talking to passengers, eating, and adjusting radio controls, use of electronic devices has become the overwhelming problem for drivers. In 2015, there were 3,196 fatal crashes that occurred on roadways across the United States involving a distraction – 10% of all fatal crashes reported. These crashes involved 3,263 distracted drivers, as some crashes involved more than one distracted driver. In these distraction-affected crashes, 3,477 fatalities – 10% of all fatalities – occurred. Of these distracted driving-related crashes, 442 involved cell phone usage (14% of all distraction-affected crashes). A total of 476 people died as a result of drivers talking on, listening to, or manipulating a cell phone.

In response to the growing proliferation of cell phones and smart phones, Massachusetts passed a Safe Driving Bill in 2010. This is a primary law which bans all operators of motor vehicles from text messaging and prohibits junior operators from using any type of mobile phone device. Despite passage of the bill, with changing technology, the increasing prevalence of smart phones and burgeoning use of mobile applications on those devices, distracted driving-related fatal crashes have increased 61% since 2011. At the same time, reported cellphone-related fatal crashes accounted for only 9% of the 235 reported distracted driving fatal crashes with non-phone distractions such as inattention, carelessness, or "lost in thought" making up the bulk of the distractions reported in these fatal crashes.

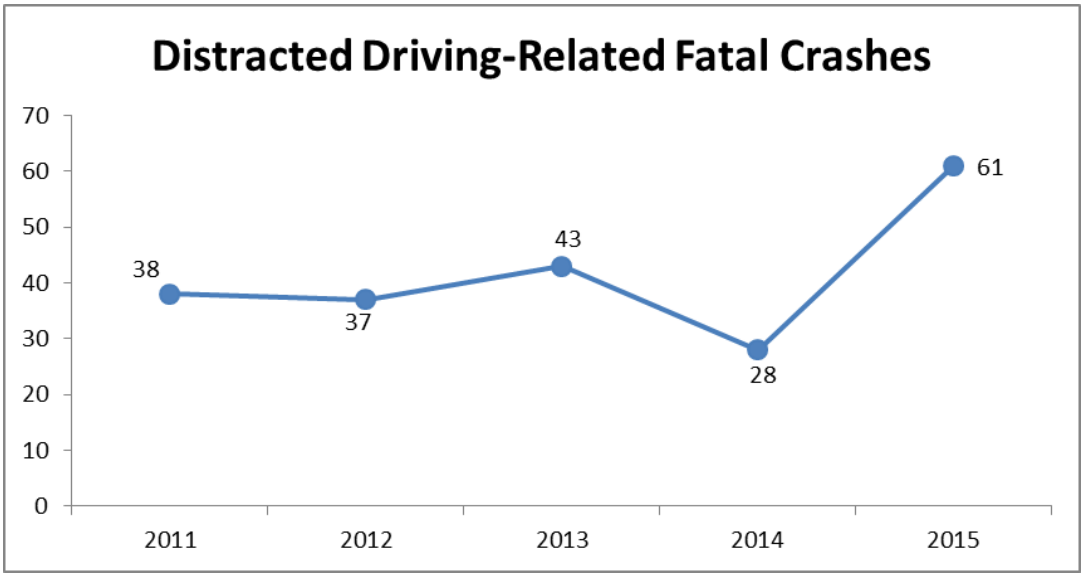


Figure 8.1 (Source: FARS)

The five-year average of distracted driving-related fatal crashes increased 17% from 2010-2014 to 2011-2015, rising from 35 to 41.

From 2011-2015 male drivers accounted for 65% of all distracted drivers involved in fatal crash. The leading age group among male drivers was 25-34, while the least active age group for males was the 65-74 age bracket. Females also had the most drivers by age in the same 25-34 group as males.

Distracted Drivers Involved in a Fatal Crash 2011-2015			
	Male	**Female**	**Total**
Under 21	19	7	*26*
21-24	15	10	*25*
25-34	32	17	*49*
35-44	14	8	*22*
45-54	19	4	*23*
55-64	16	11	*27*
65-74	11	7	*18*
75+	12	10	*22*
	138	**74**	**212**

Table 8.1 (Source: FARS)

By county, distracted driving-related fatal crashes took place most often in Worcester and Bristol County during the five-year period from 2011-2015. These two counties accounted for 30% of all distracted driving-related fatal crashes. The region south of Boston – Norfolk, Bristol and Plymouth – represented 37% of crashes.

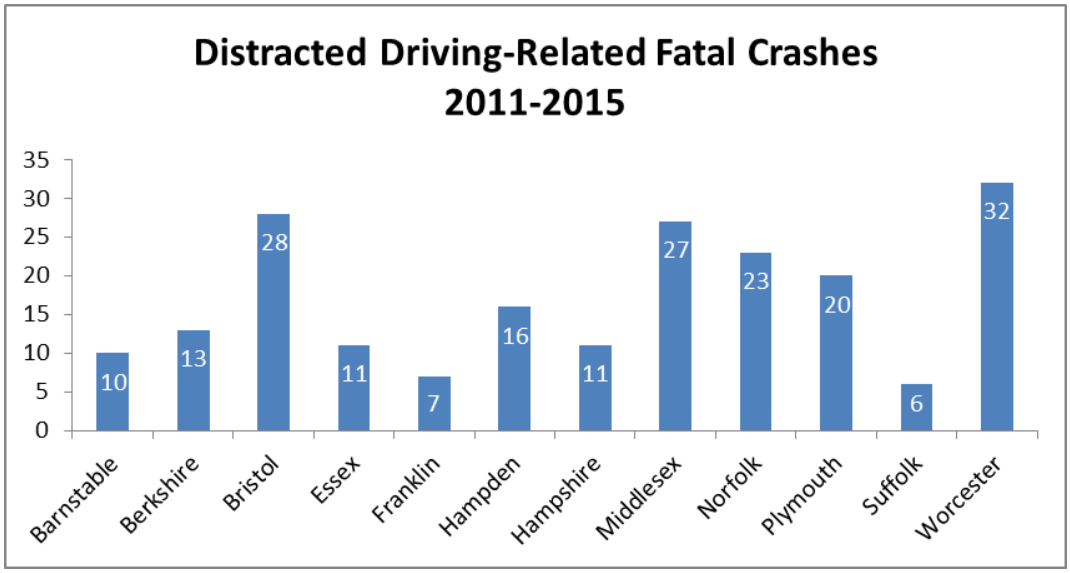


Figure 8.2 (Source: FARS)

EOPSS/OGR/HSD examined what was the reported 'distraction' to the driver involved in the fatal crash to determine if it is largely cellphone-related or something else entirely.

It was found that in a majority of the fatal crashes, the driver was simply distracted or inattentive rather than using a cellphone or the controls of the vehicle.

Type of Distraction Reported in Fatal Crash 2011-2015	
Distraction/inattention/careless	90
Other Distraction	54
Inattentive or lost in thought	19
Distracted by outside person, event	8
By other occupant	7
While talking/listening to cellphone	7
While manipulating cellular phone	6
Other cellular phone related	5
Eating or drinking	5
Adjusting Audio/Climate Controls	4
While Dialing Cellular Phone	1
While using other device/controls	1
While using or reaching for a device	1

Table 8.2 (Source: FARS)

In fact, cell phone-related distraction accounted for only 9% of the distractions reported in a fatal crash.

For all the concern about people focusing on cell phones or smart phones when driving, it seems as though drivers are simply not paying attention for unknown reasons at the time of crash. Then again, if a driver survived the crash, it is highly unlikely s/he would self-report cellphone use as the last thing they were doing prior to the crash. Nevertheless, the data does show how easily one can be distracted while driving, whether with a phone or not.

The lack of phone-related distractions may be partially due to the increase in citations issued involving distracted driving. From 2012 to 2016, distracted driving citations rose 3000% which indicates police departments are making a tremendous effort to crack down on this unlawful driving behavior.

Distracted Driving Citations	MGL Code	2012	2013	2014	2015	2016
JOL Mobile Device/Phone	90 8M	64	71	79	111	101
Mobile Device Improper Use	90 13 MP	103	698	573	610	765
Electronic Message Send/Receive	90 13B	1,726	3,389	4,707	6,140	8,566
		1,893	**4,158**	**5,359**	**6,861**	**9,432**

Table 8.3 (Source: Merit Rating Board's Quarterly Citation Report)

This rise in citations could also show how uneducated (or skeptical) drivers are of the dangers posed when using a phone while driving, especially in the act of texting.

During the 2016 Statewide Seat Belt Observational Survey, UMassSafe recorded cellphone usage of drivers at each of the 147 selected observation locations. Of a total of 23,395 drivers

observed, 5.2% were using their cell phone. This is a slight decrease from the observed rate of 5.7% in 2015. Female drivers (5.9%) continued to have higher observed usage than male drivers (4.6%). Highest rate of cellphone usage took place during peak afternoon hours (6.1%) during weekdays and was lowest over the weekends. Regionally, Middlesex (6.1%) and Bristol (5.4%) County observation locations recorded the highest cellphone usage. In regards to passenger presence, 5.9% of drivers using cell phones were alone, compared to only 1.9% with passengers. This suggests that drivers are cognizant of the dangers of driving and cell phone usage but chose to be safe more often when they have a passenger than when alone.

With the recent uptick in distracted driving fatalities and fatal crashes, it is a top concern for EOPSS. More work needs to be done educating drivers on the dangers of taking their eyes off the road, which is why EOPSS/OGR/HSD plan to offer a grant program aimed at young drivers that will include distracted driving as one of its areas of focus as well as conduct a distracted driving enforcement mobilization, with emphasis on Bristol and Worcester Counties.

Performance Targets

Distracted Driving Performance Target #1

Decrease distracted driving-related fatalities 10% from 64 in 2015 to 58 by December 31, 2018.

Performance Measures

Number of fatalities with one or more distractions

Strategies

1. Fund the MSP to enforce distracted driving laws
2. Fund the MSP and selected communities for sustained enforcement of traffic laws
3. Increase public awareness of the dangers of distracted driving, mobile device use and texting while driving
4. Educate law enforcement on the identification and citation of offending violators of mobile device laws
5. Document mobile device use as part of the annual seat belt observation survey
6. Promote the MPTC's online training for law enforcement on the importance of noting distracted driving as a factor on crash reports
7. Provide funding to 203 eligible municipal police departments to conduct a local distracted driving enforcement mobilization in April 2018

Distracted Driving Program Area Projects

DD-18-01 MSP Distracted Driving Enforcement

Based on FFY 2017's distracted driving enforcement efforts and analysis of MSP internal RAMS data to determine the appropriate days of week, times and locations, MSP will conduct activities to enforce distracted driving laws. The preliminary timeline for this project will be based on data, guidance from NHTSA and other distracted driving events. Funding for this task may change based on 405 E funds awarded. MSP will employ several trusted high-visibility strategies such spotter technique, roving marked and unmarked cruisers and SUVs as well as stationary vehicles. Since distracted driving is associated with driving behaviors such as inappropriate speeds, slow reaction times, and weaving among traffic lanes, these behaviors will receive special attention during enforcement periods. This task is supported by CTW Chapter 4 Section 1.3 and 2.2. This task will support distracted driving performance target 1.

Project Budget/Source – $150,000 (Sec. 402) and $150,000 (Sec. 405e)

Match Amount - $0 **Indirect Cost** - $101,400

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

DD-18-02 Local Distracted Driving Enforcement

Provide overtime funds to local municipal police departments to conduct activities to enforce distracted driving laws. Not only will enforcement patrols seek out violators who use cellphones while driving, but also those who exhibit other distracted driving behaviors such as inappropriate speed, weaving, slow reaction times, and drifting. Patrols will be conducted during high-risk times and locations based on the latest available state and local data. Eligibility was based upon 2012-2014 crash data, subtracting crashes the MSP responded to, and then normalized by state population. Any community with a crash rate equal to or above 0.09 is deemed eligible for this program. Under this project, participating departments may request funding for traffic enforcement equipment including, but not limited to, speed measurement devices and traffic safety signage. Participating departments are listed in the appendix under Table 13.1, along with equipment requests over $5,000 requiring NHTSA approval. Eligible departments are listed in the appendix under Table 13.1, and participating departments will be submitted to NHTSA, along with respective equipment requests in late summer 2017. The departments were selected based on crash data and past performance. This task is supported by CTW Chapter 4 Section 1.3 and 2.2. This task will support distracted driving performance target 1.

Project Budget/Source – $625,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $625,000

Project Staff – Lindsey Phelan

DD-18-03 Educational Outreach to Young Drivers

Funding will be provided to selected subrecipients to educate young drivers on the dangers of distracted driving. According to the 2011 MYHS, conducted by DPH, of the students who reported driving a car, 42% also reported that they have texted while driving. Students in the 12th grade were more likely to report texting while driving than students in any other high school grade and 11th grade students were more likely to report texting while driving than 10th grade students. Methods for outreach can include, but are not limited to, school presentations, peer-to-peer workshops, safety fairs, and informational campaigns. An evaluation component will be included. Funding will be used to cover expenses related to personnel, educational materials, consultants, travel/driving costs and office supplies. This task is supported by CTW Chapter 4, Section 2.2. This task will support all overall performance targets.

Project Budget/Source – $50,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $50,000

Project Staff – Bob Kearney

DD-18-04 Distracted Driving Media

Develop and implement statewide paid and earned media to support the April 2018 distracted driving mobilization aimed at adult drivers age 18-34, as well as supporting "100 Deadliest Days," a summer-long campaign aimed at making teens and their parents aware of the dangers of distracted driving. These two target groups account for nearly 50% of all distracted drivers involved in a fatal crash from 2011-2015. EOPSS/OGR/HSD's communications vendor, Argus, will be handling the media implementation. Advertising space purchases will be evaluated based on the criteria in the 402 Advertising Space Guidance. EOPSS/OGR/HSD follows a system like the NHTSA Communications Pyramid. Strong internal policies are followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data as well as national data provided by AAA were used not only for planning enforcement activities but also to determine the target audiences, and media channels used to reach them. NHTSA's guidelines are followed for messaging, demographics, best practices and target groups for each media effort. This task is supported by CTW Chapter 4, Sections 1.1, 1.3, and 2.2. This task will support distracted driving performance target 1.

Project Budget/Source – $150,000 (Sec. 402) [Paid - $120,000; Earned - $30,000]

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano

DD-18-05 Program Management

Provide sufficient staff to conduct related programming described in plan to cover in and out of state travel, professional development expenses, conference fees, postage and office supplies.

Project Budget/Source – $120,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $32,448

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano**,** Deb Firlit, Lindsey Phelan, Bob Kearney, Brook Chipman, and Jeffrey Brownell

Distracted Driving: Budget Summary

Project Number	Project Title	Budget	Budget Source
DD-18-01	MSP Distracted Driving Enforcement	$ 150,000	402
		$ 150,000	405e
DD-18-02	Local Distracted Driving Enforcement	$ 625,000	402
DD-18-03	Educational Outreach to Young Drivers	$ 50,000	402
DD-18-04	Distracted Driving Media	$ 150,000	402
DD-18-05	Program Management	$ 120,000	402
	Total All Funds	**$ 1,245,000**	

9.0 Speed and Aggressive Driving Program Areas

Problem Identification and Analysis

Speed-related fatalities and injuries are a significant highway safety problem often over-shadowed by the high-profile attention given to occupant protection and impaired driving at the national and state levels. In Massachusetts, 27% of crash fatalities were speed-related in 2015, up from 24% in 2014. The national rate for speed-related crash fatalities was the same as Massachusetts in 2015, 27% of all fatalities.

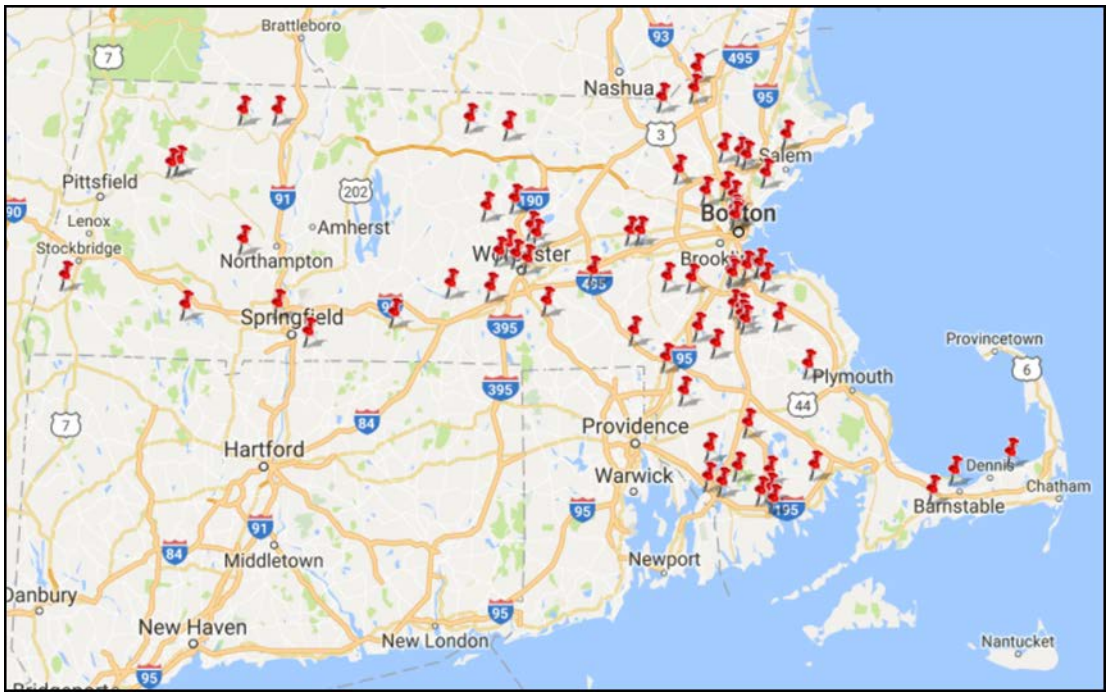


Figure 9.1 Speed Fatalities in 2015 (Source: FARS)

During 2015, speed fatalities were highest in Worcester and Bristol counties, followed by Middlesex and Norfolk. As the map above shows, the aforementioned counties have clusters of fatalities within their respective jurisdictions. The map also shows more fatalities happening along roads within urban regions than rural. From 2011-2015, over 75% of all speed-related fatal crashes took place along urban roadways with local roads accounting for more than a third as the location of crashes.

