

State of Maine

Department of Public Safety

Bureau of Highway Safety



# Federal Fiscal Year 2013 Annual Highway Safety Report

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**Paul R. LePage, Governor**  
**John E. Morris, Commissioner**  
**Lauren V. Stewart, Director**

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# A Message from the Director

December 31, 2013

The mission of the Department of Public Safety, Bureau of Highway Safety Office is to save lives and reduce injuries on the state's roads and highways through leadership, innovation, facilitation, project and program support, and working in partnership with other public and private organizations. Our efforts are based on the concept that any death or injury is one too many and that traffic crashes are not accidents, but are preventable.

I am pleased to submit this Annual Report for Federal Fiscal Year 2013. This report fulfills the Section 402 grant requirements with the National Highway Traffic Safety Administration (NHTSA) and highlights the many achievements and accomplishments of the State Highway Safety Office. The project activities represented in this annual report were approved by NHTSA in our 2013 Highway Safety Plan as countermeasures that would help Maine achieve its stated goals to reduce overall traffic fatalities, injuries, and property damage.

I would like to thank the staff of the Highway Safety Office for all of their efforts to improve highway safety and for their assistance in grant application and report development. I would also like to thank our many partners in highway safety: those in federal and state departments as well as municipal and county law enforcement, fire and EMS departments and numerous not-for-profit agencies. We work together to represent the public in addressing our highway safety priorities.



Lauren V. Stewart, Director

Maine Bureau of Highway Safety

## Partner Organizations

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AAA of Northern New England

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Alliance Sports Marketing

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American Association of Retired People (AARP)

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Atlantic Partners, EMS

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Department of Health and Humans Services—Elder Service

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Federal Highway Administration (FHWA)

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Federal Motor Carrier Safety Administration (FMCSA)

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Ford Driving Skills for Life (DSFL)

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Governor's Highway Safety Association (GHSA)

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Health Environmental Testing Lab (HETL)

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Maine Bicycle Coalition

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Maine Bureau of Labor Standard

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Maine Bureau of Motor Vehicles (BMV)

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Maine CDC's Injury and Violence Prevention

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Maine Chiefs of Police Association

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Maine Criminal Justice Academy (MCJA)

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Maine Department of Education

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Maine Department of Public Safety (DPS)

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Maine Department of Transportation (MeDOT)

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Maine Driver Education Association

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Maine Emergency Medical Services (EMS)

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Maine Motor Transport Association

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Maine Municipal Association

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Maine Principals Association

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Maine Secretary of State's Office

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Maine Sheriff's Association

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Maine State Police

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Maine Substance Abuse Mental Health Services

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Maine Turnpike Authority

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Maine Violations Bureau

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Motorcycle Rider Education of Maine Inc.

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National Highway Traffic Safety Administration (NHTSA)

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NL Partners Marketing

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Safety and Health Council of Northern New England (SHCNNE)

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United Bikers of Maine (UBM)

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University of Southern Maine (USM)

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# Acronyms

APD	Auburn Police Department
ARIDE	Advanced Roadside Impaired Driver Enforcement
ASM	Alliance Sports Marketing
BAC	Blood Alcohol Content
BAT	Blood Alcohol Testing
BMV	Bureau of Motor Vehicle
CDC	Centers for Disease Control and Prevention
CODES	Crash Outcome Data Evaluation system
CPS	Child Protection Safety
DDACTS	Data-Driven Approaches to Crime and Traffic Safety
DITEP	Drug Impairment Training for Educational Professionals
DOT	Department of Transportation
DRE	Drug Recognition Expert Program
EMS	Emergency Medical Services
FARS	Fatality Analysis Reporting System
FY	Fiscal Year
GDL	Graduated Driver License
GHSA	Governor's Highway Safety Association
HETL	Health and Environment Testing Lab
IACP	International Association of Chiefs of Police
LEA	Law Enforcement Agency
MCJA	Maine Criminal Justice Academy
MCRS	Maine Crash Reporting System
MDD	Maine Driving Dynamics
MeBHS	Maine Bureau of Highway Safety
NHTSA	National Highway Traffic Safety Administration
NTZ	No Text Zone
OPET	Occupant Protection Enforcement Team
OUI	Operating Under the Influence
PD	Police Department
PSA	Public Service Announcement
RIDE	Regional Impaired Driving Enforcement
RQS	Request for Qualification Statements
SAFE	Strategic Area Focused Enforcement
SFST	Standardized Field Sobriety Testing
TDSC	Teen Driver Safety Committee
TSI	Traffic Safety Institute

# Introduction

The Maine Bureau of Highway Safety (MeBHS), established in accordance with the Highway Safety Act of 1966, is the focal point for highway safety in Maine and is the only agency in Maine with the sole responsibility to promote safer roadways. The MeBHS is a Bureau within the Maine Department of Public Safety. The MeBHS currently consists of seven full-time employees all dedicated to ensuring safe motor transportation for everyone traveling on Maine roads and highways. The MeBHS provides leadership and state and federal financial resources to develop, promote and coordinate programs designed to influence public and private policy, make systemic changes and heighten public awareness of highway safety issues.

The overall goal of the MeBHS is to reduce the rate of motor vehicle crashes in Maine that result in death, injuries, and property damage. Through the administration of federal funding from the National Highway Traffic Safety Administration, the Federal Highway Administration and State Highway funds, the MeBHS impacted each of the major NHTSA priority program areas in Federal Fiscal Year 2013:

- Impaired Driving
- Occupant Protection
- Child Passenger Safety
- Traffic Records
- Police Traffic Services

Through additional programs developed after extensive state data analysis, we also impacted the areas of motorcycle safety, speed, teen drivers, and driver distraction.

We believe that through committed partnerships with others interested in highway safety, through a data driven approach to program planning, through public information and education, and with coordinated enforcement activities, we can achieve our goal to reduce fatalities and injuries.

This Annual Report reflects our efforts to impact traffic safety in areas including occupant protection, impaired driving, child passenger safety, motorcycles, public education and information, and traffic records for Federal Fiscal Year 2013 (October 1, 2012 – September 30, 2013).

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Report Submitted: December 31, 2013



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# Executive Summary

## Federal Fiscal Year 2013 Countermeasures

### ❖ **Bureau of Motor Vehicles Awareness and Attitudinal Survey**

As part of a joint effort to develop traffic safety performance measures for states and federal agencies, a Governor's Highway Safety Association (GHSA) and NHTSA working group identified a basic set of questions that could be used in periodic surveys that track driver attitudes and awareness concerning impaired driving, seat belt use, speeding, and distracted driving. This report was also used to determine general public awareness of the recently enacted primary belt law. The MeBHS contracted with the University of Southern Maine, Muskie School of Public Service to conduct three waves of surveys at eight Maine Bureau of Motor Vehicles offices. Most drivers reported high personal use of seat belts (83.4 percent "always" and 10.4 percent "nearly always"), consistent with actual statewide use.

### ❖ **Child Passenger Safety Inspection Stations and Distribution Sites**

The Maine Child Safety Seat Program is unique in that it partners with agencies throughout the state to distribute car seats to families who meet income eligible guidelines, thus providing an important service to local communities. From October 1, 2012 to September 30, 2013, a total of 1,457 child safety car seats, including car bed harness and pad kits, were ordered by MeBHS and sent directly to distribution sites around the state.

### ❖ **Click It or Ticket/Buckle Up. No Excuses! Enforcement and Education**

The MeBHS offered Maine law enforcement agencies sub-grant awards to participate in this year's May and June Click It or Ticket/Buckle Up. No Excuses! Enforcement and Education Campaign. This year a total of 86 agencies participated in the campaign, including the Maine State Police, County Sheriff's departments, and city and town police departments. Over 4,600 seatbelt tickets and warnings were issued during this two-week campaign that ran in conjunction with the national crackdown period.

### ❖ **"Drive Sober, Maine!" High Visibility Impaired Driving Enforcement Program**

In 2013, MeBHS offered a year-long High Visibility Impaired Driving Enforcement program which began on December 1, 2012 and ended on September 6, 2013. This program required participating Maine law enforcement departments to join in two national impaired driving crackdowns while also allowing the department the flexibility to schedule overtime details during the months when OUI is a problem in their jurisdictions.

### ❖ **"Drive Sober or Get Pulled Over" High Visibility Impaired Driving Crackdown Program**

This program allowed participating Maine law enforcement departments to join two national "Drive Sober or Get Pulled Over" impaired driving crackdown periods of December 14, 2012 to January 2, 2013 and August 16 to September 2, 2013.

### ❖ **Intoxilyzer 8000**

On January 1, 2013, about 600 Intoxilyzer certification cards, representing approximately one-third of all operators, were issued under the new recertification process. Now all certifications expire at the end of the year, in a three year cycle. A longer certification period has been discussed along with the possibility of issuing non-lapsing certification.

After receiving the new Intoxilyzer 8000's in the fall of 2012, the Academy held a training session in December for senior instructors with staff from the Intoxilyzer's manufacturer (CMI, Inc.) and chemist Bob Morgner from the Health and Environment Testing Lab (HETL). Seventy instructors were trained in the use of the new instruments. In January 2013, these instructors began training operators statewide. By June, approximately 1600 of the certified operators had received the training, and by the time of this report, all instruments have been distributed, and most current operators have received training.

❖ **Maine Driving Dynamics**

The state's defensive driving course, Maine Driving Dynamics, is a five hour defensive driving course that offers drivers the opportunity to improve their defensive driving abilities. Over 1,800 students took the class between October 2012 and September 2013.

❖ **No Text Zone Campaign**

The MeBHS partnered with Maine's CBS affiliate station, WGME, and Renys, a Maine retail chain, in the "No Text Zone" (NTZ) campaign. The campaign urges people to sign a pledge to make their vehicles a no text zone. Over 31,000 NTZ stickers were distributed throughout the state. A total of 2,215 people took the NTZ pledge and were entered to win a monthly \$100.00 gift card from Renys. Over 1.6 million impressions w/2448 click-through ads were delivered. Thirty NTZ promos as well as 384 MeBHS/NTZ promos aired over the 12-month campaign period resulting in a 92% total reach of viewers ages 16+.

❖ **Regional Impaired Driving Enforcement (RIDE) Team**

The Regional Impaired Driving Enforcement (RIDE) Team was formed and initiated in April 2012. This pilot program recruited selected volunteers from state, county, and municipal agencies within Cumberland County who demonstrated an expertise in the detection, apprehension and prosecution of impaired drivers. The success of this team led to the funding of a York County RIDE Team. Teams exist to raise awareness, educate the public, and make the roadways safer for citizens through the strict enforcement of Maine's impaired driving statutes. This year, a total of 20 saturation patrols and/or sobriety checkpoints have resulted in contacts with 2,726 operators and 52 impaired driving arrests.

❖ **Convincer & Rollover Education Program**

An estimated 8,300 people of all ages were provided with safety belt information through a variety of events where MeBHS's two Seatbelt Convincer units and one Rollover Simulator were on display.

❖ **Speed Enforcement**

The MeBHS conducted an analysis on statewide speed related crashes and their locations, then selected 11 law enforcement agencies, including Maine State Police, from those locations to participate in this third year data-driven Speed Enforcement Campaign. The focused speed enforcement operated from May 1 through September 2, 2013. Law enforcement officers wrote 4,435 speed summons during this campaign.

❖ **Statewide Observational Study**

The MeBHS contracted with the University of Southern Maine, Muskie School of Public Service for the 2013 occupant protection observational seatbelt usage survey. The surveys were conducted from July 22 to July 31, 2013, about six weeks after the Nationwide "Click It or Ticket/Buckle Up. No Excuses" seatbelt enforcement campaign in May and June 2013. The 2013 seatbelt usage rate is 83%.

❖ **Teen Driver Awareness Program**

The Teen Driver Awareness Program is designed to educate pre-permitted teens, newly permitted teens, and their parents in the areas of graduated driver licenses, seat belt usage, impaired driving, distracted driving, and parental involvement in the learning to drive process. During the 2012-2013 school year, 94 facilitators made presentations and used MeBHS's two driving simulators to instruct approximately 2,180 high school students. In addition, personnel from the MeBHS were invited to make presentation at various schools.

❖ **Traffic Records Coordinating Committee**

The Maine Traffic Records Coordinating Committee plays a major role in ensuring that a statewide traffic safety information system improvement program is successfully completed. As such, the committee works together to identify deficiencies in existing traffic records systems and recommends and funds enhancement projects that will net the State the greatest results. Projects include measures to increase the timeliness, accuracy, completeness, uniformity, integration and accessibility of all crash records and data.

## **Federal Fiscal Year 2013 Challenges**

❖ **Young Drivers and Mature Drivers**

Young and mature drivers continue to account for 25% and 24% respectively of Maine's driver fatalities. Each of these groups has its own challenges; therefore, the MeBHS has championed a Teen Driver Safety Committee and participates in an Older Driver Safety Committee.

❖ **Lane Departure Crashes**

Lane departure crashes continue to account for 70% of Maine crashes. Lane departure crashes are defined as occurring when vehicles either run off the road (left or right) or when head-on crashes occur. Since many factors such as speed, inattentive driving, and impaired driving contribute to lane departure crashes, many efforts have been made within our agency and partner agencies to decrease these crashes. The State of Maine established a first year texting ban to deter motor vehicle operators from texting while driving, and MeDOT has continued to install rumble strips in select locations that have seen a significant increase in head-on crashes throughout the State of Maine.

❖ **Unbelted Fatalities**

Despite Maine's primary enforcement law for seat belt compliance, 61% of occupants in fatal motor vehicle crashes in 2012 were unbelted.

# Performance Goals

In 2009, the NHTSA and the GHSA released a minimum set of performance measures to be used by states and federal agencies in the development and implementation of behavioral highway safety plans and programs. The minimum set of performance goals contains 14 measures: ten core outcome measures, one core behavior measure, and three activity measures. In addition, Maine has included a number of attitudinal measures related to impaired driving, seatbelts, and speeding.

The measures cover the major areas common to state highway safety plans and use existing state data systems. The Core Outcome Measures reported in this year's Annual Report represent the measures established for Maine for Federal Fiscal Year 2013.

## **C-1) Traffic Fatalities**

To decrease traffic fatalities by 5% from the 5-year average of 158.8 for 2007-2011 to 150.9 by December 31, 2013

## **C-2) Serious Traffic Injuries**

To decrease serious traffic injuries by 5% from the 5-year average of 842.8 for 2007-2011 to 800.7 by December 31, 2013

## **C-3a) Mileage Death Rate**

To decrease the mileage death rate by 5% from the 5-year average of 1.09 for 2007-2011 to 1.04 by December 31, 2013

## **C-3b) Rural Mileage Death Rate**

To decrease the rural mileage death rate by 5% from the 5-year average of 1.26 for 2007-2011 to 1.20 by December 31, 2013

## **C-3c) Urban Mileage Death Rate**

To decrease the urban mileage death rate by 5% from the 5-year average of 0.56 for 2007-2011 to 0.53 by December 31, 2013

## **C-4) Unrestrained Passenger Vehicle Occupant Fatalities**

To decrease unrestrained passenger vehicle occupant fatalities by 5% from the 5-year average of 50.4 for 2007-2011 to 47.9 by December 31, 2013

## **C-5) Alcohol Impaired Driving Fatalities**

To decrease alcohol impaired driving fatalities by 5% from the 5-year average of 41.0 for 2007-2011 to 39.0 by December 31, 2013

## **C-6) Speeding Related Fatalities**

To decrease speeding related fatalities by 5% from the 5-year average of 70.4 for 2007-2011 to 66.9 by December 31, 2013

## **C-7) Motorcyclist Fatalities**

To decrease motorcyclist fatalities by 5% from the 5-year average of 19.4 for 2007-2011 to 18.4 by December 31, 2013

**C-8) Unhelmeted Motorcyclist Fatalities**

To decrease unhelmeted motorcyclist fatalities by 5% from the 5-year average of 13.4 for 2007-2011 to 12.7 by December 31, 2013

**C-9) Drivers Age 20 or Younger Involved in Fatal Crashes**

To decrease drivers age 20 or younger involved in fatal crashes by 5% from the 5-year average of 22 for 2007-2011 to 20.9 by December 31, 2013

**C-10) Pedestrian Fatalities**

To reduce pedestrian fatalities by 10% from the 5-year average of 11.2 for 2007-2011 to 10.1 by December 31, 2013



**B-1) Seat Belt Usage Rate**

To increase statewide seat belt compliance by 2% from the 2011 survey results from 81.6% to 83.2% by December 31, 2013



**A-1)** To monitor seat belt citations issued during grant funded enforcement activities

**A-2)** To monitor impaired driving arrests made during grant funded enforcement activities

**A-3)** To monitor speeding citations issued during grant funded enforcement activities



**Impaired Driving**

**A-1)** In the past 60 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?

**A-2)** In the past 30 days, have you read, seen, or heard anything about alcohol impaired driving (or drunk driving) enforcement by police?

**A-3)** What do you think the chances are of someone getting arrested if they drive after drinking?

**Safety Belts**

**B-1)** How often do you use safety belts when you drive or ride in a car, van, sports utility vehicle or pick up?

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<sup>1</sup> See APPENDIX C for full survey report.

**B-2)** In the past 60 days, have you read, seen, or heard anything about seat belt law enforcement by police?

**B-3)** What do you think the chances are of getting a ticket if you don't wear your safety belt?

### **Speeding**

**S-1)** On a local road with a speed limit of 30 mph, how often do you drive faster than 35 mph (most of the time, half the time, rarely, never)?

**S-2)** In the past 30 days, have you read, seen or heard anything about speed enforcement by police?

**S-3)** What do you think the chances are of getting a ticket if you drive over the speed limit?

# Planning and Administration

## Funding Area, Funding Source, and Expended Funds

### General Planning and Administration

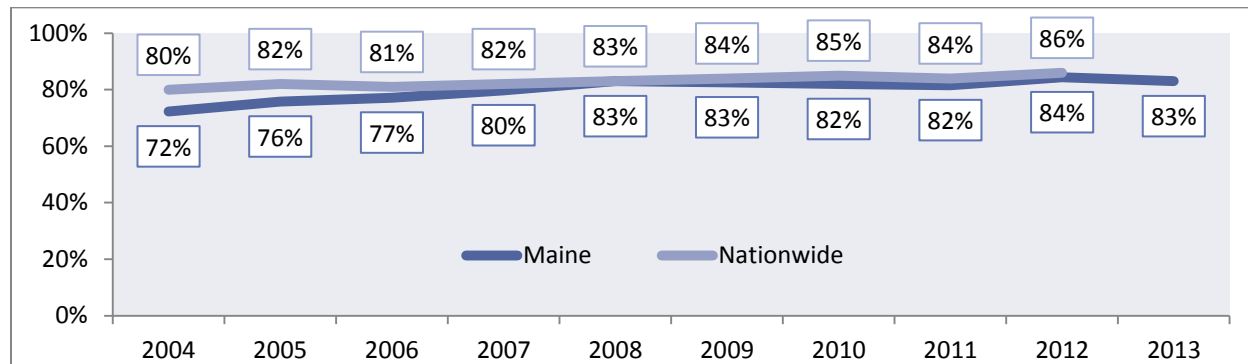
Funds were expended to cover the costs associated with the administration of the MeBHS office in its efforts to meet the highway safety plan performance goals. These costs included salaries, operational, training, and travel expenses; expenses associated with accounting audits; and upgrades.

*FUNDING SOURCE 402: \$162,461*

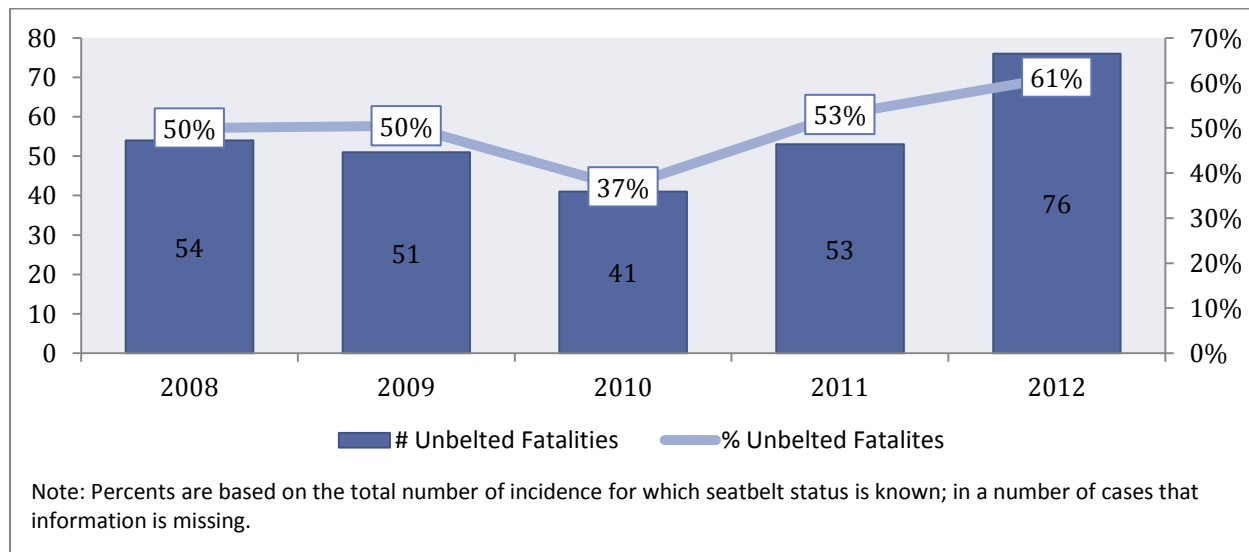
# Occupant Protection

## Problem

In 2008, Maine's seatbelt usage rate peaked at 83%. In the years following there was a gradual decline in the observed use of seat belts. However, in 2012 the seatbelt usage rate increased to the highest rate on record, 84.4%. The 2013 seatbelt usage rate stands at 83%. This is slightly below the most recent available national statistic of 86% for 2012<sup>2</sup>.



In 2012, there were 164 occupant fatalities involving passenger vehicles. Unrestrained vehicle occupants made up approximately 61% of these fatalities (n=76). This is an increase in the number and the proportion of unrestrained occupant fatalities compared to the previous two years.



<sup>2</sup> Source: Pickrell, T. M., & Ye, T. J. (2012, November). *Seat Belt Use in 2012 – Overall Results. (Traffic Safety Facts Research Note, Report # DOT HS 811 691)*. Washington, DC: National Highway Traffic Safety Administration. National statistic is based on survey results; state rate is based on observation study.



## Objective

The objective of Maine's Occupant Protection Program is to increase safety belt use for all occupants, thereby decreasing deaths and injuries resulting from unrestrained motor vehicle crashes.

## Goals & Progress

### #1 Goal

To increase statewide seat belt compliance by 2% from the 2011 survey results from 81.6% to 83.2% by December 31, 2013

#### Progress

This goal was unmet: The statewide seat belt compliance rate for 2013 was 83.0%.

### #2 Goal

To decrease unrestrained passenger vehicle occupant fatalities by 5% from the 5-year average of 55.8 for 2007-2011 to 53.01 by December 31, 2013

#### Progress

This goal was not met: The 5-year average number of unrestrained passenger vehicle occupant fatalities for 2008-2012 was 55.0.

## Countermeasures & Expended Funds

### Occupant Protection Program Management & OP Equipment Maintenance Programs

Funds were expended to cover the salaries, travel expenses, and other relevant costs associated with the provision of public information and education; procurement and distribution of printed materials and promotional information; and attendance of MeBHS employees and representatives at trainings, conferences, and workshops related to occupant protection.

*FUNDING SOURCE 402: \$102,099, OCCUPANT PROTECTION PROGRAM MANAGEMENT*

*FUNDING SOURCE 402: \$7,942, EQUIPMENT MAINTENANCE PROGRAMS*

### Click It or Ticket/Buckle Up, No Excuses! High Visibility Seatbelt Enforcement Campaign

The annual "Buckle Up. No Excuses!" seat belt education and enforcement campaign ran in conjunction with the national enforcement period from May 20 to June 2, 2013. This year, 92 law enforcement agencies participated. Participating agencies included 73 local police departments, 10 county sheriff offices, and 8 troops from the Maine State Police and 1 traffic safety unit.



Each year, MeBHS offers qualifying agencies an incentive to participate in the campaign. This year the incentive was a TruSpeed Binocular style laser speed detector. In order to qualify, agencies were required to conduct a minimum of 40 hours of details, conduct half of the details between the hours of 6 PM and 2 AM, and submit accurate paperwork before July 5. A total of 72 incentive devices were distributed this year.

During the enforcement period, officers stopped a total of 9,859 vehicles over 4,083 hours (approximately 2.41 stops per hour). A total of 2,931 seatbelt summons were issued during these hours. During the 2,334 nighttime enforcement hours, 1,797 seatbelt summons were issued. In addition to seatbelt summons, additional charges were made for speeding (297), operating under the influence of alcohol/drugs (14), operating after suspension (116), drugs (50), and warrants (40).

*FUNDING SECTION 402: \$168,025*

**Buckle Up.**  
***No Excuses!***

### Observation Studies and Driver Survey

#### *Statewide Safety Belt Use Observation Study<sup>3</sup>*

Since 1986, the MeBHS Safety has initiated a number of observations studies of safety belt use in Maine to determine the level of compliance. In 2013, the Survey Research Center at the Muskie School of Public Service, University of Southern Maine, with assistance from the Preusser Research Group of Trumbull, Connecticut, conducted the study and produced a report of the findings.

The 2013 study incorporated the standardized design requirements that were developed by NHTSA in an effort to ensure reliability and comparability of findings among states. These requirements specify that observation sites must be located in counties that account for 85% of the state's fatalities. Maine's 2013 study involved 127 observations sites located in 28 cities/towns in 12 of the state's 16 counties. An observation schedule was structured to capture variations in seat belt use by time and day of week. Observations were made for a total of 45 minutes at each location.

Findings from the 2013 study include the following:

- ❖ **Overall compliance:** The overall seat belt use rate was 83.0%. This was a decrease from the previous year's rate of 84.4%.
- ❖ **Gender:** Approximately 88% of female occupants were restrained, compared to 78% of males.
- ❖ **Seating position:** Approximately 84% of passengers were restrained, compared to 83% of drivers. (Note: Passengers were more likely to be female, and females were more likely to use safety belts—this may explain a portion of the difference between passengers and drivers. In fact, male passengers were *less* likely than male drivers to be restrained)
- ❖ **Driver/passenger correlation:** Passengers riding with restrained drivers were much more likely to be restrained—91% of passengers riding with restrained drivers were likewise restrained while only 38% of passengers riding with unrestrained drivers were restrained.

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<sup>3</sup> Full study can be found in APPENDIX A.

- ❖ **Urban/rural:** The rates in urban and rural locations were statistically equal at 84% and 85% respectively. This is a change from previous years, in which urban occupants had a higher rate of safety belt use.
- ❖ **Vehicle type:** While drivers of cars, SUVs, and vans had restraint use rates of 86%, 87%, and 87% respectively, drivers of trucks had a significantly lower use rate of 72%.
- ❖ **Time of day:** Seat belt use is highest between the hours of 7:00 AM and 8:59 AM, at 88%; it is lowest between the hours of 11:00 AM and 1:29 PM at 82%. (Note: All observations took place during daylight hours, between 7:00 AM and 6:15 PM.)
- ❖ **Weather:** Restraint use varied somewhat according to weather, but the use of restraints did not increase progressively with worsening weather conditions. During sunny conditions, 84% of occupants were restrained; during cloudy conditions, 85% were restrained; and during light rain conditions, 79% were restrained.

#### *Nighttime Belt Use Survey<sup>4</sup>*

Data from the NHTSA's Fatality Analysis Reporting System (FARS) show that fatalities are disproportionately frequent during nighttime hours. In 2007, for example, about 25% of crash fatalities occurred between 10 PM and 4 AM, despite the decrease in traffic volume during these hours. NHTSA's data also indicate that seatbelt usage among fatally injured vehicle occupants declines during nighttime hours, likely contributing to the number of fatalities.

The nighttime portion of this year's observation study found that the rate of nighttime seatbelt use was 87.2%. This is not statistically significantly different from last year's rate of 87.6%. It is, however, higher than the rate of daytime seatbelt use. The study also found differences by vehicle type, gender, and occupant position. In summary:

- ❖ **Vehicle type:** While drivers of cars, SUVs, and vans had restraint use rates of 88%, 91%, and 96% respectively, drivers of trucks had a significantly lower use rate of 82%.
- ❖ **Gender:** Approximately 93% of female occupants were restrained, compared to 84% of male occupants.
- ❖ **Occupant position:** Approximately 94% of passengers were restrained, compared to 87% of females. Passengers were more likely to be restrained regardless of gender.
- ❖ **Lowest rate:** The lowest rate of seatbelt use, 80%, was observed for males in pickup trucks.

#### *Attitudinal Survey<sup>5</sup>*

In addition to observations studies, which attempt to answer questions about actual use rates, a survey was conducted in eight Bureau of Motor Vehicle offices in July 2013. The purpose of this survey was to measure people's behavior, awareness, and the perception of consequences related to three separate subject areas—seatbelt use, drinking and driving, and speeding. In summary:

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<sup>4</sup> Full study can be found in APPENDIX B.

<sup>5</sup> Full study can be found in APPENDIX C.

❖ Seatbelt Use

- ◆ Approximately 83% of respondents reported “always” using seatbelts, while another 10% reported “nearly always” using them. These rates are not statistically different from last year’s rates.
- ◆ Approximately 68% of respondents reported that their current seatbelt use was “about the same” as it was in the last couple of years. Less than 1% each said that their use was “much less often” or “less often.” Approximately 11% said their current use was “more often” or “much more often” than it was in the last couple of years.
- ◆ Approximately 56% of respondents reported seeing or hearing about extra law enforcement efforts around seatbelt compliance in the last 60 days.
- ◆ Approximately 40% of respondents reported that they thought it likely they would “sometimes” get a ticket if they did not buckle up. Another 24% thought it likely they would “always” get a ticket, and 16% thought it likely they would “nearly always” get one.

❖ Drinking and Driving

- ◆ Approximately 87% of respondents reported “never” having driven a vehicle within 2 hours of drinking an alcoholic beverage within the past 60 days.
- ◆ Approximately 70% of respondents reported seeing or hearing about extra law enforcement efforts around drinking and driving in the last 60 days.
- ◆ Approximately 47% of respondents reported that they thought it likely they would “sometimes” get arrested if they drove within 2 hours of drinking. Another 26% thought it likely they would “nearly always” get arrested, and 22% thought it likely they would “always” get arrested. Approximately 5% thought it would “seldom” happen, and 1% thought it would “never” happen.