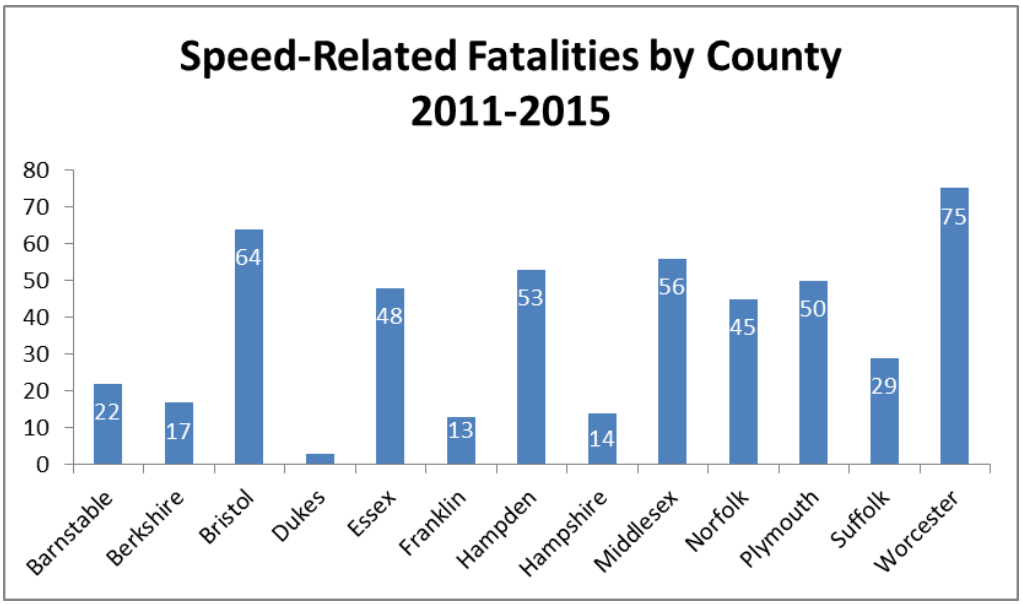


Figure 9.2 (Source: FARS)

From 2011-2015, speed-related fatalities occurred more often in Worcester and Bristol than any other counties in Massachusetts. These two counties account for 28% of all speed-related fatalities during this period. The low fatality totals for Berkshire, Franklin and Hampshire could be attributed to the lack of major roadways within their respective counties as well as having more rural roads that wind through hilly or mountainous areas. Both factors would decrease opportunities to speed compared to having major interstates or state highways available for travel.

Top Cities for Speed Fatals 2011-2015	
Boston	24
Worcester	16
Springfield	15
New Bedford	14
Brockton	11
Taunton	11

Table 9.1 (Source: FARS)

Even though Suffolk County had one of the lower speed-related fatality totals, Boston lead all cities in location for fatalities. The City of Worcester accounts for 21% of all speed fatalities in Worcester County. Springfield has 28% of fatalities in Hampden County. New Bedford and Taunton's speed fatalities are 39% of Bristol County.

During the year, speed-related fatalities happened with more frequency in the month of November. February had the lowest amount. The top three months – November, October, and July – represented 32% of all speed fatalities from 2011-2015. The average monthly total for speed fatalities was 41.

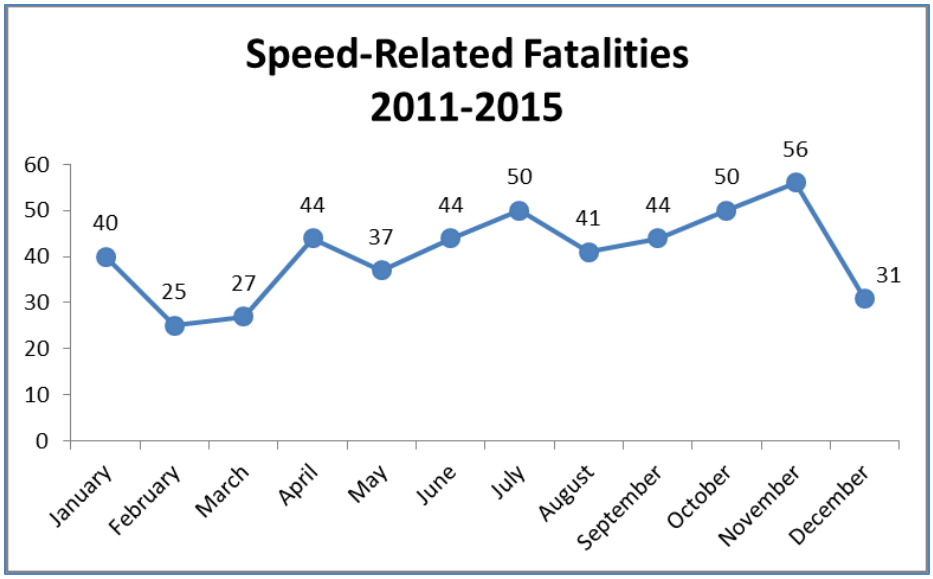


Figure 9.3 (Source: FARS)

By time of day, speed-related fatalities occurred most often between midnight and 3:00 a.m.; followed by 6:00 p.m. – 9:00 p.m. and 9:00 p.m. – midnight. The 12:00 a.m. – 3:00 a.m. period accounted for 26% of all speed fatalities. If the time frame from 6:00 p.m. to midnight is included, this nine-hour block from evening into early morning would represent nearly 60% of all speed fatalities.

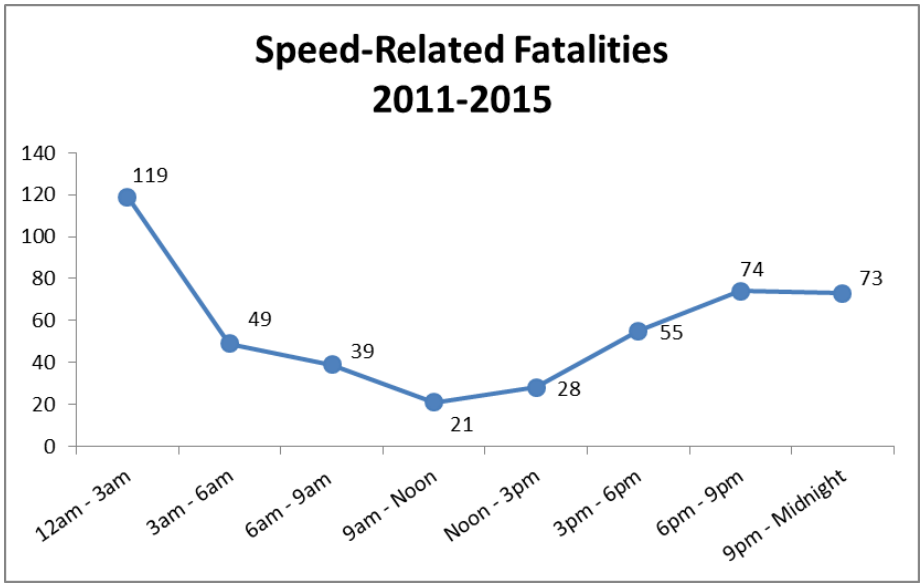


Figure 9.4 (Source: FARS)

This period would encompass the popular hours in which people tend to go out for the evening as well as heading home from an evening out. Alcohol is a possible factor. During 2015, 33% of the fatalities in a speed-related crash were found with some level of alcohol in their system.

During the five-year period of 2011-2015, males accounted for 77% of all speed fatalities. By age, the 16 – 34 group represents over 60% of the fatalities. This is not too surprising as this age

range could generally be associated with drinking, drug use, and spending the night out on the town.

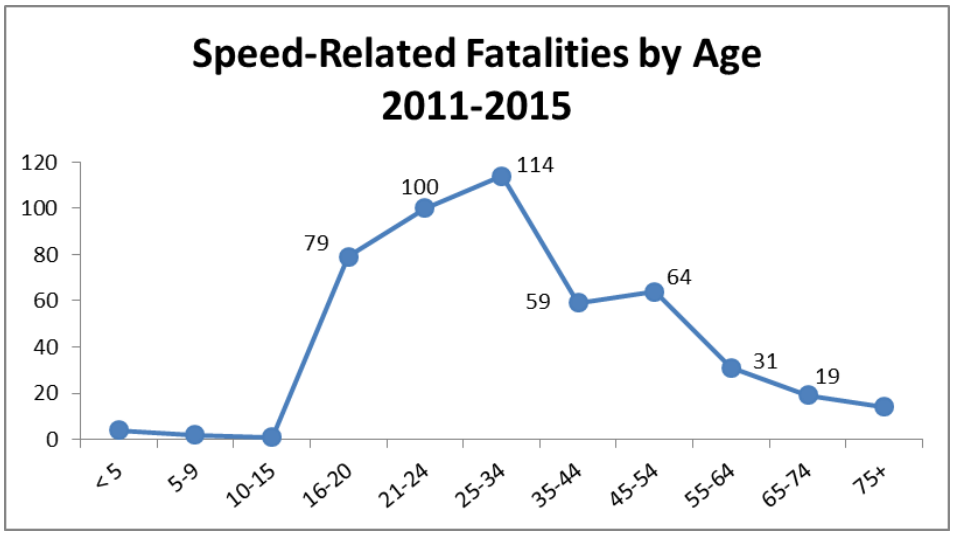


Figure 9.4 (Source: FARS)

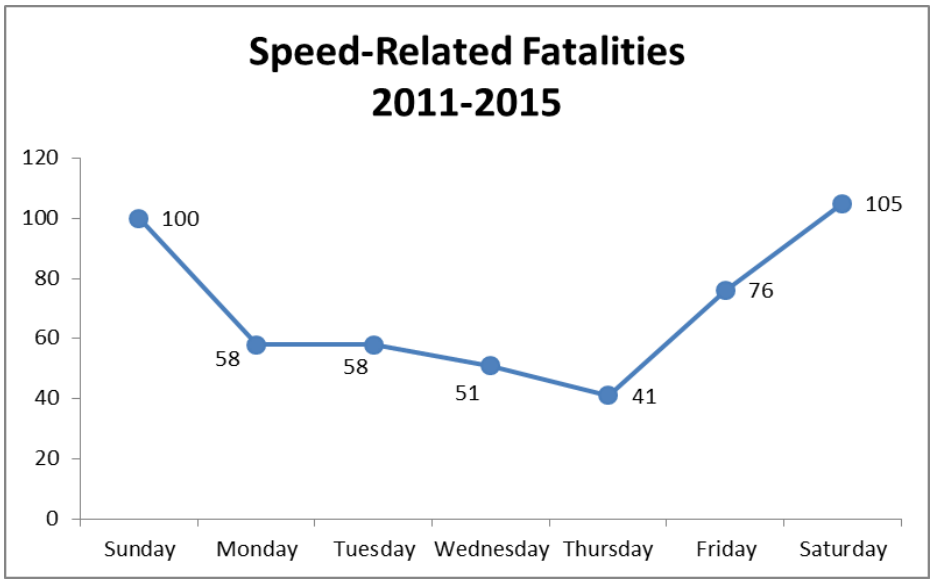


Figure 9.6 (Source: FARS)

Lastly, speed fatalities were more frequent during weekends than during the weekday. Saturday and Sunday accounted for 42% of all speed fatalities from 2011-2015. If Friday was included, the three-day period would be responsible for nearly 60% of all fatalities. Clearly, any speed-related enforcement would have to be focused on these three days.

Speed-Related Violations

Since 2012, speeding and aggressive driving violations have dropped 27%. More and more drivers are showing respect on the roadways and the substantial decline in violations is evidence of this trend.

Table 9.2 Massachusetts Speeding and Aggressive Driving Violations

	2012	2013	2014	2015	2016
Speeding Violations[a]	224,348	204,022	189,121	172,453	166,423
Aggressive Driving Violations[b]	141,689	131,174	133,009	113,689	101,721

Source: MRB Quarterly Violations Report

[a] Comprising Speed County Bridge (85 20), Speeding (90 17, 90 18, and 730 708 SP), MDC Way Speeding (350 401 SP), Mass Pike Speeding (730 500 SP and 730 707 SP), Sumner Tunnel Speeding (730 300 SP)

[b] Comprising Fail to Keep Right (89 1), Improper Passing (89 2), Keep Right No View (89 4), Lane Violation/Unsafe Passing (89 4A), Keep in Right Lane (89 4B), Right of Way Intersection (89 8), Failure to Stop (89 9), Yield to Pedestrians (89 11), Fail to Use Safety (90 14), Fail to Signal Stop (90 14B), Speed Drag Racing (90 17B), Adult Drag Racing (90 17B AD), Operating Recklessly (90 24 OR), Vehicular Homicide (90 24G), MDC Sign/Signal (350 401), Mass Pike Tandem Trailers (730 400)

In conclusion, the data presented in this section shows that localized enforcement of speeding should take place during the weekend between 6pm and 3am, with emphasis in Bristol and Worcester counties. If possible, law enforcement should consider conducting speed enforcement efforts during October and/or November along local roads, which are key locations for crashes as well as areas frequented by the 16-34 age group.

Performance Targets

Speed Performance Target #1

Decrease speed-related fatalities 5% from the five-year average of 100 to a five-year average of 95 by December 31, 2018.

Performance Measures

Number of speed-related fatalities

Strategies

1. Fund the MPTC to conduct specialized training on speed measurement
2. Fund law enforcement to conduct speed enforcement during CIOT and DSGPO
3. Fund law enforcement to conduct speed enforcement during sustained enforcement activities
4. Provide funds to the MSP for speed enforcement activities

Speed and Aggressive Driving Program Area Projects

SC-18-01 MSP Speed Enforcement Mobilization

Funds will be provided to MSP to conduct speed-related enforcement activities aimed at decreasing incidence of speeding violations as well as reducing the rate of speed-related motor vehicles crashes along the Commonwealth's major highways. Exact dates for activities are not available at this time. MSP will use internal data to determine best time of year to conduct overtime patrols. In recent years, speed mobilizations have taken place in October. This task is supported by CTW Chapter 3 Sections 2.2. This task will support speed performance targets 1 and 2.

Project Budget/Source – $300,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $101,400

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –Deb Firlit

SC-18-02 Educational Outreach to Young Drivers

Funding will be provided to selected subrecipients to educate young drivers on the dangers of speeding and aggressive driving. In 2012, over 25,000 citations were given to drivers under 21 for speeding. Methods for outreach may include, but are not limited to, school presentations, peer-to-peer workshops, safety fairs, and informational campaigns. An evaluation component will be included. Funding will be used to cover expenses related to personnel, educational materials, consultants, travel/driving costs and office supplies. This task is supported by CTW Chapter 3, Section 2.2, 4.1. This task will support speed performance target 1, younger driver target 1 & 2, core performance targets 1, 2, and 3.

Project Budget/Source – $50,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $50,000

Project Staff – Bob Kearney

SC-18-03 Speed Media

Provide funding for a media campaign in support of local and state speed enforcement activity. EOPSS/OGR/HSD's communications vendor, Argus, will be handling the media implementation. Advertising space purchases will be evaluated based on the criteria in the 402 Advertising Space Guidance. EOPSS/OGR/HSD follow a system like the NHTSA Communications Pyramid. Strong internal policies are followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data are used

not only for planning enforcement activities but also to determine the target audiences, and media channels used to reach them. NHTSA's guidelines are followed for messaging, demographics, best practices and target groups for each media effort. This task is supported by CTW Chapter 3, Section 4.1 and will support speed performance target 1.

Project Budget/Source – $50,000 (Sec. 402) [Paid - $40,000; Earned - $10,000]

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – John Fabiano

SC-18-04 Program Management

Provide sufficient staff to conduct related programming described in plan to cover in and out of state travel, professional development expenses, conference fees, postage, and office supplies.

Project Budget/Source – $75,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $20,280

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –Deb Firlit, Bob Kearney, John Fabiano, Jeffrey Brownell, and Brook Chipman

Speed and Aggressive Driving: Budget Summary

Project Number	Project Title	Budget	Budget Source
SC-18-01	Speed Enforcement Mobilization – MSP	$ 300,000	402
SC-18-02	Educational Outreach to Young Drivers	$ 50,000	402
SC-18-03	Speed Media	$ 50,000	402
SC-18-04	Program Management	$ 75,000	402
	Total All Funds	$ 475,000	

10.0 Younger and Older Drivers Program Areas

Problem Identification and Analysis

In 2015, younger drivers (age 20 or younger) accounted for 8% of all drivers involved in fatal crashes in Massachusetts. This represents an increase from 6% reported in 2014. Since 2011, young driver involvement has dropped 36%. EOPSS/OGR/HSD has continued outreach and educational initiatives aimed at young drivers are having a positive impact on driving behavior.