❖ Speeding

- ◆ Approximately 45% of respondents reported “sometimes” driving more than 35 miles per hour (mph) in a 30-mph speed zone. Another 31.9% reported “seldom” doing so, while 13% reported “never” doing so. Approximately 8% reported “nearly always” doing so, while 2% reported “always” doing so.
- ◆ Approximately 53% of respondents reported seeing or hearing about extra law enforcement efforts around speeding in the last 60 days.
- ◆ Approximately 59% of respondents reported that they thought it likely they would “sometimes” get a ticket if they drove over the speed limit. Another 21% thought it likely they would “nearly always” get a ticket, and 22% thought it likely they would “always” get one.

*FUNDING SECTION 405: \$130,235*

### **Convincer & Rollover Education Program**

The MeBHS funded a highly successful seat belt education program in partnership with Atlantic Partners, EMS, formerly known as the Mid-Coast EMS Council, Inc., using the Convincer and the Rollover simulators and a highway safety display.

In 2013, this program was made available at venues including elementary, middle and high schools; colleges; health and safety fairs; corporate and military events; community festivals and fairs; conferences; and driver education classes. An estimated 8,300 people were given safety belt information through the variety of activities.

*FUNDING SECTION 402: \$62,990*

### **Occupant Protection Outreach and Education**

Funds were expended to cover the costs associated with the outreach program that educated Maine minority populations regarding the benefits of using seat belts and child safety restraints. Outreach included projects with organizations such as Catholic Charities of Maine, Maine Department of Labor, and the Office of Multicultural Affairs. Expended funds also included costs associated with printing materials.

*FUNDING SECTION 402: ALL FUNDS WERE EXPENDED THROUGH CHILD SAFETY SEATS & DISTRIBUTION SITE PROJECT LOCATED IN THE CHILD PASSENGER SAFETY SECTION.*

## **Future Countermeasures**

- ❖ Continue to provide grant funding to Maine law enforcement agencies to participate in the May “Click It Or Ticket” national safety belt high visibility enforcement crackdown periods with grant funding provided for dedicated overtime safety belt enforcement details and public education
- ❖ In conjunction with the University of Southern Maine’s Muskie School of Public Service, conduct observational and attitudinal surveys to determine safety belt use in Maine
- ❖ Establish an Occupant Protection Enforcement Team (OPET), modeled after the RIDE Team concept, in Kennebec County to conduct patrols and checkpoints for the purpose of enforcing occupant protection laws

# Child Passenger Safety

## Problem

According to the Centers for Disease Control and Prevention (CDC), motor vehicle crashes are the leading cause of death for children between the ages of 1 and 19<sup>6</sup>. In 2010, the most recent year for which statistics are available, 25% of all fatalities in this age group were due to motor vehicle crashes. A number of these deaths might have been prevented. Studies show that when age appropriate child safety restraints are used, the risk of death decreases by 71% for infants and 54% for toddlers<sup>7</sup>. According to Safe Kids Worldwide, 33% of children under the age of 12 who died in crashes in 2011 were unrestrained<sup>8</sup>.

While studies show that the proper use of child restraint systems reduces the chance of injury and death, other studies indicate that child restraint systems are often improperly used. According to one such study, the rate of critical misuse is 73%<sup>9</sup>. Critical misuse, according to the researchers, is misuse of safety systems that could reasonably be expected to increase the likelihood of injury or death. These findings highlight the importance of proper installation and use of child safety systems.

One way in which Maine has addressed this issue is through legislation. Maine's Child Passenger Safety (CPS) law is one of the strongest in the country. The law requires that:

- ❖ Children who weigh less than 40 lbs. ride in a child safety seat;
- ❖ Children who weigh at least 40 lbs., but less than 80 lbs. and are less than 8 years old, ride in a federally approved child restraint system;
- ❖ Children who are more than 8 years old and less than 18 years old and more than 4 feet 9 inches in height be properly secured in a safety belt and;
- ❖ Children under 12 years old and who weigh less than 100 lbs. be properly secured in the back seat of the vehicle, if possible.

## Objective

The objective of the Child Passenger Safety Program is to provide leadership in the area of child passenger safety by supplying resources and undertaking activities that promote child passenger safety throughout the state of Maine.

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<sup>6</sup> Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). *Unintentional injuries, ages 13-19, all races, both sexes*. Retrieved from [http://webappa.cdc.gov/sasweb/ncipc/leadcaus10\\_us.html](http://webappa.cdc.gov/sasweb/ncipc/leadcaus10_us.html)

<sup>7</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration. (2013, May). *Traffic Safety Facts, 2011 Data*. Retrieved from <http://www-nrd.nhtsa.dot.gov/Pubs/811767.pdf>

<sup>8</sup> Safe Kids Worldwide. Retrieved from <http://www.safekids.org/infographic/your-kid-buckled-every-ride>

<sup>9</sup> Statistics taken from: Safe Kids Worldwide. (2013). Motor Vehicle Safety Fact Sheet. Retrieved from <http://www.safekids.org/sites/default/files/documents/2013%20Motor%20Vehicle.pdf>

## Goals

- ❖ Educate the public on the importance of proper child passenger safety restraint use
- ❖ Reduce the rate of child passenger safety seat misuse

## Countermeasures & Expended Funds

### Child Passenger Safety Program Management

All CPS program management costs are accounted for in the Occupant Protection section of this report.

### Child Passenger Safety Activities<sup>10</sup>

The CPS coordinator provided leadership and coordination of CPS activities throughout the state to promote child passenger safety. Activities of the coordinator for this grant period included, some but not all, of the following activities:

- ❖ Coordinated the statewide CPS program
- ❖ Conducted site visits to meet technicians/instructors, review forms and procedures, answer questions, and address any needs or concerns
- ❖ Developed formal site agreements with distribution sites and inspection stations
- ❖ Updated forms as needed for CPS activities
- ❖ Planned and executed the first CPS conference offering all recertification components
- ❖ Held three CPS certification courses
- ❖ Partnered with locations for seat check events in northern, eastern, southern, and western regions
- ❖ Provided financial support to technicians to provide education at the community level through local health fairs and other events
- ❖ Provided a roving instructor to assist technicians with seat sign-offs
- ❖ Drafted and mailed thank you letters to all host locations that offered training and seat check opportunities around the state
- ❖ Drafted and mailed thank you letters to all distribution and inspection locations around the state for their involvement in educating the public
- ❖ Carried on discussions with representatives from facilities regarding the future potential of facilities to be distribution sites
- ❖ Attended Lifesavers Conference 2013 in Denver to obtain necessary training and knowledge to fulfill the duties entailed in the coordinator position
- ❖ Attended Kidz-in-Motion CPS Conference 2013 in New Mexico to obtain continuing education
- ❖ Managed statewide CPS program resources
- ❖ Ensured that CPS information and updates were shared as appropriate

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<sup>10</sup> The CPS coordinator is the program manager.

## Child Safety Seats & Distribution

### *Child Safety Seat Purchases*

Funds were expended to cover the costs associated with providing child safety seats to approximately 35 distribution sites located throughout Maine. These sites placed monthly orders with the MeBHS. During FY13, a total of 1,457 child safety seats (including car bed harnesses and pad kits) were purchased by the MeBHS and sent directly to distribution sites. The child safety seats distributed included the following:

- ❖ Cosco Scenery
- ❖ Cosco Pronto
- ❖ Graco TurboBooster
- ❖ Graco Backless TurboBooster
- ❖ Graco SnugRide
- ❖ Graco Nautilus
- ❖ Evenflo Titan Elite
- ❖ Evenflo Tribute 5
- ❖ Evenflo Kid No-Back Booster
- ❖ Evenflo Generations 65
- ❖ Evenflo Secure Kid LX
- ❖ Evenflo Embrace 35
- ❖ Evenflo Big Kid Sport
- ❖ Evenflo Maestro
- ❖ Combi Navette

In addition Angel Ride pad and harness kits were distributed and car seat levelers (noodles) were available for site technicians.

*FUNDING SOURCE 402: \$102,693*

## Child Passenger Safety Technician and Instructor Training and Education

### *Child Passenger Safety Training Certification Classes*

Successful completion of the NHTSA National Standardized CPS training course results in certification as a CPS technician for two years. In order to successfully complete the training, students must pass both written and hands-on tests. They must also participate in a car seat check-up event on their final day of training.

Three classes were held during this grant period. The classes followed different course formats, but all three met the 32-hour training requirement and included lectures, discussions, role playing, and hands-on practice with a wide variety of child safety seats and vehicle seat belt systems. A total of 28 students attended the intensive 4-day trainings. Seven students attended the first training, held at the Ellsworth Fire Department in October. A second class of eleven students was held in Augusta at the MeBHS in November, and the third class of ten students was held at the Topsham Public Safety Building in April and May. All students passed the course.

In addition, for technicians whose certifications had expired, a one-day renewal training option was offered. Five students attended that course, held at the York Beach Fire Department in November, and all passed.



### **Inspection Site Program**

Currently there are 25 inspections sites located through the state. These sites provide parents with education about how to keep their children safe when riding in cars through the correct use of child safety seats or safety belts. One-on-one lessons are offered by certified CPS technicians, who explain the correct use and installation child safety seats and safety belts.

### **Car Seat Check Events/Educational Booths**

In addition to inspection stations, there were 9 car seat check events/educational booths across the state and available to the public on set schedules. Educational boots included one at the Baby Fair in Belfast and another at Old Navy's Safety Health Fair in South Portland. Events were held at the Brunswick Fire Department (Bike Rodeo), Camden Fire Department, Union Fire Department, Knox County Sherriff's Office, Calais Fire Station, Baileyville Fire Station, and the Biddeford YMCA.

### **Child Passenger Safety Technical Conference**

Over 100 attendees took part in the first CPS conference in Freeport at the Hilton Garden Inn. Speakers from NHTSA, the Children's Hospital of Philadelphia, Safe Kids Worldwide, Safety Belt Safe, and Safe Ride News came from around the nation to address attendees. Conference sessions focused on a variety of topics including enforcement, medical, and emergency issues related to CPS.

*FUNDING SOURCE 402: \$42,026*

### **CPS Tracking Database Project**

Funds were intended to support the development of an online CPS tracking database. The MeBHS contracted with University of Southern Maine, Muskie School of Public Service to begin working on this project.

*FUNDING SOURCE: FUNDS WERE NOT EXPENDED ON THIS PROJECT IN FY13. THIS WAS AN APPROVED PROJECT FOR THE 2014 HSP AND IS CURRENTLY UNDERWAY IN FY14.*

### **Child Passenger Safety Roving Instructor Program**

Funds were intended to support one instructor to travel to sites as needed to provide seat sign-offs for technicians who were unable to attend seat check events.

*FUNDING SOURCE: FUNDS WERE NOT EXPENDED ON THIS PROJECT IN FY13.*

### **CPS Booster Seat Education in Schools**

Funds were intended to support technicians and/or instructors to provide outreach to area schools in order to educate 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> graders about booster seat safety.

*FUNDING SOURCE: FUNDS WERE NOT EXPENDED ON THIS PROJECT IN FY13.*

## **Future Countermeasures**

- ❖ Develop a car bed loaner program with Maine hospitals
- ❖ Promote a dedicated outreach program to educate minority populations regarding the benefits of using safety belts and child restraints (may include production of print materials and paid media)
- ❖ Increase education to parents regarding child occupant protection/passenger safety for 8-12 age group
- ❖ Decrease the reliance on federal funds to fully support the Maine CPS program

# Teen Drivers

## Problem

According to the CDC, motor vehicle crashes are the leading cause of deaths for teenagers in the United States. In 2010, 25% of all teen fatalities were attributed to motor vehicle crashes, while 16% were attributed to homicide and 15% to suicide<sup>11</sup>.

In Maine:

- ❖ There were 164 driver and passenger fatalities in 2012.
- ❖ Approximately 13% (n=21) of all motor vehicle fatalities were teens and young adults between the ages of 16 and 20.
  - ◆ In 62% of these cases (n=13), the young person was the driver.
  - ◆ In 24% of these cases (n=5), the young person was a passenger in a vehicle driven by a young driver.
  - ◆ Approximately 86% of young people between the ages of 16 and 20 who died in motor vehicle crashes died in vehicles operated by a 16- to 20-year-old driver.
- ❖ Approximately 13% (n=22) of all fatalities involved a 16- to 20-year old driver.
- ❖ Approximately 46% (n=6) of all deceased 16- to 20-year old drivers had a positive blood alcohol content (BAC).
- ❖ Approximately 23% (n=3) of all deceased 16- to 20-year old drivers were wearing seat belts. In a small number of cases it was not possible to establish whether drivers were wearing seat belts, but the proportion of fatalities not belted may be as high as 77%.

	2006	2007	2008	2009	2010	2011	2012
Number of Fatalities, Any Age	188	183	155	159	161	136	164
Number of Deceased 16- to 20-Year-Olds	32	28	15	17	22	17	21
Number of Deceased 16- to 20-Year-Old Drivers	23	13	12	11	16	14	13
Number of Fatalities Caused by 16- to 20-Year-Old Driver	47	28	18	16	27	19	22
Number of Deceased 16- to 20-Year Old Drivers with a Positive BAC	8	5	4	3	4	3	6
Number of Deceased 16- to 20-Year Old Drivers Using a Seat Belt	4	4	8	5	6	12	3

<sup>11</sup> Teen Drivers: Fact Sheet retrieved from [http://www.cdc.gov/motorvehiclesafety/teen\\_drivers/teendrivers\\_factsheet.html](http://www.cdc.gov/motorvehiclesafety/teen_drivers/teendrivers_factsheet.html)

## Objective

The objective of the Teen Drivers Program is to promote safe teen driving in Maine, continue integration of a statewide teen driver safety strategic plan, and implement community-based programs throughout the state.

## Goals & Progress

### #1 *Goal*

To decrease drivers age 20 or younger involved in fatal crashes by 5% from the 5-year average of 22 for 2007-2011 to 20.9 by December 31, 2013

#### *Progress*

This goal was unmet: The 5-year average number of drivers age 20 or younger involved in fatal crashes for 2008-2012 was 21.0.

### #2 *Goal\**

To reduce young driver crash fatalities by 10% by 2014

### #3 *Goal\**

To reduce alcohol related crashes for underage drivers by 10% by 2014

*\*Goals #2 and 3 were established in the 2012 Maine Strategic Highway Safety Plan<sup>12</sup>*

## Countermeasures & Expended Funds

### Teen Driver Safety Committee

The Maine Teen Driver Safety Committee (TDSC) was convened in 2008 at the request of the MeBHS Director. The TDSC comprises individuals representing Maine state agencies, including the Department of Public Safety, MeBHS, Department of Transportation, Department of Health and Human Services, Bureau of Motor Vehicles, and organizations such as AAA Northern New England.

The Committee feels strongly that efforts to improve teen driver safety have a greater opportunity for success when they are implemented by community partners and stakeholders. The role of the Committee is to serve as partner—providing technical assistance when needed or requested and attending monthly meetings of the recently formed Underage Drinking Task Force, facilitated through the Office of Substance Abuse.

As part of its work, the TDSC has developed a teen driver safety strategic work plan. This plan is intended to be a guide for agencies interested in addressing teen driver safety issues at local, county, and statewide levels. The plan contains sample activities for each identified strategy and is intended to be one component of a comprehensive community-based effort to address teen driver safety issues.

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<sup>12</sup> The 2012 Maine Strategic Highway Safety Plan is available online at <http://www.themtsc.org/news/ckfinder/userfiles/files/shspnewversionreducedsize.pdf>

### *Teen Driving Goal, Objectives and Strategies*

Goal: Promote safe teen driving in Maine

Target Audience: 16-18 year old drivers

- ❖ Objective 1: Integrate a variety of partners and stakeholders to participate in the Teen Driver Safety Committee (TDSC) activities
  - ◆ Strategy 1.1: Recruit partners and stakeholders to implement the TDSC work plan
    - Activity: Create fact sheet describing the work of the TDSC
    - Activity: Create and maintain a partner and stakeholder distribution list
  - ◆ Strategy 1.2: Provide partners and stakeholders the most current research and evidence based teen driver safety focused programs
    - Activity: Develop a directory of the most current research and evidence based teen driver safety information and programs
    - Activity: Collect and distribute related crash data involving teens
  - ◆ Strategy 1.3: Create a Maine focused teen driving safety awareness toolkit for use and distribution at the local and state levels
    - Activity: Research other states for already developed toolkits
  - ◆ Strategy 1.4: Create an evaluation plan for the use of the TDS Awareness toolkit
- ❖ Objective 2: Increase parental involvement in developing a safe teen driver
  - ◆ Strategy 2.1: Provide parent-focused education regarding teen driver issues
    - Topics:
      - Current Graduated Driver License (GDL) and state laws
      - Modeling good driving habits
      - Setting rules and consequences for actions
      - Monitoring teen driver behaviors
    - Activity: Brainstorm various venues to promote parental education
    - Activity: Create parent-based website to include information listed above
    - Activity: Create fact sheets on the issues identified above
- ❖ Objective 3: Decrease teen driving related crashes, injuries and fatalities due to alcohol and other drugs
  - ◆ Strategy 3.1: Develop outreach and education for current and future drivers on the laws and risk pertaining to driving while under the influence of alcohol and drugs
  - ◆ Strategy 3.2: Develop outreach and education venues for family members and other influencers on the laws pertaining to driving while under the influence of alcohol and drugs
  - ◆ Strategy 3.3: Support an increase in law enforcement efforts
  - ◆ Strategy 3.4: Collaborate with court systems working with OUI and juveniles
- ❖ Objective 4: Decrease teen driving related crashes, injuries and fatalities due to unsafe speed
  - ◆ Strategy 4.1: Develop outreach and education for current and future drivers on the laws and risks pertaining to speeding
  - ◆ Strategy 4.2: Develop outreach and education venues for family members and other influencers on the laws and risk pertaining to speeding
  - ◆ Strategy 4.3: Support an increase in law enforcement efforts

- ❖ Objective 5: Decrease teen driving related crashes, injuries and fatalities due to lack of seatbelt use
  - ◆ Strategy 5.1: Develop outreach and education for current and future drivers on the laws and risks pertaining to driving unbelted
  - ◆ Strategy 5.2: Develop outreach and education venues for family members and other influencers on the laws and risk pertaining to driving unbelted
  - ◆ Strategy 5.3: Support an increase in law enforcement efforts
- ❖ Objective 6: Decrease teen driving related crashes, injuries and fatalities due to distractions
  - ◆ Strategy 6.1: Develop outreach and education for current and future drivers on the laws and risks pertaining to distracted driving
  - ◆ Strategy 6.2: Develop outreach and education venues for family members and other influencers on the laws and risk pertaining to distracted driving
  - ◆ Strategy 6.3: Support an increase in law enforcement efforts
- ❖ Objective 7: Decrease teen driving related crashes, injuries and fatalities due to late night driving
  - ◆ Strategy 7.1: Develop outreach and education for current and future drivers on the laws and risks pertaining to late night driving
  - ◆ Strategy 7.2: Develop outreach and education venues for family members and other influencers on the laws and risk pertaining to late night driving
  - ◆ Strategy 7.3: Support an increase in law enforcement efforts

#### *Progress Related to the Strategic Plan*

The TDSC carried out a number of activities related to Objectives 1 of the strategic plan.

- ❖ Objective 1: Integrate a variety of partners and stakeholders to participate in Teen Driver Safety Committee (TDSC) activities
  - ◆ The list of driver safety resources and links was updated to include additional teen safety resources, i.e., Governors Highway Safety Association (GHSA) and AAA publications involving teen driving and the [“Point of No Return” video](#) (created by the Kennebec Police Department).
  - ◆ An introduction/outreach letter was created explaining who we are and our purpose/goal. The TDSC introduction letter was distributed to District Health Coordinators associated with Substance Abuse Mental Health Services, Child Passenger Safety instructors, Child Passenger Safety technicians, defensive driving instructors, Maine Driving Dynamics location sites, Maine Transportation Safety Coalition members, Maine high school resource officers, the Maine Drug Enforcement Agency, municipalities, Maine Motor Transport Association, and the Maine State Police.
  - ◆ The TDSC link was added to the Bureau of Motor Vehicle web page.
  - ◆ The TDSC link was added to the Bureau of Highway Safety website and Facebook page.
  - ◆ The TDSC link was added to the Substance Abuse Mental Health Services (SAMSA) website.
  - ◆ Maine Law Enforcement agencies were provided with Teen Safety Grant Projects.

- ◆ A slide pertaining to teen driving issues was created to be displayed on the monitors at the twelve Motor vehicle Branch offices located throughout the state.
- ◆ The Bureau of Highway Safety applied for and received a \$20,000 grant from the Ford Driving Skills for Life; these funds will be used to promote teen safe driving initiatives in the State of Maine.
- ◆ A 3 x 5 resource/handout card was created to be given to school health course teachers and Healthy Maine Partners and to be distributed at school fairs and sporting events.
- ◆ A Graduated Driver's License (GDL) informational sheet was created for the Maine State Troopers, which will allow them quick access to the GDL law. The information sheet will be printed so it will in the officers' ticket/violation book.

*FUNDING SOURCE: SALARY EXPENSES FOR HIGHWAY SAFETY COORDINATORS WHO PARTICIPATED IN THIS COMMITTEE WERE PAID WITH SECTION 402 FEDERAL FUND.*

### Teen Driver Awareness Program (TDAP)

The TDAP has been up and running since August 2011. The program was launched utilizing grant funding from the Ford Motor Corporation and the Governors Highway Safety Association. Developed in conjunction with AAA of Northern New England, the program is designed to educate pre-permitted teens, newly permitted teens, and their parents in the areas of graduated driver licenses, seat belt usage, impaired driving, distracted driving, and parental involvement in the learning to drive process. Additional training is provided to facilitators on underage drinking and enforcement of underage drinking laws.

The MEBHS, along with AAA of Northern New England and the Maine Office of Substance Abuse, has presented 6 workshops around the state to train law enforcement officers to facilitate the program and use the program's two driving simulators. Currently 94 officers and school resource officers serve as program facilitators. During the 2012-2013 school year, the following agencies have utilized the program and the simulators: Bath Police Department (PD); Kennebunk PD; Lewiston PD (3 times); Jay PD; Portland PD; Gorham



PD; Lincoln County Sheriff's Office; Sabattus PD; Oakland PD; and Troop F, Maine State Police (2 times). Approximately 1,000 high school students have been instructed through presentations and the use of simulators during the 2012-2013 school year.

In addition, personnel from the MeBHS have been invited to make presentations at various schools, including York High School, Rockland High School, Falmouth High School, Oakland High School, Noble High School, Freeport High School, Madison High School, Telstar High School, Morse High School, Mt.

Valley High School, and Maranacook High School. These presentations have afforded the Bureau contact with over 1,180 students.

The Program has received positive feedback and high acclaim from facilitators, students, parents and school administrators. Although the 2013-2014 school year has only begun, the program is receiving more requests for use of the simulators by program facilitators as well as invitations for presentations from schools, state agencies and civic groups.

*FUNDING SOURCE 406: COSTS ASSOCIATED WITH SALARIES FOR THIS PROJECT WERE FUNDED THROUGH THE LEL GRANT AND MAINE DRIVING DYNAMICS REVENUE. NO FEDERAL FUNDS EXPENDED OUTSIDE OF THE LEL SALARY.*

### **Unbelted Teen Driver Project**

Funds were intended to support a project with the Teen Driver Safety Committee; this project was designed to increase the teen seat belt usage rate and decrease unbelted injuries in this age group.

*FUNDING SOURCE: PROJECT NOT IMPLEMENTED IN FY13.*

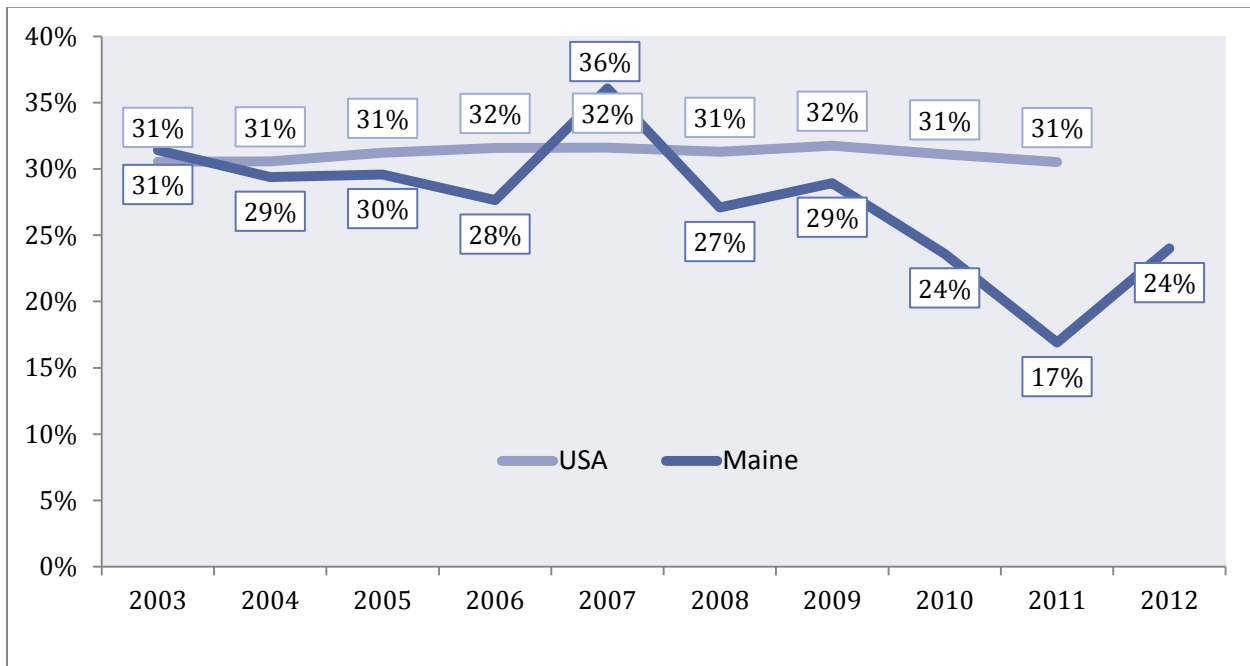
## **Future Countermeasures**

- ❖ Develop, implement, and evaluate a multi-market radio station campaign targeting locations with high incidences of teen driver crashes and fatalities
- ❖ Develop, implement, and evaluate advertisement through Pandora Internet Radio, an automated music recommendation service available online and through mobile devices
- ❖ In partnership with Lisbon Police Department and Lisbon High School's Students Against Destructive Decisions (SADD), produce and distribute a public service announcement (PSA) targeting teen impaired driving to be used during school assemblies, prior to prom and graduation activities, and at public safety events
- ❖ In Auburn:
  - ◆ Partner with the Auburn Police Department (APD), Central Maine Community College, and ORL Productions to produce a 30-second distracted driving PSA to be distributed to local media outlets and social media providers as well as the MeBHS
  - ◆ Partner with the APD and Edward Little High School to conduct a "mock crash" in April prior to high risk events such as prom and graduation
  - ◆ Partner with the APD, which will conduct scheduled details targeting young drivers; provide education on the risks of distracted driving, seat belts and speed; and utilize fatal vision equipment at the APD's annual "National Night Out" event

# Impaired Driving

## Problem

Nationally, the percentage of fatalities that were alcohol-related hovered between 31% and 32% from 2003 to 2011 (the last year for which these data are available). In Maine, the proportion of fatalities that were alcohol-related exceeded the national rate for just one year, 2007, when the rate reached 36%. For the four years prior to 2007 (2003-2006), the average rate was close to the national rate, at 30%. For the four years following 2007 (2008-2011), the average rate was well below the national rate, at 24%. While the year 2012 showed an increase in rate compared to the previous year's rate of 17%, at 24%, 2012's rate was still in line with the post-2007 average.



## Objective

The objective of the Impaired Driving Program is to focus on reducing alcohol-related fatalities by targeting high crash locations. Using police crash data, the MeBHS identifies high crash locations and partners with law enforcement to increase patrols in those areas.

## Goal & Progress

### Goal

To decrease alcohol impaired driving fatalities by 5% from the 5-year average for 2007-2011 of 41.0 to 39.0 by December 31, 2013

### Progress

This goal was met: The five-year average number of alcohol-impaired driving fatalities for 2008-2012 was 37.8.



## Countermeasures & Expended Funds

### Impaired Driving Program Management and Planning and Administrative Costs

Costs for this program area included wages; travel expenses for highway safety coordinators and/or program managers (examples of travel include Traffic Safety Institute (TSI) training courses, in-state monitoring of sub-grantees, and law enforcement agency chief committee meetings); and operating costs directly related to program development, coordination, monitoring, evaluation, public education, marketing, auditing, and training (costs include printing, supplies, state indirect rate, and postage).

*FUNDING SOURCE 402: \$33,411*

*FUNDING SOURCE 410: \$9,211*

### Impaired Driving High Visibility Enforcement (HVE) Campaigns

#### 2013 Drive Sober or Get Pulled Over Impaired Driving Enforcement Campaign

In 2013, the MeBHS introduced a new impaired driving enforcement campaign. This campaign involved giving law enforcement agencies a choice between participating in a yearlong impaired driving enforcement grant or a crackdown period impaired driving enforcement grant, allowing LEAs to choose whichever campaigns best fit the impaired driving problems in their areas.

The yearlong impaired driving campaign gave overtime grants to 45 LEAs to conduct impaired driving enforcement details from December 1, 2012 to September 5, 2013. All grantees were required to perform at least four overtime details or one sobriety checkpoint during both of the high visibility enforcement periods, which run from December 14, 2012 to January 2, 2013 and from August 16, 2013 to September 2, 2013. Law enforcement officers worked a total of 7,912 hours of overtime and conducted 14,674 traffic stops (1.85 stops per hour). A total of 40 roadblocks were utilized. These efforts resulted in a total of 482 arrests for operating under the influence. In addition, a number of tickets and warrants were issued for violations, including 280 speeding violations, 44 seatbelt violations, 208 drug violations, and 198 violations for operating after suspension.

The crackdown period impaired driving campaign gave overtime grants to 6 LEAs to conduct impaired driving enforcement details during the national crackdown periods, which run from December 14, 2012 to January 2, 2013 and from August 16, 2013 to September 2, 2013. Law enforcement officers worked a total of 323 hours of overtime and conducted 391 traffic stops (1.21 stops per hour). These efforts resulted in a total of 21 arrests for operating under the influence.

*FUNDING SOURCE 402: \$208,834*

*FUNDING SOURCE 410: \$264,870*

### 2013 BHS Maine Criminal Justice Academy Trainings

#### Drug Recognition Expert Program (DRE)

There are currently 76 active Drug Recognition Experts in Maine, up from 72 last year. The Maine Criminal Justice Academy (MCJA) completed another DRE school that began in February of 2013. A total of 19 students enrolled in the school, and 18 successfully completed the certification process on (or around) September 1, 2013.

DREs submitted approximately 264 urine samples for analysis with the Department of Human Services Health and Environmental Testing Lab (HETL).