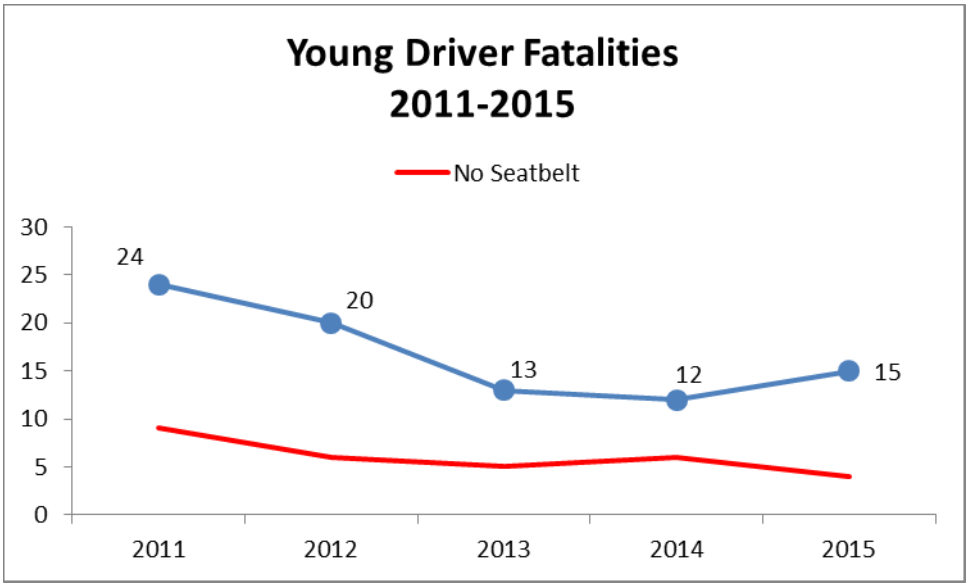


Figure 10.1 (Source: FARS)

Young driver (16-20) fatalities declined 38% from 2011-2015. More importantly, unrestrained young drivers as a percentage of all young driver fatalities dropped from 38% in 2011 to 27% in 2015. Clearly, the impact of JOL laws has helped increase young driver knowledge about roadway safety regarding wearing seat belts, distracted driving, and alcohol-impairment.

As with the 2010-2014 period, drivers aged 20 had the most fatalities (30) of all young driver fatalities during 2011-2015. Age 19 was second with 22 fatalities. The lowest number of fatalities were reported by 16 year old drivers – seven. Males account for 75% of the drivers involved.

Despite the decline in young driver fatalities, it is critical to examine key data elements about young drivers involved in fatal crashes.

Examining young driver involvement across three elements – by day of week, by time, and by county – will provide a clearer view of trends.

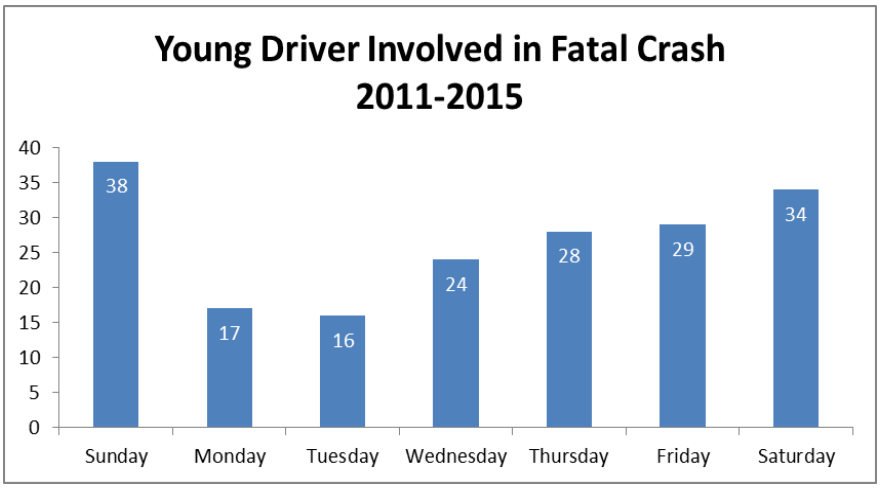


Figure 10.2 (Source: FARS)

By day of week, the weekends (Saturday/Sunday) accounted for 39% of the fatal crashes. If Friday was included as part of the weekend, the three-day period would be responsible for 54% of fatal crashes. Monday and Tuesday had the lowest amount of young driver involvement in fatal crashes. These two days accounted for 18% of fatal crashes.

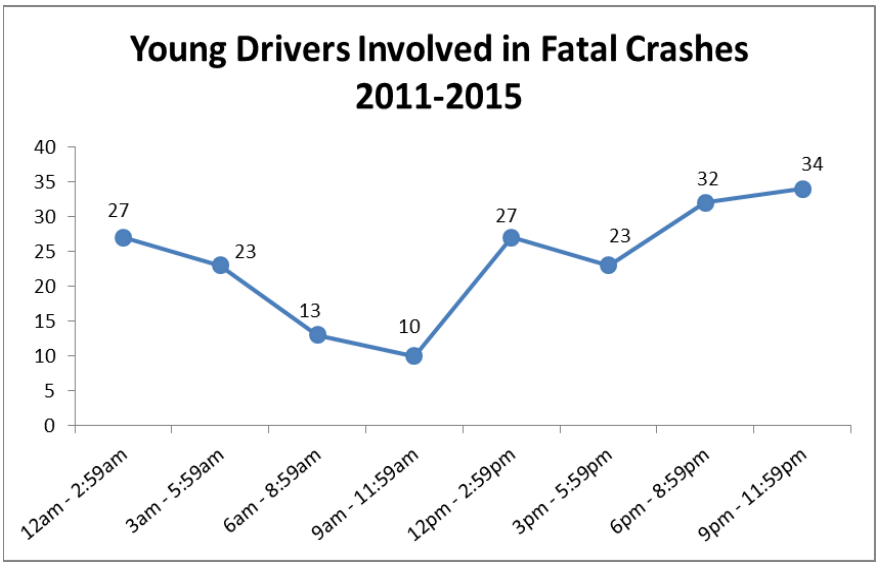


Figure 10.3 (Source: FARS)

By time of day, the period from evening through early morning (6pm to 3am) accounted for nearly 50% of the fatal crashes involving young drivers. The time between 6am to 11:59am had the lowest levels of fatal crashes. This period had 12% of fatal crashes.

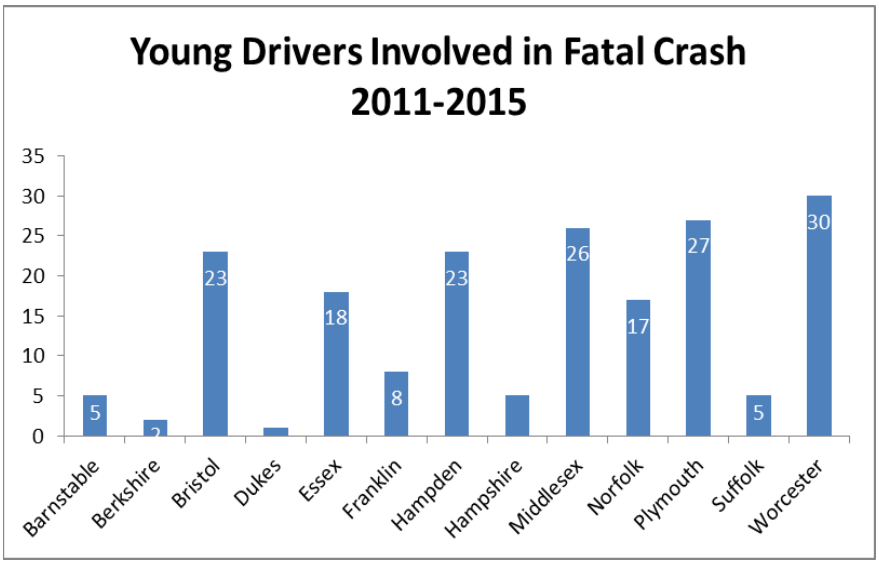


Figure 10.4 (Source: FARS)

In terms of counties, from 2011-2015, Worcester, Plymouth and Middlesex were the top locations for fatal crashes involving a young driver. The top three counties accounted for 41% of all fatal crashes involving a young driver. In the southeast region Plymouth, Bristol, and Barnstable Counties accounted for 27% of the fatal crashes. In Western Massachusetts (Berkshire, Franklin, Hampshire and Hampden Counties combined) accounted for 19% of fatal

crashes.

Regarding young drivers, the prior evidence shows that any enforcement activity during FFY 2018 should be conducted during the weekend between the hours of 9pm to 3am with focus on Worcester, Plymouth, and Middlesex Counties.

Older drivers (age 65+) represented 8% of all drivers involved in fatal crashes during 2015. This was four percent lower than in 2014. Since 2011, older driver involvement in a fatal crash has declined 10%. Males account for 65% of the drivers involved in a fatal crash.

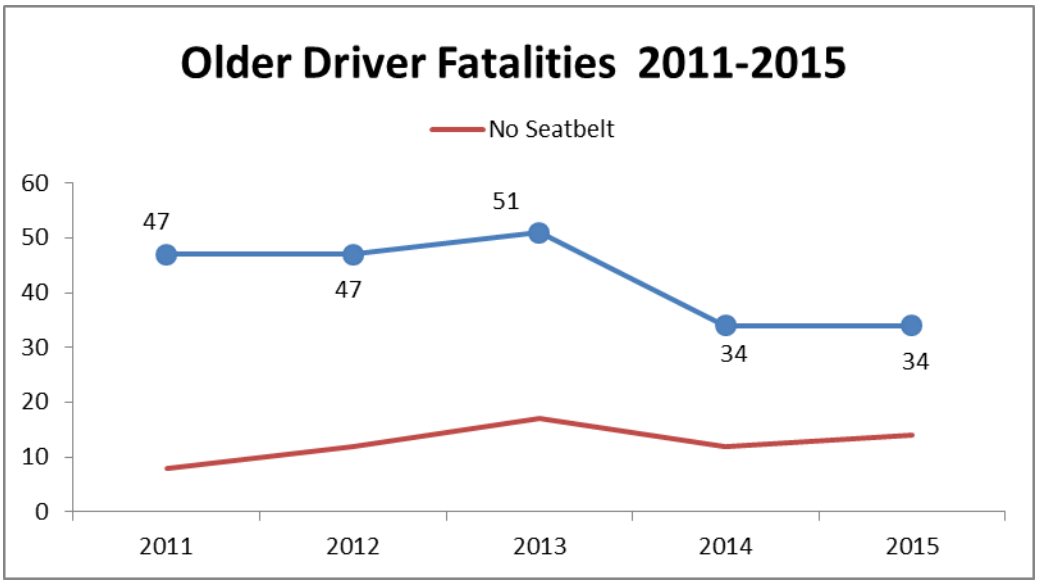


Figure 10.5 (Source: FARS)

Older driver fatalities have declined 28% since 2011. Yet, the percentage of unrestrained fatalities among the older drivers has risen from 8 to 14. In 2015, unrestrained older driver fatalities were responsible for 41% of all older driver fatalities. Compared to young drivers, it seems as though older drivers may not adhere to the media messaging about seat belt usage.

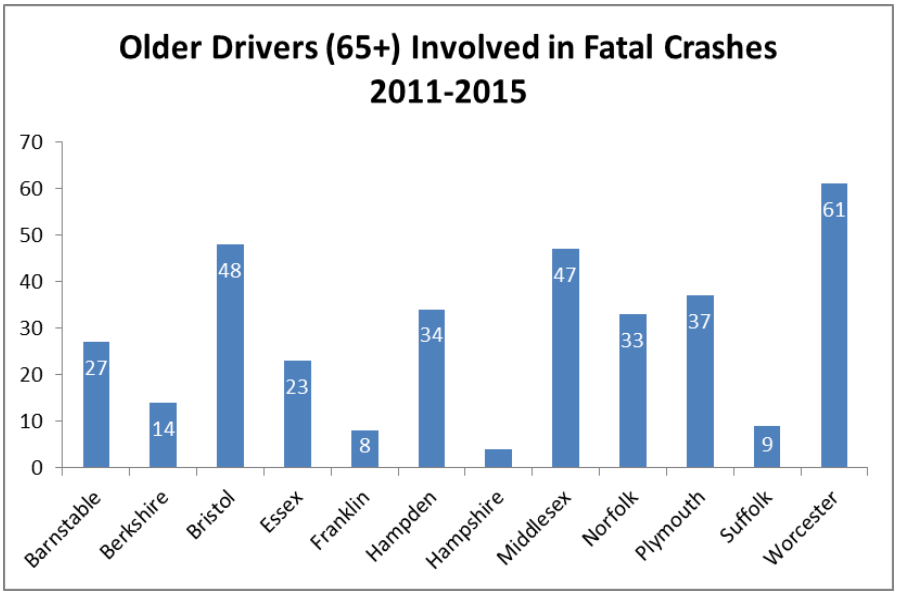
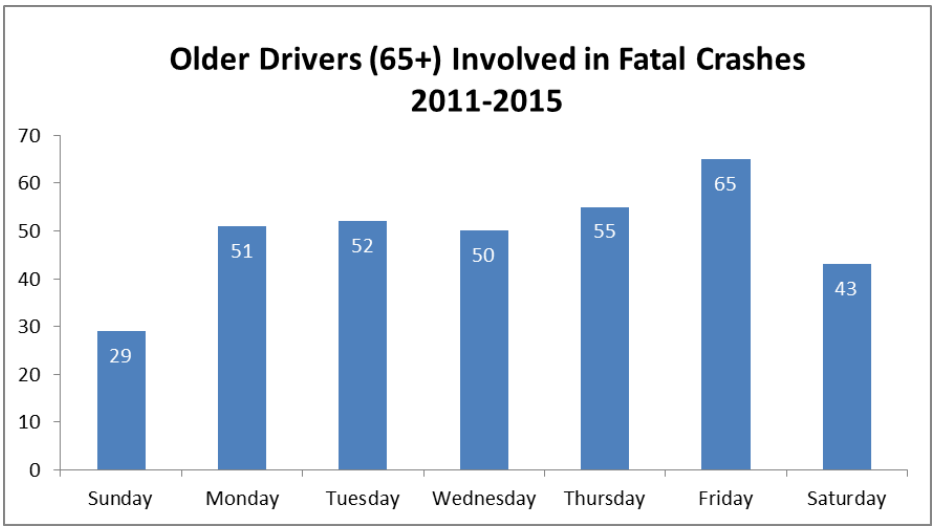


Figure 10.6 (Source: FARS)

From 2011-2015, older drivers were most involved in fatal crashes in Worcester County where 17% of crashes occurred. Bristol and Middlesex both accounted for 13% of fatal crashes. The three counties represented 43% of fatal crashes involving an older driver.

The southeast region of Barnstable, Bristol and Plymouth County accounted for over a third of the



fatal crashes – similar to the 27% reported for younger drivers.

Figure 10.7 (Source: FARS)

By day of week, older drivers were most often in fatal crashes on Fridays, followed by Thursdays and Tuesdays. The weekends were the slowest days of the week for fatal crashes. Saturday and Sunday accounted for 22% of older drivers (compared to 39% for young drivers).

Currently, there are no specific programs listed in this section for younger and older drivers. However, enforcement and media activities for these age groups will be incorporated into other tasks. For instance, we will be conducting programs specifically for young drivers and occupants to increase seat belt use (OP-18-09) and reduce underage drinking/impaired driving (AL-18-04, AL-18-05, AL-18-11, and AL-18-17), speeding (SC-18-02) and distracted driving (DD-18-03).

This plan also allows for continuous follow-up and adjustment based on new data and the effectiveness of projects.

Performance Targets

Younger Driver Performance Target #1

Decrease number of young drivers (age 20 or under) involved in fatal crashes 10% from the five-year average of 38 in 2011-2015 to a five-year average of 34 by December 31, 2018.

Younger Driver Performance Target #2

Decrease younger driver (age 20 or under) fatalities 15% from the five-year average of 17 to a five-year average of 14 by December 31, 2018.

Older Driver Performance Target #1

Decrease number of older drivers (65+) involved in fatal crashes 5% from the five-year average of 69 in 2011-2015 to a five-year average of 65 by December 31, 2018.

Performance Measures

Number of fatalities involving a younger driver
Number of young driver fatalities
Number of older drivers (age 65 or older) involved in fatal crashes

11.0 Additional Program Areas

Additional programs and projects are listed below. Many of these projects seek to address multiple traffic safety issues.

■ 11.1 Police Traffic Services Program Area

Performance Measure
Number of motor vehicle-related fatalities

Performance Target
Reduce motor vehicle-related fatalities 2.5% from the five-year average of 361 in 2011-2015 to a five-year average of 352 by December 31, 2018

PT-18-01 Municipal Police Training

Provide funding to MPTC to conduct up to 38 classes for municipal police departments to improve enforcement of laws pertinent to current traffic safety issues such as speeding, pedestrian and bicyclist safety, and distracted driving. Topics will include Advanced Traffic Crash Investigation, Traffic Crash Investigation, Speed Measurement, and LiDAR training. This task is supported by CTW Chapter 1, Sections 2.1, 2.5, Chapter 2 Section 2.3, Chapter 3 Section 2.2, Chapter 4 Section 1.3, Chapter 8 Section 4.4, and Chapter 9 Section 3.3. This task will support all performance targets.

Project Budget/Source – $ 238,570 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $23,857

Maintenance of Effort - $0 **Local Benefit** - $215,668

Project Staff – Lindsey Phelan

PT-18-02 Law Enforcement Liaison (LEL)

Funds will be used to hire up to a total two part-time LELs. In this capacity, the contract LELs will work in conjunction with OGR, the MPTC Executive Director, and the MSP representative assigned to LEL responsibilities to promote strategies and policies with state and local law

enforcement to strengthen our mission and make the roadways safer. Funds will also be provided for LEL travel related expenses related to state and national conferences and trainings, and in-state travel. This task is supported by CTW Chapter 1, Sections 2.5, Chapter 2 Sections 2.1, 2.2, 2.3, Chapter 3 Section 2.2, and Chapter 4 Section 1.3. This task will support all performance targets.

Project Budget/Source – $150,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $40,560

Maintenance of Effort - $0 **Local Benefit** - $150,000

Project Staff – Brook Chipman

PT-18-03 MDAA/TSRP

Funds will be used to support TSRP salary to conduct trainings and conferences, provide technical assistance, create and maintain vehicular crimes pages and resources for prosecutors and law enforcement about motor vehicle issues. The Massachusetts OUI Prosecutors Manual will be updated. This task is supported by CTW Chapter 1 Sections 3.1, 3.2, and 3.3. This task will support impaired driving performance targets 1 and 2 and occupant protection performance target 1.