DREs continued to enter their evaluations into the National DRE Database, which allows individual DREs to be tracked for performance and facilitates the processing of recertification applications.

In August of 2013, Detective William Scull of the Presque Isle Police Department and Officer Robert Libby of the South Portland Police Department attended the 19th Annual International Association of Chiefs of Police (IACP) Training Conference on Drugs, Alcohol and Impaired Driving in Oklahoma City. Upon their return, they assisted in the development and instruction of the 2013 mandatory DRE refresher training at the MCJA, which was held on September 5 at the Academy. Robert Annese from the MeBHS provided an overview on training initiatives and discussed blood technician training. Presenters discussed conference updates, challenging evaluations, changes to the National Database, and the resources available on the MeBHS web site. Steve Pierce answered questions related to the HETL. The class was very well attended, with 54 DREs and instructors participating.

#### ***Standardized Field Sobriety Testing (SFST)***

The MCJA conducted or processed 6 full standardized Field Sobriety Testing (SFST) student classes with 102 students attending. The Academy also processed 11 SFST refresher classes statewide with 39 students attending. A SFST Instructor Development class scheduled for 2013 was postponed due to low enrollment; this class will be offered again in 2014.

#### ***Drug Impairment Training for Educational Professionals (DITEP)***

Drug Impairment Training for Educational Professionals (DITEP) is sponsored by the IACP. This training teaches educational professionals how to identify drug use in students and teaches key school staff how to conduct evaluations on students who have been identified as being impaired. The goal of the program is to reduce drug use by students and keep drug-impaired students off the roads. Two DITEP programs were offered this year.

#### ***Advanced Roadside Impaired Driver Enforcement (ARIDE)***

The MCJA offered 2 ARIDE classes this year, which were held at Portland and Bangor Police Departments. A total of 38 students attended the two-day trainings. The IACP has also created an on-line version of the ARIDE training that is available to officers. This training is not yet being endorsed, due to issues with the curriculum.

#### ***Prosecutors Conference DRE Training Expenses***

Funds were expended to cover travel costs to the 2013 Prosecutors Conference for two DRE instructors who provided DRE training to prosecutors.

*FUNDING SOURCE 402: \$13,777*

#### ***Educational Partnership with Colleges and Universities and Underage Drinking Projects***

Funds were intended to support an impaired driving and alcohol educational program involving demonstrations, discussions, and the presentation of materials. The program was developed by the Teen Driver Safety Committee in partnership with the MeBHS, the Office of Substance Abuse, law enforcement agencies, and Maine universities and colleges. Education was provided by student organizations during safety events on college campuses.

*FUNDING SOURCE: NO FUNDS WERE EXPENDED IN FY13.*

### Regional Impaired Driving Enforcement (RIDE)

The Cumberland County RIDE Team concluded its second successful year of enforcement details. This program involved select officers from state, county, and municipal agencies within Cumberland County with demonstrated expertise in the detection, apprehension and prosecution of impaired drivers. The team comprises 1 trooper from the Maine State Police; 3 deputies from the Cumberland County Sheriff's Office; and 21 officers from the Scarborough, South Portland, Portland, Freeport, Falmouth, Windham, Cape Elizabeth, Gorham, Westbrook, Cumberland, Yarmouth, Bridgton, and Brunswick. These officers, their agencies, and the Chief Executive Officers have made a commitment to raise awareness, educate the public, and make the roadways of Cumberland County safer for citizens through the strict enforcement of Maine's Impaired Driving Statutes. From April to September, the team conducted 15 saturation patrols (277 traffic stops) and/or sobriety checkpoints, resulting in contact with 2,544 operators and leading to:



R.I.D.E. Team Press Conference at the Falmouth Police Department

- ❖ 43 arrests for impaired driving;
- ❖ 74 warnings for impaired driving (BAC test <.08 or SFST);
- ❖ 9 citations for consumption, transportation or possession by minors;
- ❖ 11 arrests/citations for possession of drugs;
- ❖ 103 arrests/citations for various other offenses; and
- ❖ 375 warnings for various other offenses.

With the success of the Cumberland County RIDE Team, the MeBHS funded another RIDE team in York County comprising 3 deputies from the York County Sheriff's Office and 11 officers from Kennebunkport, Saco, York, Kennebunk, Ogunquit and North Berwick. The team conducted 5 Saturation Patrol details between May and August, resulting in 182 traffic stops resulting in:



R.I.D.E. Team Checkpoint in Casco

- ❖ 9 arrests for impaired driving,
- ❖ 2 warnings for impaired driving,
- ❖ 1 citation for possession of drugs,
- ❖ 36 arrests/citations for various other offenses, and
- ❖ 172 warnings for various other offenses.

*FUNDING SOURCE 402: \$14,914*

### Law Enforcement Blood Technician Project

The Law Enforcement Blood Technician Project was initiated with the assistance of instructors from Southern Maine Emergency Medical Services. Four 16-hour training sessions were held for law enforcement officers in April, May, and June. The curriculum included sessions on the history of blood technicians, basic anatomy and physiology, aseptic techniques, blood borne pathogens, protective equipment, needle disposal, Department of Health and Human Services procedures, legal issues, case law and courtroom testimony. Training included extensive hands-on practical applications with various wet manikins and supervision by qualified phlebotomists. Students were then required to pass both a written and practical examination to obtain their certificates of completion.

The four classes graduated 70 officers who are now trained to perform blood draws. This has proven to be a much needed asset to the law enforcement community and has enhanced efforts to prosecute impaired drivers. As of October 2013, law enforcement blood technicians have successfully performed more than 60 blood draws.



*Students and Instructors at Law Enforcement Officer Blood Technician Training*

*FUNDING SOURCE 410: \$22,040*

#### **Intoxilyzer**

On January 1, 2013, about 600 Intoxilyzer certification cards, representing approximately one-third of all operators, were issued under the new recertification process. Now all certifications expire at the end of the year, in a three year cycle. A longer certification period has been discussed along with the possibility of issuing non-lapsing certification.

The vendor provided the health and environmental testing lab with a new reporting program to enhance reporting capabilities from the new Intoxilyzer 8000 EIN to the lab.

Curriculum for breath testing device operator certification training was also developed, which includes training for operators on both the 5000EN and I-8000. Approximately 100 operators have received the training.

*FUNDING SOURCE 410: \$4,082.00*

#### **OUI BAT Mobile for Impaired Driving Enforcement Including RIDE Team Activities**

Funds were intended to support the procurement of a used blood alcohol testing (BAT) mobile unit to assist Maine law enforcement in dedicated efforts to combat impaired driving.

*FUNDING SOURCE: PROJECT NOT IMPLEMENTED IN FY13; APPROVED IN HIGHWAY SAFETY PLAN 2014 FOR FY14.*

#### **Phase Two Purchase of Breath Testing Instruments for Impaired Driving Detection**

Funds were intended to support the purchase of new breath testing instruments for statewide detection of impaired driving.

*FUNDING SOURCE: PROGRAM NOT IMPLANTED IN FY13; NO FUNDS EXPENDED.*

#### **Underage Drinking Projects**

Funds were intended to support underage drinking enforcement.

*FUNDING SOURCE: PROJECT NOT IMPLEMENTED IN FY13; APPROVED IN HIGHWAY SAFETY PLAN 2014 FOR FY14.*

### **Future Countermeasures**

- ❖ The MeBHS will work with the Maine Prosecutors Association and the National District Attorney's Association in order to educate around the topic of DREs.
- ❖ The MeBHS will provide funding to agencies to conduct Teen Impaired Driving Enforcement campaigns; grant funding will coincide with the prom/graduation season and continue into the summer.
- ❖ The MeBHS will continue with Cumberland and York RIDE Teams.

# Traffic Records

## Problem

A complete traffic records program is necessary for planning (program identification), operational management or control, and evaluation highway safety activities. The MeBHS and its partners collect and use traffic records data to identify highway safety problems and problem areas, to select the best possible countermeasures, and to evaluate the effectiveness of these efforts. The role of traffic records in highway safety has been substantially increasing since the creation of the Federal Section 408 grant program under the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

## Objective

The objective of the Traffic Records Program is to gather, process, and report all data pertaining to traffic safety activities in an accurate and timely fashion. The MeBHS relies on these data for the selection of projects and programs and the setting of policy. To accomplish its objective, the MeBHS has established a permanent Traffic Records Coordination Committee (TRCC).

## Goal

The goal of Maine's TRCC is to continue to develop a comprehensive traffic records system that provides timely, complete, accurate and usable traffic records data so it can identify and address Maine's highest priority traffic safety issues.

## Countermeasures & Expended Funds

### Traffic Records Program Management

Costs for this program area included wages; travel expenses for highway safety coordinators and/or program managers (examples of travel include TSI training courses, in-state monitoring of sub-grantees, and law enforcement agency chief committee meetings); and operating costs directly related to program development, coordination, monitoring, evaluation, public education, marketing, auditing, and training (costs include printing, supplies, state indirect rate, and postage).

*FUNDING SOURCE 402: \$931*

### Traffic Records – Emergency Medical Services (EMS) Run Reporting Project

Funds associated with this project area supported the continued roll-out and upgrade to the EMS Run Reporting System, which is a key element in Maine's ability to produce accurate FARS data.

*FUNDING SOURCE 408: \$154,454*

### 2013 E-Citation Working Group and Projects

Funds allocated to this project area covered the costs associated with the TRCC-approved e-citation project and working group, furthering the development of an e-citation application in the state of Maine.

*FUNDING SOURCE 408: \$20,750*

### **2013 Maine Crash Reporting System (MCRS) Upgrade**

Funds allocated to this project area covered the costs associated with the TRCC-approved completion of MCRS upgrade projects.

*FUNDING SOURCE 408: \$125,000*

### **Traffic Records Data Analyst Position (or Contract)**

Funds associated with this project covered the costs associated with procuring a full-time data analyst. MeBHS contracted with the University of Southern Maine, Muskie School of Public Service to perform data analysis. Duties included studying and analyzing the state's available data for crashes, fatalities, locations, EMS run information, Crash Outcome Data Evaluation System (CODES), and Data-Driven Approaches to Crime and Traffic Safety (DDACTS). Duties also included attendance at TRCC, CODES, EMS, and other data-related meetings and responsibility for the MeBHS' databases and Highway Safety Plan analysis.

*FUNDING SOURCE 402: \$45,108 (PROJECT NOT FINISHED; AMENDED TO INCLUDE WORK PERFORMED IN FY14)*

### **Maine CODES Project**

This project entailed the linkage of crash and fatality data.

*FUNDING SOURCE: FUNDS WERE EXPENDED THROUGH THE TRAFFIC RECORDS DATA ANALYST CONTRACT (SEE ABOVE)*

### **Data Warehouse Projects**

Funds were intended to support costs associated with the TRCC-approved data warehousing and public access reports.

*FUNDING SOURCE: THIS PROJECT WAS NOT IMPLEMENTED DURING FY13.*

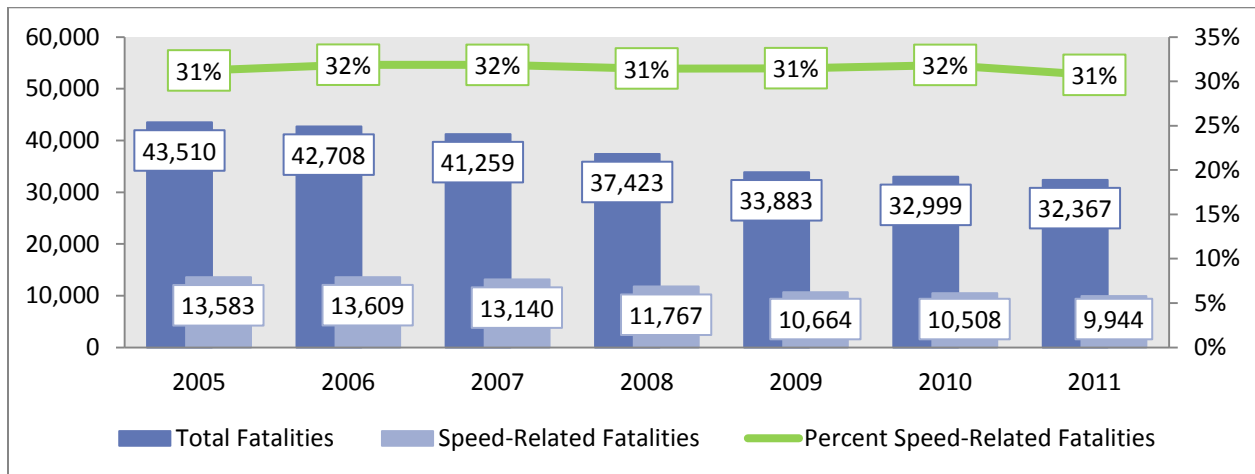
## **Future Countermeasures**

Future projects have been identified in the State's approved Traffic Records Plan for 2014. Those projects include funding for collection of electronic citation data, a Maine-specific CODES project, and public access to crash records and data analysis. In order to continue to be eligible to receive federal funds for traffic data and records purposes, the State must undergo traffic records assessments every five years. Maine's Traffic Records Assessment was conducted April 25-29, 2011. A copy of the final assessment report is available upon request.

# Police Traffic Services

## Problem

Nationally, speed is cited as a factor in approximately 31% of all crash fatalities<sup>13</sup>. While the actual number of speed-related fatalities has decreased over the years, the proportion of speed-related fatalities has remained relatively unchanged.



In Maine, in the year 2012, speed was cited as a factor in approximately 47% of all crash fatalities. The proportion of speed-related fatalities has fluctuated over the years. In part, this is due to the relatively small number of fatalities—when base numbers are small, minor fluctuations in the numerator can result in large changes in percent. However, the average proportion of speed-related fatalities from 2005 to 2012 is 45%, a rate that is substantially higher than the national rate of 31%.



<sup>13</sup> National Highway Traffic Safety Administration. (2011). *Traffic Safety Facts (Report # DOT HS 811 751)*. Retrieved from <http://www-nrd.nhtsa.dot.gov/Pubs/811751.pdf>



## Objective

The objective of the Police Traffic Services Program is to work with Maine law enforcement agencies, funding dedicated overtime details in order to combat the number of speeders on Maine roads.

## Goal & Progress

### Goal

To decrease speed-related fatalities by 5%, from the 5-year average of 70.4 for 2007-2011 to 66.9 by December 31, 2013.

### Progress

This goal was unmet: The five-year average number of speed-related fatalities for 2008-2012 was 68.8.

## Countermeasures & Expended Funds

### Police Traffic Services Program Management

Costs for this program area included wages; travel expenses for highway safety coordinators and/or program managers (examples of travel include TSI training courses, in-state monitoring of sub-grantees, and law enforcement agency chief committee meetings); and operating costs directly related to program development, coordination, monitoring, evaluation, public education, marketing, auditing, and training (costs include printing, supplies, state indirect rate, and postage).

Funding Source 402: \$29,637

### State, Local & County Law Enforcement Speed Enforcement

Funds expended for this project supported the Maine State Police troops and air wings in the conducting of Strategic Area Focused Enforcement (SAFE) details, which were overtime patrols dedicated to speed enforcement in designated high crash locations. Speed Enforcement Campaigns were initiated in 2011, when the MeBHS performed an analysis on the number of speed-related crashes in the state and chose 15 agencies to participate in the first year of the campaign. In 2012, the same agencies were invited to participate. Project directors from each of the agencies were provided with speed crash data from their respective towns, counties, and troop areas. These data included time analysis output identifying high volume dates and times as well as maps indicating where speed-related crashes had occurred.

The 2013 Speed Enforcement Campaign began on May 1 and concluded on September 30. Due to manpower issues, only 11 law enforcement agencies were able to participate. A maximum funding cap of \$5,000 per agency was set, and the Maine State Police conducted their speed enforcement activities using separate Strategic Area Focused Enforcement (SAFE) funds.

	2013 Speed Enforcement Campaign	SAFE (Maine State Police)	Total
Funds expended	\$41,773	\$86,472	\$128,245
Hours worked	1,853	1,749	3,602
Traffic stops	6,002	6,480	12,482
Stops per hour	3.2	3.7	3.5
Speeding summons	2,548	3,551	6,099

*FUNDING SOURCE 402: \$128,245*

#### **2013 Radar Equipment Purchase Grant**

Through a survey of LEAs, the MeBHS determined that in-cruiser radars were the most needed type of traffic safety equipment. Maine utilized the Request for Qualification Statements (RQS) process to select a vendor for these units. Stalker Dual Radar Units were purchased and distributed to LEAs. No equipment was in excess of \$5,000, and participating LEAs provided a cash match.

*FUNDING SOURCE 402: \$88,000*

#### **Buckle Up, No Excuses! Law Enforcement Incentive Equipment**

Funds allocated to this project area covered the costs of procuring equipment to assist LEAs in the detection of speeding drivers.

*FUNDING SOURCE 402: \$135,790 (THESE FUNDS EXPENDED UNDER OCCUPANT PROTECTION PROGRAM)*

#### **Maine State Police Crash Analysis Equipment**

Funds allocated to this project area covered the purchase of event data recorder downloads, the purchase of version 8.1 cables and connectors. This equipment replaces older versions that were incompatible with newer model police vehicles.

*FUNDING SOURCE 402: \$11,979*

#### **Law Enforcement Chiefs Challenge**

The Chief's Challenge is an assessment and evaluation tool for law enforcement agencies.

*FUNDING SOURCE: THIS PROJECT WAS NOT IMPLEMENTED IN FY13.*

#### **Law Enforcement Liaison**

The law enforcement liaison serves as a link between the law enforcement community and the MeBHS, encouraging more law enforcement participation in the HVE campaigns, assisting with grant applications, encouraging the use of DDACTS and other proven countermeasures and evaluation measures, and soliciting input from stakeholders.

*FUNDING SOURCE 402: \$77,085*

### **Law Enforcement Operating After Suspension Enforcement**

Funds for this project were intended to fund overtime for LEAs through the provision of grants. Grants were to have been awarded to agencies that demonstrated with data a serious problem with offenders operating after suspension in their jurisdictions.

*FUNDING SOURCE: PROJECT WAS NOT IMPLEMENTED IN FY13.*

### **Maine State Police SAFE Program**

Funds expended for this project supported the Maine State Police troops and air wings in the conducting of Strategic Area Focused Enforcement (SAFE) details, which were overtime patrols dedicated to speed enforcement in designated high crash locations.

*FUNDING SOURCE 402: \$86,472*

### **Traffic Safety Resource Prosecutor**

Funds were intended to support a full-time traffic safety resource prosecutor position to assist Maine law enforcement and prosecutors with impaired driving cases.

*FUNDING SOURCE: THIS PROJECT WAS NOT IMPLEMENTED IN FY13; PROJECT HAS BEEN APPROVED IN THE 2014 HIGHWAY SAFETY PLAN AND SHOULD BE GOING OUT TO RFP DURING FY14.*

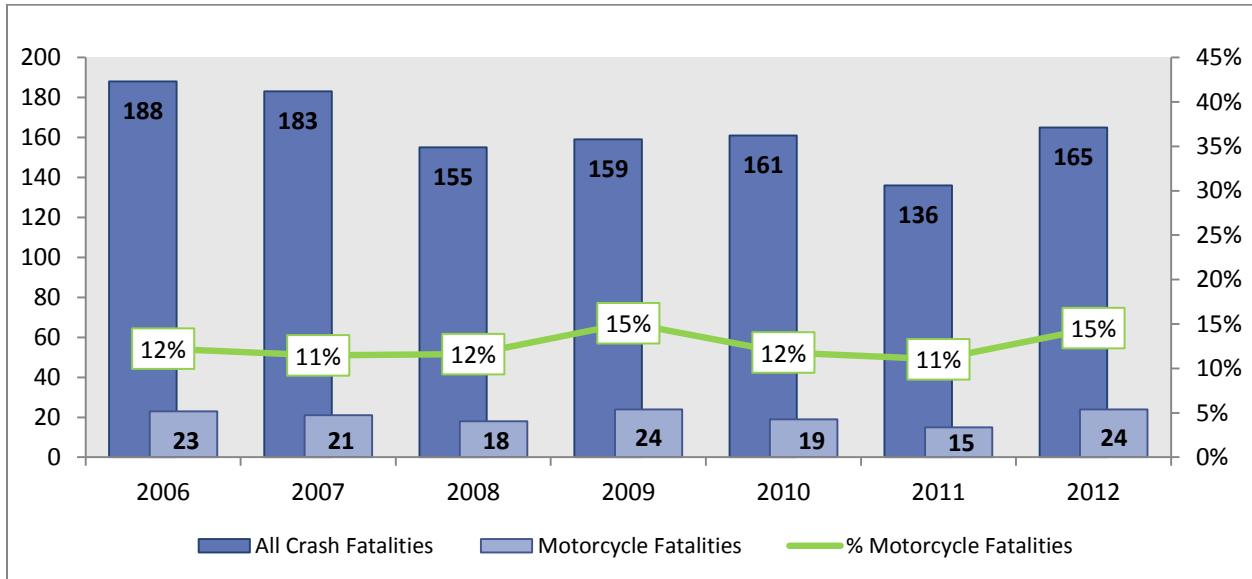
## **Future Countermeasures**

- ❖ Sustain high visibility enforcement in data-driven locations
- ❖ Continue to produce and distribute public service announcements via television, radio, and web that emphasize speed and its effect on public safety

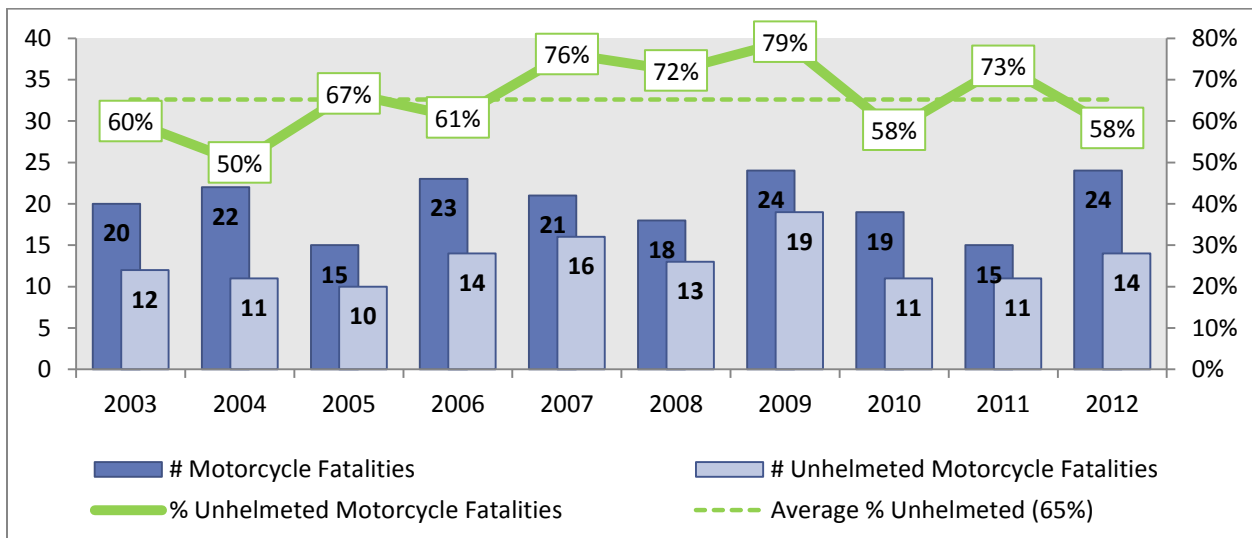
# Motorcycle Safety

## Problem

In 2012, there were 24 motorcycle fatalities. This was an increase over the previous year, in which there were 15 motorcycle fatalities. The 24 motorcycle fatalities constituted 15% of all 2012 crash fatalities, which was also an increase over the previous year, in which motorcycle fatalities constituted 11% of all crash fatalities.



Approximately 58% (n=14) of the 24 motorcycle fatalities were unhelmeted fatalities. While the number of unhelmeted fatalities increased from the previous year (n=11), the proportion of unhelmeted fatalities decreased, from 73% to 58%. Changes in percent should be interpreted with caution when base numbers are small, but the 2012 proportion falls below the average percent of unhelmeted fatalities for the years 2003 to 2012 (65%), which suggests positive change.



## Objective

The objective of the Motorcycle Safety Program is to educate the public on the importance of motorcycle safety for both motorcycle riders and the motoring public. This education and public outreach will help decrease motorcycle deaths on Maine roadways.

## Goals & Progress

### #1 Goal

To decrease motorcyclist fatalities by 5% from the 5-year average of 19.4 for 2007-2011 to 18.4 by December 31, 2013.

#### Progress

This goal was unmet: The five-year average number of motorcycle fatalities for 2008-2012 was 20.0.

### #2 Goal

To decrease unhelmeted motorcyclist fatalities by 5% from the 5-year average of 14.0 for 2007-2011 to 13.3 by December 31, 2013.

#### Progress

This goal was unmet: The five-year average number of unhelmeted motorcyclist fatalities for 2008-2012 was 13.6.

## Countermeasures & Funds Expended

### Bureau of Motor Vehicles Branch Office Media

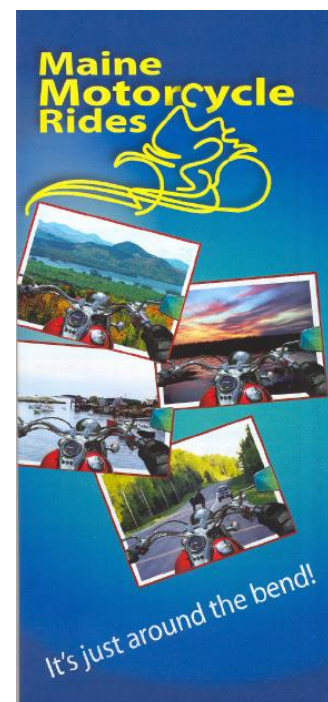
The MeBHS partnered with the Bureau of Motor Vehicles (BMV) to play MeBHS television media spots on the video monitors located in the waiting areas of all the BMV branch offices. The media spots include two motorcycle public service announcements.

Approximately 500,000 people visit a BMV branch office annually, giving the MeBHS the opportunity to reach a great number of people at a very low cost through this partnership with BMV.

### Motorcycle Safety Maps

In 2007, the MeBHS partnered with the Department of Transportation (DOT) to develop a motorcycle safety map of the state of Maine. These maps were then successfully distributed statewide.

In 2012, the MeBHS published 50,000 second edition motorcycle safety maps. MeBHS worked with the DOT to update the map, tourist routes, and safety messaging, which included information on impaired riding, proper protective gear, wildlife alerts, and much more. The maps were printed by MeBHS's media contractor, NL Partners, and distributed through the Maine Office of Tourism at all visitor areas on the Maine turnpike, to all motorcycle dealerships in Maine, and to several



motorcycle clubs. (Funding for safety maps is included in the Public Relations and Marketing section of this report.)

#### **Motorcycle Media (Share the Road Education)**

In an effort to bring continuing awareness to motorcycle safety, the MeBHS added two motorcycle television spots to the 2013 communications plan. These spots were tagged with the “Survive Your Ride” logo and encourage riders and drivers to be aware of each other and share the road.

*FUNDING SOURCE 2011: \$110,240*

#### **Ride Maine Publication**

The publication “Ride Maine” is a free magazine aimed at Maine residents and tourists interested in motorcycling. Each year, the MeBHS submits an article, “7 Tips for a Safer Ride,” to Ride Maine encouraging riders to ride safely. In 2013, the MeBHS “Ride Safely” article listed tips on being alert for wildlife, being an alert and sober rider, and wearing the proper safety gear.

*FUNDING SOURCE: FREE PUBLICATION*

### **Future Countermeasures**

- ❖ Continue Share the Road education for motorcyclists
- ❖ Continue partnership with the Bureau of Motor Vehicles to educate motorcyclists on safe riding

# Safe Communities

## Countermeasures & Funds Expended

The MeBHS awards grants to non-profit organization, municipalities, and/or state agencies. Projects funded by grant monies are to be focused on priority program areas at the community level and submitted via the request for proposal (RFP) process.

### *Town of York Police Department Community Grant*

This project supported a mini-grant designed to educate high school students about the dangers of distracted driving.

*FUNDING SOURCE 402: \$5,000*

### **Oakland Police Department Distracted Driving Education and Awareness Campaign**

The MeBHS conducted trainings, gave presentations, and facilitated the use of driving simulators to educate drivers about the dangers of distracted driving, including texting while driving.

*FUNDING SOURCE 406: \$4,000*

# Public Relations and Marketing

## Program

The utilization of media continues to be a key focus in the MeBHS' efforts to decrease accidents and fatalities on Maine roadways. Together with NL Partners, Maine attempts to employ media and public education in the most effective and efficient manner to influence the largest possible audience regarding highway safety issues related to Maine's priority areas. Because media outlets evolve, it is important to enter media markets that are not only cost effective but also those that will reach the target audience. In order to ensure that the MeBHS' media efforts are doing so, it has engaged Critical Insights Inc. to do periodic assessment of message reach and penetration.

## Objective

The objective of the Public Relations and Marketing Program is to increase seatbelt use and the proper use of child passenger safety restraints; reduce motorcycle fatalities; and reduce impaired driving, speeding, and distracted driving through the use of a statewide media campaign.

## Countermeasures<sup>14</sup>

### Paid Media to Support National Crackdowns and Priority Program Areas

The MeBHS used paid media to support the NHTSA's high visibility enforcement campaigns, to draw attention to Maine's traffic safety laws, and to encourage safe driving habits in order to reduce the number of crashes and fatalities that occur within the state. The NHTSA Communication Calendar was used as a guide in developing the statewide media campaign timeline to ensure alignment between national and statewide efforts.

The statewide media campaign focused on providing education on impaired driving, occupant protection, child passenger safety, teen drivers, motorcycle safety, and speeding. Funds supported campaign development; the retagging of announcements; and the purchase of radio, TV, and print media.

*FUNDING SOURCE 402: \$137,959*

### Sports Marketing Program

The MeBHS contracted with Alliance Sports Marketing (ASM) to reach a number of sports audiences throughout the state. Targeted venues included:

- ❖ Beech Ridge Motor Speedway (Scarborough, ME)
- ❖ Maine Championship football, hockey, basketball, science, and math tournaments
- ❖ Maine Red Claws basketball
- ❖ Oxford Plains Speedway
- ❖ Portland Pirates hockey
- ❖ Portland Sea Dogs baseball

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<sup>14</sup> See Appendix D for Marketing Flowchart.



- ❖ Richmond Karting Speedway
- ❖ Speedway 95 (Hermon, ME)
- ❖ Spud Speedway (Caribou, ME)
- ❖ Unity Raceway
- ❖ University of Maine football
- ❖ University of Maine hockey
- ❖ Wiscasset Speedway

The marketing program used highway safety messages, such as Click It or Ticket and Share the Road. It addressed audiences audibly through public address announcements, visually through venue billboard signs and website banners, and interactively through on-site presence and personal connection at the different venues.