Project Budget/Source – $75,000 (Sec. 402) and $130,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $20,500

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

PT-18-04 MSP LEL

Provide funds to MSP for training and travel-related expenses for the LEL to attend meetings, trainings and national conferences in support of major traffic safety issues including but not limited to impaired and distracted driving, occupant protection and drug recognition expert training. National conferences will include the International Association of Chiefs of Police Conference in the Fall, 2017 and the Lifesavers Conference in the Spring, 2018. Funding will also be used to cover the cost of local travel for the LEL to attend meetings and trainings with local law enforcement and other traffic safety stakeholders. This task is supported by CTW Chapter 1, Sections 2.5, Chapter 2 Sections 2.1, 2.2, 2.3, Chapter 3 Section 2.2, and Chapter 4 Section 1.3. This task will support all performance targets.

Project Budget/Source – $9,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $0

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

PT-18-05 State Judicial Outreach Liaison (SJOL)

The Massachusetts HSD will hire one part-time (.5 FTE) State Judicial Outreach Liaison (SJOL) as a pilot project. Ideally, the MA SJOL position will be filled by a retired Massachusetts judge, with extensive experience in handling impaired driving or other traffic-related cases. According to SJOL guidance provided by the National Highway Traffic Safety Administration (NHTSA), the theory underlying the creation of SJOLs is that local judges, whether sitting or retired, are in better positions to understand and respond to local highway safety concerns, as it relates to their position, and are more likely to have close working relationships with local leaders, than are the National Judicial Fellows or the Regional JOLs. In addition, SJOLs serve as direct resources to State and local judges and have access to or knowledge of national resources that benefit them.

According to NHTSA's Countermeasures that work document (CTW) related to Judicial Outreach Liaisons, DWI cases can be highly complex and difficult to prosecute, yet they are often assigned to the least experienced prosecutors. In one survey, about half of prosecutors and judges said the training and education they received prior to assuming their position was inadequate for preparing them to prosecute and preside over DWI cases (Robertson & Simpson, 2002a).

The SJOL will also work closely with the Massachusetts Traffic Safety Resource Prosecutors (TSRP) who already provide training, education and technical support to other prosecutors and law enforcement agencies within the State. This will ensure a comprehensive and consistent approach to training, education, and technical support at all appropriate levels of the court system. In addition to alcohol-related cases, Massachusetts prosecutors and judges also must process drug-related ones. This is important to note given the state's recent legalization of marijuana for both medical and recreational use. Currently Massachusetts has 23 adult drug courts and three juvenile drug courts. The SJOL will be instrumental in helping to ensure that judges in these courts have up-to-date information about the impacts drugs have on drivers, passengers, motorcyclists, bicyclists and pedestrians. The SJOL will also strive to provide education about the knowledge, skills and abilities the state's Drug Recognition Experts (DREs) who can provide invaluable and credible testimony in impaired driving cases. Funds will also be provided for SJOL travel related expenses related to state and national conferences and trainings, and in-state travel. This task is supported by CTW Chapter 1 Sections 3.1, 3.2, 3.3, 4.2, 4.3, and 4.4. This task will support impaired driving performance targets 1 and 2.

Project Budget/Source – $ 100,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $27,040

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –Deb Firlit

PT-18-06 MSP Traffic Data Analyst

Funds will be used to support the salary of a Traffic Data Analyst trained to dissect, analyze and identify trends within the MSP RAMS system. The analyst will effectively maximize all available resources and provide analytics to Troop Commanders and Commanding Officers. Utilizing reports generated by the analyst, commanders will be better equipped to identify and target specific areas when scheduling patrols for sobriety checkpoints and national and state mobilizations addressing major traffic safety issues including, but not limited to, impaired and distracted driving, occupant protection and speeding. This task is supported by CTW Chapter 1, Section 2.1, 2.2, 2.5 Chapter 2, Sections 2.1, 2.2, 2.5, 3.1 and Chapter 3 Section 2.2. This task will support all FFY 2018 performance targets.

Project Budget/Source – $75,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $25,350

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Deb Firlit

PT-18-07 MSP/TSRP

Funds will be provided to the MSP to support the salary of a TSRP to be assigned to the Traffic Programs Section to assist in keeping the department informed and trained about the advancements in technology and the law. The TSRP will provide troopers and their law enforcement partners with training and resources in the area of vehicular crimes, assist with the Oral Fluids Testing program, review all cases and prepare legal challenges in court to sobriety checkpoints, ALPR data and medical and recreational marijuana. This task is supported by CTW Chapter 1 Sections 3.1, 3.2, and 3.3. This task will support impaired driving performance targets 1 and 2 and occupant protection performance target 1.

Project Budget/Source – $75,000 (Sec. 402) and $130,000 (Sec. 405d)

Match Amount - $0 **Indirect Cost** - $69,290

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff - Deb Firlit

PT-18-08 Program Management

Provide sufficient staff to conduct police traffic services-related programming described in this plan to cover in and out of state travel, professional development expenses, conference fees, postage, and office supplies.

Project Budget/Source – $ 115,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $31,096

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –Lindsey Phelan, Brook Chipman, Jeffrey Brownell, and Deb Firlit

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Police Traffic Services Program Area

Project Number	Project Title	Budget	Budget Source
PT-18-01	Municipal Police Training	$ 238,570	402
PT-18-02	Law Enforcement Liaison (LEL)	$ 150,000	402
PT-18-03	MDAA/TSRP	$ 75,000	402
		$ 130,000	405d
PT-18-04	MSP LEL	$ 9,000	402
PT-18-05	State Judicial Outreach Liaison (SJOL)	$ 100,000	405d
PT-18-06	MSP Traffic Data Analyst	$ 75,000	402
PT-18-07	MSP/TSRP	$ 75,000	402
		$ 130,000	405d
PT-18-08	Program Management	$ 115,000	402
	Total all Funds	$ 1,097,570	

■ 11.2 Planning and Administration Program Areas

Performance Measures

Deadline for submission of Highway Safety Plan
Deadline for submission of Annual Report
Number of financial vouchers per month

Performance Targets

Submit a complete Highway Safety Plan by the deadline of July 3rd

Submit an Annual Report by the deadline of December 31st
Submit a financial voucher once a month

PA-18-01 Administration of Statewide Traffic Safety Program

Funding will be used to plan, implement, monitor, and evaluate programs and projects for the FFY 2017 HSP and produce the FFY 2017 Annual Report and FFY 2018 HSP. Provide required staff salaries, professional development, travel, office space, equipment, materials, and fiscal support.

Project Budget/Source – $550,000 (Sec. 402)

Match Amount - $550,000 **Indirect Cost** - $148,750

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff – Jeff Larason, Paul Garrity, Diane Perrier, Denise Veiga, Susan Burgess-Chin, Angela Davis, Samantha Frongillo, Kevin Stanton

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PA-18-02 Americans with Disabilities Act (ADA) Compliance Services

Provide funds for interpretation, translation, and specialized printing services for those in need of accommodations. Also make necessary programmatic, organizational, and procedural improvements to alert the public about the availability of such accommodations.

Project Budget/Source – $25,000 (Sec. 402)

Match Amount - $0 **Indirect Cost** - $13,520

Maintenance of Effort - $0 **Local Benefit** - $0

Project Staff –Bob Kearney

Planning and Administration: Budget Summary

Project Number	Project Title	Budget	Budget Source
PA-18-01	Administration of Statewide Traffic Safety Program	$ 550,000	402
PA-18-02	ADA Compliance Services	$ 25,000	402
	Total all Funds	$ 575,000	

12.0 FFY 2018 HSP Cost Summary

Table 12.1 Highway Safety Plan Cost Summary

Program Area	Project	State Funds	Previous Bal.	Incre/(Decre)	Current Balance	Share to Local
NHTSA						
408 Data Program SAFETEA-LU						
408 Data Program Incentive						
	K9-2018-TR-18-04	$.00	$.00	$197,871.00	$197,871.00	$.00
	408 Data Program Incentive Total	$.00	$.00	$197,871.00	$197,871.00	$.00
	408 Data Program SAFETEA-LU Total	$.00	$.00	$197,871.00	$197,871.00	$.00
1906 Prohibit Racial Profiling						
	K10-2018-TR-18-04	$.00	$.00	$17,744.00	$17,744.00	$.00
	1906 Prohibit Racial Profiling Total	$.00	$.00	$17,744.00	$17,744.00	$.00
MAP 21 405c Data Program						
	M3DA-2018-TR-18-04	$.00	$.00	$700,000.00	$700,000.00	$.00
	M3DA-2018-TR-18-05	$.00	$.00	$106,000.00	$106,000.00	$.00
	M3DA-2018-TR-18-06	$.00	$.00	$32,000.00	$32,000.00	$.00
	M3DA-2018-TR-18-07	$.00	$.00	$130,000.00	$130,000.00	$.00
	M3DA-2018-TR-18-08	$.00	$.00	$196,803.00	$196,803.00	$.00
	M3DA-2018-TR-18-10	$.00	$.00	$85,000.00	$85,000.00	$.00
	M3DA-2018-TR-18-11	$.00	$.00	$151,119.00	$151,119.00	$.00
	M3DA-2018-TR-18-12	$.00	$.00	$66,150.00	$66,150.00	$.00
	M3DA-2018-TR-18-13	$.00	$.00	$60,000.00	$60,000.00	$.00
	M3DA-2018-TR-18-16	$.00	$.00	$118,453.00	$118,453.00	$.00
	405c Data Program Total	$.00	$.00	$1,645,525.00	$1,645,525.00	$.00
	MAP 21 405c Data Program Total	$.00	$.00	$1,645,525.00	$1,645,525.00	$.00
FAST Act NHTSA 402						
	PA-2018-PA-18-01	$575,000.00	$.00	$550,000.00	$550,000.00	$.00
	PA-2018-PA-18-02	$.00	$.00	$25,000.00	$25,000.00	$.00
	Planning and Administration Total	$575,000.00	$.00	$575,000.00	$575,000.00	$.00
Alcohol						
	AL-2018-AL-18-10	$.00	$.00	$50,000.00	$50,000.00	$50,000.00
	AL-2018-AL-18-11	$.00	$.00	$338,750.00	$338,750.00	$338,750.00
	AL-2018-AL-18-12	$.00	$.00	$125,000.00	$125,000.00	$.00
	AL-2018-AL-18-13	$.00	$.00	$20,000.00	$20,000.00	$20,000.00
	AL-2018-AL-18-19	$.00	$.00	$220,000.00	$220,000.00	$.00
	Alcohol Total	$.00	$.00	$753,750.00	$753,750.00	$408,750.00
Motorcycle Safety						
	MC-2018-MC-18-02	$.00	$.00	$5,000.00	$5,000.00	$.00
	MC-2018-MC-18-03	$.00	$.00	$30,000.00	$30,000.00	$.00
	Motorcycle Safety Total	$.00	$.00	$35,000.00	$35,000.00	$.00
Occupant Protection						
	OP-2018-OP-18-04	$.00	$.00	$200,000.00	$200,000.00	$200,000.00
	OP-2018-OP-18-07	$.00	$.00	$338,750.00	$338,750.00	$338,750.00
	OP-2018-OP-18-12	$.00	$.00	$125,000.00	$125,000.00	$.00
	OP-2018-OP-18-16	$.00	$.00	$5,000.00	$5,000.00	$5,000.00
	OP-2018-OP-18-17	$.00	$.00	$250,000.00	$250,000.00	$.00
	Occupant Protection Total	$.00	$.00	$918,750.00	$918,750.00	$543,750.00
Pedestrian/Bicycle Safety						
	PS-2018-PS-18-01	$.00	$.00	$10,000.00	$10,000.00	$.00
	PS-2018-PS-18-03	$.00	$.00	$15,000.00	$15,000.00	$.00
	PS-2018-PS-18-04	$.00	$.00	$120,000.00	$120,000.00	$.00
	Pedestrian/Bicycle Safety Total	$.00	$.00	$145,000.00	$145,000.00	$.00
Police Traffic Services						
	PT-2018-PT-18-01	$.00	$.00	$238,570.00	$238,570.00	$238,750.00
	PT-2018-PT-18-02	$.00	$.00	$150,000.00	$150,000.00	$150,000.00
	PT-2018-PT-18-03	$.00	$.00	$75,000.00	$75,000.00	$.00
	PT-2018-PT-18-04	$.00	$.00	$9,000.00	$9,000.00	$.00
	PT-2018-PT-18-06	$.00	$.00	$75,000.00	$75,000.00	$.00
	PT-2018-PT-18-07	$.00	$.00	$75,000.00	$75,000.00	$.00
	PT-2018-PT-18-08	$.00	$.00	$115,000.00	$115,000.00	$.00
	Police Traffic Services Total	$.00	$.00	$737,570.00	$737,570.00	$388,750.00
Traffic Records						
	TR-2018-TR-18-01	$.00	$.00	$50,000.00	$50,000.00	$.00
	TR-2018-TR-18-02	$.00	$.00	$505,000.00	$505,000.00	$.00
	TR-2018-TR-18-04	$.00	$.00	$1,750,000.00	$1,750,000.00	$1,000,000.00
	TR-2018-TR-18-18	$.00	$.00	$80,000.00	$80,000.00	$.00
	Traffic Records Total	$.00	$.00	$2,385,000.00	$2,385,000.00	$1,000,000.00
Speed Management						
	SC-2018-SC-18-02	$.00	$.00	$50,000.00	$50,000.00	$50,000.00
	SC-2018-SC-18-03	$.00	$.00	$10,000.00	$10,000.00	$.00
	SC-2018-SC-18-04	$.00	$.00	$75,000.00	$75,000.00	$.00
	Speed Management Total	$.00	$.00	$135,000.00	$135,000.00	$50,000.00
Speed Enforcement						
	SE-2018-SC-18-01	$.00	$.00	$300,000.00	$300,000.00	$.00
	Speed Enforcement Total	$.00	$.00	$300,000.00	$300,000.00	$.00

Table 12.1 Highway Safety Plan Cost Summary (continued)