ASM and the MeBHS developed the “You’ve Been Ticketed” campaign, which partnered ASM and local LEAs at each event. The LEAs that volunteered to help at these events maintained a presence in parking areas, identifying spectators who were wearing seatbelts as they arrived. LEA volunteers then issued tickets to these spectators, which they could turn in at ASM booths for T-shirts bearing a NHTSA safety message along with logos of the sports teams they came to watch.

Another targeted area of concern in 2013 was distracted driving. Distracted driving is an especially serious issue for Maine’s youngest, least experienced drivers. Research shows that 78% of teenagers have cell phones<sup>15</sup>, and that approximately 43% of high school juniors and 58% of seniors have admitted to texting or e-mailing while driving within the last 30 days<sup>16</sup>. To combat the growing distracted driving problem, ASM and the MeBHS developed a Distracted Driving Program utilizing the NHTSA message “One Text or Call Could Wreck It All.” This campaign was used in cooperation with high school athletic programs and provided access to thousands of athletes, students, parents, school administrators, and community members from throughout the state.

ASM and MeBHS also developed a “Share the Road, Watch for Motorcycles” campaign, which included premium signage and public address announcements at six motorsports venues along with a “Share the Road, Watch for Motorcycles” safety night at those venues plus the Portland Sea Dogs. During these events, spectators arriving on motorcycles were directed to park at entrances in order to increase visual awareness of motorcycles. Throughout the events, additional motorcycle safety messages were delivered over public address systems and on video and message boards whenever possible. In addition, at each event one person was selected as an honorary guest and given the opportunity to wave the flag to start the race, ride in the pace car, or throw out the ceremonial first pitch. This was often an opportunity to recognize individuals who were saved from becoming motorcycle fatalities by wearing helmets. While the primary focus of the campaign was to encourage others to watch out for motorcycles, this recognition also served as a safety message to a concentrated group of bikers regarding the importance of wearing the proper safety gear.

*FUNDING SOURCE 402: \$201,269*

*FUNDING SOURCE 406: \$148,687*

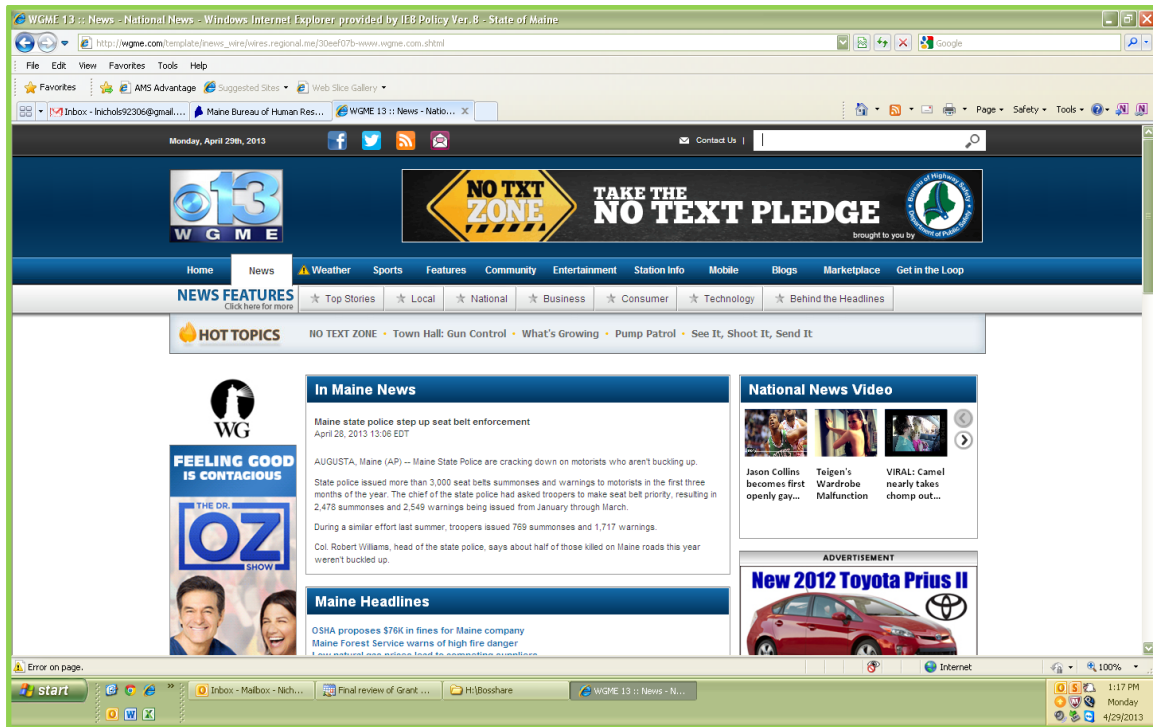
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<sup>15</sup> Pew Research Center. (2013). *Teens and Technology 2013*. Retrieved from <http://www.pewinternet.org/Reports/2013/Teens-and-Tech.aspx>

<sup>16</sup> Centers for Disease Control and Prevention. (2012). Youth risk behavior surveillance—United States, 2011. *Morbidity and Mortality Weekly Report*, 61, 4.

## BHS “No Text Zone” Campaign with WGME TV Station

Funds spent for this program supported the “No Text Zone” media campaign with Maine’s CBS affiliate, WGME. This campaign included news coverage, public service announcements, a distracted driving pledge website, and partnership with Maine businesses. Through the campaign, drivers were encouraged to take the no text pledge and display the stickers provided to them for taking the pledge on their vehicles.



*FUNDING SOURCE 406: \$44,400*

## E-Newsletter

The MeBHS developed and produced a periodic e-newsletter which was distributed to law enforcement agencies and other state agency partners.

*FUNDING SOURCE 402: \$513*

## Share the Road Motorcycle Education Through Paid Media

The MeBHS joined with NL Partners to raise motorcycle safety awareness in the general driving population as well as among motorcycle riders. All riders and drivers were encouraged to “Share the Road” and “Watch for Motorcycles.” In 2013, the number of motorcycle fatalities dropped to 12, compared to 24 fatalities in 2012.

*FUNDING SOURCE 402: \$46,974*

# Noteworthy Programs

## ❖ Partnerships and the Strategic Highway Safety Plan

The MeBHS partnered with the Maine Department of Transportation, the Maine Turnpike Authority, the Department of Health and Human Services, state law enforcement agencies, and many others in working toward the initiatives identified within the statewide Strategic Highway Safety Plan to substantially reduce the number of injuries and deaths resulting from crashes on Maine's highways. The MeBHS will continue to strengthen existing partnerships and explore new partnerships with other agencies (governmental and non-governmental, local, state, law enforcement and non-law enforcement) in its efforts to educate Maine citizens about traffic safety and to affect behavioral change.

## ❖ Maine Driving Dynamics

Maine Driving Dynamics (MDD) is a five-hour defensive driving course that offers any driver the opportunity to improve his/her defensive driving abilities. MDD is sponsored by the MeBHS in partnership with local and regional adult education programs. It is offered to the public several times each month at a variety of locations around the state. The Maine BMV, in partnership with MDD, advertises the MDD class schedule in BMV branches across the state, giving the motoring public information regarding participation opportunities. In addition, the MDD course is offered on site to private companies and organizations.

The course includes discussion of collision avoidance techniques, safety issues, driver habits and attitudes, and the basic elements that challenge drivers on Maine's highways. MDD is taught by a certified instructor in a format that engages students with lectures, videos, and class discussion/participation. Those completing the course receive a three-point credit on their driving records, and students 55 and older can receive insurance discounts from their insurers. This class continues to be a success in assisting Maine drivers to become more aware and defensive drivers.

# Legislative Summary

A number of new laws related to drivers and highway safety went into effect on October 9, 2013. According to a Secretary of State press release<sup>17</sup>:

- A driver who is cited for texting while driving will receive a \$250 minimum fine for a first time violation and a \$500 fine on a second or subsequent offense within three years. In addition, texting violations will now include a 30-day license suspension on a second offense; a 60-day suspension on a third offense; and a 90-day suspension on a fourth or subsequent violation. These suspension periods are mandatory, without a right to a hearing.
- The minimum practice time for a driver under the age of 21 who applies for a learner's permit on or after October 9, 2013, has increased from 35 to 70 hours, including an increase in night driving from five to 10 hours. Drivers completing their practice time must be accompanied by a parent, guardian or licensed driver at least 20 years of age. Additionally, while the permit exam is administered by the driving school prior to program completion, the law now requires all learners' permits to be issued only by the Secretary of State.
- Previously, active duty military personnel had 30 days to obtain a non-military identification card or license after discharge from service; they will now have up to 180 days.
- Bicyclists are now part of the definition of "traffic" and a collision between a motor vehicle and a bicyclist or roller skier is prima facie evidence that the motorist violated the three foot law.
- Police officers as well as the BMV may now accept proof of current insurance in electronic form.
- An officer may, at his or her discretion, issue a permit to travel directly home or to the BMV if a driver is found to be operating illegally on an expired license.
- The suspension period for an Operating Under the Influence (OUI) offender with three or more previous offenses within 10 years has been increased from six years to eight years.
- The license of a person with four or more OUI offense may be eligible for early reinstatement after serving four years of the suspension period if an approved ignition interlock device (IID) is installed for a period of four years.

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<sup>17</sup> See Title 29-A, Motor Vehicles, 2013-2014 for more information. Press release retrieved from <http://www.maine.gov/sos/news/2013/newbmvlaws.html>

# Crash Data

Performance Goals use an average of 2008-2012 data

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
C-1) Fatalities (Actual)	207	194	169	188	183	155	159	161	136	165
C-2) # of Serious Injuries	1,091	1,119	1,030	996	978	862	732	775	867	981
C-3a) Fatality Rate /100 million VMT	1.40	1.30	1.10	1.20	1.22	1.08	1.10	1.11	0.95	1.14
C-3b) Rural Mileage Death Rate	--	1.56	1.50	1.49	1.51	1.08	1.32	1.23	1.15	1.58 <sup>18</sup>
C-3c) Urban Mileage Death Rate	--	0.53	0.19	0.59	0.45	0.64	0.51	0.79	0.43	-- <sup>19</sup>
C-4) # of Unrestrained Passenger Vehicle Occupant Fatalities	87	75	64	65	76	54	51	41	53	76
C-5) # of Fatalities Involving Driver or Motorcycle Operator w/ $\geq$ .08 BAC	65	57	50	52	66	42	46	38	23	45
C-6) # of Speeding-Related Fatalities	79	90	86	72	86	53	61	83	69	78
C-7) # of Motorcyclist Fatalities	20	22	15	23	21	18	24	19	15	24
C-8) # of Unhelmeted Motorcyclist Fatalities	12	11	10	14	16	13	19	11	11	14
C-9) # of Drivers Age 20 or Younger Involved in Fatal Crashes	13	21	16	23	25	19	20	24	22	20
C-10) # of Pedestrian Fatalities	13	10	9	10	10	12	11	12	11	9
B-1) % Observed Belt Use for Passenger Vehicles - Front Seat Outboard Occupants	59.2%	72.3%	75.8%	77.2%	79.8%	83.0%	82.6%	82.0%	81.6%	84.4%
A-1) # of Seat Belt Citations Issued During Grant-Funded Enforcement Activities	--	2,166	2,568	1,725	1,566	5,997	6,650	9,856	3,332	2,931
A-2) # of Impaired Driving Arrests Made During Grant-Funded Enforcement Activities	321	275	330	301	359	506	545	456	503	230
A-3) # of Speeding Citations Issued During Grant-Funded Enforcement Activities	--	--	--	3,312	2,947	3,963	4,887	11,732	2,382	4,435

<sup>18, 19</sup> In 2012, FARS redefined "urban" and "rural;" according to the new definitions, all of Maine's roads are considered rural. As a result, the rural rate is higher for year 2012, and the urban rate is zero.

Figure 1: C-1) Fatalities

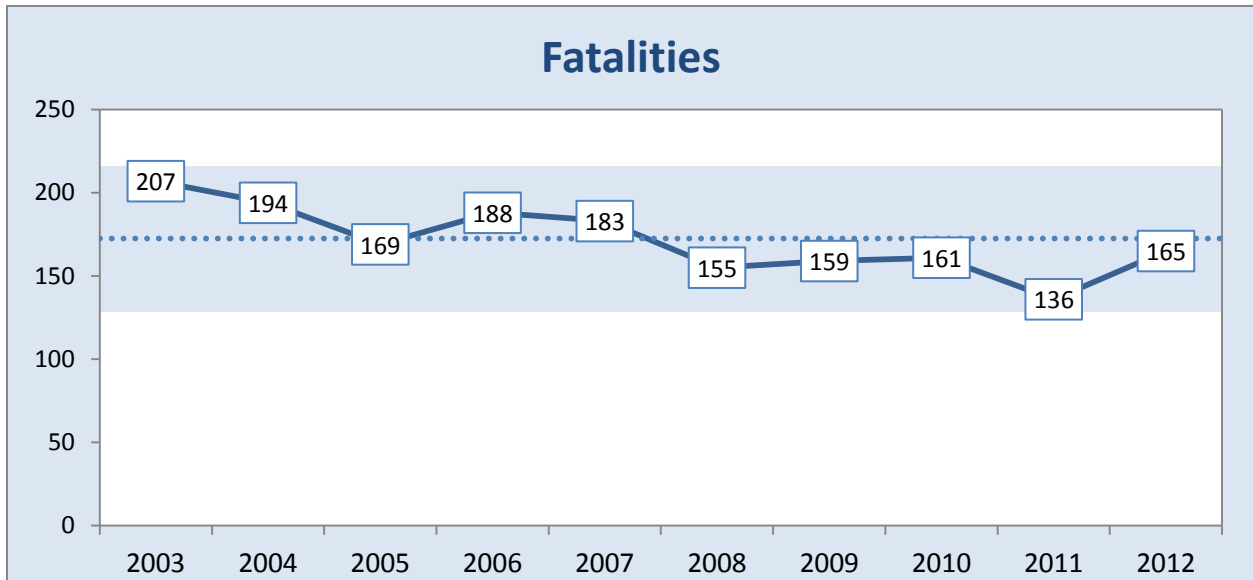


Figure 2: Number of Serious Injuries

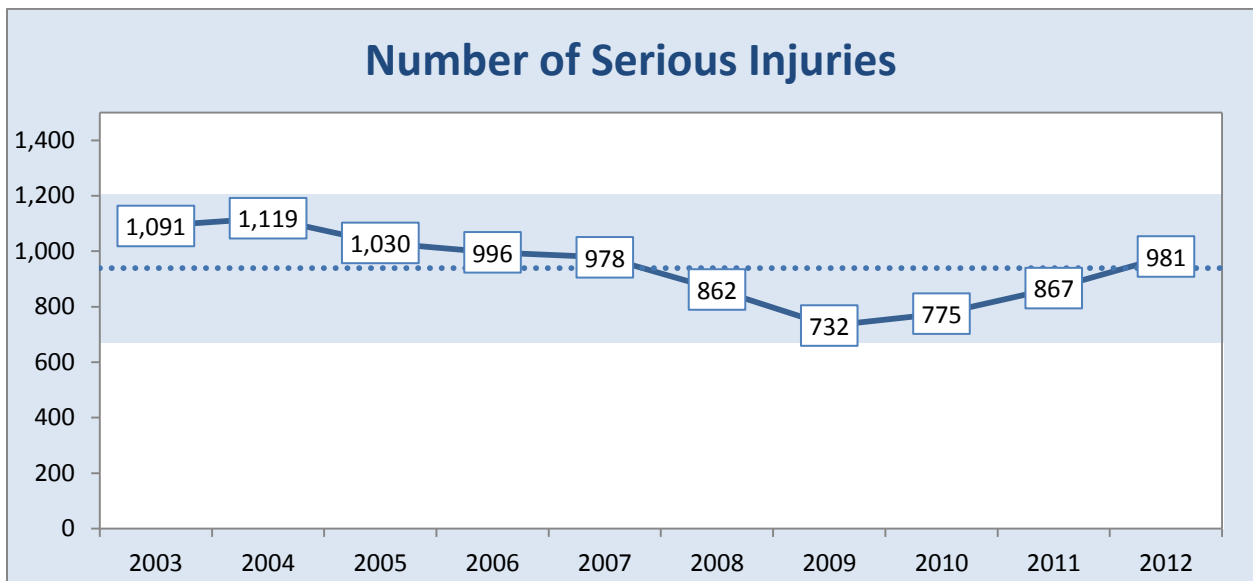


Figure 3: 3a) Fatality Rate/100 million VMT

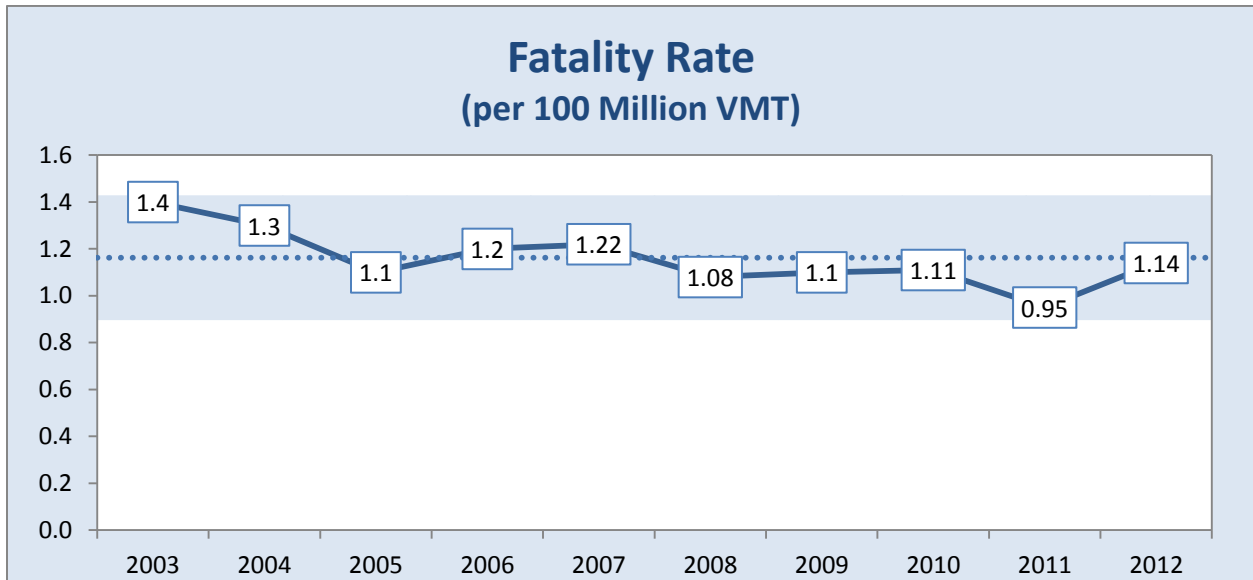
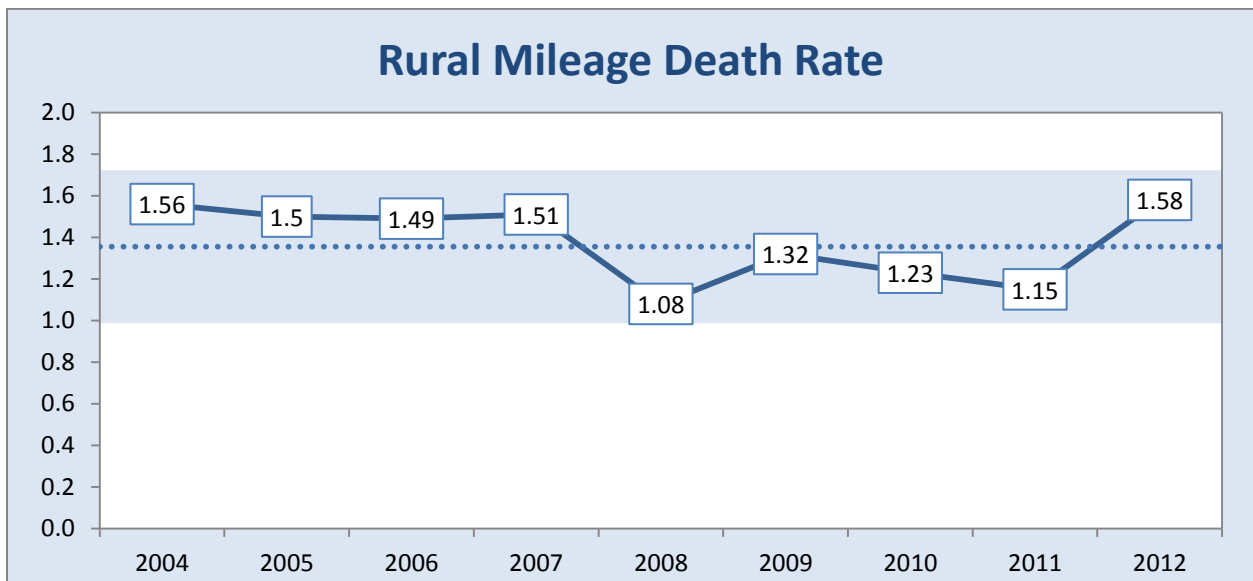


Figure 4: 3b) Rural Mileage Death Rate/100 million VMT<sup>20</sup>



<sup>20</sup> In 2012, FARS redefined “urban” and “rural;” according to the new definitions, all of Maine’s roads are considered rural. As a result, the rural rate is higher for year 2012, and the urban rate is zero.

Figure 5: C-3c) Urban Mileage Death Rate/100 million VMT<sup>21</sup>

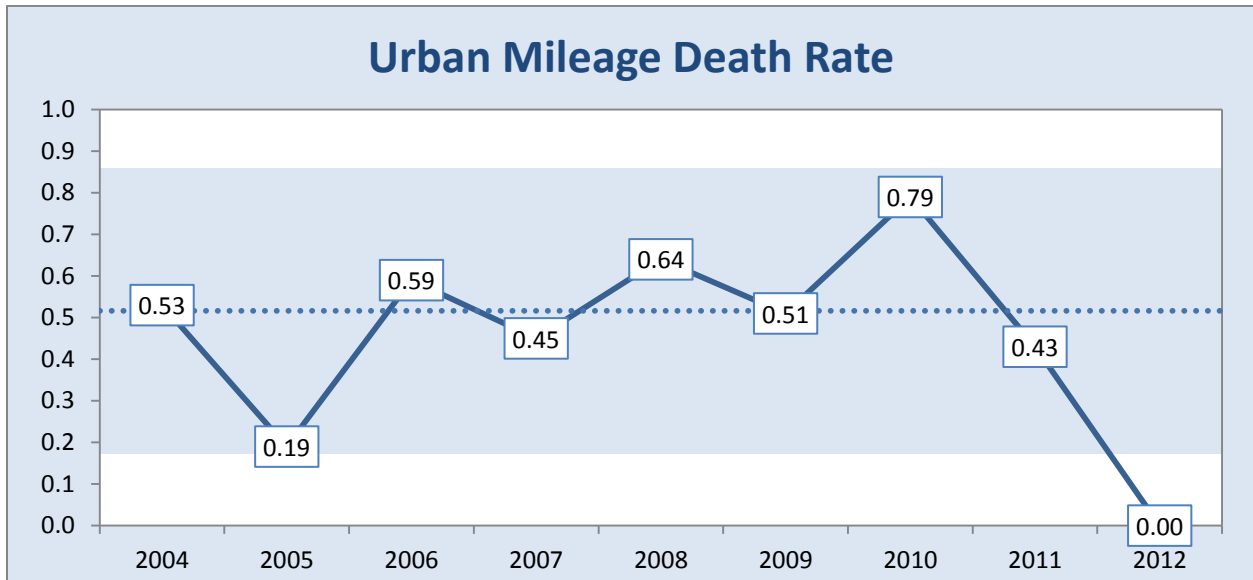
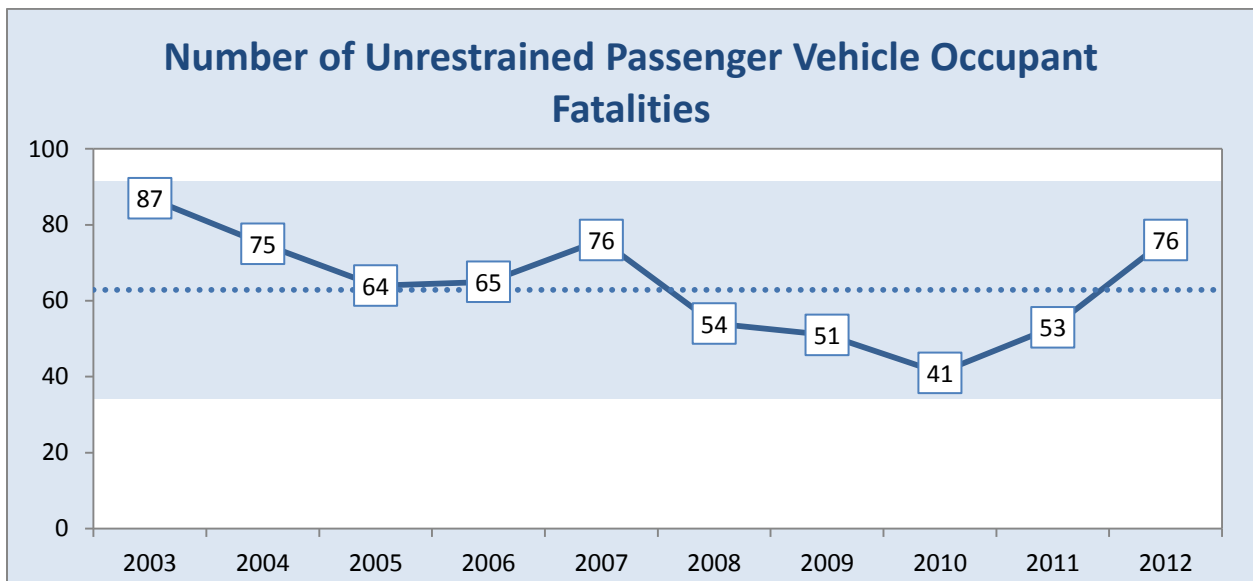


Figure 6: C-4) Number of Unrestrained Passenger Vehicle Occupant Fatalities



<sup>21</sup> In 2012, FARS redefined “urban” and “rural;” according to the new definitions, all of Maine’s roads are considered rural. As a result, the rural rate is higher for year 2012, and the urban rate is zero.



Figure 7: C-5) Number of Fatalities Involving Driver or Motorcycle Operator with  $\geq .08$  BAC

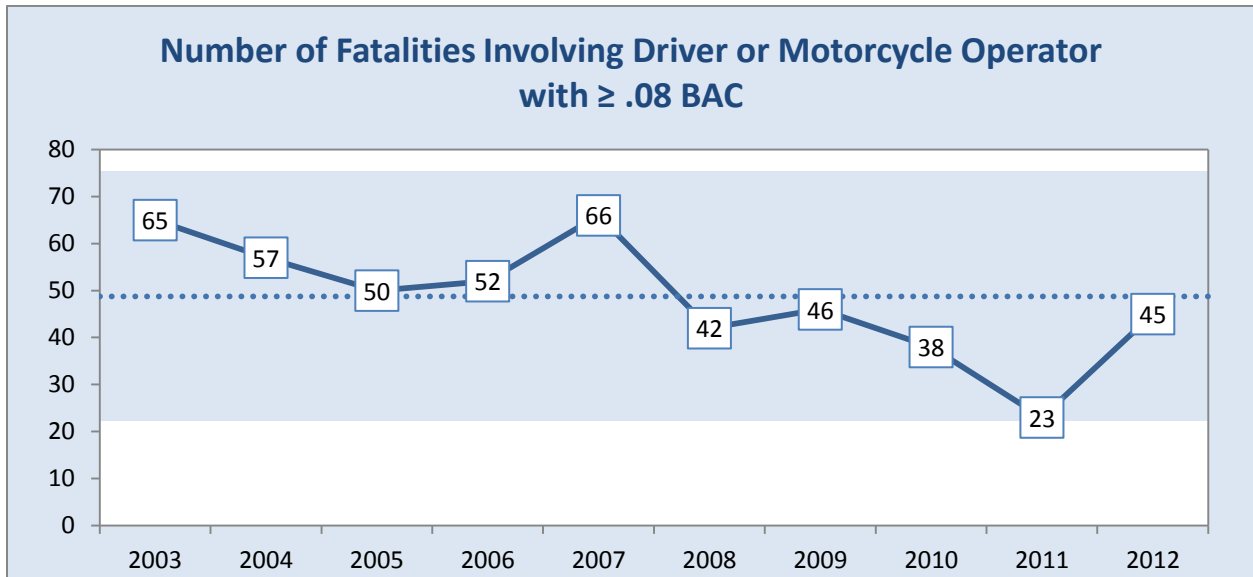


Figure 8: C-6) Number of Speeding-Related Fatalities

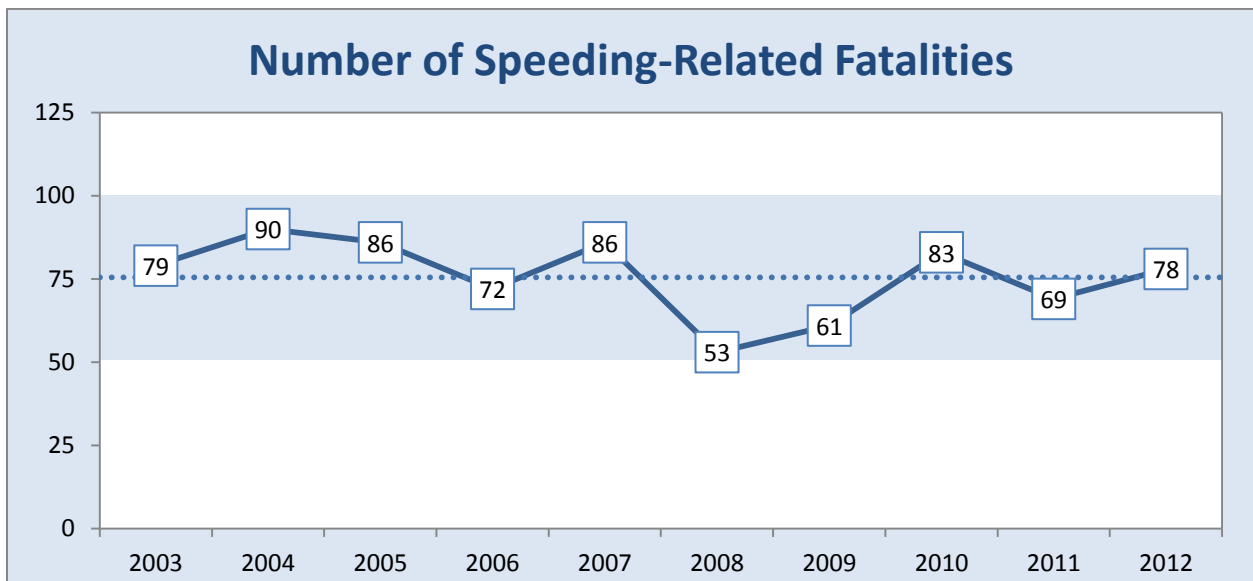


Figure 9: C-7) Number of Motorcyclist Fatalities

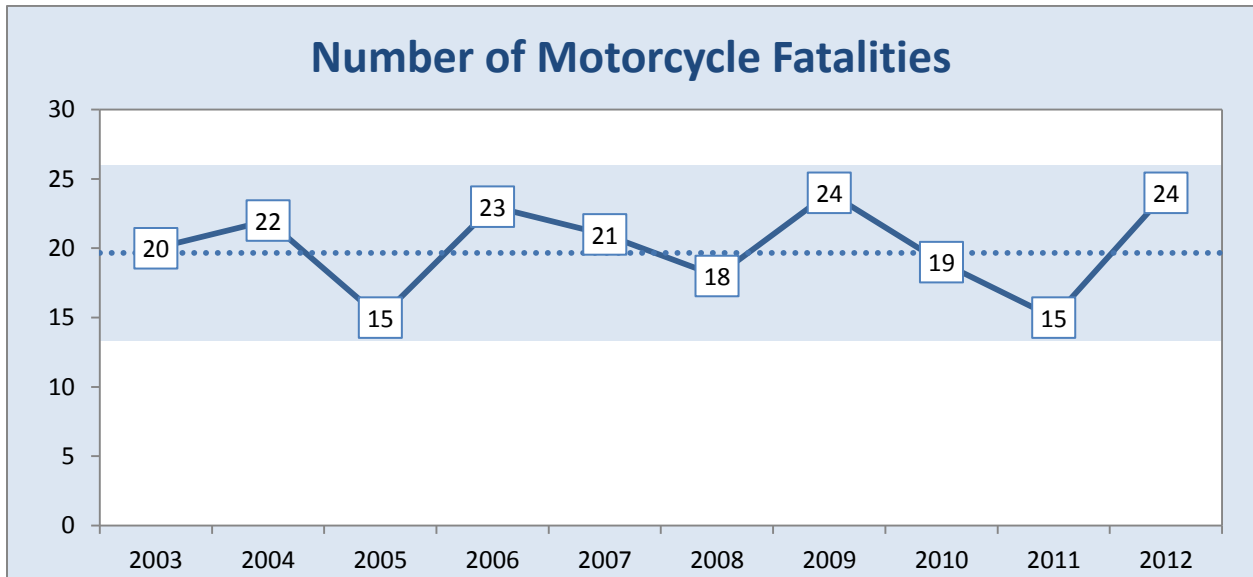


Figure 10: C-8) Number of Unhelmeted Motorcyclist Fatalities

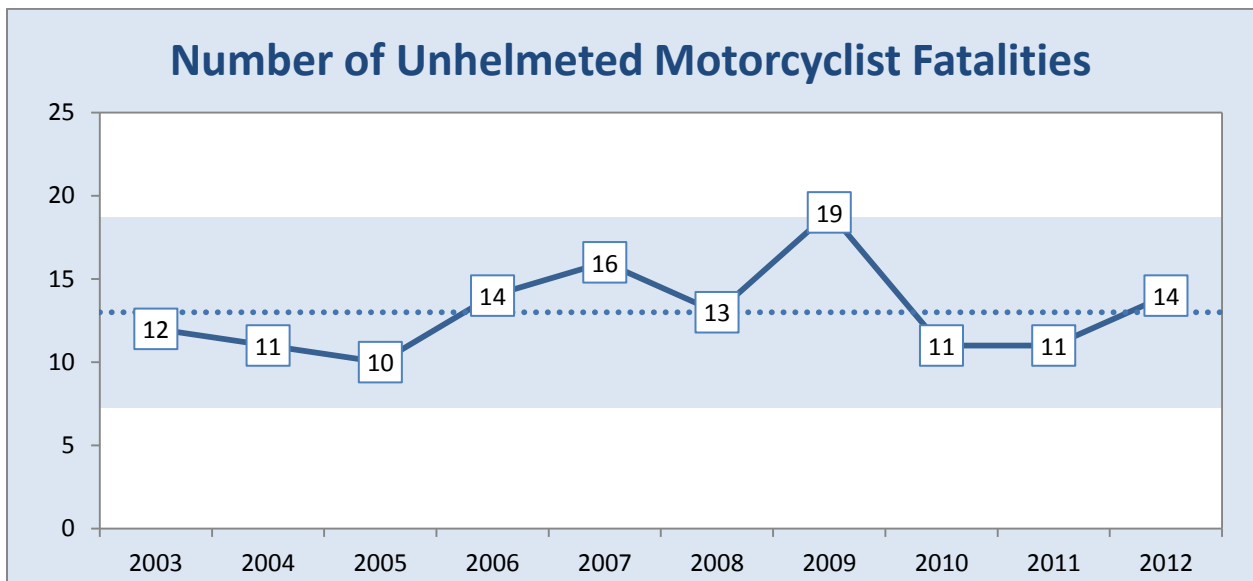


Figure 11: C-9) Number of Drivers Age 20 or Younger Involved in Fatal Crashes

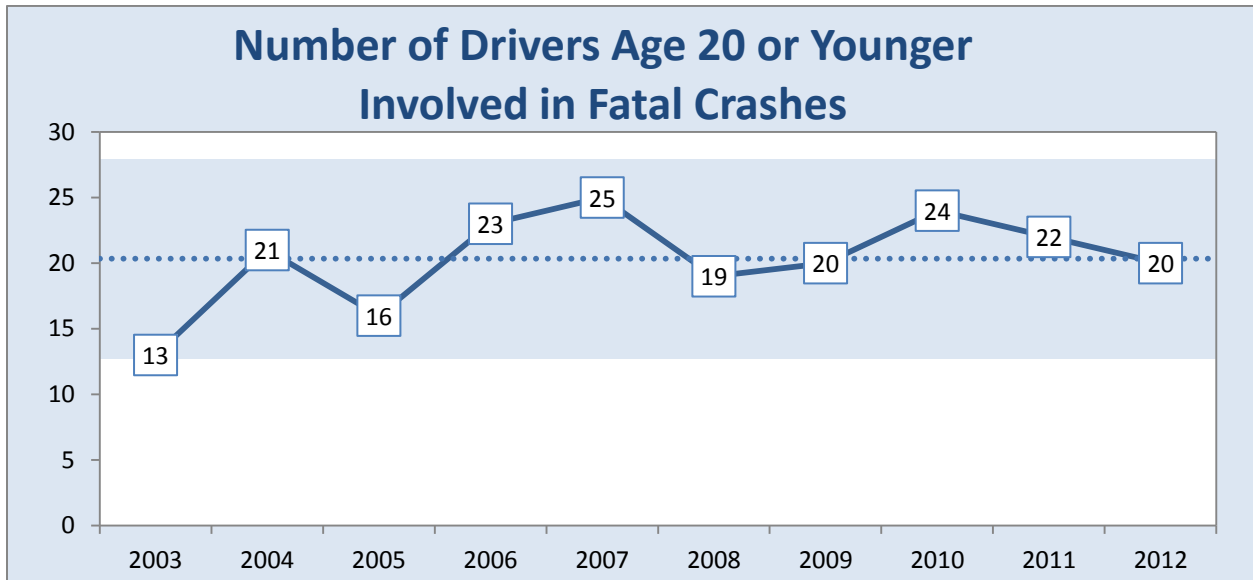


Figure 12: C-10) Number of Pedestrian Fatalities

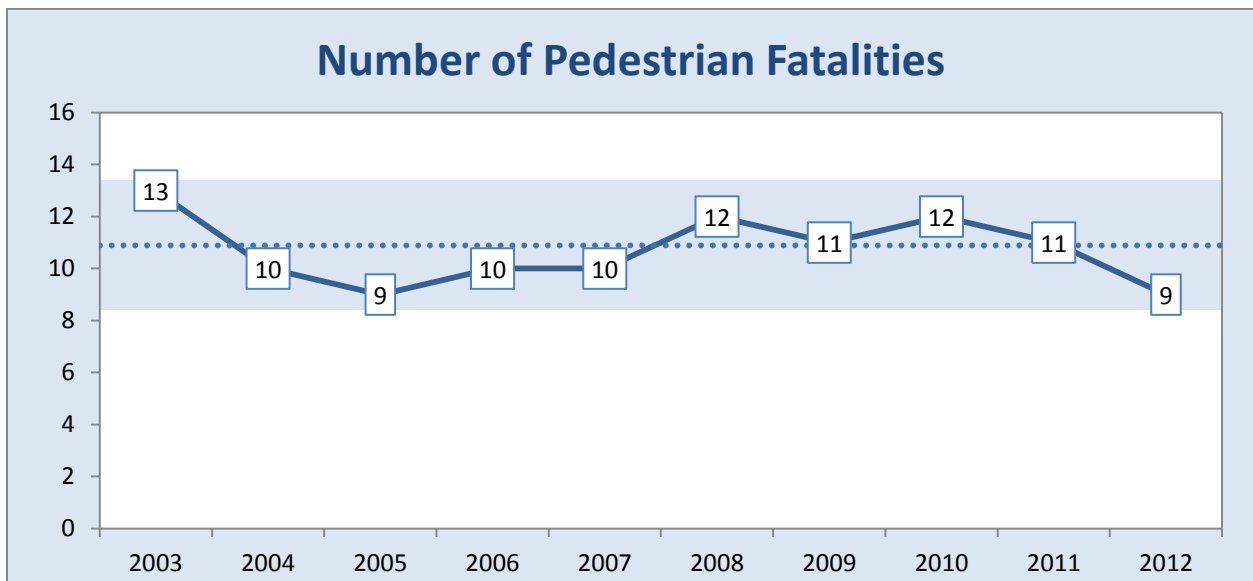


Figure 13: B-1) Observed Belt Use for Passenger Vehicles—Front Seat Outboard Occupants

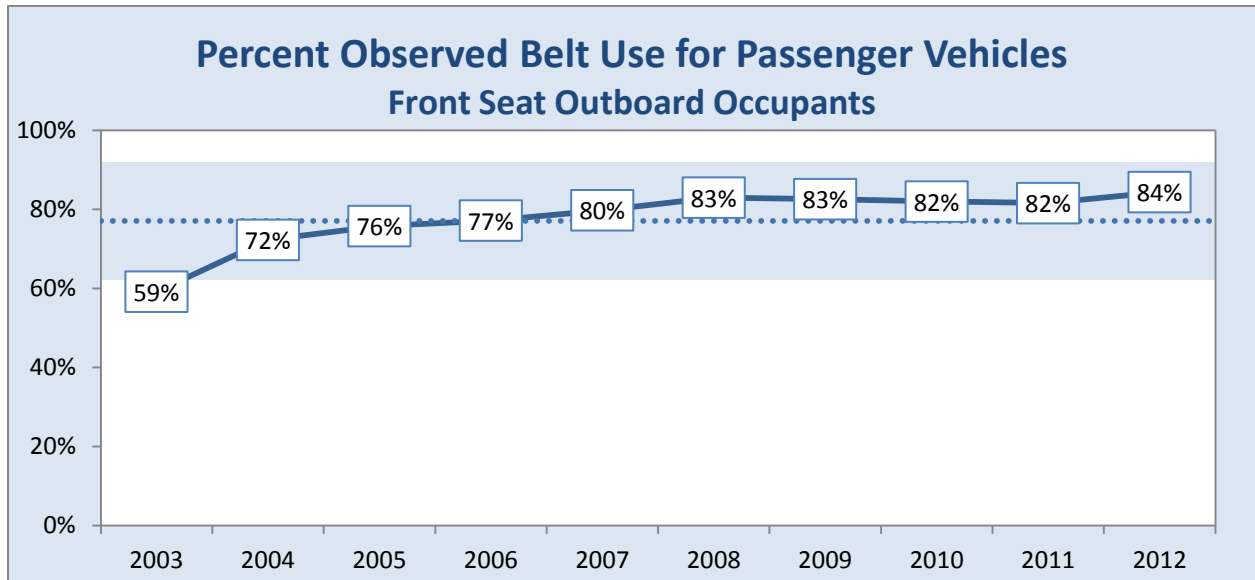


Figure 14: A-1) Number of Seat Belt Citations Issued During Grant-Funded Enforcement Activities

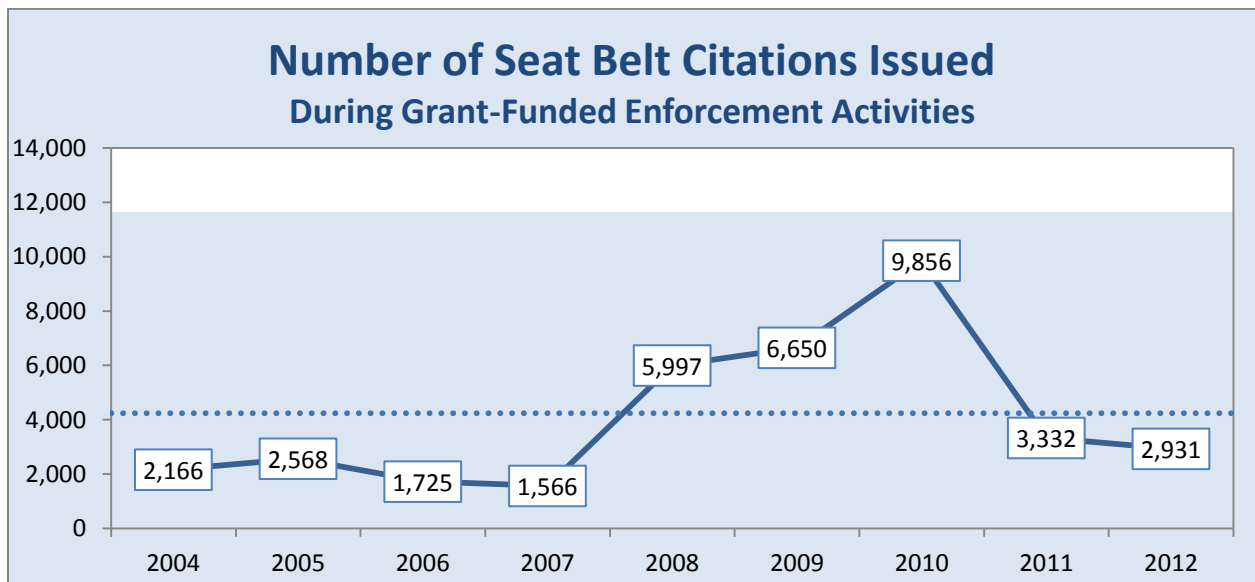


Figure 15: A-2) Number of Impaired Driving Arrests Made During Grant-Funded Enforcement Activities

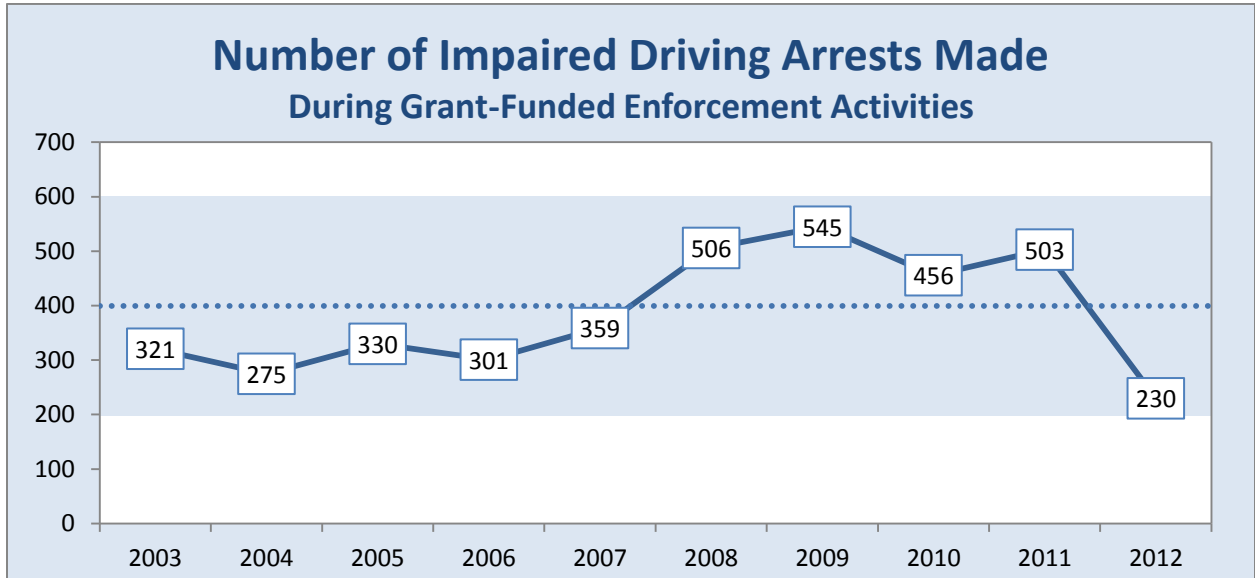
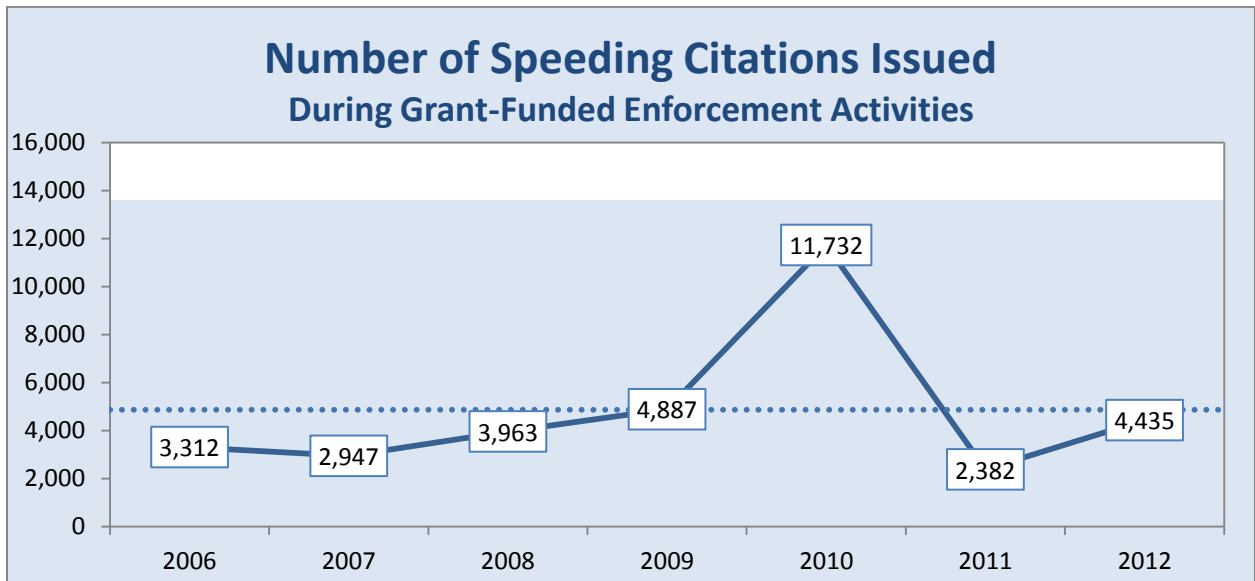
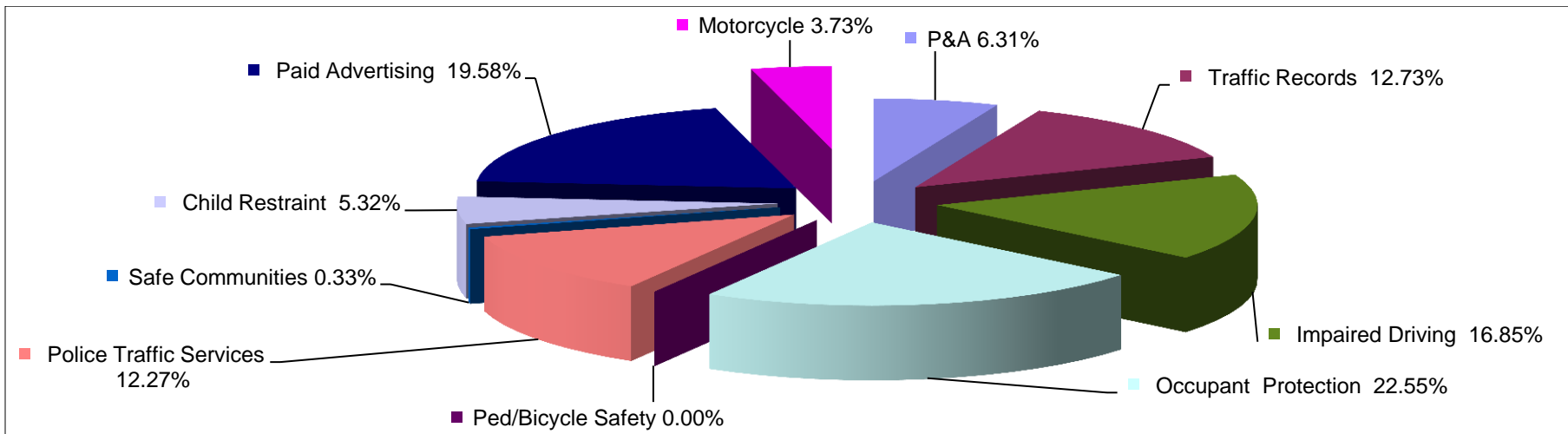


Figure 16: A-3) Number of Speeding Citations Issued During Grant-Funded Enforcement Activities



**FFY13 Financial Summary of Expenditures (as of 12/23/13)**

	402	405	163	406	408	410	2010	2011	Total	% of Total
<b>P&amp;A</b>	\$ 162,461					\$ 9,211			\$ 171,672	6.31%
<b>Traffic Records</b>	46,039				\$ 300,204				346,243	12.73%
<b>Impaired Driving</b>	270,936					187,656			458,592	16.85%
<b>Occupant Protection</b>	476,846	\$130,235		\$ 6,494					613,575	22.55%
<b>Ped/Bicycle Safety</b>										0.00%
<b>Police Traffic Services</b>	333,968								333,968	12.27%
<b>Safe Communities</b>	5,000			4,000					9,000	0.33%
<b>Child Restraint</b>	102,693						\$ 42,026		144,719	5.32%
<b>Paid Advertising</b>	339,741			193,087					532,828	19.58%
<b>Motorcycle</b>							\$ 110,240		110,240	4.05%
<b>TOTAL</b>	\$ 1,737,685	\$ 130,235		\$ 203,581	\$ 300,204	\$ 196,867	\$ 110,240	\$ 42,026	\$ 2,720,838	100.00%



**Safety Belt Use in Maine 2013**

# Safety Belt Use in Maine 2013

Al Leighton  
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2013

Submitted to:



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State of Maine  
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Augusta, Maine 04333-0164



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## ACKNOWLEDGMENTS

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Finally, we thank the tremendous contributions of the Survey Research Center observers: Margaret Gormley, Sharleen Garvey, Heather Feamster, and Fran Kressley.

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## EXECUTIVE SUMMARY

Since 1986, the Maine Bureau of Highway Safety has periodically had an observation study of safety belt use in Maine conducted to determine the level of compliance in the state. For the year 2013, the Survey Research Center (SRC) at the Muskie School of Public Service, University of Southern Maine, with assistance from the Preusser Research Group of Trumbull, Connecticut, conducted the study and produced this report of the findings. Research results from this study provide the official measure of belt use in Maine and provide valuable information regarding the success of the state's efforts to educate the public about the importance of safety belt use. Furthermore, increased seatbelt use can lead to additional funding from the National Highway Traffic Safety Administration (NHTSA).

In 2012, NHTSA began implementing a new, standardized method for conducting seatbelt observations in each state. For the first time, the number of traffic fatalities in each county was utilized in the site selection process. Whereas in previous years, the counties in which observations took place were chosen to represent at least 85% of the state's **population**, the new guidelines are designed to choose the counties that represent at least 85% of the **vehicular fatalities** in the state. In Maine, 12 of 16 counties were included for observations, representing approximately 90% of all vehicular fatalities in the state. A probability based sampling method was utilized to select the 127 segments to be observed. Among the locations chosen were sites on I-95, I-295, and the Maine Turnpike. As a result, all types of roads and traffic were observed. As in all prior studies, visual observations were made to determine the extent of use.

In addition, motorcycle helmet use was recorded again in 2013. Results of those observations are reported in the "Motorcycle Helmet Use" section on page 17.

For the past ten years, Maine's seatbelt use observations were done immediately after a major campaign to raise awareness of Maine's seatbelt laws. Radio ads about seatbelt use received heavy air play in many parts of the state. In addition, many police departments conducted a coordinated and highly visible enforcement campaign. We have speculated in the past that these steps might temporarily lead to an increased use rate, at least during the time of the campaign and shortly after. Several steps have been taken to examine the extent of any possible "drop off" in use rates. In 2009 the full observation study was conducted again during the month of September. In addition, several "mini" studies of a sub-sample of sites have been conducted. In each case, the drop in use rates was found to be very modest (see "Safety Belt Use in Maine, September 2009" for more details).

This study meets all of the applicable NHTSA criteria and was approved by NHTSA on April 5, 2012. See Table 11 for the list of counties studied.

**Road sections selected as observation sites.** Observations of seatbelt use were conducted at 127 sites from the 12 counties (see Table 11 for a full list of towns selected). Sites were selected following a probability-based sampling procedure developed by the Preusser Research Group and approved by NHTSA on April 5, 2012. Restraint use was recorded for 19,350 drivers and front seat passengers in 15,047 vehicles (in the 2012 study, 15,360 vehicles and 19,827 occupants were recorded).

**Sampling and estimating protocols.** In 2012, NHTSA began to institute new standardized sampling and estimating protocols for all states to follow in their safety belt use studies. These procedures were developed to ensure comparability among findings from state to state. The new estimation formulae are intended to provide each state with very precise estimates of their statewide belt use rates. These formulae provide a statistically sound method to calculate weights that will help adjust sample data to better reflect the volume and types of traffic found in all roads in a state, not just those selected for observation. Maine's sampling procedures are now based primarily on the number of vehicular fatalities in each county, and on traffic data known as the Daily Vehicle Miles Traveled (DVMT) for each county in the State. DVMT data provide a measure of the volume of traffic at each road segment in Maine.

One of the results of adopting new estimation methods is that the findings from 2012 and 2013 are not entirely comparable to those from previous years. Different methods can produce different results, which is why NHTSA has adopted the new standardized methods. We support the use of the new estimation approach and NHTSA's efforts to bring consistency and uniformity to all of the states but remind readers that, because of these changes, results from this year's study are not quite equivalent to those conducted in previous years.

**Subgroup analyses.** This report includes findings from several subgroups, such as for different seating positions, type of vehicle, etc. We urge readers to keep in mind that some of these groups have lower numbers and, therefore, the point estimates of their use rates are less precise than those for the entire sample.

**OBSERVATION STUDY FINDINGS**

**Overview: Compliance with the law.** The overall restraint use decreased in 2013, to 83.0%. In 2002, the statewide use rate was only 59%. By 2007, that rate had increased to 79.8%. This year, drivers have a slightly lower use rate than passengers. Table A shows changes in the rates for drivers and passengers for the three most recent years.

**Table A**

Comparison of seat belt usage rates statewide:

<b>Occupants Observed</b>	<b>2013 Study</b>	<b>2012 Study</b>	<b>2011 Study</b>
All Vehicle Occupants	83.0%	84.4%	81.6%
All Drivers	82.9%	84.5%	81.2%
All Front Passenger Seat Occupants	83.5%	83.4%	83.1%

**Gender differences.** Women in particular show substantial compliance with seatbelt laws. Table B shows gender differences for 2011, 2012, and 2013.

**Table B**

Comparison of seat belt usage rates by gender:

<b>Gender</b>	<b>2013 Study</b>	<b>2012 Study</b>	<b>2011 Study</b>
Male Driver	79.5%	82.1%	78.2%
Female Driver	87.2%	88.8%	86.2%
Male Passenger	71.9%	71.7%	76.1%
Female Passenger	91.6%	89.7%	87.0%

**Passengers' use of safety belts related to use by driver.** As with prior studies, belt use of passengers is strongly correlated with the practices of the drivers. When drivers use their safety belts, other occupants of the vehicle (who are most likely friends or family of the driver) are nearly two and a half times as likely to use their belts as they are when the driver is not using a belt (90.8% vs.37.9%).

**Comparison with other states.** While Maine's safety belt use has improved considerably over the years, other states have increased their use as well<sup>1</sup>. As a result, the state remained near the bottom nationally until recent years. In 1995, Maine's rate of 50% was the fifth from the bottom of a list of all 50 states, the District of Columbia, and Puerto Rico. By 2011, there still were only 11 reporting lower use rates than Maine. Because NHTSA has not yet released the 2013 use rates for all states, it is not possible to report where Maine now stands but in 2012, Maine was right in the middle of all states, with 26 states having lower rates and 23 states having higher rates. Nationally, the use rate was 86% in 2012.

**Type of vehicle.** As has been the case in every study conducted in Maine, people in pickup trucks have the lowest use rates, at 71.6%. While this is a substantial increase from the 39.7% reported in 2002, it marks a sharp decline from the 76.7% rate in 2012, and continues to be an area where considerable improvement is still possible. Cars, SUVs, and vans have use rates of 85.6%, 86.5%, and 87.1%, respectively.

### SUMMARY

Safety belt use in Maine has increased markedly since 1991, when only a third of people aged 16 and over were belted. (Another change in study methods should be noted here: In all of the studies conducted during the 1990s, information for all vehicle occupants, including children, was recorded, as well as the estimated age of each individual. Since 2004, children are no longer included for observations, nor is age estimated.)

The impact of safety belt use is significant. Research published by NHTSA in 2008 stated that, when properly used, lap/shoulder safety belts reduce the risk of fatal injury to front-seat passenger car occupants by 45%; they reduce the risk of moderate-to-critical injury by 50%. The safety effect is even greater for light truck occupants, where safety belts reduce the risk of fatal injury by 60% and moderate-to-critical injury by 65%. The same study estimates that over 15,000 lives were saved by using safety belts in the year 2006.<sup>2</sup> It is research findings such as these that provide much of the impetus for continuing efforts to increase seatbelt use in Maine and the nation.

This year's study was conducted immediately after a major enforcement and publicity campaign meant to increase safety belt usage. The rest of this report describes how the 2013 study was implemented and presents the key findings. It also shows comparisons between 2013 and the previous two studies. The project was conducted thanks to a contract between the Bureau of Highway Safety, Department of Public Safety, State of Maine, and the Survey Research Center at the Muskie School of Public Service, University of Southern Maine (USM), along with a subcontract between USM and the Preusser Research Group in Trumbull, Connecticut.