Program Area	Project	State Funds	Previous Bal.	Incre/(Decre)	Current Balance	Share to Local
Paid Advertising						
	PM-2018-DD-18-04	$.00	$.00	$120,000.00	$120,000.00	$.00
	PM-2018-MC-18-02	$.00	$.00	$70,000.00	$70,000.00	$.00
	PM-2018-PS-18-01	$.00	$.00	$90,000.00	$90,000.00	$.00
	PM-2018-SC-18-03	$.00	$.00	$40,000.00	$40,000.00	$.00
	Paid Advertising Total	$.00	$.00	$320,000.00	$320,000.00	$.00
Distracted Driving						
	DD-2018-DD-18-01	$.00	$.00	$150,000.00	$150,000.00	$.00
	DD-2018-DD-18-02	$.00	$.00	$625,000.00	$625,000.00	$625,000.00
	DD-2018-DD-18-03	$.00	$.00	$50,000.00	$50,000.00	$50,000.00
	DD-2018-DD-18-04	$.00	$.00	$30,000.00	$30,000.00	$.00
	DD-2018-DD-18-05	$.00	$.00	$120,000.00	$120,000.00	$.00
	Distracted Driving Total	$.00	$.00	$975,000.00	$975,000.00	$675,000.00
	FAST Act NHTSA 402 Total	$575,000.00	$.00	$7,280,070.00	$7,280,070.00	$3,066,250.00
FAST Act 1906 Prohibit Racial Profiling						
	F1906CMD-2018-TR-18-04	$.00	$.00	$750,000.00	$750,000.00	$.00
	1906 Collecting and Maintaining Data Total	$.00	$.00	$750,000.00	$750,000.00	$.00
	FAST Act 1906 Prohibit Racial Profiling Total	$.00	$.00	$750,000.00	$750,000.00	$.00
FAST Act 405b OP Low						
	M2HVE-2018-OP-18-02	$.00	$.00	$500,000.00	$500,000.00	$.00
	M2HVE-2018-OP-18-03	$.00	$.00	$625,000.00	$625,000.00	$.00
	M2HVE-2018-OP-18-07	$.00	$.00	$338,750.00	$338,750.00	$.00
	M2HVE-2018-OP-18-12	$.00	$.00	$125,000.00	$125,000.00	$.00
	405b Low HVE Total	$.00	$.00	$1,588,750.00	$1,588,750.00	$.00
405b Low Public Education						
	M2PE-2018-OP-18-01	$.00	$.00	$675,000.00	$675,000.00	$.00
	M2PE-2018-OP-18-05	$.00	$.00	$200,000.00	$200,000.00	$.00
	M2PE-2018-OP-18-06	$.00	$.00	$30,000.00	$30,000.00	$.00
	M2PE-2018-OP-18-08	$.00	$.00	$100,000.00	$100,000.00	$.00
	M2PE-2018-OP-18-09	$.00	$.00	$50,000.00	$50,000.00	$.00
	M2PE-2018-OP-18-10	$.00	$.00	$17,000.00	$17,000.00	$.00
	M2PE-2018-OP-18-11	$.00	$.00	$67,000.00	$67,000.00	$.00
	M2PE-2018-OP-18-13	$.00	$.00	$550.00	$550.00	$.00
	M2PE-2018-OP-18-14	$.00	$.00	$2,500.00	$2,500.00	$.00
	M2PE-2018-OP-18-15	$.00	$.00	$250,000.00	$250,000.00	$.00
	405b Low Public Education Total	$.00	$.00	$1,392,050.00	$1,392,050.00	$.00
	FAST Act 405b OP Low Total	$.00	$.00	$2,980,800.00	$2,980,800.00	$.00
FAST Act 405c Data Program						
	M3DA-2018-TR-18-04	$.00	$.00	$300,000.00	$300,000.00	$.00
	M3DA-2018-TR-18-09	$.00	$.00	$166,768.00	$166,768.00	$.00
	M3DA-2018-TR-18-14	$.00	$.00	$80,000.00	$80,000.00	$.00
	M3DA-2018-TR-18-15	$.00	$.00	$414,779.00	$414,779.00	$.00
	M3DA-2018-TR-18-17	$575,000.00	$.00	$82,000.00	$82,000.00	$.00
	405c Data Program Total	$575,000.00	$.00	$1,043,547.00	$1,043,547.00	$.00
	FAST Act 405c Data Program Total	$575,000.00	$.00	$1,043,547.00	$1,043,547.00	$.00
FAST Act 405d Impaired Driving Low						
	M6OT-2018-AL-18-01	$.00	$.00	$675,000.00	$675,000.00	$.00
	M6OT-2018-AL-18-02	$.00	$.00	$1,500,000.00	$1,500,000.00	$.00
	M6OT-2018-AL-18-03	$.00	$.00	$138,497.00	$138,497.00	$.00
	M6OT-2018-AL-18-04	$.00	$.00	$195,000.00	$195,000.00	$.00
	M6OT-2018-AL-18-05	$.00	$.00	$25,000.00	$25,000.00	$.00
	M6OT-2018-AL-18-06	$.00	$.00	$195,000.00	$195,000.00	$.00
	M6OT-2018-AL-18-07	$.00	$.00	$125,000.00	$125,000.00	$.00
	M6OT-2018-AL-18-08	$.00	$.00	$495,672.00	$495,672.00	$.00
	M6OT-2018-AL-18-09	$.00	$.00	$1,245,000.00	$1,245,000.00	$.00
	M6OT-2018-AL-18-10	$.00	$.00	$512,394.00	$512,394.00	$.00
	M6OT-2018-AL-18-11	$.00	$.00	$338,750.00	$338,750.00	$.00
	M6OT-2018-AL-18-12	$.00	$.00	$125,000.00	$125,000.00	$.00
	M6OT-2018-AL-18-14	$.00	$.00	$40,000.00	$40,000.00	$.00
	M6OT-2018-AL-18-15	$.00	$.00	$50,000.00	$50,000.00	$.00
	M6OT-2018-AL-18-17	$.00	$.00	$10,000.00	$10,000.00	$.00
	M6OT-2018-OP-18-11	$.00	$.00	$2,000.00	$2,000.00	$.00
	M6OT-2018-OP-18-14	$.00	$.00	$2,500.00	$2,500.00	$.00
	M6OT-2018-PT-18-03	$.00	$.00	$130,000.00	$130,000.00	$.00
	M6OT-2018-PT-18-05	$.00	$.00	$100,000.00	$100,000.00	$.00
	M6OT-2018-PT-18-07	$.00	$.00	$130,000.00	$130,000.00	$.00
	405d Low Other Based on Problem ID Total	$.00	$.00	$6,034,813.00	$6,034,813.00	$.00
	FAST Act 405d Impaired Driving Low Total	$.00	$.00	$6,034,813.00	$6,034,813.00	$.00
FAST Act 405e Comprehensive Distracted Driving						
	M8DDLE-2018-DD-18-04	$.00	$.00	$150,000.00	$150,000.00	$.00
	405e DD Law Enforcement Total	$.00	$.00	$150,000.00	$150,000.00	$.00
	FAST Act 405e Comprehensive Distracted Driving Total	$.00	$.00	$150,000.00	$150,000.00	$.00
FAST Act 405f Motorcycle Programs						
	M9X-2018-MC-18-01	$.00	$.00	$250,000.00	$250,000.00	$.00
	405f Motorcycle Programs Total	$.00	$.00	$250,000.00	$250,000.00	$.00
	FAST Act 405f Motorcycle Programs Total	$.00	$.00	$250,000.00	$250,000.00	$.00
FAST Act 405h Nonmotorized Safety						
	FHX-2018-PS-18-02	$.00	$.00	$546,000.00	$546,000.00	$.00
	FHX-2018-PS-18-03	$.00	$.00	$60,000.00	$60,000.00	$.00
	405h Nonmotorized Safety Total	$.00	$.00	$606,000.00	$606,000.00	$.00
	FAST Act 405h Nonmotorized Safety Total	$.00	$.00	$606,000.00	$606,000.00	$.00
	NHTSA Total	$1,150,000.00	$.00	$20,956,370.00	$20,956,370.00	$3,066,250.00
	Total	$1,150,000.00	$.00	$20,956,370.00	$20,956,370.00	$3,066,250.00

Figure 12.1 The planned funding distribution by program area for FFY 2018.

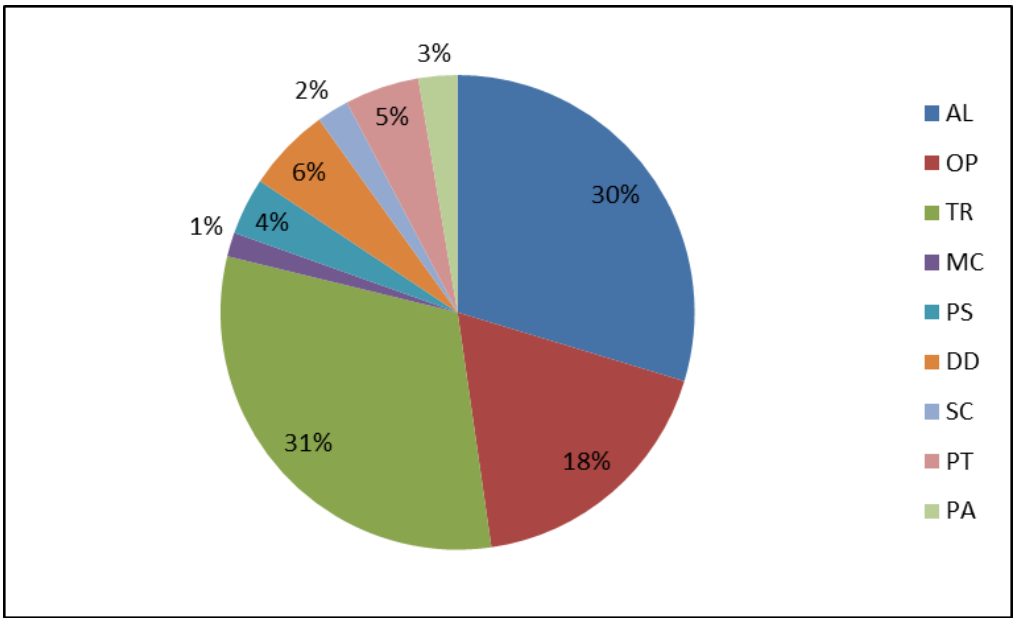

Table 12.2 Acronym Glossary

Administrative Office of the Trial Court (AOTC)
Advanced Roadside Impaired Driving Enforcement (ARIDE)
Alcoholic Beverages Control Commission (ABCC)
Americans with Disabilities Act (ADA)
Automated License and Registration System (ALARS)
Blood Alcohol Content (BAC)
Breath Alcohol Testing (BAT)
Child Passenger Safety (CPS)
Click It or Ticket (CIOT)
Countermeasures That Work (CTW)
Crash Data System (CDS)
Data-Driven Approach to Crime and Traffic Safety (DDACTS)
Drive Sober or Get Pulled Over (DSGPO)
Drug Evaluation and Classification Program (DEC)
Drug Impairment Training and Educational Professionals (DITEP)
Drug Recognition Expert (DRE)
Emergency Medical Services (EMS)
Executive Office of Public Safety and Security (EOPSS)
Fair and Impartial Policing (FAIP)
Fatality Analysis Reporting System (FARS)
Federal Fiscal Year (FFY)
Federal Highway Administration (FHWA)
Governors Highway Safety Association (GHSA)
Highway Safety Division (HSD)
Highway Safety Plan (HSP)
Junior Operator License (JOL)
Law Enforcement Liaison (LEL)
Massachusetts Ambulance Trip Record Information System (MATRIS)
Massachusetts Department of Public Health (MDPH)
Massachusetts Department of Transportation (MassDOT)
Massachusetts District Attorneys Association (MDAA)
Massachusetts Executive-Level Traffic Records Coordinating Committee (METRCC)
Massachusetts Law Enforcement Challenge (MLEC)
Massachusetts General Laws (M.G.L.)
Massachusetts Rider Education Program (MREP)
Massachusetts State Police (MSP)
Massachusetts Traffic Records Analysis Center (MassTRAC)
Massachusetts Traffic Records Coordinating Committee (TRCC)
Merit Rating Board (MRB)
Moving Ahead for Progress in the 21st Century (MAP-21)
Municipal Police Training Committee (MPTC)
National Emergency Medical Services Information System (NEMSIS)
National Highway Traffic Safety Administration (NHTSA)
Office of Grants and Research (OGR)

Office of Juvenile Justice Delinquency Prevention (OJJDP)
Preliminary Breath Testing (PBT)
Prevent Injuries Now Network (PINN)
Registry of Motor Vehicles (RMV)
Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)
Standardized Field Sobriety Test (SFST)
State Traffic Safety Information (STSI)
Strategic Highway Safety Plan (SHSP)
Traffic Occupant Protection Strategies (TOPS)
Traffic Safety Resource Prosecutor (TSRP)
Vehicle Miles Traveled (VMT)

13.0 HSP Appendix

Table 13.1 Traffic Enforcement Grant Eligible Communities

FFY 2018 Traffic Enforcement Grant Program Eligibility List

Department	Population (2010 Census)	Maximum Eligible Award	Maximum Equipment Award	Minimum Enforcement Budget
ABINGTON	15,985	$10,000.00	$5,000.00	$5,000.00
ACTON	21,924	$10,000.00	$5,000.00	$5,000.00
ACUSHNET	10,303	$10,000.00	$5,000.00	$5,000.00
ADAMS	8,485	$10,000.00	$5,000.00	$5,000.00
AGAWAM	28,438	$10,000.00	$5,000.00	$5,000.00
AMESBURY	16,283	$10,000.00	$5,000.00	$5,000.00
AMHERST	37,819	$12,000.00	$5,400.00	$6,600.00
ANDOVER	33,201	$12,000.00	$5,400.00	$6,600.00
ARLINGTON	42,844	$12,000.00	$5,400.00	$6,600.00
ASHLAND	16,593	$10,000.00	$5,000.00	$5,000.00
ATHOL	11,584	$10,000.00	$5,000.00	$5,000.00
ATTLEBORO	43,593	$12,000.00	$5,400.00	$6,600.00
AUBURN	16,188	$10,000.00	$5,000.00	$5,000.00
AVON	4,356	$10,000.00	$5,000.00	$5,000.00
BARNSTABLE	45,193	$12,000.00	$5,400.00	$6,600.00
BEDFORD	13,320	$10,000.00	$5,000.00	$5,000.00
BELCHERTOWN	14,649	$10,000.00	$5,000.00	$5,000.00
BELLINGHAM	16,332	$10,000.00	$5,000.00	$5,000.00
BELMONT	24,729	$10,000.00	$5,000.00	$5,000.00
BERLIN	2,866	$10,000.00	$5,000.00	$5,000.00
BEVERLY	39,502	$12,000.00	$5,400.00	$6,600.00
BILLERICA	40,243	$12,000.00	$5,400.00	$6,600.00
BOLTON	4,897	$10,000.00	$5,000.00	$5,000.00
BOSTON	617,594	$112,000.00	$33,600.00	$78,400.00
BOURNE	19,754	$10,000.00	$5,000.00	$5,000.00
BOXFORD	7,965	$10,000.00	$5,000.00	$5,000.00
BRAINTREE	35,744	$12,000.00	$5,400.00	$6,600.00
BREWSTER	9,820	$10,000.00	$5,000.00	$5,000.00
BRIDGEWATER	26,563	$10,000.00	$5,000.00	$5,000.00
BROCKTON	93,810	$16,000.00	$6,400.00	$9,600.00
BROOKLINE	58,732	$12,000.00	$5,400.00	$6,600.00
BURLINGTON	24,498	$10,000.00	$5,000.00	$5,000.00
CAMBRIDGE	105,162	$28,000.00	$9,800.00	$18,200.00
CANTON	21,561	$10,000.00	$5,000.00	$5,000.00
CARVER	11,509	$10,000.00	$5,000.00	$5,000.00
CHARLTON	12,981	$10,000.00	$5,000.00	$5,000.00
CHELMSFORD	33,802	$12,000.00	$5,400.00	$6,600.00
CHELSEA	35,177	$12,000.00	$5,400.00	$6,600.00
CHICOPEE	55,298	$12,000.00	$5,400.00	$6,600.00
CONCORD	17,668	$10,000.00	$5,000.00	$5,000.00
DANVERS	26,493	$10,000.00	$5,000.00	$5,000.00
DARTMOUTH	34,032	$12,000.00	$5,400.00	$6,600.00
DEDHAM	24,729	$10,000.00	$5,000.00	$5,000.00
DEERFIELD	5,125	$10,000.00	$5,000.00	$5,000.00

Department	Population (2010 Census)	Maximum Eligible Award	Maximum Equipment Award	Minimum Enforcement Budget
DENNIS	14,207	$10,000.00	$5,000.00	$5,000.00
DOUGLAS	8,471	$10,000.00	$5,000.00	$5,000.00
DRACUT	29,457	$10,000.00	$5,000.00	$5,000.00
DUDLEY	11,390	$10,000.00	$5,000.00	$5,000.00
DUXBURY	15,059	$10,000.00	$5,000.00	$5,000.00
EAST BRIDGEWATER	13,794	$10,000.00	$5,000.00	$5,000.00
EAST LONGMEADOW	15,720	$10,000.00	$5,000.00	$5,000.00
EASTHAM	4,956	$10,000.00	$5,000.00	$5,000.00
EASTHAMPTON	16,053	$10,000.00	$5,000.00	$5,000.00
EASTON	23,112	$10,000.00	$5,000.00	$5,000.00
EVERETT	41,667	$12,000.00	$5,400.00	$6,600.00
FAIRHAVEN	15,873	$10,000.00	$5,000.00	$5,000.00
FALL RIVER	88,857	$16,000.00	$6,400.00	$9,600.00
FALMOUTH	31,531	$12,000.00	$5,400.00	$6,600.00
FITCHBURG	40,318	$12,000.00	$5,400.00	$6,600.00
FOXBOROUGH	16,865	$10,000.00	$5,000.00	$5,000.00
FRAMINGHAM	68,318	$12,000.00	$5,400.00	$6,600.00
FRANKLIN	31,635	$12,000.00	$5,400.00	$6,600.00
FREETOWN	8,870	$10,000.00	$5,000.00	$5,000.00
GARDNER	20,228	$10,000.00	$5,000.00	$5,000.00
GEORGETOWN	8,183	$10,000.00	$5,000.00	$5,000.00
GLOUCESTER	28,789	$10,000.00	$5,000.00	$5,000.00
GRAFTON	17,765	$10,000.00	$5,000.00	$5,000.00
GRANBY	6,240	$10,000.00	$5,000.00	$5,000.00
GREAT BARRINGTON	7,104	$10,000.00	$5,000.00	$5,000.00
GREENFIELD	17,456	$10,000.00	$5,000.00	$5,000.00
GROTON	10,646	$10,000.00	$5,000.00	$5,000.00
HADLEY	5,250	$10,000.00	$5,000.00	$5,000.00
HANOVER	13,879	$10,000.00	$5,000.00	$5,000.00
HARVARD	6,520	$10,000.00	$5,000.00	$5,000.00
HARWICH	12,243	$10,000.00	$5,000.00	$5,000.00
HAVERHILL	60,879	$12,000.00	$5,400.00	$6,600.00
HINGHAM	22,157	$10,000.00	$5,000.00	$5,000.00
HOLBROOK	10,791	$10,000.00	$5,000.00	$5,000.00
HOLDEN	17,346	$10,000.00	$5,000.00	$5,000.00
HOLLISTON	13,547	$10,000.00	$5,000.00	$5,000.00
HOLYOKE	39,880	$12,000.00	$5,400.00	$6,600.00
HOPKINTON	14,925	$10,000.00	$5,000.00	$5,000.00
HUDSON	19,063	$10,000.00	$5,000.00	$5,000.00
KINGSTON	12,629	$10,000.00	$5,000.00	$5,000.00
LAKEVILLE	10,602	$10,000.00	$5,000.00	$5,000.00
LANCASTER	8,055	$10,000.00	$5,000.00	$5,000.00
LAWRENCE	76,377	$16,000.00	$6,400.00	$9,600.00
LEE	5,943	$10,000.00	$5,000.00	$5,000.00
LEICESTER	10,970	$10,000.00	$5,000.00	$5,000.00