Portland, Maine  
September 20, 2013



## INTRODUCTION

The impact of seatbelt use is substantial. Research reported by NHTSA in 2008 found that lap/shoulder belts reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. Seat belts are even more effective for light-truck occupants, reducing the fatality risk by 60 percent and the moderate-to-critical injury risk by 65 percent. In 2006, seat belts saved the lives of an estimated 15,383 vehicle occupants age 5 and older.<sup>3</sup> Nationally, about 84% of all motorists now use their safety belts.<sup>4</sup>

Prior to 1996, when mandatory seatbelt laws for adults went into effect, Maine motorists used their seatbelts at a rate only about half of the national rate.<sup>5</sup> In November 1995, Maine voters narrowly approved a referendum establishing a secondary enforcement law requiring almost all people to wear safety belts or use child restraint devices. In 2007, a primary enforcement law went into effect (although ticketing didn't begin until April 1, 2008, to allow time for the state to raise public awareness of the law). The study here reports on results from an observation study conducted in 2013, five years after Maine's primary enforcement law began to be implemented. The data contained in this report are used to provide the Bureau of Highway Safety and the National Highway Traffic Safety Administration the current use rates and a measure of changing use patterns over time.

The research project was conducted by the Survey Research Center of the Muskie School of Public Service at the University of Southern Maine, under a contract with the Maine Bureau of Highway Safety, Department of Public Safety, State of Maine. The study was designed to determine the rate of safety restraint use in Maine as part of the development of a statewide comprehensive highway safety plan as required by NHTSA. It incorporates the standardized design requirements developed by NHTSA in an effort to ensure reliability and comparability of findings between each of the states.

## METHODOLOGY

In 2012, a number of methodological changes were introduced in the observation study. These include selecting the counties for observations based on traffic fatalities rather than population; developing a stratified sampling protocol in which each county had either 10 or 11 observation sites chosen; and the inclusion of certain commercial and emergency vehicles in the study. While all of the Muskie School's previous studies have met NHTSA guidelines and represent the official state use rates, the effect of these changes means that direct comparisons may not be entirely accurate between this year's study and earlier ones. The following is a description of the changes that were implemented and their potential impact.

The biggest methodological change in 2012 was the new protocol for selecting counties for observation. In all previous years, this was based on the population of each county. NHTSA guidelines allowed selecting the counties that had a combined population that covered 85% of the population of the entire state. In 2012, the new guidelines called for choosing counties that represented 85% of all traffic fatalities in the state, as measured by the Fatality Analysis Reporting System (FARS) over the previous 3 years. The impact of this method was to increase the number of counties included, from 10 counties in previous years to 12 counties, starting in 2012; the 12 counties represent 90% of all traffic fatalities in Maine. 9 of the 10 counties chosen prior to this change were included in the new design (see Table 11 for a complete list of all towns and counties chosen).

The next biggest change in methodology was that of using a stratified sample of road segments selected for observation within each county. Prior to 2012, the number of segments chosen in each county ranged from 18 in Cumberland to only 7 in Knox, an assignment based on the county's population in relation to the state population. Now, each county has either 10 or 11 road segments included for observations; data were weighted to adjust for this selection method.

To accommodate the new guidelines, certain commercial and emergency vehicles were included for this year's observation. In the past, taxi cabs, pizza delivery cars, police cars, etc., were not included; beginning with 2012, these vehicles were allowed. Large commercial vehicles (generally, those with more than 4 wheels) were still excluded.

In addition to these methodological adjustments, another important factor is the highly advertised and visible awareness and enforcement campaign that was conducted immediately before the current study began. While this seems to have the effect of at least temporarily boosting people's likelihood of using safety belts, the September 2009 study that was conducted by the Muskie School and Preusser Research Group 3 months after the campaign ended found the impact to be only a modest one.

**Road sections selected as observation sites.** Observation sites must allow the opportunity for a reasonably representative flow of multi-purpose traffic, while allowing observers a safe viewing position from which to observe and record belt use of occupants in each vehicle. Observers were given descriptions of the road segment to observe (e.g., “in Auburn, on Minot Avenue, between Heath Lane and Garfield Road”). They were also told which direction of traffic to observe. They then were able to find the most advantageous spot on the road segment from which to observe. They were instructed to only include vehicles that had actually passed through the first identifier of the description (in the example above, the intersection of Minot Avenue and Heath Lane). Observations were conducted from a single point on each segment. In all, observations of 15,047 passenger vehicles and the use or nonuse by 19,350 occupants was recorded. A list of the towns and cities selected appears as Table 11.

**Sampling.** The sites to be observed were selected by the Preusser Research Group of Trumbull, Conn. The sampling design was developed to ensure compliance with NHTSA’s standardized guidelines. The design of the sampling process provides a confidence level of 95% with a standard error of 1.015% and a relative standard error of 1.224%, and a final sample size of 127 road segments. The probability of a road segment being selected was proportional to the traffic volume measured in average daily vehicle-miles traveled (DVMT) on each road segment, based on Maine Department of Transportation data.

**Weighting.** Consistent with NHTSA guidelines, the data were weighted to reflect the sampling design and the average traffic volume at the selected road segments. The weighting simply adjusts the actual number of vehicles observed to reflect the expected number of vehicles, based on the traffic volume where the segment is located, and combines the site data in a way that represents statewide traffic volumes.

**Observation times and days.** Observations were made at 127 locations throughout the state for 45 minutes each, on a structured schedule of observation times and days that would maximize the opportunity to study variations in restraint use by time and by day of the week. Road segments were randomly assigned to a day and time for observations, although consideration had to be given for trips to locations that required lengthy travel times. Each day and time had an equal probability of selection. All observations were done during daylight hours. All observations in each county were conducted over a two day period. If any site had to be rescheduled (due to rain, road construction, etc), the observations were done on the same day of the week and at the same time of day as the originally scheduled time.

Many roads have two or more lanes of traffic in each direction. In those cases, the observation period was divided by the number of lanes, and each lane was observed for the proportional length of time. For example, a road with three lanes would require that each lane be observed for 15 minutes (three lanes

## APPENDIX A

times 15 minutes each equals 45 minutes, the full observation period).

Observation assignments were made across a schedule of time slots that began at 7:00 a.m. and ended at 6:15 p.m. They were conducted from June 3 to July 3, 2013 (by design, the observations are scheduled to be completed before the Fourth of July holiday, as traffic patterns may be significantly different during that weekend).

**Observer training.** Observers were trained by Tara Casanova from the Preusser Research Group. They were trained to observe proper shoulder belt use (vs. improper or no use) of the driver and, if present, a right front seat passenger (infants were excluded). Observations were made for private passenger vehicles and for certain commercial and emergency vehicles. The training involved written material, oral presentation, and field practice. The field practice was conducted on Deering Avenue in Portland, near the SRC office. The practice observations were crucial. Results were reviewed and analyzed for accuracy and consistency; no observers were allowed to begin until their practice observations met training standards.

## OBSERVATION STUDY FINDINGS

**Overview: Compliance with the law.** The latest use figures show a decrease in the proportion of Maine's population buckling up, at 83.0% overall; we do point out that this figure is well within the upper and lower limits expected for this study design. While the use of safety belts has improved considerably from earlier years, many states still have higher use rates.<sup>6</sup> In order to raise rates relative to other states, it seems likely that Maine will continue to require an on-going effort of education and enforcement.

**Gender differences.** The female use rate has been consistently higher than that of males; that pattern continues in 2013. While 88.2% of all female occupants were restrained, only 78.4% of males were using their seatbelts. Both of these represent decreases from last year, particularly for males.

**Seating position.** In 2013, 82.9% of drivers were using seatbelts and 83.5% of passengers were using theirs. This reverses the pattern of the past three years in which drivers have had a higher rate of belt use than passengers.

**Urban/rural differences.** The belt use rate in rural locations is now equal to that of urban locations, at 84.4% and 84.6% respectively. The gap between the two areas has narrowed considerably over the last few years, after a consistent pattern of higher use in urban areas for many years. (Note: due to the statistical difficulties of weighting data by twelve different counties, various road types, and traffic volume at all road segments, these data are not weighted).

**Type of vehicle.** There is one clear difference in driver safety belt use rates according to the type of vehicle the driver is operating. At 71.6%, drivers of pickup trucks have a considerably lower use rate than any of the other types of vehicles (see Table 7 for use rates of all drivers by vehicle type). It is likely that the selection of a vehicle and the decision of whether to buckle up or not are both related to gender, age, lifestyle and other factors, so this may not be a surprising finding; it certainly has been consistent over the years. With implementation of the primary enforcement law, however, drivers in pickup trucks had shown strong improvement, going from 68.6% in 2007 to 76.7% in 2012, the highest use rate yet recorded for pickup truck drivers. But in 2013, pickup truck drivers declined significantly, down to 71.6 percent. This was the biggest decline of any subgroup in the 2013 study.

**Passenger use related to use by driver.** As in all prior studies, buckling up is a friend and family affair. When drivers use their safety belts, other occupants of the vehicle (who are most likely friends or family of the driver) are nearly two and a half times as likely to use their belts as they are when the driver is not using a belt 90.8% vs. 37.9%; see Table 8.

## APPENDIX A

**Comparison with other states.** While Maine's use rate has improved substantially since 2002, other states have also improved.<sup>7</sup> The net result is that Maine is now in the middle of the range in national standings. In 2012, there were 26 states reporting lower use rates than Maine. 2013 figures have not been released yet so we cannot state Maine's position in this year's national rankings.

**Day of week.** Observations were conducted on all days of the week, and while there are slight variations in safety belt usage across the days (Table 7), there is no readily apparent pattern to the findings. The assignment of days and times of observation to the sites was systematic and unbiased, but the number of observations obtained on each day varied considerably because the traffic volume at the selected sites varied. Use rates are highest on Tuesdays (87.5%) and lowest on Wednesdays, at 80.7% (NOTE: these are based on unweighted data).

**Time of day.** Safety belt use varies throughout the day (Table 7). The highest rates are from 7:00 a.m. to 8:59 a.m. (88.3%). The lowest rates occur between 11:00 a.m. and 1:29 p.m. (81.5%). Time of day rates have also varied from year to year.

**Weather and road conditions.** Poor weather conditions prevailed throughout most of the study period. As a result, most observations were conducted in cloudy and/or rainy weather this year. Overall, 48.5% of vehicles were observed in sunny and clear weather and 47.0% while it was cloudy. The rest (4.6%) were done during rainy weather. There was some variation in use rates; sunny weather had 83.9% use but cloudy weather saw 85.3% use, while light rain had 78.6 %. (see Table 7).

**Comparison of 2013 with 2012 and 2011 data.** Several studies in Maine have been conducted for the Bureau of Highway Safety of the Maine Department of Public Safety over the years. The first was done by Northeast Research for the School of Public Health of the Boston University Medical School.<sup>8</sup> The next four were conducted by the Muskie School's Survey Research Center.<sup>9</sup> The year 2002 study was completed by CSI<sup>®</sup> Santa Rita Research Center.<sup>10</sup>

The Muskie School has now conducted a number of these studies. As described in the Methodology section, there were several major changes in the study design that were implemented in 2012. In addition, over the years other changes have been made, so direct comparisons between years may not be entirely appropriate.

In 2002, overall compliance stood at approximately 59%. At that time, the rate for people over 18 was also 59%. Beginning in 2004, only adults were recorded (although it is likely that some mid- to older-teens were inadvertently included). The rate for 2007 had increased to 80% and to 83% in 2008. Over the next four years, Maine's use rate increased to 84.4% but has now dropped a bit to 83.0 percent.

This year, passengers are more likely to use their seatbelts than drivers, 83.5% and 82.9%, respectively. This is a reversal from the last few years, in which drivers had higher use rates than passengers. While driver use declined from last year, passenger use has increased for the third consecutive year.

A look at male drivers and female drivers over the last three studies shows that both men and women had been increasing their use rates until this year. For the year 2011, male drivers had a use rate of 78.2% and females had a rate of 86.2%. In 2012, the comparable figures were 80.9% for males and 89.1% for females. The current use rates of 78.4% for males and 88.2% for females demonstrate that the “gender gap” continues to exist.

### SUMMARY

During the early to mid-nineties, seatbelt use in Maine increased substantially. By 1997, however, that trend had ended. From then through 2002, there was no overall increase and even some declines in certain areas. The years of increase correspond to a time when a number of changes were made in seatbelt laws in the state—in 1989, the law was expanded to require all occupants age 4 to 19 to use restraints. In 1993, fines for violations were increased. And most importantly, in 1995, a statewide referendum requiring all adults 19 and older to use safety belts was passed. From 1995 through 2006, there were no major revisions to Maine’s belt laws. With the implementation of the new primary enforcement law, Maine’s safety belt use rates showed increases in some but not all categories.

While this year’s use rate of 83.0% is within the upper and lower limits that would be expected for this design, it does appear to represent a decline from last year. With the exception of passengers, almost all subgroups (gender, vehicle type, etc.) showed decreases from 2012 (it may be worth noting that 2012 had the highest rates ever observed so far in many categories). These apparent declines suggest that efforts need to continue in order to ensure that Maine’s level of safety in passenger vehicles will be improved and maintained.

## MOTORCYCLE HELMET USE

This year marks the fourth time in as many years that we included observations of motorcycle helmet use. There was no sampling protocol specific to motorcycle traffic volume; rather, we simply included observations for all motorcycles seen at the sites that had been selected for the seatbelt use sample. This resulted in recording the helmet use and non-use of 333 drivers and 61 passengers. The overall helmet use rate has increased this year to 60.2% from last year's rate of 59.3 percent. Tables E and F present the key findings.

**Table E**

Comparison of motorcycle helmet usage rates statewide

<b>Occupants Observed</b>	<b>June 2013</b>
All Motorcycle Occupants	60.2% (N=394)
All Drivers	59.5% (N=333)
All Passengers	63.9% (N=61)

**Table F**

Comparison of motorcycle helmet usage rates by gender:

<b>Gender</b>	<b>June 2013</b>
Male Driver	59.4% (N=315)
Female Driver	64.3% (N=14)
Male Passenger	100.0% (N=4)
Female Passenger	61.4% (N=57)



## ENDNOTES

<sup>1</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2011, Research Note*, DOT HS 811 493.

<sup>2</sup> Al Leighton and Erika Ziller, *Safety Belt Use in Maine 1998*, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine, prepared for the Bureau of Highway Safety, Department of Public Safety, State of Maine, April 1999.

<sup>3</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration, *2006 Motor Vehicle Occupant Protection Facts, August 2008*, DOT HS 810 654.

<sup>4</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration, *2006 Motor Vehicle Occupant Protection Facts, August 2008*, DOT HS 810 654.

<sup>5</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2011, Research Note*, DOT HS 811 493.

<sup>6</sup> Al Leighton, Erika Ziller and Suzanne K. Hart, *Safety Belt Use in Maine 1995*, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine, prepared for the Bureau of Highway Safety, Department of Public Safety, State of Maine, 1995; Suzanne K. Hart, *Child Restraint Device and Safety Belt Use in Maine*, 1991, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine, prepared for the Bureau of Highway Safety, Department of Public Safety, State of Maine, August 1992; and Deidre Hungerford, David Kovenock, and James Sorg, *Maine Seat Belt Use Observation Study*, February, 1986: *Preliminary Summary*, Northeast Research, Orono, Maine, 1986.

<sup>7</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2011, Research Note*, DOT HS 811 493.

<sup>8</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2011, Research Note*, DOT HS 811 493.

<sup>9</sup> Deidre Hungerford, David Kovenock, and James Sorg, *Maine Seat Belt Use Observation Study*, February, 1986: *Preliminary Summary*, Northeast Research, Orono, Maine, 1986.

<sup>10</sup> Al Leighton, Erika Ziller and Suzanne K. Hart, *Safety Belt Use in Maine 1991, 1995, 1997, 1998*, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine, prepared for the Bureau of Highway Safety, Department of Public Safety, State of Maine, 1992, 1995, 1997, 1999.

<sup>11</sup> Ash Bose, *Safety Belt Use in Maine 2002*, CSI Santa Rita Research Center, Communication Software, Inc., Arizona, December, 2002.

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**TABLE 1**  
**Restraint Use in Passenger Vehicles**  
**Statewide**

**Maine, 2013**

**All Persons**

<b>All Persons</b>	
Lap/Shoulder	83.0%
No Restraint	17.0%
No. Vehicles =15,047; No. Persons =19,161	

**TABLE 2**  
**Restraint Use in Passenger Vehicles**  
**Statewide**  
**By Seating Position**

**Maine, 2013**

**All Persons**

<b>Driver</b>		<b>Passenger</b>	
Lap/Shoulder	82.9%	Lap/Shoulder	83.5%
No Restraint	17.1%	No Restraint	16.5%
N = 14,947		N = 4,214	

**TABLE 3**  
**Restraint Use in Passenger Vehicles**  
**Statewide**  
**Maine, 2013**  
**Males**

<b>All Males</b>	
Lap/Shoulder	78.4%
No Restraint	21.6%
N = 9,939	

**TABLE 4**  
**Restraint Use in Passenger Vehicles**  
**Statewide**  
**By seating position**  
**Maine, 2013**  
**Males**

<b>Driver</b>		<b>Passenger</b>	
Lap/Shoulder	79.5%	Lap/Shoulder	71.9%
No Restraint	20.5%	No Restraint	28.1%
N = 8,526		N = 1,413	

**TABLE 5**  
**Restraint Use in Passenger Vehicles**  
**Statewide**  
**Maine, 2013**  
**Females**

<b>All Females</b>	
Lap/Shoulder	88.2%
No Restraint	11.8%
N = 9,163	

**TABLE 6**  
**Restraint Use in Passenger Vehicles**  
**Statewide**  
**By seating position**  
**Maine, 2013**  
**Females**

<b>Driver</b>		<b>Passenger</b>	
Lap/Shoulder	87.2%	Lap/Shoulder	91.6%
No Restraint	12.8%	No Restraint	8.4%
N = 6,389		N = 2,774	

TABLE 7

**Percentage of Drivers Wearing Safety Belts  
Under Selected Conditions  
Statewide**

**Maine, 2013**

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**Type of Vehicle**

<b>Vehicle Type</b>		<b>Belt Use</b>
Car	(N =7,042)	85.6%
SUV	(N =3,987)	86.6%
Van	(N =1,097)	86.7%
Truck	(N =2,921)	71.6%

---

**Day of the Week**

(Note: data in the rest of this table  
are not weighted)

**Percent of Drivers  
Wearing Safety Belts**

Sunday	(N = 2,133)	85.1%
Monday	(N = 1,991)	81.5%
Tuesday	(N = 2,251)	87.5%
Wednesday	(N = 1,540)	80.7%
Thursday	(N = 2,310)	86.9%
Friday	(N = 2,473)	81.5%
Saturday	(N = 2,251)	85.8%

---

Table 7, cont'd

<b>Weather<sup>1</sup></b>		<b>Percent of Drivers Wearing Safety Belts</b>
Sunny/Clear	(N = 7,158)	83.9%
Raining	(N = 672)	78.6%
Cloudy	(N = 6,931)	85.3%
Fog	(N = 0)	--
Wet/Not Raining	(N = 0)	--

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<sup>1</sup> Observations of **Sunny/Clear** and **Cloudy** imply the roads are dry. **Raining** corresponds to light rain occurring during the observations (data are not collected in heavy rain) and thus the roads are wet.

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<b>Time of Observation</b>		<b>Percent of Drivers Wearing Safety Belts</b>
7am – 8:59am	(N = 3,116)	88.3%
9am – 10:59am	(N = 2,633)	85.4%
11am – 1:29pm	(N = 2,804)	81.5%
1:30pm – 3:29pm	(N = 2,819)	82.5%
3:30pm – 6pm	(N = 3,528)	83.9%

TABLE 8

**Passenger belt use/nonuse  
compared to Driver belt use/nonuse**  
NOTE: Data in this table are NOT weighted

Maine, 2013

**When the driver IS wearing a belt**

Driver	Passenger	
NOT APPLICABLE	Lap/Shoulder	90.8%
	No Restraint	9.2%
N = Not Applicable	N = 3,709	

**When the driver is NOT wearing a belt**

Driver	Passenger	
NOT APPLICABLE	Lap/Shoulder	37.9%
	No Restraint	62.1%
N = Not Applicable	N = 486	



TABLE 9

**Restraint Use All Occupants, All Vehicles  
Grouped by Observation Sites in Rural and Urban Locations**  
NOTE: Data in this table are NOT weighted

**Maine, 2013**

RESTRAINT TYPE	Rural		Urban		STATEWIDE	
	N	%	N	%	N	%
Lap/Shoulder Belt	9,049	84.4	6,202	84.6	15,251	84.5
No Lap/Shoulder Belt	1,675	15.6	1,129	16.4	2,804	15.5
<b>Lap/Shoulder Belt TOTAL</b>	<b>10,724</b>	<b>100.0</b>	<b>7,331</b>	<b>100.0</b>	<b>18,055</b>	<b>100.0</b>

TABLE 10

**Observed Safety Belt Use Rates Reported by States to NHTSA  
2011 and 2012**

<b>State</b>	<b>2011</b>	<b>2012</b>	<b>State</b>	<b>2011</b>	<b>2012</b>
Alabama	<b>88%</b>	<b>90%</b>	Montana	77%	76%
Alaska	<b>89%</b>	<b>88%</b>	Nebraska	84%	79%
Arizona	83%	82%	Nevada	94%	91%
Arkansas	<b>78%</b>	<b>72%</b>	New Hampshire	75%	69%
California	<b>97%</b>	<b>96%</b>	New Jersey	<b>95%</b>	<b>88%</b>
Colorado	82%	81%	New Mexico	<b>91%</b>	<b>91%</b>
Connecticut	<b>88%</b>	<b>87%</b>	New York	<b>91%</b>	<b>90%</b>
Delaware	<b>90%</b>	<b>88%</b>	North Carolina	<b>90%</b>	<b>88%</b>
District of Columbia	<b>95%</b>	<b>92%</b>	North Dakota	77%	81%
Florida	<b>88%</b>	<b>87%</b>	Ohio	84%	82%
Georgia	<b>93%</b>	<b>92%</b>	Oklahoma	<b>86%</b>	<b>84%</b>
Hawaii	<b>96%</b>	<b>93%</b>	Oregon	<b>97%</b>	<b>97%</b>
Idaho	79%	79%	Pennsylvania	84%	84%
Illinois	<b>93%</b>	<b>94%</b>	Rhode Island	80%	78%
Indiana	<b>93%</b>	<b>94%</b>	South Carolina	<b>86%</b>	<b>91%</b>
Iowa	<b>94%</b>	<b>92%</b>	South Dakota	73%	67%
Kansas	<b>83%</b>	<b>80%</b>	Tennessee	<b>87%</b>	<b>84%</b>
Kentucky	<b>82%</b>	<b>84%</b>	Texas	<b>94%</b>	<b>94%</b>
Louisiana	<b>78%</b>	<b>79%</b>	Utah	89%	82%
Maine	<b>82%</b>	<b>84%</b>	Vermont	85%	84%
Maryland	<b>94%</b>	<b>91%</b>	Virginia	82%	78%
Massachusetts	73%	73%	Washington	<b>98%</b>	<b>97%</b>
Michigan	<b>95%</b>	<b>94%</b>	West Virginia	85%	84%
Minnesota	<b>93%</b>	<b>94%</b>	Wisconsin	<b>79%</b>	<b>80%</b>
Mississippi	<b>82%</b>	<b>83%</b>	Wyoming	83%	77%
Missouri	79%	79%	Puerto Rico	<b>92%</b>	<b>90%</b>

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts, July 2013*, Research Note DOT HS 811 809.

1 Rates in states with primary belt enforcement laws appear in boldface.

**Primary Enforcement:** Allows police to stop and cite motorists simply for not wearing seat belts.

**Secondary Enforcement:** Motorists must be stopped for another reason in order to receive a seat belt citation.

TABLE 11

## Maine 2013 Observation Sites List

- |   |  |   |
|---|--|---|
| <p><b>1. Androscoggin (11)</b></p> <ol style="list-style-type: none"> <li>1. Auburn (5)</li> <li>2. Durham (1)</li> <li>3. Greene (1)</li> <li>4. Lewiston (4)</li> </ol> <p><b>2. Aroostook (11)</b></p> <ol style="list-style-type: none"> <li>1. Ashland (1)</li> <li>2. Bridgewater (1)</li> <li>3. Caribou (1)</li> <li>4. Houlton (3)</li> <li>5. Limestone (1)</li> <li>6. Ludlow (1)</li> <li>7. Mars Hill (1)</li> <li>8. Presque Isle (1)</li> <li>9. Sherman (1)</li> </ol> <p><b>3. Cumberland (11)</b></p> <ol style="list-style-type: none"> <li>1. Bridgton (2)</li> <li>2. Brunswick (1)</li> <li>3. Cumberland (1)</li> <li>4. Falmouth (2)</li> <li>5. Gorham (1)</li> <li>6. Portland (3)</li> <li>7. Pownal (1)</li> </ol> <p><b>4. Hancock (10)</b></p> <ol style="list-style-type: none"> <li>1. Bar Harbor (1)</li> <li>2. Blue Hill (2)</li> <li>3. Bucksport (1)</li> <li>4. Ellsworth (2)</li> <li>5. Franklin (1)</li> <li>6. Gouldsboro (1)</li> <li>7. Orland (1)</li> <li>8. Trenton (1)</li> </ol> | <p><b>5. Kennebec (11)</b></p> <ol style="list-style-type: none"> <li>1. Augusta (2)</li> <li>2. China (2)</li> <li>3. Pittston (1)</li> <li>4. Sidney (1)</li> <li>5. Waterville (2)</li> <li>6. Windsor (2)</li> <li>7. Winslow (1)</li> </ol> <p><b>6. Lincoln (10)</b></p> <ol style="list-style-type: none"> <li>1. Boothbay Harbor (1)</li> <li>2. Damariscotta (1)</li> <li>3. Dresden (1)</li> <li>4. Edgecomb (2)</li> <li>5. Newcastle (2)</li> <li>6. Waldoboro (1)</li> <li>7. Wiscasset (2)</li> </ol> <p><b>7. Oxford (10)</b></p> <ol style="list-style-type: none"> <li>1. Canton (1)</li> <li>2. Fryeburg (1)</li> <li>3. Hartford (1)</li> <li>4. Otisfield (1)</li> <li>5. Oxford (1)</li> <li>6. Paris (2)</li> <li>7. Rumford (3)</li> </ol> <p><b>8. Penobscot (11)</b></p> <ol style="list-style-type: none"> <li>1. Bangor (2)</li> <li>2. Brewer (2)</li> <li>3. Carmel (2)</li> <li>4. Hampden (1)</li> <li>5. Hermon (1)</li> <li>6. Passadumkeag (1)</li> <li>7. Veazie (2)</li> </ol> | <p><b>9. Somerset (11)</b></p> <ol style="list-style-type: none"> <li>1. Anson (1)</li> <li>2. Madison (1)</li> <li>3. Mercer (1)</li> <li>4. Norridgewock (1)</li> <li>5. Palmyra (1)</li> <li>6. Pittsfield (2)</li> <li>7. Skowhegan (3)</li> <li>8. Solon (1)</li> </ol> <p><b>10. Waldo (10)</b></p> <ol style="list-style-type: none"> <li>1. Belfast (5)</li> <li>2. Knox (1)</li> <li>3. Monroe (1)</li> <li>4. Northport (1)</li> <li>5. Stockton Springs (1)</li> <li>6. Waldo (1)</li> </ol> <p><b>11. Washington (10)</b></p> <ol style="list-style-type: none"> <li>1. Calais (1)</li> <li>2. Devereaux Twp (1)</li> <li>3. Indian Twp (1)</li> <li>4. Jonesboro (1)</li> <li>5. Jonesport (2)</li> <li>6. Princeton (1)</li> <li>7. Wesley (1)</li> <li>8. Whiting (1)</li> <li>9. Whitneyville (1)</li> </ol> <p><b>12. York (11)</b></p> <ol style="list-style-type: none"> <li>1. Acton (1)</li> <li>2. Alfred (1)</li> <li>3. Biddeford (2)</li> <li>4. Eliot (1)</li> <li>5. Kittery (1)</li> <li>6. Lebanon (1)</li> <li>7. So. Berwick (1)</li> <li>8. Wells (1)</li> <li>9. York (2)</li> </ol> |
|---|--|---|

**History of Occupant Protection Laws**

EFFECTIVE DATES	LAWS
09-20-07	Primary enforcement law takes effect; ticketing began on April 1, 2008.
01-01-03	The operator is responsible for ensuring that a child (from 40 pounds but less than 80 pounds and less than 8 years of age) is properly secured in a federally approved child restraint system.
09-19-97	The operator is responsible for securing persons under age 18 in a safety belt/seat. Persons 18 years and older are responsible for securing themselves.
09-19-97	A law enforcement officer may take enforcement action against an operator or passenger 18 years or age or older who fails to wear a seat belt only if the officer detains the operator for a suspected violation of another law. The requirement that the operator must receive a fine for the other violation in order to be subject to a penalty for the seat belt violation has been deleted.
01-01-95	With the implementation of Title 29A, the child safety seat law and seat belt law were combined into one law.
12-27-95	A statewide referendum requiring adults 19 and older to use safety belts passed on 11-07-95. The law could be enforced only if the police officer had detained the operator of a motor vehicle for a suspected violation of another law.
07-94	Driver made responsible for securing children under 4 years in a child safety seat.
10-13-93	Penalty <u>changed from fine of \$25</u> for first violation and \$50 for each subsequent violation for those aged 0 to 4 <u>to traffic infraction (up to \$500 fine)</u> .
10-13-93	Penalty <u>changed from fine of \$25</u> for first violation and \$200 for each subsequent violation for those 4 to 19 <u>to traffic infraction (up to \$500 fine)</u> .
09-29-87	Children aged 4 to 13 years must be secured in a child safety seat or safety belt.
09-30-89	Law expanded to include children 4 to 16 years.
10-09-91	Law expanded to include persons 4 to 19 years.
09-23-83	Children aged 0 to 4 years must be secured in a child safety seat.

Maine Seat Belt Observation Form

SITE NUMBER: \_\_\_\_\_ SITE: \_\_\_\_\_

NOTES: \_\_\_\_\_

DATE: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ DAY OF WEEK: \_\_\_\_\_

**WEATHER CONDITIONS**  
 1 Clear / Sunny      4 Fog  
 2 Light Rain        5 Clear but Wet  
 3 Cloudy

DIRECTION OF TRAFFIC FLOW (Circle one): N S E W

START TIME: \_\_\_\_\_ (Observation period will last exactly 45 minutes)

DRIVER				PASSENGER			DRIVER				PASSENGER		
Veh. #	Vehicle C = car T = truck S = suv V = van	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure	Veh. #	Vehicle C = car T = truck S = suv V = van	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure		
1						36							
2						37							
3						38							
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35						70							



**Night Seat Belt Use in Maine, June 2013**

# Night Seat Belt Use in Maine, June 2013

Prepared for:

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September 12, 2013



## Introduction

Maine is one of 22 States to have upgraded their seat belt law to primary enforcement since 1997. A primary belt law in Maine went into effect September 20, 2007, with an educational grace period to April 1, 2008. In 2008, NHTSA conducted a three-part evaluation of the implementation and effects of the new primary belt law (Chaudhary, Tison, & Casanova, 2010a). Because the night belt use measurement described in this report is a continuation of their work, this document quotes liberally from the Chaudhary et al. report.