Department	Population (2010 Census)	Maximum Eligible Award	Maximum Equipment Award	Minimum Enforcement Budget
LENOX	5,025	$10,000.00	$5,000.00	$5,000.00
LEOMINSTER	40,759	$12,000.00	$5,400.00	$6,600.00
LEXINGTON	31,394	$12,000.00	$5,400.00	$6,600.00
LITTLETON	8,924	$10,000.00	$5,000.00	$5,000.00
LONGMEADOW	15,784	$10,000.00	$5,000.00	$5,000.00
LOWELL	106,519	$28,000.00	$9,800.00	$18,200.00
LUDLOW	21,103	$10,000.00	$5,000.00	$5,000.00
LUNENBURG	10,086	$10,000.00	$5,000.00	$5,000.00
LYNN	90,329	$16,000.00	$6,400.00	$9,600.00
LYNNFIELD	11,596	$10,000.00	$5,000.00	$5,000.00
MALDEN	59,450	$12,000.00	$5,400.00	$6,600.00
MANSFIELD	23,184	$10,000.00	$5,000.00	$5,000.00
MARION	4,907	$10,000.00	$5,000.00	$5,000.00
MARLBOROUGH	38,499	$12,000.00	$5,400.00	$6,600.00
MARSHFIELD	25,132	$10,000.00	$5,000.00	$5,000.00
MASHPEE	16,506	$10,000.00	$5,000.00	$5,000.00
MEDFORD	56,173	$12,000.00	$5,400.00	$6,600.00
MEDWAY	12,752	$10,000.00	$5,000.00	$5,000.00
MELROSE	26,983	$10,000.00	$5,000.00	$5,000.00
MENDON	5,839	$10,000.00	$5,000.00	$5,000.00
METHUEN	47,255	$12,000.00	$5,400.00	$6,600.00
MIDDLEBOROUGH	23,116	$10,000.00	$5,000.00	$5,000.00
MIDDLETON	8,987	$10,000.00	$5,000.00	$5,000.00
MILFORD	27,999	$10,000.00	$5,000.00	$5,000.00
MILLBURY	13,261	$10,000.00	$5,000.00	$5,000.00
MILTON	27,003	$10,000.00	$5,000.00	$5,000.00
NATICK	33,006	$12,000.00	$5,400.00	$6,600.00
NEEDHAM	28,886	$10,000.00	$5,000.00	$5,000.00
NEW BEDFORD	95,072	$16,000.00	$6,400.00	$9,600.00
NEWBURYPORT	17,416	$10,000.00	$5,000.00	$5,000.00
NEWTON	85,146	$16,000.00	$6,400.00	$9,600.00
NORTH ADAMS	13,708	$10,000.00	$5,000.00	$5,000.00
NORTH ANDOVER	28,352	$10,000.00	$5,000.00	$5,000.00
NORTH ATTLEBOROUGH	28,712	$10,000.00	$5,000.00	$5,000.00
NORTHAMPTON	28,549	$10,000.00	$5,000.00	$5,000.00
NORTHBOROUGH	14,155	$10,000.00	$5,000.00	$5,000.00
NORTHBRIDGE	15,707	$10,000.00	$5,000.00	$5,000.00
NORTON	19,031	$10,000.00	$5,000.00	$5,000.00
NORWELL	10,506	$10,000.00	$5,000.00	$5,000.00
NORWOOD	28,602	$10,000.00	$5,000.00	$5,000.00
ORLEANS	5,890	$10,000.00	$5,000.00	$5,000.00
OXFORD	13,709	$10,000.00	$5,000.00	$5,000.00
PALMER	12,140	$10,000.00	$5,000.00	$5,000.00
PEABODY	51,251	$12,000.00	$5,400.00	$6,600.00
PEMBROKE	17,837	$10,000.00	$5,000.00	$5,000.00

Department	Population (2010 Census)	Maximum Eligible Award	Maximum Equipment Award	Minimum Enforcement Budget
PEPPERELL	11,497	$10,000.00	$5,000.00	$5,000.00
PITTSFIELD	44,737	$12,000.00	$5,400.00	$6,600.00
PLAINVILLE	8,264	$10,000.00	$5,000.00	$5,000.00
PLYMOUTH	56,468	$12,000.00	$5,400.00	$6,600.00
QUINCY	92,271	$16,000.00	$6,400.00	$9,600.00
RANDOLPH	32,112	$12,000.00	$5,400.00	$6,600.00
RAYNHAM	13,383	$10,000.00	$5,000.00	$5,000.00
READING	24,747	$10,000.00	$5,000.00	$5,000.00
REHOBOTH	11,608	$10,000.00	$5,000.00	$5,000.00
REVERE	51,755	$12,000.00	$5,400.00	$6,600.00
ROCKLAND	17,489	$10,000.00	$5,000.00	$5,000.00
SALEM	41,340	$12,000.00	$5,400.00	$6,600.00
SALISBURY	8,283	$10,000.00	$5,000.00	$5,000.00
SANDWICH	20,675	$10,000.00	$5,000.00	$5,000.00
SAUGUS	26,628	$10,000.00	$5,000.00	$5,000.00
SCITUATE	18,133	$10,000.00	$5,000.00	$5,000.00
SEEKONK	13,722	$10,000.00	$5,000.00	$5,000.00
SHARON	17,612	$10,000.00	$5,000.00	$5,000.00
SHERBORN	4,119	$10,000.00	$5,000.00	$5,000.00
SHREWSBURY	35,608	$12,000.00	$5,400.00	$6,600.00
SOMERSET	18,165	$10,000.00	$5,000.00	$5,000.00
SOMERVILLE	75,754	$16,000.00	$6,400.00	$9,600.00
SOUTH HADLEY	17,514	$10,000.00	$5,000.00	$5,000.00
SOUTHBOROUGH	9,767	$10,000.00	$5,000.00	$5,000.00
SOUTHBRIDGE	16,719	$10,000.00	$5,000.00	$5,000.00
SOUTHWICK	9,502	$10,000.00	$5,000.00	$5,000.00
SPENCER	11,688	$10,000.00	$5,000.00	$5,000.00
SPRINGFIELD	153,060	$112,000.00	$33,600.00	$78,400.00
STERLING	7,808	$10,000.00	$5,000.00	$5,000.00
STONEHAM	21,437	$10,000.00	$5,000.00	$5,000.00
STOUGHTON	26,962	$10,000.00	$5,000.00	$5,000.00
STURBRIDGE	9,268	$10,000.00	$5,000.00	$5,000.00
SUDBURY	17,659	$10,000.00	$5,000.00	$5,000.00
SUTTON	8,963	$10,000.00	$5,000.00	$5,000.00
SWAMPSCOTT	13,787	$10,000.00	$5,000.00	$5,000.00
SWANSEA	15,865	$10,000.00	$5,000.00	$5,000.00
TAUNTON	55,874	$12,000.00	$5,400.00	$6,600.00
TEWKSBURY	28,961	$10,000.00	$5,000.00	$5,000.00
TOWNSEND	8,926	$10,000.00	$5,000.00	$5,000.00
TYNGSBOROUGH	11,292	$10,000.00	$5,000.00	$5,000.00
WAKEFIELD	24,932	$10,000.00	$5,000.00	$5,000.00
WALPOLE	24,070	$10,000.00	$5,000.00	$5,000.00
WALTHAM	60,632	$12,000.00	$5,400.00	$6,600.00
WARE	9,872	$10,000.00	$5,000.00	$5,000.00
WAREHAM	21,822	$10,000.00	$5,000.00	$5,000.00

Department	Population (2010 Census)	Maximum Eligible Award	Maximum Equipment Award	Minimum Enforcement Budget
WATERTOWN	31,915	$12,000.00	$5,400.00	$6,600.00
WAYLAND	12,994	$10,000.00	$5,000.00	$5,000.00
WEBSTER	16,767	$10,000.00	$5,000.00	$5,000.00
WELLESLEY	27,982	$10,000.00	$5,000.00	$5,000.00
WEST BOYLSTON	7,669	$10,000.00	$5,000.00	$5,000.00
WEST BRIDGEWATER	6,916	$10,000.00	$5,000.00	$5,000.00
WEST SPRINGFIELD	28,391	$10,000.00	$5,000.00	$5,000.00
WESTBOROUGH	18,272	$10,000.00	$5,000.00	$5,000.00
WESTFIELD	41,094	$12,000.00	$5,400.00	$6,600.00
WESTFORD	21,951	$10,000.00	$5,000.00	$5,000.00
WESTMINSTER	7,277	$10,000.00	$5,000.00	$5,000.00
WESTON	11,261	$10,000.00	$5,000.00	$5,000.00
WESTPORT	15,532	$10,000.00	$5,000.00	$5,000.00
WESTWOOD	14,618	$10,000.00	$5,000.00	$5,000.00
WEYMOUTH	53,743	$12,000.00	$5,400.00	$6,600.00
WHITMAN	14,489	$10,000.00	$5,000.00	$5,000.00
WILBRAHAM	14,219	$10,000.00	$5,000.00	$5,000.00
WILMINGTON	22,325	$10,000.00	$5,000.00	$5,000.00
WINCHENDON	10,300	$10,000.00	$5,000.00	$5,000.00
WINCHESTER	21,374	$10,000.00	$5,000.00	$5,000.00
WOBURN	38,120	$12,000.00	$5,400.00	$6,600.00
WORCESTER	181,045	$112,000.00	$33,600.00	$78,400.00
WRENTHAM	10,955	$10,000.00	$5,000.00	$5,000.00
YARMOUTH	23,793	$10,000.00	$5,000.00	$5,000.00
203		$2,500,000.00	$1,137,600.00	$1,362,400.00

Table 13.2 Sustained Traffic Enforcement Program [AL-18-12 & OP-18-07]

Grant #	Grantee	Award Amount		Grant #	Grantee	Award Amount
AL-18-12-01	Barnstable	$27,500		OP-18-07-01	Barnstable	$27,500
AL-18-12-02	Boston	$56,250		OP-18-07-02	Boston	$56,250
AL-18-12-03	Brockton	$37,500		OP-18-07-03	Brockton	$37,500
AL-18-12-04	Cambridge	$37,500		OP-18-07-04	Cambridge	$37,500
AL-18-12-05	Chicopee	$28,125		OP-18-07-05	Chicopee	$28,125
AL-18-12-06	Fall River	$33,750		OP-18-07-06	Fall River	$33,750
AL-18-12-07	Framingham	$33,750		OP-18-07-07	Framingham	$33,750
AL-18-12-08	Holyoke	$33,750		OP-18-07-08	Holyoke	$33,750
AL-18-12-09	Lowell	$37,500		OP-18-07-09	Lowell	$37,500
AL-18-12-10	Lynn	$37,500		OP-18-07-10	Lynn	$37,500
AL-18-12-11	New Bedford	$28,125		OP-18-07-11	New Bedford	$28,125
AL-18-12-12	Quincy	$37,500		OP-18-07-12	Quincy	$37,500
AL-18-12-13	Springfield	$62,500		OP-18-07-13	Springfield	$62,500
AL-18-12-14	Taunton	$37,500		OP-18-07-14	Taunton	$37,500
AL-18-12-15	Westfield	$27,500		OP-18-07-15	Westfield	$27,500
AL-18-12-16	Worcester	$56,250		OP-18-07-16	Worcester	$56,250

OCCUPANT PROTECTION
ATTACHMENT A

Massachusetts Safety Belt Law

THE GENERAL LAWS OF MASSACHUSETTS PART I. ADMINISTRATION OF THE GOVERNMENT

TITLE XIV. PUBLIC WAYS AND WORKS

CHAPTER 90. MOTOR VEHICLES AND AIRCRAFT - MOTOR VEHICLES

Chapter 90: Section 13A. Seat belt use required; exemptions; penalty
Original 2/1/94
Updated 10/29/08

Section 13A. No person shall operate a private passenger motor vehicle or ride in a private passenger motor vehicle, a vanpool vehicle or truck under eighteen thousand pounds on any way unless such person is wearing a safety belt which is properly adjusted and fastened; provided, however, that this provision shall not apply to:

(a) any child less than twelve years of age who is subject to the provisions of section seven AA;

(b) any person riding in a motor vehicle manufactured before July first, nineteen hundred and sixty-six;

(c) any person who is physically unable to use safety belts; provided, however, that such condition is duly certified by a physician who shall state the nature of the handicap, as well as the reasons such restraint is inappropriate; provided, further, that no such physician shall be subject to liability in any civil action for the issuance or for the failure to issue such certificate;

(d) any rural carrier of the United States Postal Service operating a motor vehicle while in the performance of his duties; provided, however, that such rural mail carrier shall be subject to department regulations regarding the use of safety belts or occupant crash protection devices;

(e) anyone involved in the operation of taxis, liveries, tractors, trucks with gross weight of eighteen thousand pounds or over, buses, and passengers of authorized emergency vehicles.

(f) the side facing seat on which the factory did not install a seat belt in any car owned for the purpose of antique collection.

Any person who operates a motor vehicle without a safety belt, and any person sixteen years of age or over who rides as a passenger in a motor vehicle without wearing a safety belt in violation of this section, shall be subject to a fine of twenty-five dollars. Any operator of a motor vehicle shall be subject to an additional fine of twenty-five dollars for each person under the age of sixteen and no younger than twelve who is a passenger in said motor vehicle and not wearing a safety belt. The provisions of this section shall be enforced by law enforcement

agencies only when an operator of a motor vehicle has been stopped for a violation of the motor vehicle laws or some other offense.

Any person who receives a citation for violating this section may contest such citation pursuant to section three of chapter ninety C. A violation of this section shall not be considered as a conviction of a moving violation of the motor vehicle laws for the purpose of determining surcharges on motor vehicle premiums pursuant to section one hundred and thirteen B of chapter one hundred and seventy-five.

CREDIT(S)

Added by St.1993, c. 387, § 1. Amended by St.2008, c. 225, eff. Oct. 29, 2008.

HISTORICAL AND STATUTORY NOTES

St.1993, c. 387, § 1, an emergency act, returned by the Governor to the House of Representatives, the branch in which it originated, with his objections thereto, was passed by the House of Representatives, Jan. 4, 1994, and, in concurrence, by the Senate, Jan. 4, 1994, the objections of the Governor notwithstanding, in the manner prescribed by the Constitution; and thereby has the force of law.

Sections 2 to 4 and 7 to 9 of St.1993, c. 387, provide:

"Section 2. The provisions of section one of this act shall apply to any municipal, county or district public employee.

"Section 3. Failure to wear a properly fastened safety belt shall not be considered as contributory negligence or used as evidence in any civil action.

"Section 4. The registrar of motor vehicles shall require, pursuant to his authority under section twenty-nine of chapter ninety of the General Laws, that police officers shall record the use or non-use of safety belts when reporting auto-mobile accidents."

"Section 7. The commissioner of insurance shall mandate a minimum five percent reduction in bodily injury premiums if the observed safety belt use rate among all occupants equals or exceeds fifty percent one year after this law has been in effect. Annual surveys of belt use shall be conducted by the governor's highway safety bureau and shall conform to standards approved by the National Highway Traffic Safety Administration.

"Annual safety belt survey results shall be a criterion in all future regulatory actions regarding bodily injury premiums. If at any time the safety belt use rate in the commonwealth exceeds the national average, additional reductions in bodily injury premiums shall take effect.

"Section 8. No insurance company doing business in the commonwealth shall deny coverage to any individual who has failed to wear a safety belt during the occurrence of an accident resulting in bodily injury; nor shall any insurance company deny an individual the right to purchase a motor vehicle liability policy based on a violation of the provisions of section thirteen A of chapter ninety of the General Laws.

"Section 9. This act shall take effect on February first, nineteen hundred and ninety-four."

St.1993, c. 387, was submitted to the people and approved by them at the general election held Nov. 8, 1994, pursuant to the provisions of Article XLVIII of the Amendments to the Constitution.

St.2008, c. 225, approved July 31, 2008, effective Oct. 29, 2008, in the first paragraph, added cl. (f).

OCCUPANT PROTECTION
ATTACHMENT B

Child Passenger Safety Law

THE GENERAL LAWS OF MASSACHUSETTS PART I. ADMINISTRATION OF THE GOVERNMENT

TITLE XIV. PUBLIC WAYS AND WORKS

CHAPTER 90. MOTOR VEHICLES AND AIRCRAFT - MOTOR VEHICLES

Chapter 90: Section 7AA. Child passenger restraints; fine; violation as evidence in civil action

Section 7AA. A passenger in a motor vehicle on any way who is under the age of 8 shall be fastened and secured by a child passenger restraint, unless such passenger measures more than 57 inches in height. The child passenger restraint shall be properly fastened and secured according to the manufacturer's instructions.

Unless required to be properly fastened and secured by a child passenger restraint under the preceding paragraph, a passenger in a motor vehicle on any way that is under the age of 13 shall wear a safety belt which is properly adjusted and fastened according to the manufacturer's instructions.

The provisions of this section shall not apply to any such child who is: (1) riding as a passenger in a school bus; (2) riding as a passenger in a motor vehicle made before July first, nineteen hundred and sixty-six, that is not equipped with safety belts; (3) physically unable to use either a conventional child passenger restraint or a child restraint specifically designed for children with special needs; provided, however, that such condition is duly certified in writing by a physician who shall state the nature of the disability as well as the reasons such restraints are inappropriate; provided, further, that no such certifying physician shall be subject to liability in a civil action for the issuance of or for the failure to issue such certificate. An operator of a motor vehicle who violates the provisions of this section shall be subject to a fine of not more than twenty-five dollars; provided, however, that said twenty-five dollar fine shall not apply to an operator of a motor vehicle licensed as a taxi cab not equipped with a child passenger restraint device.

A violation of this section shall not be used as evidence of contributory negligence in any civil action.

A person who receives a citation for a violation of any of the provisions of this section may contest such citation pursuant to section three of chapter ninety C. A violation of this section shall not be deemed to be a conviction of a moving violation of the motor vehicle laws for the purpose of determining surcharges on motor vehicle premiums pursuant to section one hundred and thirteen B of chapter one hundred and seventy-five.

OCCUPANT PROTECTION
ATTACHMENT C

Statewide Fitting Stations

Location / Name	Address	Description	2010 Census	Urban (U) or Rural (R)	Spanish-speaking CPS Tech Available	Special Health Care CPS Tech Available
Abington Fire Department	1040 Bedford Street, Abington, MA 02351	Call 781-982-2114 to schedule an appointment	15,985	U		
Acton Ambulance Service	121 West Housatonic Street, Pittsfield, MA 01201	Call 413-445-5355 to schedule an appointment	21,929	U		
Acushnet Police Department	64 Middle Road, Acushnet, MA 02743	Call 508-998-0240 to schedule an appointment	10,303	U		
Adams Police Department	4 School Street, Adams, MA 01220	Adams residents call 413-743-1212 to schedule an appointment	8,485	R		
Addison Gilbert Hospital	298 Washington Street, Gloucester, MA 01930	Email ChildPassengerSafety@BeverlyHospital.org to schedule an appointment		U		x
Amesbury Police Department	19 School Street, Amesbury, MA 01913	Call 978-388-1212 to schedule an appointment	16,283	U		x
Amherst Fire Department	68 North Pleasant Street, Amherst, MA 01002	Call 413-259-3085 to schedule an appointment	37,819	U		
Amherst Police Department	111 Main Street, Amherst MA, 01002	Call 413-259-3000 to schedule an appointment		U		
Andover Fire Department	32 North Main Street, Andover, MA 01810	Call 978-475-1281 to schedule an appointment		U		
Andover Police Department	32 North Main Street, Andover, MA 01810	Call 978-475-0411 to schedule an appointment	33,201	U		
Aquinnah Police Department	67 State Road, Aquinnah, MA 02535	Call 508-645-2313to schedule an appointment	311	R		
Attleboro Fire Department	100 Union Street, Attleboro, MA 02703	Call 508-222-2325 to schedule an appointment		U		
Attleboro Police Department	12 Union Street, Attleboro, MA 02703	Call 508-222-1212 x2609 to schedule an appointment	43,593	U	x	
Auburn Police Department	416 Oxford Street North, Auburn, MA 01501	Call 508-832-77777 to schedule an appointment	16,188	U		
Ayer Police Department	54 Park Street, Ayer, MA 01432	Call 978-772-8200 to schedule an appointment	7,427	U		
Barnstable Fire Department	3249 Main Street, Barnstable, MA 02630	Call 508-362-3312 to schedule an appointment	45,193	U		x
Bay State Medical Center/Safe Kids of Western MA	50 Maple Street, Springfield, MA 01103	Call 413-794-2255 to schedule an appointment	153,451	U	x	
Bedford Police Department	2 Mudge Way, Bedford, MA 01730	Call 781-275-1212 to schedule an appointment	13,320	U		
Belchertown Fire Department	10 N Main Street, Belchertown, MA 01007	Call 413-323-7571 to schedule an appointment	14,649	R		
Belchertown Police Department	70 State Street, Belchertown, MA 01007	Call 413-323-6685 to schedule an appointment		U		
Belmont Police Department	460 Concord Ave, Belmont, MA 02478	Email carseat@belmontpd.org to schedule an appointment	24,729	U		
Berkley Police Department	3 North Main Street, Berkley, MA 02779	Call 508-222-7040 to schedule an appointment	6,411	R		
Berlin Police Department	23 Linden Street, Berlin, MA 01503	Call 978-838-7355 to schedule an appointment	2,866	R		
Beverly Fire Department	15 Hale Street, beverly, MA 01915	Call 978-922-2424 to schedule an appointment		U		
Beverly Hospital	85 Herrick Street, Beverly, MA 01915	Email ChildPassengerSafety@BeverlyHospital.org to schedule an appointment	39,502	U		
Beverly Police Department	191 Cabot Street, Beverly, MA 01915	Call 978-816-2670 to schedule an appointment		U		x
Billerica Police Department	6 Good Street, Billerica, MA 01821	Call 978-215-9686 to schedule an appointment	40,243	U		
Boston Children's Hospital	300 Longwood Ave, Boston, MA 02115	Call 617-355-7332 to schedule an appointment		U		x
Boston Police Department: Headquarters	One Schroeder Plaza, Boston, MA 02120	Call 617-343-4500 to schedule an appointment		U		
Boston Police Department: District A-7	69 Paris Street, East Boston, MA 02128	Call 617-343-4220 to schedule an appointment		U	x	
Boston Police Department: District B-2	2400 Washington Street, Roxbury, MA 02119	Call 617-343-4270 to schedule an appointment		U	x	
Boston Police Department: District C-11	40 Gibson Street, Dorchester, MA 02122	Call 617-343-4330 to schedule an appointment	617,594	U		
Boston Police Department: District D-4	650 Harrison Ave, Boston, MA 02118	Call 617-343-4250 to schedule an appointment		U		
Boston Police Department: District D-14	301 Washington Street, Brighton, MA 02135	Call 617-343-4260 to schedule an appointment		U		
Boston Police Department: District E-5	1708 Centre Street, West Roxbury, MA 02132	Call 617-343-4560 to schedule an appointment		U		
Boston Police Department: District E-18	1249 Hyde Park Ave, Hyde Park, MA 02136	Call 617-343-5600 to schedule an appointment		U		
Boston Public Health Commission	203 River Street, Mattapan, MA 02126	Boston residents can call 617-343-6891 to schedule an appointment		U		
Bourne Fire Department	130 Main Street, Buzzards Bay, MA 02532	Call 508-759-4412 to schedule an appointment	19,754	U		
Boxborough Fire Department	502 Massachusetts Ave, Boxborough, MA 01719	Call 978-264-1770 to schedle an appointment	4,996	U		
Braintree Police Department	282 Union Street, Braintree, MA 02184	Call 781-794-8703 to schedule an appointment	35,744	U		
Brewster Police Department	631 Harwich Road, Brewster, MA 02631	Call 508-896-7011 to schedule an appointment	9,820	R		
Brimfield Police Department	34 Wales Road, Brimfield, MA 01010	Call 413-245-3442 to schedule an appointment	3,609	R		
Brockton Police Department	7 Commercial Street, Brockton, MA 02302	Call 508-897-5208 to schedule an appointment	93,810	U	x	
Brookline Police Department	350 Washington Street, Brookline, MA 02445	Call 617-730-2603 to schedule an appointment	58,732	U		
Burlington Police Department	45 Center Street, Burlington, MA 01803	Call 781-270-1940 to schedule an appointment	24,498	U		
C.O.M.M (Centerville, Osterville, Marston Mills) Fire District	1875 Falmouth Road, Centerville, MA 02632	Call 508-790-2375 to schedule an appointment Submit an appointment request at:	170,695	U		
Cambridge Police Department	125 Sixth Street, Cambridge, MA 02142	www.cambridgema.gov/cpd/contactforms/childseats	105,162	U		
Canton Police Department	1492 Washington Street, Canton, MA 02021	Call 781-821-5090 to schedule an appointment	21,561	U		
Carlisle Police Department	41 Lowell Street, Carlisle, MA 01741	Call 978-369-1155 to schedule an appointment	4,852	U		
Carver Police Department	112 Main Street, Carver, MA 02330	Call 508-866-2000 to schedule an appointment	11,509	R		
Charlton Police Department	85 Masonic Home Road, Charlton, MA 01507	Call 508-248-2250 to schedule an appointment	12,981	R		
Chatham Fire Rescue	135 Depot Road, Chatham, MA 02633	Call 508-945-2324 to schedule an appointment	6,125	R		
Chelmsford Fire Department	50 Billerica Road, Chelmsford, MA 01824	Call 978-250-5267 to schedule an appointment	33,802	U	x	
Chicopee Fire Department	80 Church Street, Chicopee, MA 01020	Call 413-594-1652 to schedule an appointment	55,991	U		
Cohasset Police Department	62 Elm Street, Cohasset, MA 02025	Call 781-383-1055 to schedule an appointment	7,542	U		
Concord Police Department	219 Walden Street, Concord, MA 01742	Call 978-318-3400 to schedule an appointment	17,668	U		
Cotuit Fire Department	64 High Street, Cotuit, MA 02635	Call 508-428-2210 to schedule an appointment	45,193	R		
Dalton Fire Department	20 Flansburg Ave, Dalton, MA 01226	Call 413-684-0500 to schedule an appointment		R		
Dalton Police Department	462 Main Street, Dalton, MA 01226	Call 413-684-0300 to schedule an appointment	6,756	R		
Danvers Fire Department	64 High Street, Danvers, MA 01923	Call 978-774-2425 and select option 6 to schedule an appointment		R		
Danvers Police Department	120 Ash Street, Danvers, MA 01923	Call 978-774-1213 to schedule an appointment	26,493	U		x
Dartmouth Fire District No. 3	140 Cross Road, Dartmouth, MA 02747	Call 508-994-6761 to schedule an appointment	34,032	R		
Dennis Fire Department	883 Main Street, Dennis, MA 02670	Call 508-398-2242 to schedule an appointment		U		
Dennis Police Department	90 Bob Crowell Road, South Dennis, MA 02660	Call 508-394-1313 to schedule an appointment	14,207	U		
Dighton Fire Department	300 Main Street, Dighton, MA 02715	Call 508-669-6611 to schedule an appointment	7,086	R		
Douglas Police Department	29 Depot Street, Douglas, MA 01516	Call 508-476-3333 to schedule an appointment	8,471	R		
Dover Police Department	3 Walpole Street, Dover, MA 02030	Call 508-785-1130 to schedule an appointment	5,589	U		
Dracut Fire Dept.	488 Pleasant Street, Dracut, MA 01826	Email dracutseatcheck@yahoo.com to schedule an appointment	29,457	U		
Dudley Police Department	71 W Main Street, Dudley, MA 01571	Call 508-949-8019 to schedule an appointment	11,390	R		
Duxbury Police Department	155 Mayflower Street, Duxbury, MA 02332	Call 781-934-5656 to schedule an appointment	15,059	U		
East Bridgewater Police Department	153 Central Street, East Bridgewater, MA 02333	Call 508-378-7223 to schedule an appointment	13,794	U		
Eastham Fire Department	2520 State Highway, Eastham, MA 02642	Call 508-255-2324 to schedule an appointment	4,956	R		
Eastham Police Department	2550 State Highway, Eastham, MA 02642	Call 508-255-0551 to schedule an appointment		R		
Edgartown Police Department	72 Pease's Point Way South, Edgartown, MA 02539	Call 508-627-4343 to schedule an appointment	4,067	R		
Essex Police Department	24 Martain Street, Essex, MA 01929	Call 978-768-6200 to schedule an appointment	3,504	U		
Fall River Police Department	685 Pleasant Street, Fall River, MA 02721	Call 508-676-8511 to schedule an appointment	88,857	U		
Falmouth Fire Department	399 Main Street, Falmouth, MA 02540	Call 508-548-2325 to schedule an appointment		U		
Falmouth Police Department	750 Main Street, Falmouth, MA 02540	Call 508-457-2527 to schedule an appointment	31,531	U		
Fitchburg Police Department	20 Elm Street, Fitchburg, MA 01420	Call 978-345-9641 to schedule an appointment	40,414	U		
Framingham Police Department	1 William H Welch Way, Framingham, MA 01702	Call 508-872-1212 to schedule an appointment	68,318	U		

Location / Name	Address	Description	2010 Census	Urban (U) or Rural (R)	Spanish-speaking CPS Tech Available	Special Health Care CPS Tech Available
Gardner Police Department	200 Main Street, Gardner, MA 01440	Call 978-632-5600 to schedule an appointment	20,228	U		
Georgetown Fire Department	47 Central Street, Georgetown, MA 01883	Call 978-352-5757 to schedule an appointment	8,183	U		
Gloucester Police Department	197 Main Street, Gloucester, MA 01930	Call 978-283-1212 to schedule an appointment	28,739	U		
Granby Police Department	259A E State Street, Granby, MA 01033	Call 413-467-9222 to schedule an appointment	6,132	R		
Groton Fire Department	45 Farmers Row, Groton, MA 01450	Call 978-448-6333 to schedule an appointment		R		
Groton Police Department	99 Pleasant Street, Groton, MA 01450	Call 978-448-5555 to schedule an appointment	10,646	R		
Groveland Fire Department	181 Main Street, Groveland, MA 01834	Call 978-374-1923 to schedule an appointment	6,459	U		
Hadley Police Department	15 East Street, Hadley, MA 01035	Call 413-584-0883 to schedule an appointment	5,250	R		
Hamilton Police Department	265 Bay Road, Hamilton, MA 01982	Call 978-468-1212 to schedule an appointment	7,764	U		
Hanover Police Department	129 Rockland Street, Hanover, MA 02339	Call 781-826-3231 to schedule an appointment	13,879	U		
Harvard Police Department	40 Ayer Road, Harvard, MA 01451	Call 978-456-1212 to schedule an appointment	6,520	U		
Harwich Fire Department	175 Sisson Road, Harwich, MA 02645	Call 508-430-7546 to schedule an appointment		U		
Harwich Police Department	183 Sisson Road, Harwich, MA 02645	Call 508-430-7541 to schedule an appointment	12,243	U		
Haverhill Police Department	40 Bailey Blvd., Haverhill, MA 01830	Call 978-373-1212 to schedule an appointment	60,879	U		
Hingham Police Department	212 Central Street, Hingham, MA 02043	Call 781-749-1212 to schedule an appointment	22,157	U		
Holbrook Emergency Communications Department	300 South Franklin Street, Holbrook, MA 02343	Call 781-767-6830 to schedule an appointment	10,791	U		
Holden Police Department	1370 Main Street, Holden, MA 01520	Holden residents may call 508-829-4444 to schedule an appointment	17,346	R		
Holliston Police Department	550 Washington Street, Holliston, MA 01746	Call 508-429-1212 to schedule an appointment	13,547	U		
Holyoke Fire Department	600 High Street, Holyoke, MA 01040	Call 413-534-2250 to schedule an appointment	39,880	U	x	
Hopedale Police Department	70 Hopedale Street, Hopedale, MA 01747	Call 508-634-2227 to schedule an appointment		U		
Hopkinton Police Department	74 Main Street, Hopkinton, MA 01748	Call 508-497-3401 to schedule an appointment	14,925	U		
Hudson Police Department	62 Packard Street, Hudson, MA 01749	Call 978-562-7122 to schedule an appointment	19,063	R		
Hull Police Department	1 School Street, Hull, MA 02045	Call 781-925-1212 to schedule an appointment	10,293	U		
Ipswich Fire Department	55 Central Street, Ipswich, MA 01938	Call 978-356-6630 to schedule an appointment	13,175	U		
Lakeville Police Department	296 Bedford Street, Lakeville, MA 02347	Call 508-947-4422 to schedule an appointment	10,602	R		
Lawrence General Hospital	1 General Street, Lawrence, MA 01842	Call 978-683-4000 to schedule an appointment	76,377	U		x
Leicester Police Department	90 South Main Street, Leicester, MA 01524	Call 508-892-7010 to schedule an appointment	10,970	R		
Leominster Fire Department	19 Church Street, Leominster, MA 01453	Call 978-534-7541 to schedule an appointment	40,759	U		
Lexington Police Department	1575 Massachusetts Ave, Lexington, MA 02420	Lexington residents may call 781-862-1212 to schedule an appointment	31,394	U		
Lincoln Police Department	169 Lincoln Road, Lincoln, MA 01773	Call 781-259-8113 to schedule an appointment	6,362	U		x
Littleton Police Department	500 Great Road, Littleton, MA 01460	Call 978-952-2300 to schedule an appointment	8,924	R		
Lowell Police Department	50 Arcand Drive, Lowell, MA 01852	Call 978-937-3200 to schedule an appointment	106,519	U		x
Lynnfield Fire Department	59 Summer Street, Lynnfield, MA 01940	Call 781-334-5152 to schedule an appointment	11,596	U		
Malden Police Department	200 Pleasant Street, Malden, MA 02148	Call 781-397-7171 to schedule an appointment	59,450	U		
Manchester Fire Department	12 School Street, Manchester, MA 01944	Call 978-526-4040 to schedule an appointment	5,136	U		
Mansfield Police Department	50 West Street, Mansfield, MA 02048	Visit www.facebook.com/MansfieldPD/app/414863965197774/ to schedule an appointment	23,184	U		
Marion Fire EMS	50 Spring Street, Marion, MA 02738	Call 508-748-1177 to schedule an appointment	4,907	U		x
Marion Police Department	550 Mill Street, Marion, MA 02738	Call 508-748-1212 to schedule an appointment		R		
Marshfield Police Department	1639 Ocean Street, Marshfield, MA 02050	Call 781-834-6655 to schedule an appointment	25,132	U		
Mashpee Fire Department	20 Frank E Hicks Drive, Mashpee, MA 02649	Call 508-539-1454 to schedule an appointment	14,006	R		
Massachusetts State Police-Bourne	1 Bourne Rotary, Bourne, MA 02532	Call 508-759-4488 to schedule an appointment		U		
Massachusetts State Police-GHQ	470 Worcester Road, Framingham, MA 01702	Call 508-988-7405 to schedule an appointment		U		
Mattapoisett Police Department	64 County Road, Mattapoisett, MA 02739	Call 508-758-4141 to schedule an appointment	6,045	R		
Medford Police Department	100 Main Street, Medford, MA 02155	Call 781-391-6776 to schedule an appointment	56,173	U		
Medway Fire Department	44 Milford Street, Medway, MA 02053	Call 508-533-3211 to schedule an appointment	12,752	U		
Medway Police Department	315 Village Street, Medway, MA 02053	Call 508-533-3212 to schedule an appointment		U		
Melrose Police Department	56 West Foster Street, Melrose, MA 02176	Call 781-665-1212 to schedule an appointment	26,983	U		
Merrimac Police Department	16 East Main Street, Merrimac, MA 01860	Call 978-346-8321 to schedule an appointment	6,338	U		
Middleton Fire Department	4 Lake Street, Middleton, MA 01949	Call 978-774-2466 to schedule an appointment	8,987	R		
Milford Police Department	250 Main Street, Milford, MA 01757	Call 508-473-1113 to schedule an appointment	27,999	U		
Millis Fire Department	885 Main Street, Millis, MA 02054	Call 508-376-2361 to schedule an appointment	7,891	U		
Millville Police Department	10 Central Street, Millville, MA 01529	Call 508-883-3117 to schedule an appointment	3,190	U		
Montague Police Department	180 Turnpike Road, Turners Falls, MA 01376	Call 413-863-2913 to schedule an appointment	8,437	R		
Mount Holyoke Police Department	50 College Street, South Hadley, MA 01075	Email embrown@mtholyoke.edu to schedule an appointment		U		
Nantucket Fire Department	131 Pleasant Street, Nantucket, MA 02554	Call 508-228-2324 to schedule an appointment	10,172	R		
Nashoba Valley Regional Dispatch District	270 Barnum Road, Devens, MA 01434	Call 978-772-1900 to schedule an appointment	34,264	U		x
Natick Police Department	20 E Central Street, Natick, MA 01760	Natick residents may call 508-647-9518 to schedule an appointment	33,006	U		
Needham Police Department	99 School Street, Needham, MA 02492	Call 781-455-7570 to schedule an appointment	28,886	U		
New Bedford Police Department	871 Rockdale Ave, New Bedford, MA 02740	Call 508-991-6300 to schedule an appointment	95,072	U		
Newburyport Police Department	4 Green Street, Newburyport, MA 01950	Call 978-462-4411 to schedule an appointment	17,416	U		
Newton Police Department	1321 Washington Street, Newton, MA 02465	Call 617-796-2112 to schedule an appointment	89,045	U		
North Adams Ambulance Service	10 Harris Street, North Adams, MA 01247	Call 413-664-6680 to schedule an appointment	13,064	U		
North Andover Fire Department	795 Chickering Road, North Andover, MA 01845	Call 978-688-9590 to schedule an appointment		U		
North Andover Police Department	1475 Osgood Street, North Andover, MA 01845	Call 978-683-3168 to schedule an appointment	28,352	U		
North Attleboro Police Department	102 S Washington Street, North Attleboro, MA 02760	Call 508-695-1212 to schedule an appointment	28,712	U		x
North Reading Police Department	150 Park Street, North Reading, MA 01864	Call 978-357-5087 to schedule an appointment	14,892	U		
Northampton Fire Department	26 Carlon Drive, Northampton, MA 01060	Please visit http://www.northamptonma.gov/1239/Car-Seat-Installations to schedule an appointment	28,549	U		
Northampton Police Department	29 Center Street, Northampton, MA 01060	Call 413-587-1100 to schedule an appointment		U		
Northbridge Police Department	1 Hope Street, Whitinsville, MA 01588	Call 508-234-6211 to schedule an appointment	15,707	R		
Norwell Police Department	300A Washington Street, Norwell, MA 02061	Call 781-659-7979 to schedule an appointment	10,506	U		
Norwood Police Department	137 Nahatan Street, Norwood, MA 02062	Call 781-440-5100 to schedule an appointment	28,602	U		
Orleans Fire Department	58 Eldridge Park Way, Orleans, MA 02653	Call 508-255-0050 to schedule an appointment	5,890	R		
Orleans Police Department	90 S Orleans Road, Orleans, MA 02653	Call 508-255-0117 to schedule an appointment		R		
Oxford Fire Department	181 Main Street, Oxford, MA 01540	Call 508-987-6012 to schedule an appointment	13,709	U		
Pembroke Fire Department	172 Center Street, Pembroke, MA 02359	Call 781-293-2300 to schedule an appointment	17,837	U		
Pepperell Police Department	59 Main Street, Pepperell, MA 01463	Call 978-433-2424 to schedule an appointment	11,497	R		
Pittsfield Police Department	39 Allen Street, Pittsfield, MA 01201	Pittsfield residents may call 413-448-9700 x366 to schedule an appointment	44,737	U		
Plainville Fire Department	157 South Street, Plainville, MA 02762	Call 508-695-5252 to schedule an appointment	8,264	U		
Quincy Police Department	1 Sea Street, Quincy, MA 02169	Call 617-745-5824 to schedule an appointment	92,771	U		
Randolph Auxiliary Police Department	41 South Main Street, Randolph, MA 02368	Email tkennedy@randolphauxpolice.com to schedule an appointment	32,112	U		
Randolph Police Department	41 South Main Street, Randolph, MA 02368	Visit www.randolphmapolice.com/CPSForm.htm to schedule an appointment		U		
Raynham Police Department	53 Orchard Street, Raynham, MA 02767	Call 508-824-2716 to schedule an appointment	13,383	U		
Rehoboth Police Department	334 Anawan Street, Rehoboth, MA 02035	Call 508-252-3722 to schedule an appointment	11,608	R		
Revere Police Department	400 Revere Beach Parkway, Revere, MA 02151	Call 781-284-1212 to schedule an appointment	51,755	U	x	
Rochester Police Department	29 Dexter Lane, Rochester, MA 02770	Call 508-763-5112 to schedule an appointment	5,232	R		
Rockland Police Department	490 Market Street, Rockland, MA 02370	Call 781-871-3890 to schedule an appointment	17,489	U		