Primary laws have been associated with a higher percentage of observed seat belt use (e.g. Ulmer, Preusser, & Preusser, 1995). In 2008, States with primary laws had an average observed seat belt usage rate about nine percentage points higher than those with secondary laws (based on NHTSA, 2009).

Seat belt use saves lives. It is estimated that nearly half of passenger vehicle fatalities involving unbelted occupants would be prevented if they had been properly restrained. In practice, changes from secondary to primary belt laws have led, along with greater belt use, to fewer traffic fatalities. For example, in late 1999 and early 2000, Alabama, Michigan, and New Jersey changed their laws from secondary to primary. Chaudhary (in review) reported that these laws led to increased seat belt use among fatally injured front seat occupants of motor vehicles and also decreased numbers of fatalities. Similar effects were seen with other States as they passed belt use laws – belt use increased and fatalities decreased.

Fatalities did not drop as much as expected. One explanation is drivers who were buckling up may be consistently relatively safe drivers and risky drivers, more likely to be involved in a crash, may remain unrestrained. Therefore, those most in need of seat belts were least likely to buckle up. Preusser, Williams, and Lund (1986) showed support for this contention. During this study researchers visited bars in New York State several months after the New York State seat belt law went into effect. Seat belt observations occurring on roadways near taverns showed 43 percent of drivers during the day were belted but observed belt use at the same locations dropped to 36 percent at night. Furthermore, drivers most likely to be drinking (and therefore perceived a higher risk) had even lower belt use. Indeed, drivers arriving or leaving bar parking lots at night had a 24 percent belt use rate.

### **Day Versus Night Seat Belt Use**

Research using National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS) indicates that seat belt use among fatally injured front seat occupants of passenger vehicles declines nationally across the hours of night (Chaudhary & Preusser, 2006). Figure 1 shows this effect for the State of Maine using 2002-2008 FARS data. Belt use is uniformly highest during daytime hours (5 a.m. – 2:59 p.m.), declines steadily from 3 p.m. to late evening, and is at its lowest from midnight to 4:59 a.m.

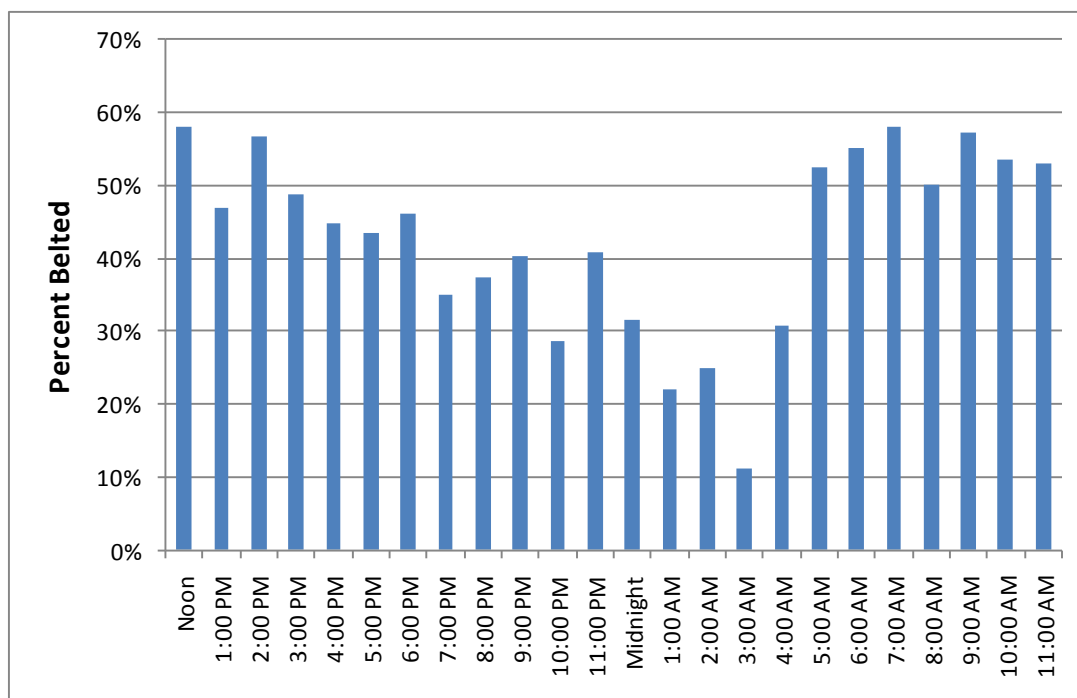


Figure 1. Percent belt use among fatally injured occupants of passenger vehicles by hour, Maine, 2002-2008

Similarly, nighttime fatalities are disproportionately frequent compared to the amount of nighttime driving. In 2007, about 26 percent of all motor vehicle fatalities occurred between the hours of 10:00 p.m. and 3:59 a.m., according to FARS, but this time period likely has less than 15 percent of daily traffic volume (Hallenbeck, 1997). Chaudhary and Preusser (2006) compared daytime and nighttime seat belt use in Connecticut, using the State’s Section 157-compliant sites, and found that daytime belt use was about 7 percentage points higher than nighttime (83 percent vs. 77 percent). Solomon, Chaudhary, and Preusser (2007) showed a similar day to night difference in New Mexico using similar observation techniques and New Mexico’s daytime statewide seat belt use site locations. This study showed that nighttime seat belt use was 6.2 percentage points lower than daytime seat belt use. Masten (2007) studied the role of primary law upgrade on nighttime seat belt use using FARS. In all but one of six states that changed their law from secondary to primary, he found an increase in seat belt use among fatally injured occupants; in several states that increase was greater at night than during the day.

In 2008, in addition to evaluating Maine’s change from secondary to primary to enforced primary belt law, Chaudhary et al. (2010a, 2010b) examined changes in daytime and nighttime seat belt use. Daytime belt use was measured at 40 “mini-survey” sites and nighttime belt use was measured at a subset of the mini-survey sites. During three time periods (prior to primary law enforcement; immediately after primary enforcement; and immediately after standard Click It or Ticket (CIOT) enforcement), belt use rose consistently for both day and night. Daytime belt use for the 40-site mini-survey rose from 77 percent to 79 percent to 84 percent. Nighttime belt use was always lower than daytime, however nighttime use rose as much or more, from 69 percent to 77 percent to 81 percent. Changes were statistically significant.

The same methodology was used in June 2009 where Maine's belt use was measured at 83 percent daytime and 80 percent nighttime-virtually unchanged from the year before. In June 2010, again the same methodology was used and Maine's belt use was 82 percent daytime and approximately 77 percent nighttime. In 2011, the figures were 82 percent daytime and 79 percent nighttime.

The current study continues the previous methodology to examine nighttime belt use in 2013 approximately five years after Maine's primary law took effect with enforcement. This study is one of a number of coordinated seat belt use measurements being undertaken by the State.

## Method

Maine's pre-2012 statewide Section 157-compliant seat belt use survey design included 120 observation sites in 10 of the 16 counties; the design was developed in 2004. A subset of 40 of those sites in six counties were used for "mini" surveys from 2008 - 2010. The 40 sites were chosen to be representative of the full 120-site design in terms of urban and rural locations and road function categories. Chaudhary et al. (2010) used those 40 sites for daytime and nighttime observations in 2008 to directly compare day and night belt usage. Observations showed that 13 of the sites at night, had fewer than five observations per 45-minute observation period during each of the three observation waves. In order to minimize the impact of these very low volume sites on the overall measures, these sites were dropped from nighttime belt use calculations (and day-night belt use comparisons were based only on the remaining 27 sites). Those 27 sites were used in 2009, 2010, 2011, and 2012.

Starting in 2012 the daytime statewide seatbelt survey was modified as per NHTSA regulations. Using observation data from the 2012 daytime survey, a mini sample of 35 was selected from the non-local roadways to be part of the new night sample. Local roadways were excluded because late night traffic volume on local roadways are typically too low to reach a minimum number of observations. Local roadways were not included in previous night observations therefore the exclusion of these roadways for the current observation sample were comparable to the previous night observation samples. Observation site criteria required at least five vehicle observations for to the site to be included in the analyses. This criteria was also used in past year analysis. As a result of this criteria six of the 35 sites were removed from the data set. The final analysis is based on 29 sites.

Site information, including county name, city/town/area identifier, exact roadway location, date, day of week, time, weather condition, and direction of traffic flow and lane(s) was documented. Each one-page data collection form recorded information for 70 vehicles, the driver of that vehicle, and the outboard front seat passenger, if observed. Multiple pages were used to record belt use as needed.

Preusser Research Group provided experienced observers, trained to follow the procedures shown in Appendix A. Observers were trained to observe proper shoulder belt use (vs. improper or no use) of the driver and if present, a right front seat passenger. Observations were made for

## APPENDIX B

non-commercial passenger vehicles only. These methods were used in Maine in previous years for daytime belt use observations and in numerous other seatbelt observation efforts.

Observers were given descriptions of the road segment and the direction of traffic to be observed. Guidance was provided to determine the exact location for observations. Observers were trained to adjust their location within the road segment if conditions made the recommended location unusable or unrepresentative (e.g., construction, nearby traffic rerouting). This was unnecessary for any of these observations. Many roads had two or more lanes of traffic. During these situations, the observation period (45 minutes) was divided by the number of lanes, each lane being observed for the proportional length of time. For example, a road with three lanes would require that each lane be observed for 15 minutes.

Observations were made for 45 minutes on a structured schedule of observation times and days. The schedule was designed to maximize the opportunity to study variations in restraint use by time of day and by day of week (e.g. day/night, weekday/weekend). Nighttime observation assignments were made across a schedule beginning at 9:00 p.m. and ending at 2:45 a.m. Road segments were randomly assigned to a day of week and time of day for observations, although consideration was given for trips to locations that required lengthy travel times. Each day and time had an equal probability of selection. Night belt observations were observed based on weekday (Sunday night-Thursday night) and weekend (Friday and Saturday night) schedules.

When needed, military grade night vision goggles and 2 million candle-power handheld infrared spotlights were used. Two staff members were needed for these observations. One staff member (observer) would observe belt use through the night vision goggles while shining the infrared light at the vehicle. This person would also call out the data while the other staff member (recorder) would write down information on the observation data sheet.

## Results

Data were collected post-CIOT, from June 1, 2013, through June 9, 2013. The numbers of observed occupants at the other sites ranged from 5 to 226. In all, there were 1,084 passenger vehicle drivers along with 295 passengers, or 1,379 occupants in all.

Belt use was calculated as the average of the 29 site belt use percentages. Overall belt use was 87.2 percent. The standard error of measurement was calculated as the standard error of the means; it was 1.36 percent. The 95% confidence interval for the statewide night belt use value was 85 percent – 90 percent.

Table 1 places these observations in context with those made in 2008 (Chaudhary et al., 2010), 2009, 2010, 2011 and 2012.

Night belt use in 2013 was more than eight percentage points higher than during the comparable time periods in 2008 – 2011, a statistically significant increase. This is contrasted with the relatively stable belt use values from 2008 through 2011.

Table 1. Statewide Night Belt Use, by Wave

	Obs. Dates	Condition	Night Belt Use
Wave 1	2/24 – 3/1/2008	Pre-enforcement	69.3%
Wave 2	4/25 – 5/3/2008	Post-enforcement	76.9%
Wave 3	5/30 – 6/12/2008	Post-CIOT	81.2%
Wave 4	5/30 – 6/13/2009	Post-CIOT	80.1%
Wave 5	6/6-6/12/2010	Post-CIOT	77.1%
Wave 6	6/3-6/11/2011	Post-CIOT	79.0%
Wave 7	6/4-6/9/2012	Post-CIOT	87.6%
<b>Wave 8</b>	<b>6/1-6/9/2013</b>	<b>Post-CIOT</b>	<b>87.2%</b>

The increase in night belt use observed in 2012 was, for the most part, sustained for the 2013 observations. The key reason for the difference between 2012 and earlier years is that groups with typically lower belt use rates, in particular pickup occupants, have had rates that were much higher, much more similar to those of other groups. It should be noted that the sites observed in 2013 were different than those observed in earlier years. It is not clear whether the relatively higher use rate in 2013 (compared to pre 2012 rates) is a function of the new sites or a continuation of the pattern demonstrated in 2012. Seat belt use did not vary significantly across roadway types but did follow the typical pattern of higher volume classes (e.g. Expressways) having higher belt use than lower volume roadways (Collectors). The highest belts use was in expressways (91%) and the lowest at Collectors (83%).

- Seat belt use varied significantly (Chi Square (3) = 16.268,  $p < .001$ ) as a function of vehicle type. Belt use was lowest for occupants of pickup trucks (82%). Vans had the highest use (96%) followed by SUVs (91%) and cars (88%).
- Female occupants buckle up 9 percentage points more than male occupants, a typical finding (Women: 93%; Men: 84%).
- Passengers in general buckle up more than drivers (94 % vs. 87%). The effect was similar for both male and female occupants.
- Typically, males in pickup trucks are the least likely group to buckle up; consistent with that the current survey showed that this group had the lowest seatbelt use rate (79.6%).

Table 2. Night Belt Use, June 2013, by Road Type, Vehicle Type, Person Type, and Role<sup>1</sup>

<b>Road Functional Class Category</b>	<b>N</b>	<b>Night Belt Use</b>
Expressways	264	91.3%
Urban Other Arterials	672	88.5%
Rural Other Arterials	312	86.2%
Collectors	131	83.2%
<b>Vehicle Type</b>		
Passenger Cars	733	87.7%
Pickups	224	81.7%
SUVs	330	90.9%
Vans	92	95.7%
<b>Sex x Driver-Passenger</b>		
Male Drivers	698	83.5%
Female Drivers	385	91.9%
Male Passengers	97	88.7%
Female Passengers	197	95.9%
<b>Sex</b>		
Male	795	84.2%
Female	582	93.3%
<b>Driver-Passenger</b>		
Driver	1084	86.5%
Passenger	295	93.6%

<sup>1</sup> Tables are raw percentages.

## Discussion

Until the past two years, night seat belt use has remained relatively stable since primary belt use enforcement began in April 2008, ranging from 81.2 percent in June 2008 to 77.1 percent in June 2010. The observation in 2012 and 2013 (from different sample sites) both show rates over 87 %. The changes in 2012 appeared to be driven by typical low belt users increasing their use, but the pattern of relative belt use for 2013 was typical, nighttime seatbelt use in 2013 followed an expected pattern but all users were higher than in the past.

As with last year the night belt use in Maine was higher than the daytime rate. It should be noted that the weighting procedure for day and night are different and daytime observations contain local roadways (which typically have the lowest belt use rates). Nevertheless, the fact that nighttime use measured slightly higher than daytime use is remarkable.

The similarity of the daytime and nighttime figures is in sharp contrast to the difference in belt use by Maine fatalities in Figure 1, where average daytime belt use of over 50 percent (by fatally injured passenger vehicle occupants) dropped to below 40 percent from 9 p.m. to midnight and about 20 percent after midnight. This lends support to previous findings that many nighttime fatalities are drawn from high-risk subpopulations, e.g., impaired drivers, that are particularly

unlikely to buckle up and are much more likely to be out in late night hours. It would be of some interest to examine FARS 2012 and 2013 relative to prior years to see if there was a change in rates of use among fatally injured occupants.

In 2002-2008, 175 passenger vehicle fatalities were unbuckled between 9 p.m. and 4:59 a.m., an average of 25 per year. It is likely that about half of them, 12-13 per year, would not have died if they had been properly restrained. Most of these fatalities occurred before Maine's primary seat belt law, and night belt use has risen by about twenty percentage points after the new law, a very positive outcome. However, targeted efforts to increase the seat belt use of all night drivers and their passengers could further improve compliance and reduce fatalities.

## References

- Chaudhary, NK. (in review). *Evaluation of the Alabama, Michigan and New Jersey Safety Belt Law Change to Primary Enforcement*.
- Chaudhary, NK & Preusser, DF. 2006. Connecticut nighttime safety belt use. *Journal of Safety Research*, 37, 353-358.
- Chaudhary, NK, Tison, J, and Casanova, TM. 2010a. *Evaluation of Maine's Safety Belt Law Change from Secondary to Primary Enforcement*. Final Report, National Highway Traffic Safety Administration, Washington, DC. DOT HS 811 259.
- Chaudhary, NK, Tison, J, and Casanova, TM. 2010b. The effects of Maine's Change to Primary Seat Belt Law on Seat Belt Use and Public Perception and Awareness. *Traffic Injury Prevention*, 11:165-172.
- Hallenbeck, ME, Smith, B, Cornell-Martinez, & Wilkinson, J. 1997. Vehicle Volume Distributions by Classification, FHWA-PL-97-025.
- Masten, SV. 2007. Do states upgrading to primary enforcement of safety belt laws experience increased daytime and nighttime belt use? *Accident Analysis and Prevention*, 39, 1131-1139.
- NHTSA. 2009. Traffic Safety Facts: Occupant Protection, 2008 Data, DOT HS 811 160.
- Preusser DF, Williams AF, & Lund AK. 1986. Seat belt use among New York bar patrons. *Journal of public health policy*, 7, 470-9.
- Solomon, MG, Chaudhary, NK, & Preusser, DF. 2007. *Daytime and Nighttime Safety Belt Use at Selected Sites in New Mexico*. Final Report, National Highway Traffic Safety Administration, Washington, DC. DOT HS 810 705.
- Ulmer, RG, Preusser, CW, & Preusser, DF. 1995. Evaluation of California's safety belt law change from secondary to primary enforcement. *Journal of Safety Research*, 26, 213-220.



## Appendix A

### SEAT BELT OBSERVATION INSTRUCTIONS

- Eligible vehicles need to have at least, but not more than, four tires and be one of the following: Private or “self-proprietor” passenger automobile, pickup truck, sport utility vehicle (SUV), jeep, minivan, or full-size van. Pickup trucks should be coded “truck.” Jeeps, Broncos, Blazers, and other vehicles of similar type should be coded “SUV.” Minivans and full-size vans should be coded “van.” Eligible vehicles should be observed regardless of the state in which they are registered.
- **Do Not Include** in your observations vehicles with more than four tires, buses, motorcycles, commercial vehicles, emergency vehicles such as police, fire, and ambulance, vehicles with mounted colored lights, government vehicles, and taxis. Do include qualified vehicles with small business markings, e.g., a removable magnetic sign like “Joe’s Plumbing.”
- Belt use will be observed for front seat occupants only. Observe and record data for the driver and passenger in the right front seat. If there is more than one front seat passenger, observe only the “outside” passenger. Do not record data for passengers in the back seat or for a third passenger riding in the middle of the front seat.
- If a child is present in the front seat in a child restraint seat, do not record anything. However, children riding in the front seat, regardless of age, who are not in child restraint seats should be observed as any other front seat passenger.
- Each observation period will last for 45 minutes.

The following procedures will be used in conducting observations of belt use:

1. As you observe an eligible vehicle, record the type of vehicle (car, truck, sport utility, van) and the sex (male or female) and restrained by shoulder belt (yes or no) of the front seat occupants (driver and front seat “outside” passenger only).
2. If you notice a lap belt in use without a shoulder belt, it should be recorded as not restrained. Only shoulder belts are to be counted.
3. If the vehicle is equipped with shoulder belts but the person has the shoulder strap under his/her arm or behind the back, this should be recorded as not restrained.
4. Observe traffic in each lane for an equal amount of time, and in the direction specified, throughout the 45-minute observation time period.
5. In many situations, it will be possible to observe every vehicle in the designated lane. However, if traffic is moving too fast to observe every vehicle, you should determine a focal point up the road in the appropriate lane. Observe the next vehicle to pass the focal point after the last vehicle has been coded.
6. Do not observe if it is raining, or if there is fog or inclement weather. If you arrive at a site and it begins to rain, do not collect data in the rain. Find a dry place and wait 15 minutes for weather to clear. If the weather clears, start observing again and extend the observation period to make up for the time missed. Otherwise, the site will be rescheduled. (Note: rain means heavy, consistent rain, not light fog, or drizzle, or mist).
7. If more than one data sheet is used, staple the sheets together at the end of the observation period and note the number of sheets used in the space provided at the bottom of the data form. Indicate on the form each time the observed lane changes.

It may happen that the site you are assigned to observe is seriously compromised due to construction or heavy traffic. If this occurs you may move one block in any direction on the same street such that you are observing the same flow of traffic that would typically have been observed had there been no construction. If moving one block will not solve the problem, then do not observe. The site will be rescheduled for a future date OR an alternate site will be selected for immediate observation.



Driver Awareness Surveys in Maine, July 2013

# Driver Awareness Surveys in Maine, July 2013

September 19, 2013

Prepared for:

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## Introduction

Maine is one of 22 States to have upgraded their seat belt law to primary enforcement since 1997. As of July 2012, 32 States, the District of Columbia, and Puerto Rico had primary enforcement laws. A primary seat belt law allows law enforcement to issue a belt citation upon observation of a seat belt violation alone. With secondary seat belt laws, police must first observe another violation (e.g. speeding) before being able to issue a seat belt citation.

The primary belt law in Maine went into effect September 20, 2007, with an educational grace period to April 1, 2008. In 2008, NHTSA conducted a three-part evaluation of the implementation and effects of the new primary belt law (Chaudhary, Tison, and Casanova, 2010). In 2009, 2010, and 2011, an additional survey of driver knowledge was conducted (Leaf and Chaudhary, 2009; Leaf and Chaudhary, 2010; Leaf and Chaudhary, 2011). Because the driver knowledge measurement described in this report is a continuation of the work reported previously, this document quotes liberally from those reports.

Primary laws have been associated with a higher percentage of observed seat belt use (e.g. Ulmer et al., 1995). In 2008, States with primary laws had an average observed seat belt usage rate about nine percentage points higher than those with secondary laws (based on NHTSA, 2009).

Seat belt use saves lives. It is estimated that nearly half of passenger vehicle fatalities involving unbelted occupants would be prevented if they had been properly restrained. In practice, changes from secondary to primary belt laws have led, along with greater belt use, to fewer traffic fatalities. For example, in late 1999 and early 2000, Alabama, Michigan, and New Jersey changed their laws from secondary to primary. Chaudhary (in review) reported that these laws increased seat belt use among fatally injured front seat occupants of motor vehicles and also decreased the number of fatalities.

Similar effects were seen with other States as they passed belt use laws – belt use increased but fatalities did not drop as much as expected. One explanation was that the drivers who were buckling up were drivers who were already relatively safe drivers and the risky drivers, more likely to be involved in a crash, remained unrestrained. Therefore, those most in need of seat belts were least likely to buckle up. Preusser, Williams, and Lund (1986) showed support for this contention. During this study, researchers observed roadways near bars and taverns in New York State several months after the New York State seat belt law went into effect. Seat belt observations occurring on roadways near taverns showed that 43 percent of drivers during the day were belted but that observed belt use dropped to 36 percent at night, at the same location. Furthermore, drivers most likely to be drinking (and therefore constituted a higher risk) had even lower belt use. Indeed, drivers arriving or leaving bar parking lots at night had a 24 percent belt use rate.

One of the key features, of course, of a primary belt law is that the general public is aware of the law and perceives a high probability of being stopped and ticketed for not being restrained. Chaudhary et al. (2010) conducted three waves of surveys of drivers at Maine Bureau of Motor Vehicles (BMV) offices. They showed that the public was aware of the main feature of the primary belt law, i.e., that they can be stopped and ticketed simply for not wearing their seat

belts. Similarly, respondent reported chances of getting a ticket remained relatively high in June 2009, 2010, 2011 and 2012 (Leaf and Chaudhary, 2009; Leaf and Chaudhary, 2010; Leaf and Chaudhary, 2011; Leaf and Chaudhary, 2012).

The current report repeats the Chaudhary et al. (2010) methodology to examine the evolution of driver knowledge and attitudes a year after they were last assessed, six years after Maine's primary belt law began to be enforced. Some results from the earlier reports are included here for perspective. The survey used in this iteration, as the one used 2010 to 2012, was modified to extend driver knowledge measurement to the topics of drinking and driving, speeding, and cell phone use.

### Method

Surveys were conducted in eight Bureau of Motor Vehicle (BMV) offices across the state of Maine: Augusta, Bangor, Ellsworth, Kennebunk, Mexico, Portland, Rockland, and South Portland. These offices were selected to provide a representative sampling of Maine drivers. Surveys were conducted from July 22, 2013 to July 31, 2013 about six weeks after the Nationwide *Click It or Ticket* campaign, which was conducted around the Memorial Day holiday.

The methods were identical to those in Chaudhary et al. (2010). Each individual completing a survey was required to be a licensed driver in the state of Maine. Individuals were approached while they were waiting to be called to a station and asked if they held a valid Maine license. Once qualified, individuals were asked to complete the anonymous survey. The survey consisted of 17 questions on one side of a single sheet of paper (see Appendix A).

Surveys prior to 2010 contained questions regarding primary seat belt law only which had recently went into effect. The last three surveys, including the current survey, began with driver background questions: age, sex, home zip code, driving frequency and primary vehicle type. In addition questions pertaining to impaired driving, speeding and cell phone use were added:

- 4 questions on seat belt use, enforcement, and enforcement publicity;
- 3 questions on drinking and driving and enforcement;
- 3 questions on speeding and enforcement; and
- 2 questions on cell phone use.

The scope of the current survey reflected major topics of emphasis within the Maine highway safety office.

### Results

#### Demographics

A total of 1,737 driver surveys were completed across the eight BMV offices. Half (50 percent) of drivers were male, and the other half female. Two percent were under 18 years of age; 12 percent were 18-25; 13 percent were 26-34; 25 percent were 35-49; 22 percent were 50-59; and 25 percent were age 60 or older. Seventeen percent drove less than 5000 miles/year; 30 percent drove 5000-10,000 miles/year; 30 percent drove 10,001-15,000 miles/year; and 24 percent drove more than 15,000 miles/year. Fifty percent drove passenger cars; 19 percent drove pickup trucks; 19 percent drove SUVs; six percent drove minivans; six percent drove full-size vans; and 5

percent drove other or multiple kinds of vehicles. These numbers are very similar to those in the 2011 and 2012 survey samples.

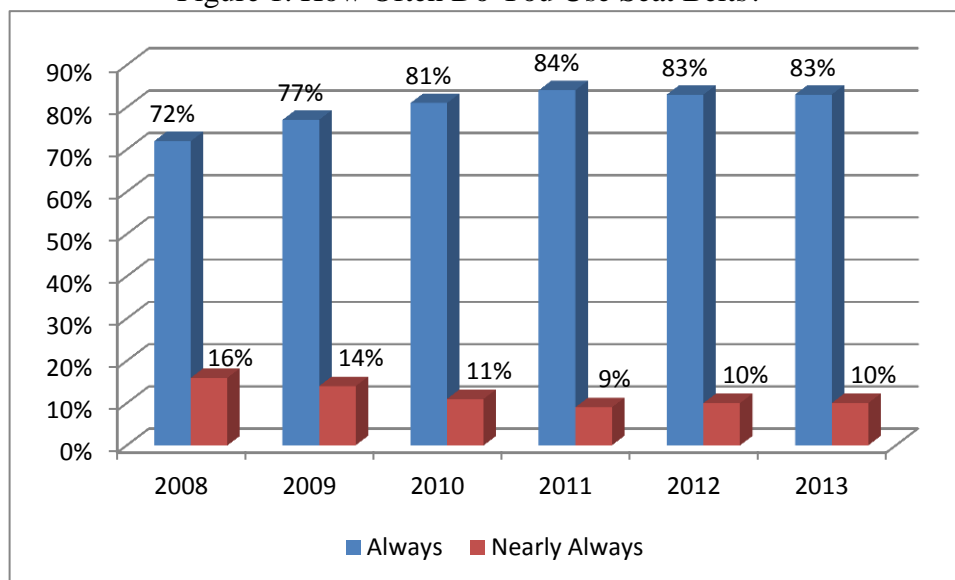
### Reported Belt Use

Self-reported belt use increased steadily from the three measurements in 2008 to July 2011 and is nearly unchanged from 2011 to 2013. The distribution of 2011-2013 belt use self-reports is given in Table 1; comparative values for the highest usage categories over the last six waves (always and nearly always) are shown in Figure 1. Note that actual belt use measured at 120 sites statewide was nearly constant at 81 percent in June 2008 and June 2009, 82 percent in June 2010 and June 2011, 84 percent in June 2012 and 83 percent in June 2013.

Table 1. Driver Reports: How Often They Use Seat Belts

How often wear belts?	July 2011		July 2012		July 2013	
	Number	Percent	Number	Percent	Number	Percent
Always	1,395	84.1%	1,329	83.0%	1447	83.4%
Nearly always	149	9.0%	160	10.0%	181	10.4%
Sometimes	72	4.3%	73	4.6%	66	3.8%
Seldom	26	1.6%	19	1.2%	23	1.3%
Never	16	1.0%	20	1.2%	18	1.0%
TOTAL N	1,658		1,601		1,735	

Figure 1. How Often Do You Use Seat Belts?



Drivers were asked how their current seat belt use compared to their belt use in recent years. Results for 2011-2013 are shown in Table 2 and, along with the preceding five waves, in Figure 2. The percent of drivers indicating that their belt use was unchanged increased to 64 percent in 2010, 68 percent in 2011, and 68-69 percent in 2012 and 2013. These increases were nearly matched by decreases in the “more often” and “much more” responses, about 38 percent

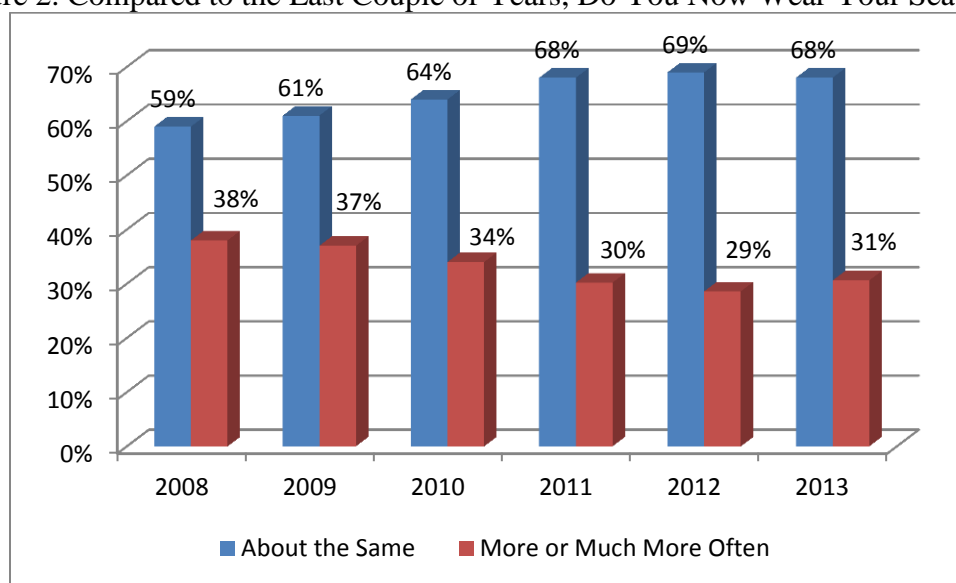
## APPENDIX C

combined for 2008 and 2009, 34 percent in 2010, and 29-31 percent in 2011, 2012 and 2013. The consistency of these reports is independent of actual belt use, which rose about seven percent over the three waves in 2008 before stabilizing in June 2008 through June 2011 and rising again in June 2012, followed by a slight drop in 2013. About one-fourth to one-third of drivers report increased belt use even though the overall belt use numbers are quite steady.