Location / Name	Address	Description	2010 Census	Urban (U) or Rural (R)	Spanish-speaking CPS Tech Available	Special Health Care CPS Tech Available
Salem Fire Department	48 Lafayette Street, Salem, MA 01970	Email sfdchildsafety@yahoo.com to schedule an appointment	43,132	U		
Salisbury Fire Department	37 Lafayette Road, Salisbury, MA 01952	Call 978-465-3631 to schedule an appointment	8,283	U		
Sandwich Fire Department	115 Massachusetts 6A, Sandwich, MA 02563	Call 508-888-0525 to schedule an appointment	20,675	R		
Saugus Police Department	27 Hamilton Street, Saugus, MA 01906	Call 781-941-1190 to schedule an appointment	26,628	U		
Scituate Police Department	604 Chief Justice Cushing Hwy, Scituate, MA 02066	Call 781-545-1212 to schedule an appointment	18,133	U		
Seekonk Police Department	500 Taunton Ave, Seekonk, MA 02771	Call 508-336-8123 to schedule an appointment	13,722	U		
Sharon Police Department	213 South Main Street, Sharon, MA 02067	Sharon residents may call 781-784-1586 to schedule an appointment	17,612	U		
Sheffield Police Department	10 S Main Street, Sheffield, MA 01257	Call 413-229-8522 to schedule an appointment	3,257	R		
Shrewsbury Fire Department	11 Church Road, Shrewsbury, MA 01545	Email carseat@shrewsburyma.gov to schedule an appointment	35,608	U		
Somerset Police Department	465 County Street, Somerset, MA 02726	Call 508-679-2138 to schedule an appointment	18,165	U		
Somerville Police Department	220 Washington Street, Somerville, MA 02143	Email seats@police.somerville.ma.us to schedule an appointment	75,754	U		
South Hadley Police Department	41 Bridge Street, South Hadley, MA 01075	Call 413-538-8231 to schedule an appointment	17,514	U		
Southborough Police Department	19 Main Street, Southborough, MA 01772	Call 508-485-2121 to schedule an appointment	9,767	U		
Southbridge Police Department	1 Mechanic Street, Southbridge, MA 01550	Call 508-764-5420 to schedule an appointment	16,719	U		
Southwick Police Department	11 Depot Street, Southwick, MA 01077	Call 413-569-5348 to schedule an appointment	8,835	R		
Spencer Police Department	9 W Main Street, Spencer, MA 01562	Call 508-885-6333 to schedule an appointment	11,688	R		
Stoneham Police Department	47 Central Street, Stoneham, MA 02180	Call Officer Laura Engel at 781-438-1215 x3137 to schedule an appointment	21,437	U		
Stoughton Police Department	26 Rose Street, Stoughton, MA 02072	Call 781-344-2424 to schedule an appointment	26,962	U		x
Stow Police Department	305 Great Road, Stow, MA 01775	Call 978-897-4545 to schedule an appointment	6,590	U		
Sturbridge Police Department	346 Main Street, Sturbridge, MA 01566	Call 508-347-2525 to schedule an appointment	9,268	R		
Swansea Police Department	1700 Grand Army Highway, Swansea, MA 02777	Call 508-674-8464 to schedule an appointment	15,865	U		
Taunton Police Department	23 Summer Street, Taunton, MA 02780	Call 508-824-7522 to schedule an appointment	55,874	U		
Tewksbury Police Department	918 Main Street, Tewksbury, MA 01876	Call 978-851-7373 to schedule an appointment	28,961	U		
Topsfield Fire Department	27 High Street, Topsfield, MA 01983	Call 978-887-5148 to schedule an appointment	6,085	U	x	
Townsend Fire Department	272 Main Street, Townsend, MA 01469	Call Nicole Carter CPST-SN at 978-597-8150 to schedule an appointment	8,926	R		x
Townsend Police Department	70 Brookline Street, Townsend, MA 01469	Call 978-597-6214 to schedule an appointment		R		
Truro Fire Department	344 US-6, Truro, MA 02666	Call 508-487-7548 to schedule an appointment	2,003	R		
UMASS Amherst Police	585 East Pleasant Street, Amherst, MA 01003	Email jeroberts@umass.edu to schedule an appointment	22,000	U		x
UMASS Memorial Medical Center - Worcester	55 Lake Ave N, Worcester, MA 01655	Call 774-443-8627 to schedule an appointment	399,276	U		
Upton Police Department	30 School St, Upton, MA 01568	Call 508-529-3200 to schedule an appointment	7,542	U		
Uxbridge Fire Department	25 S Main St, Uxbridge, MA 01569	Call 508-278-2787 to schedule an appointment	13,457	U		
Uxbridge Police Department	275 Douglas St, Uxbridge, MA 01569	Call 508-278-7755 to schedule an appointment		U		
Wakefield Police Department	1 Union St, Wakefield, MA 01880	Email carseats@wakefieldpd.org to schedule an appointment	24,932	U		
Walpole Police Department	972 Main St, Walpole, MA 02081	Call 508-668-1095 to schedule an appointment	24,070	U		
Waltham Police Department	155 Lexington St, Waltham, MA 02452	Call 781-314-3623 to schedule an appointment	60,632	U		
Wareham Fire Department	273 Main St, Wareham, MA 02571	Call 508-295-2973 to schedule an appointment	21,822	U		
Watertown Fire Department	99 Main St, Watertown, MA 02472	Call 617-972-6567 to schedule an appointment	35,025	U		
Wayland Police Department	38 Cochituate Rd, Wayland, MA 01778	Email cps@wayland.ma.us to schedule an appointment	12,994	U		
Webster Police Department	357 Main St, Webster, MA 01570	Call 508-943-1212 to schedule an appointment	16,767	U		
Wellesley Police Department	485 Washington Street, Wellesley, MA 02482	Wellesley residents can call 781-235-1212 to schedule an appointment	27,982	U		
Wellfleet Police Department	36 Gross Hill Rd, Wellfleet, MA 02667	Call 508-349-2100 to schedule an appointment	2,750	R		
West Bridgewater Police Department	99 W Center St # 2, West Bridgewater, MA 02379	Call 508-586-2525 to schedule an appointment	6,916	U		
West Brookfield Police Department	2 E Main St, West Brookfield, MA 01585	Call 508-867-1405 to schedule an appointment	3,701	R		
West Newbury Police Department	401 Main Street, West Newbury, MA 01985	Call 978-363-1213 to schedule an appointment	4,235	R		
Westborough Fire Department	42 Milk St, Westborough, MA 01581	Call 508-366-3040 to schedule an appointment	18,272	U		
Westborough Police Department	45 W Main St, Westborough, MA 01581	Call 508-366-3060 to schedule an appointment		U		
Westfield Police Department	15 Washington Street, Westfield, MA 01085	Call 413-562-5211 to schedule an appointment	41,094	U		
Westford Fire Department	51 Main St, Westford, MA 01886	Call 978-692-5542 to schedule an appointment	21,951	U		
Westford Police Department	53 Main Street, Westford, MA 01886	Call 978-692-2161 to schedule an appointment		U		
Westminster Police Department	7 South St, Westminster, MA 01473	Call 978-874-2900 to schedule an appointment	7,277	U		x
Weston Police Department	180 Boston Post Road, Weston, MA 02493	Call 781-786-6200 to schedule an appointment	11,261	U		
Westport Fire Department	54 Hixbridge Road, Westport, MA 02790	Call 508-636-1110 to schedule an appointment	15,532	U		
Westport Fire Department	85 Briggs Road, Westport, MA 02790	Call 508-672-0721 to schedule an appointment		U		
Westport Police Department	818 Main Rd, Westport, MA 02790	Call 508-636-1122 to schedule an appointment		U		x
Westwood Police Department	590 High St, Westwood, MA 02090	Call 781-320-1000 to schedule an appointment	14,618	U		
Weymouth Fire Department	636 Broad St, Weymouth, MA 02189	Call 781-337-5151 to schedule an appointment	55,972	U		
Whitman Police Department	20 Essex St, Whitman, MA 02382	Call 781-447-1212 to schedule an appointment	14,489	U	x	
Wilbraham Police Department	16 Main St, Wilbraham, MA 01095	Call 413-596-3837 to schedule an appointment	14,868	U		
Williamsburg Police Department	16 S Main St, Haydenville, MA 01039	Call 413-268-7237 to schedule an appointment	2,482	R		x
Wilmington Police Department	1 Adelaide St, Wilmington, MA 01887	Call 978-658-5071 to schedule an appointment	22,325	U		
Winthrop Police Department	3 Metcalf Square, Winthrop, MA 02152	Call 617-846-1212 to schedule an appointment	17,497	U		
Woburn Police Department	25 Harrison Ave, Woburn, MA 01801	Call 781-933-1212 to schedule an appointment	38,120	U		
Yarmouth Fire Department	96 Old Main St, South Yarmouth, MA 02664	Call 508-398-2212 to schedule an appointment	23,793	U		

Total Number of Fitting Stations	**229**	**Total Population of Communities with Fitting Stations:**	**5,609,363**
Urban	176	**MA Population as of 2010 Census:**	**6,547,629**
Rural	53	**Percent of Population serviced by Fitting Stations:**	86%
Percentage of Stations in Urban Areas	77%		
Percentage of Stations in Rural Areas	23%		
The FHWA determined Rurality Levels by State based upon the 2010 Census	For MA, 92% of state population lives in urban areas; 8% in rural areas.	With 23% of fitting stations in rural communities, Masschusetts is making sure those in rural areas have access to child passenger seat expertise.	

FFY 2017 Checkup Events in Massachusetts

Date	Location	Host agency	Time
4/29/2017	YMCA of Central Massachusetts	Baystate Medical Center	10:00am-2:00pm
4/29/2017	Wareham YMCA	Wareham Police Department	9:00am-12:00pm
4/30/2017	Millbury Babies R Us	Umass Memorial Hospital	10:00am-2:00pm
5/6/2017	Clinton Middle School	Nashoba Valley Regional Dispatch District	11:00am-2:00pm
5/6/2017	Thorpe Elementary School	Danvers Police Department	9:00am-12:00pm
5/7/2017	Stadium Plaza	Tewksbury Police Department	10:am-1:00pm
5/20/2017	Commonwealth Motors	Lawrence General Hospital	10:00am-1:00pm
5/28/2017	Walmart-Pittsfield	Baystate Medical Center	10:00am-1:00pm
6/2/2017	Second Baptist Church-South Hadley	Baystate Medical Center	10:00am-1:00pm
6/2/2017	Randolph Police Station	Randolph Police Department	12:00-4:00pm
6/10/2017	Franciscan Children's Hospital-Boston	Franciscan Children's Hospital	10:00am-1:00pm

Note – List of events planned through June 10, 2017. It must be stated that funding for the CPS grant was not distributed until April. EOPSS/HSD expects the number of checkup events to pick up through July, August and September.

OCCUPANT PROTECTION
ATTACHMENT D

Communications Plan FFY 2018

Executive Office of Public Safety and Security

Office of Grants and Research

Highway Safety Division

For each of the campaigns listed below, OGR/HSD will work with our media vendor, as well as internal and external stakeholders, to develop comprehensive outreach campaigns comprised of earned media (press events/releases/interviews) and paid media (video ad creation, online/TV/radio buys, out-of-home advertising, and signage).

Our agency will continue to work with state agencies, through EOPSS, to further enhance our media campaigns, including the digital team at Mass.Gov, the Governor's Office, MassDOT, and the Massachusetts RMV. These partnerships provide us with social media guidance, press conference planning, and the ability to promote our messages across social media accounts, state-run blogs, and over 110 digital billboards throughout the state at no cost.

We also continue to expand partnerships with non-profit agencies, schools, and hospitals which provides collaborative opportunities for education and outreach though EOPSS/OGR/HSD as appropriate.

The campaigns and dates below are subject to change, but EOPSS/OGR/HSD will note which sources will be used for promote campaign messaging. EOPSS/OGR/HSD will use the 2018 NHTSA Communications Calendar, trafficsafetymarketing.gov, and local and national crash, citation, and fatality data to guide us in developing target audiences and messaging.

October 15-21, 2017: National Teen Driver Safety week.
Social Media, Digital Billboards

October 31, 2017: Halloween
Social Media

October – November 2017
Earned and Paid Media, Social Media, Digital Billboards, Blog

November 2017: Drowsy Driving Awareness
Social Media, Digital Billboards, Blog

November 24, 2017: Thanksgiving Holiday Travel period.
Social Media, Digital Billboards

December 2017- January 2018: Drive Sober or Get Pulled Over National Enforcement Mobilization
Earned and Paid Media, Social Media, Digital Billboards, Blog

January-February 2018: Child Passenger Safety Winter Tips
Social Media, Blog

February 4, 2018: Super Bowl
Social Media

March 17, 2018: St. Patrick's Day
Social Media

April 2018: National Distracted Driving Awareness month
Earned and Paid Media, Social Media, Digital Billboards, Blog

May 2018: Click it or Ticket National Enforcement Mobilization
Earned and Paid Media, Social Media, Digital Billboards, Blog

May-June 2018: Motorcycle Safety Awareness and Bicycle & Pedestrian Safety Awareness
Earned and Paid Media, Social Media, Digital Billboards, Blog

May-September 2018: 100 Deadliest Days for Teen Drivers
Social Media, Digital Billboards, Blog

June, 2018 TBD: Secure Your Load Day
Social media

July 4, 2018 – Fourth of July Impaired Driving
Social Media, Digital Billboards

August-September 2018: Drive Sober or Get Pulled Over National Enforcement Mobilization
Earned and Paid Media, Social Media, Digital Billboards, Blog

August-September 2018: Back to School Safety and Child Passenger Safety Week
Earned and Paid Media, Social Media, Digital Billboards, Blog