Table 2. Driver Reports: Belt Use Compared To “Last Couple of Years”

How often wear belts?	July 2011		July 2012		July 2013	
	Number	Percent	Number	Percent	Number	Percent
Much less often	19	1.2%	14	0.9%	8	0.5%
Less often	6	0.4%	18	1.1%	10	0.6%
About the same	1,109	68.3%	1,093	69.4%	1167	68.4%
More often	176	10.8%	177	11.2%	191	11.2%
Much more often	313	19.3%	274	17.4%	331	19.4%
TOTAL N	1,623		1,576		1,707	

Figure 2. Compared to the Last Couple of Years, Do You Now Wear Your Seat Belt?



Drivers also rated what they thought their chances were of getting a seat belt ticket if they drove without wearing their seat belt. More than one-third (40.3 percent) felt that they would be ticketed “always” or “nearly always” if they were not properly buckled up. This is higher than 2011 and 2012 but down significantly from June 2008 and June 2009, when 46 percent and 47 percent, respectively, of drivers thought so. Fewer drivers thought they would be ticketed “sometimes” in 2012 and 2013 (40 percent) compared to 2011 (44 percent). There is a slight decrease in the number of drivers reporting their chances as being “seldom” (14.3 percent compared to 16-17 percent for 2011-12), with slightly more indicating “never” (up to 5.8 percent from 5.0 and 5.2 respectively from 2011 and 2012).



Table 3. Driver Reports: Chances of Getting a Ticket If Driving Unbelted

Chances of getting a ticket?	July 2011		July 2012		July 2013	
	Number	Percent	Number	Percent	Number	Percent
Always	312	19.0%	360	22.7%	415	24.1%
Nearly always	248	15.1%	257	16.2%	278	16.2%
Sometimes	726	44.1%	630	39.7%	682	39.7%
Seldom	277	16.8%	256	16.1%	245	14.3%
Never	83	5.0%	83	5.2%	99	5.8%
TOTAL N	1,646		1,586		1,719	

### Awareness of Enforcement and Media Seat Belt Efforts

The next survey questions asked drivers what they had seen or heard recently about using seat belts. Note that these surveys were administered about six weeks after the annual CIOT program, which emphasizes media messages and highly visible enforcement. The first question asked, “In the past 60 days, have you seen or heard about extra enforcement where police were looking at seat belt use?” About 56 percent of respondents reported hearing about belt use enforcement in 2013. In 2012, 58 percent said they had, compared with just 53 percent in 2011.

Those who had indicated a general awareness were asked to check where they had seen or heard something and what message theme(s) they recalled. The results are summarized in Tables 4 and 5 below. 2011 and 2012 values are also presented for comparison.

Television was the most cited medium, by 32 percent of all respondents, followed by radio (18 percent), newspaper (12 percent), police checkpoints (5 percent), posters (3 percent), and web sites (2 percent). “Other” medium was selected by 8 percent of the respondents, nearly all of them explaining they heard about it from someone else (e.g., friend, people, or word of mouth).

Table 4. Where Did They See or Hear About Extra Seat Belt Enforcement

(Where see/hear about seat belts *	July 2011		July 2012		July 2013	
	Number	Percent	Number	Percent	Number	Percent
Newspaper	182	11.0%	174	10.9%	202	11.6%
Radio	295	17.9%	325	20.3%	320	18.4%
Television	435	26.3%	558	34.8%	551	31.7%
Poster	59	3.6%	49	3.1%	51	2.9%
Web site	24	1.5%	27	1.7%	26	1.5%
Police checkpoint	99	6.0%	83	5.2%	88	5.1%
Other	124	7.5%	130	8.1%	140	8.0%
TOTAL N RESPONDENTS	1,661		1,602		1,737	

\* Respondents could check more than one; percents do not need to add to 100%.

The most mentioned theme of the messages, by 43 percent of the respondents, was *Click It or Ticket*, which was the national theme that had been emphasized around Memorial Day. Seventeen percent identified *Buckle Up. No Excuses!* as the theme they had heard. Smaller numbers recognized *Drive Sober or Get Pulled Over*, (5 percent) and *Survive your drive* (5

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percent). Four percent checked “other”, but no more than one or two respondents mentioned any specific theme.

Table 5. If Yes, What Did It Say?

What did the messages say?	July 2011		July 2012		July 2013	
	Number	Percent	Number	Percent	Number	Percent
Click it or ticket	642	38.9%	739	46.1%	739	42.5%
Drive Sober or Get Pulled Over	114	6.9%	67	4.2%	79	4.5%
Buckle up. No excuses!	276	16.7%	279	17.4%	299	17.2%
Survive your drive	52	3.1%	71	4.4%	80	4.6%
Other	63	3.8%	46	2.9%	67	3.9%
TOTAL N RESPONDENTS	1,652		1,602		1,737	

### Self-Reported Belt Use and Other Factors

The surveys provide the opportunity to examine belt use, as reported by the respondents, as related to demographic characteristics and other factors in the surveys. These are the subjects of Tables 6 and 7.

Male respondents reported lower belt use than female respondents, consistent with belt use observations. Drivers ages 18-25 reported lowest belt use, followed by drivers ages 26-34. The highest belt use was reported by drivers 50-59, followed by those who were 60 and older, under 18, and 35-49. Drivers of pickup trucks are less likely to report buckling up than drivers of other vehicle types, consistent with results seen in actual belt use surveys.

Drivers who report buckling up “more often” are, oddly enough, least likely to report buckling up. The few drivers who report using their seat belts less or much less than recently are very unlikely to report buckling up compared to others. Drivers who report “about the same” or “much more often” are most likely to buckle up.

There are no significant differences in reported seat belt use between different miles driven categories. Drivers in the Kennebunk BMV office were most likely to report always buckling up, and drivers in the Ellsworth office least likely.

Table 6. Demographics and Self-Reported Belt Use

Factor	N	Self-Reported Seat Belt Use (%)				
		Always	Nearly Always	Sometimes	Seldom	Never
<b>Total</b>	1723	83.3%	10.4%	3.8%	1.3%	1.0%
<b>Sex***</b>						
Male	862	76.2%	14.8%	5.1%	2.0%	1.9%
Female	861	90.5%	6.0%	2.6%	0.7%	0.2%
<b>Age***</b>						
Under 18	41	87.8%	2.4%	7.3%	0.0%	2.4%
18-25	205	70.7%	13.7%	10.7%	2.9%	2.0%
26-34	229	75.5%	17.0%	4.8%	1.3%	1.3%
35-49	439	82.7%	11.4%	3.2%	2.1%	0.7%
50-59	378	89.4%	7.7%	1.6%	0.5%	0.8%
60+	439	88.6%	7.7%	2.3%	0.5%	0.9%
<b>Miles driven, last year</b>						
Less than 5000	285	89.5%	6.7%	2.5%	0.7%	0.7%
5000-10000	523	83.7%	9.6%	4.6%	1.3%	0.8%
10001-15000	511	82.8%	10.6%	3.7%	1.8%	1.2%
15000+	407	79.1%	14.3%	3.9%	1.2%	1.5%
<b>Vehicle driven most often***</b>						
Passenger car	871	86.7%	8.2%	3.1%	1.4%	0.7%
Pickup truck	322	71.4%	16.5%	7.1%	2.5%	2.5%
SUV	322	87.9%	9.9%	1.2%	0.3%	0.6%
Minivan	106	91.5%	6.6%	1.9%	0.0%	0.0%
Full-sized van	27	74.1%	18.5%	7.4%	0.0%	0.0%
Other	34	76.5%	2.9%	11.8%	2.9%	5.9%
<b>How often use belt now vs recent years***</b>						
Much less often	8	50.0%	0.0%	12.5%	0.0%	37.5%
Less often	10	0.0%	40.0%	40.0%	0.0%	20.0%
About the same	1167	90.0%	5.0%	2.6%	1.5%	0.9%
More often	191	44.0%	39.8%	13.6%	2.1%	0.5%
Much more often	330	85.5%	13.0%	1.5%	0.0%	0.0%
<b>BMV Office**</b>						
Augusta	260	84.2%	8.5%	5.0%	1.9%	0.4%
Bangor	264	83.3%	8.7%	6.1%	1.1%	0.8%
Ellsworth	204	74.0%	15.7%	5.4%	2.0%	2.9%
Kennebunk	204	91.7%	4.9%	2.0%	1.0%	0.5%
Mexico	183	82.5%	12.0%	2.7%	2.2%	0.5%
Portland	199	84.4%	11.6%	2.5%	0.0%	1.5%
Rockland	210	82.9%	12.9%	3.3%	0.5%	0.5%
South Portland	211	83.9%	10.4%	2.4%	1.9%	1.4%

\*\* p < .05; \*\*\* p < .001

Drivers who think the chances of being ticketed if unbelted are “always” or “never” are more likely to report always wearing their belts, followed by drivers who believe the chance of being ticketed is “nearly always” or “sometimes”. Drivers believing there is “seldom” a chance of being ticketed are least likely to report “always” using their belts. Drivers believing there is “never” a chance of being ticketed are most likely to report “never” wearing their belts.

People aware of extra seat belt enforcement within the 60 days before the survey or who recognized Click It or Ticket were somewhat less likely to report always using their seat belts and somewhat more likely to report the lower levels of belt use.

Table 7. Awareness of Seat Belt Campaigns and Self-Reported Belt Use

Factor	N	Self-Reported Seat Belt Use (%)				
		Always	Nearly Always	Sometimes	Seldom	Never
<b>Chances of getting ticket if unbelted***</b>						
Always	414	94.4%	3.6%	0.7%	0.5%	0.7%
Nearly Always	278	81.3%	14.0%	3.2%	1.1%	0.4%
Sometimes	682	79.8%	12.9%	5.3%	1.9%	0.1%
Seldom	244	75.4%	13.5%	6.1%	1.6%	3.3%
Never	99	87.9%	4.0%	3.0%	0.0%	5.1%
<b>Past 60 days, seen/heard about extra seat belt enforcement***</b>						
Yes	962	79.7%	13.0%	4.4%	1.7%	1.2%
No	773	88.0%	7.2%	3.1%	0.9%	0.8%
<b>Recognized Click It or Ticket**</b>						
Yes	737	80.3%	13.0%	4.5%	1.2%	0.9%
No	998	85.7%	8.5%	3.3%	1.4%	1.1%

\*\* p < .05; \*\*\* p < .001

### Drinking and Driving

Three questions addressed the issue of drinking and driving. The first asked how often within the last 60 days the respondent had driven within two hours after drinking alcoholic beverages. Nearly seven out of eight respondents (87.3 percent) report never doing so. Another 6.4 percent report drinking and driving once or twice, and 6.4 percent report doing so three or more times.

The results are summarized in Table 8 below. Female respondents are more likely than male respondents to report never drive after drinking (90 percent vs. 84 percent). Only one driver less than 18 (out of 40) reports driving after drinking. Drivers 18-25 are most likely to report driving after drinking, followed by those 26-34; drivers 60 and over were least likely to drive after drinking. Also, drivers who report always wearing seat belts are more likely to never drive after drinking (89 percent) than drivers who report less belt use (78 percent). Drivers who report driving the least (< 5000 miles/year) more often never drove after drinking (95 percent) than drivers who drove more miles (85-87 percent). People from the Rockland and Portland offices were least likely to report never driving after drinking (77% and 80% respectively), with the remaining offices ranging from 87.9% to 91.2%). There were no differences in reported driving after drinking by type of vehicle driven (not shown).

Table 8. Self-Reported Driving Within Two Hours After Drinking In The Last 60 Days

Factor	Total N	Frequency, drive after drinking in 60 days (%)		
		Never	1-2 times	3+ times
<b>Total</b>	1668	87.3%	6.4%	6.4%
<b>Sex***</b>				
Male	831	84.4%	6.9%	8.8%
Female	837	90.2%	5.9%	3.9%
<b>Age**</b>				
Under 18	40	97.5%	2.5%	0.0%
18-25	199	82.9%	7.5%	9.5%
26-34	223	85.2%	5.8%	9.0%
35-49	425	85.9%	7.1%	7.1%
50-59	371	87.9%	8.1%	4.0%
60+	418	90.4%	4.3%	5.3%
<b>Miles driven last year***</b>				
Less than 5000	276	95.3%	4.0%	0.7%
5000-10000	504	86.7%	6.0%	7.3%
10001-15000	496	85.5%	7.9%	6.7%
15000+	396	84.8%	6.6%	8.6%
<b>Self-Reported Seat Belt Use***</b>				
Always	1396	89.3%	5.4%	5.3%
All other	283	77.7%	11.0%	11.3%
<b>BMV Office***</b>				
Augusta	251	91.2%	5.6%	3.2%
Bangor	253	90.9%	3.6%	5.5%
Ellsworth	199	88.4%	7.0%	4.5%
Kennebunk	199	87.9%	4.5%	7.5%
Mexico	177	90.4%	4.5%	5.1%
Portland	193	80.3%	10.4%	9.3%
Rockland	204	77.0%	11.3%	11.8%
South Portland	204	90.7%	4.9%	4.4%

\*\* p < .05; \*\*\* p < .001

Overall, 48 percent of respondents felt that the likelihood of being arrested if driving impaired was “always” or “nearly always”. Another 47 percent felt they would be arrested “sometimes”. Few thought impaired drivers had very low chances of being apprehended; just 5 percent answered “seldom”, 1 percent “never”. Details are given in Table 9.

Nearly three in four drivers (70 percent) report seeing or hearing about impaired driving enforcement within the last 60 days. Those drivers felt the likelihood of arrest for impaired driving was slightly higher than did the drivers who had not seen recent enforcement messages.

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Female respondents felt the odds of arrest for impaired driving were higher than did male respondents, and young drivers felt the odds were higher than did older drivers. Those with higher self-reported levels of seat belt use felt the likelihood of arrest for impaired driving was higher. There were no differences by miles driven or vehicle type (all not shown).

Table 9. Awareness of Impaired Driving Enforcement and Perceived Likelihood of Arrest

Factor	Total N	Perceived likelihood of arrest if driving impaired (%)				
		Always	Nearly always	Sometimes	Seldom	Never
<b>Total</b>	1718	21.9%	25.7%	47.3%	4.5%	0.6%
<b>Past 60 days, seen/heard about extra seat belt enforcement***</b>						
Yes	1209	23.6%	27.0%	45.7%	3.5%	0.2%
No	509	17.9%	22.6%	51.3%	6.9%	1.4%

\*\*\* p < .001

### Speeding

Overall, nearly 8 in 9 drivers (87%) admitted driving more than 35 mph on roads with a 30 mph speed limit at least occasionally. Two percent said they did it “always”, and 8 percent said they did it “nearly always”. Most (44 percent and 32 percent respectively) reported “sometimes” or “seldom”. Just 13 percent said they “never” did so.

Male respondents admitted going over 35 mph more than female respondents. Drivers ages 18-25 were most likely to speed, followed by drivers under 18 and drivers 26-34. Drivers age 60 and older were least likely to speed. Drivers who drove less than 5000 miles/year were most likely to report speeding “seldom” or “never” while those who drove more than 15,000 were most likely to report speeding always or nearly always. SUV drivers were most likely to report speeding always or nearly always and pickup drivers were least likely to report speeding seldom or never. Drivers who always used their seat belts were less likely to speed than other drivers. The details are shown in Table 10.

Table 10. Self-Reported Driving More Than 5 Mph Over 30 Mph Speed Limit

Factor	Total N	How often drive over 35mph in 30 mph zone (%)				
		Always	Nearly Always	Sometimes	Seldom	Never
Total	1716	2.3%	8.3%	44.5%	31.9%	13.1%
<b>Sex**</b>						
Male	860	2.6%	9.8%	45.5%	29.1%	13.1%
Female	856	2.0%	6.8%	43.5%	34.8%	13.0%
<b>Age***</b>						
Under 18	41	9.8%	7.3%	46.3%	17.1%	19.5%
18-25	205	4.4%	13.2%	48.8%	26.3%	7.3%
26-34	228	1.8%	11.4%	46.9%	27.6%	12.3%
35-49	436	2.1%	8.3%	40.6%	36.5%	12.6%
50-59	376	2.4%	7.4%	43.6%	35.4%	11.2%
60+	438	0.9%	5.0%	45.4%	30.6%	18.0%
<b>Miles driven, last year***</b>						
Less than 5000	285	2.1%	4.9%	39.3%	28.8%	24.9%
5000-10000	520	1.7%	6.2%	44.0%	33.5%	14.6%
10001-15000	508	1.8%	8.1%	46.1%	35.4%	8.7%
15000+	406	3.4%	13.5%	46.3%	27.6%	9.1%
<b>Vehicle driven most often**</b>						
Passenger car	868	2.5%	7.5%	43.1%	31.9%	15.0%
Pickup truck	322	2.2%	8.4%	50.9%	26.7%	11.8%
SUV	321	1.6%	10.3%	45.2%	34.9%	8.1%
Minivan	104	1.0%	5.8%	35.6%	37.5%	20.2%
Full-sized van	26	0.0%	7.7%	42.3%	38.5%	11.5%
Other	34	5.9%	14.7%	35.3%	23.5%	20.6%
<b>Self-Reported Seat Belt Use***</b>						
Always	1440	1.7%	6.8%	43.4%	33.3%	14.8%
Not Always	287	5.2%	15.3%	49.1%	24.7%	5.6%

\*\* p < .05; \*\*\* p < .001

Drivers were very ready to believe speeding results in tickets. For driving over the speed limit, 11 percent of drivers reported believing the offense would “always” result in a ticket, and another 21 percent felt it would “nearly always” produce a ticket. Just 1 percent felt it would “never” result in a ticket.

Drivers who more often drive over the speed limit were less likely to believe such behavior results in tickets; drivers who report never driving over the speed limit were most likely to believe it would “always” result in a ticket.

About half of all drivers (53 percent) reported seeing or hearing about heightened police enforcement of speeding laws. They were much more likely to also report high likelihood of being ticketed for exceeding the speed limit. Details are shown in Table 11.

Table 11. Awareness of Speeding Enforcement and Perceived Likelihood of Ticket

Factor	N	Chances of getting ticket if drive over speed limit (%)				
		Always	Nearly Always	Sometimes	Seldom	Never
Total	1728	11.0%	21.2%	58.8%	8.2%	0.8%
<b>How often drive over 35 in 30 mph zone***</b>						
Always	39	15.4%	10.3%	35.9%	33.3%	5.1%
Nearly always	142	6.3%	17.6%	62.0%	14.1%	0.0%
Sometimes	765	5.6%	19.0%	67.1%	8.0%	0.4%
Seldom	551	9.6%	26.7%	57.2%	6.5%	0.0%
Never	228	34.2%	19.7%	37.3%	5.3%	3.5%
<b>Past 60 days, seen/heard about extra speeding enforcement***</b>						
Yes	912	14.6%	25.3%	54.3%	5.2%	0.7%
No	812	6.9%	16.7%	63.9%	11.7%	0.7%

\*\*\* p < .001

### Hand-held cell phone calling and texting

The use of hand-held cell phones for calling and for texting is under intense scrutiny at the present time. Cell phone use has been shown to be roughly equivalent to alcohol-impaired driving in increased crash involvement, and texting involves more extreme distraction.

Though both are demonstrably risky behaviors, they are popular activities for Maine drivers, though small improvements are becoming evident. The percent of drivers indicating they never use hand held cell phones while driving has increased from 27.7% in 2011, to 28.7% in 2012 and now 31.7% in 2013. Texting while driving has also decreased from 2011 to 2013 but by a much smaller margin, from a low of 72.4% of drivers saying they never text while driving to 73.6% of drivers in 2013. The full distributions of responses from 2011 to 2013 are shown in Table 12.

Table 12. Driver Reports: Hand-Held Cell Phone Calling and Texting While Driving

	Use hand-held cell phone			Text while driving		
	July 2011	July 2012	July 2013	July 2011	July 2012	July 2013
Always	1.7%	2.2%	1.3%	1.3%	0.7%	0.3%
Nearly always	5.3%	4.1%	3.7%	1.9%	1.0%	1.3%
Sometimes	33.8%	33.8%	32.9%	9.1%	9.7%	8.1%
Seldom	31.5%	31.2%	30.4%	15.4%	15.3%	16.7%
Never	27.7%	28.7%	31.7%	72.4%	73.3%	73.6%
TOTAL N	1,652	1,594	1,737	1,652	1,594	1,737

Drivers who text while driving tend to be the same ones who make and receive hand-held cell phone calls while driving. Of those who “always” or “nearly always” make hand-held cell calls, 71% admit to any texting, and 23% admit to texting “always” or “nearly always”. Ninety-eight percent of those who “never” make hand-held cell phone calls also “never” text.



As shown in Table 13, there was no difference in hand-held cell phone use by sex. With the exception of under-18 drivers, hand-held cell phone use was greatest for drivers ages 18-25 and dropped off with increasing age. Under-18 drivers “always” or “nearly always” used hand-held cell phones as much as anyone but also had very high rates of “never” using the devices. Hand-held cell phone use was least for drivers with less than 5000 miles driven last year and increased with mileage; it’s important to emphasize that the measure is of the rate of phone use, not the total number of calls. Like 2011, full-size van drivers were more likely to use cell phones, followed by pickup truck drivers and drivers of other vehicles. Drivers who always wore seat belts used hand-held cell phones much less than drivers who used their seat belts less often.

Table 13. Self-Reported Talking on Hand-Held Cell Phone When Driving

Factor	Total N	How often talk on hand-held cell phone when driving (%)				
		Always	Nearly Always	Sometimes	Seldom	Never
<b>Total</b>	1718	1.3%	3.7%	33.1%	30.6%	31.4%
<b>Sex</b>						
Male	860	1.9%	3.7%	31.9%	30.0%	32.6%
Female	858	0.8%	3.5%	34.3%	31.1%	30.3%
<b>Age***</b>						
Under 18	41	2.4%	7.3%	19.5%	22.0%	48.8%
18-25	204	2.9%	6.9%	45.1%	27.0%	18.1%
26-34	227	2.2%	6.2%	47.6%	28.2%	15.9%
35-49	438	1.8%	3.9%	42.0%	32.4%	19.9%
50-59	378	0.8%	4.2%	31.2%	33.6%	30.2%
60+	438	0.0%	0.0%	13.5%	29.5%	57.1%
<b>Miles driven, last year***</b>						
Less than 5000	283	0.4%	2.1%	18.4%	22.6%	58.5%
5000-10000	522	0.4%	2.5%	30.1%	30.1%	37.0%
10001-15000	510	2.0%	3.9%	36.9%	34.5%	22.7%
15000+	406	2.5%	5.9%	41.6%	31.3%	18.7%
<b>Vehicle driven most often**</b>						
Passenger car	869	0.8%	3.6%	30.5%	31.3%	33.8%
Pickup truck	322	1.9%	5.0%	34.5%	27.6%	31.1%
SUV	322	2.2%	2.2%	38.2%	33.2%	24.2%
Minivan	105	1.0%	2.9%	29.5%	24.8%	41.9%
Full-sized van	27	0.0%	7.4%	33.3%	33.3%	25.9%
Other	32	0.0%	6.3%	43.8%	9.4%	40.6%
<b>Self-Reported Seat Belt Use***</b>						
Always	1440	0.9%	3.1%	29.7%	31.5%	34.8%
Not Always	289	3.5%	6.6%	48.8%	24.9%	16.3%

\*\* p < .05 \*\*\* p < .001

Patterns were similar for texting, though at lower levels of activity than hand-held cell phone use (not shown). Texting did not vary by sex or by type of vehicle. Drivers under 18 texted at levels that would fall in between those for drivers 18-25 and 26-34. For all remaining age categories texting gradually decreased with age. Drivers reporting miles driven as 10,000 to 15,001 miles had the highest rate of texting (2.6%), more than twice that of the other miles driven categories. Finally, texting increased as belt usage decreased.

## Discussion

In eight Maine Bureau of Motor Vehicles offices in July 2013, 1,737 drivers with valid Maine driver's licenses completed one-page surveys. Respondent demographics were very similar to those from the 2011 and 2012 survey samples. Drivers were surveyed about their knowledge of recent campaigns to increase awareness and compliance as well as their own attitudes and belt use. They were also surveyed about drinking and driving, speeding, and texting and calling using hand-held cell phones.

This survey is an extension of seven earlier surveys. The first four looked exclusively at seat belt laws, campaigns, and use. Surveys in 2010, 2011 and 2012 had expanded scope identical to the current survey. Two surveys were conducted in 2008 just before and after April 1, 2008, which was the time that Maine's primary seat belt law first began to be enforced. The third of those surveys was done in early June 2008, after the national CIOT enforcement and media campaign, and the fourth was done in early June 2009, also just after the CIOT emphasis. The fifth survey was done in early July 2010, about 6 weeks after CIOT, as were the surveys in 2011, 2012 and the current survey in 2013.

Overall seat belt use in passenger vehicles, as measured by Maine in NHTSA-approved observation designs, was nearly unchanged over the first three years: 83.0 percent in 2008, 82.6 percent in 2009, 82.0 percent in 2010, and 81.6 percent in 2011. With a new survey design, observed belt use rose to 84.4 percent in 2012. In 2013, observed belt use was 83 percent.

Most drivers reported high personal use of seat belts (83 percent "always" and 10 percent "nearly always"), consistent with actual statewide use. Although actual statewide belt use was nearly stable since 2008, drivers regularly reported using their seatbelts more than the year before: for the first five waves (three in 2008, one in 2009, and one in 2010), about 61 percent of drivers reported "about the same" belt use as in the preceding year, about 16 percent reported "more often", and about 20 percent reported "much more often." There are fairly consistent responses for 2011-2013. In 2011 and in 2013, the figures were 68 percent, 11 percent, and 19 percent, respectively. In 2012, figures were slightly different but very similar at 69 percent, 11 percent, and 17 percent, respectively.

Nearly half of the drivers in 2012 (46 percent) were aware of the CIOT campaign completed several weeks before the surveys were administered, up from 39 percent in 2011. This year, 43 percent of drivers were aware of the campaign. Also this year, 17 percent (the same as in 2012) recognized the *Buckle Up. No Excuses!* campaign that was used in 2007 and 2008 to publicize the new primary law but not more recently.

Differences in reported seat belt use reinforced observed belt use differences and offered interesting additional patterns. By their own reports, male drivers buckle up less, as do drivers ages 18-34, and pickup drivers.. Interestingly, those drivers indicating the highest and lowest perceived chances of getting a ticket report the highest belt use. Awareness of seat belt enforcement efforts and the CIOT campaign, were both reliable predictors of slightly lower belt use this year, contrary to the results for 2012.

The current survey repeated the broader focus of the 2010 through 2012 surveys by looking at impaired driving, speeding, and cell phone use. Very few drivers report driving within two hours after drinking alcohol, though males and younger drivers more often did this. It should be noted that this behavior, as described, is not illegal. While driving with any alcohol in one's system increases crash risk, a single drink one to two hours before driving is likely to produce a BAC of 0.02 g/dl or less, well below the legal per se limit (.08). Questions which tap into the frequency of legally impaired driving, opinions about it, and expectations of the risk of arrest, could be a useful extension of these more general questions. Self-reported use of hand-held cell phones while driving and self-reported texting while driving have both shown small but persistent declines over the past three years. These drops are accompanied by increases in the percent of respondents reporting that they never use hand-held cell phones while driving (28 percent to 32 percent) and never text while driving (72 percent to 74 percent). A review of the programs and efforts in place to address cell phone use while driving in Maine might serve useful to continue to make strides in this area.

Overall, the results of these surveys are useful measures of the effectiveness of seat belt use campaigns in reaching the public. They also provide detailed information about characteristics of people who use seat belts regularly and those who don't and may point to ways to continue to increase the public's use of seat belts. Expanding them to include other key traffic safety issues such as alcohol, speed, and distracted driving, provides information about attitudes and behaviors in these areas and allows for the unique study of common patterns within individuals.

## References

- Chaudhary, NK (in review). *Evaluation of the Alabama, Michigan and New Jersey Safety Belt Law Change to Primary Enforcement*.
- Chaudhary, NK, Tison, J, & Casanova, TM (2010). *Evaluation of Maine's Safety Belt Law Change from Secondary to Primary Enforcement*. Final Report, National Highway Traffic Safety Administration, Washington, DC. DOT HS 811 259.
- Chaudhary, NK, Tison, J, & Casanova, TM (2010). The effects of Maine's Change to Primary Seat Belt Law on Seat Belt Use and Public Perception and Awareness. *Traffic Injury Prevention, 11*:165-172.
- Leaf, WA & Chaudhary, NK (2009). Driver Awareness Surveys in Maine, June 2009. Report to the University of Southern Maine, November, 2009.
- Leaf, WA & Chaudhary, NK (2010). Driver Awareness Surveys in Maine, July 2010. Report to the University of Southern Maine, September, 2010.
- Leaf, WA & Chaudhary, NK (2010). Driver Awareness Surveys in Maine, July 2011. Report to the University of Southern Maine, September, 2011.
- NHTSA (2009). Traffic Safety Facts: Occupant Protection, 2008 Data, DOT HS 811 160.
- Preusser, DF, Williams, AF, & Lund, AK (1986). Seat belt use among New York bar patrons. *Journal of public health policy, 7*, 470-9.
- Ulmer, RG, Preusser, CW, & Preusser, DF (1995). Evaluation of California's safety belt law change from secondary to primary enforcement. *Journal of Safety Research, 26*, 213-

## Appendix A

*This Driver Licensing Office is assisting in a vehicle safety study. Your answers to the following questions are voluntary and anonymous. Please complete the survey and then put it in the drop box.*

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1. Your sex:  Male  Female
2. Your age:  Under 18  18-25  26-34  35-49  50-59  60 Plus
3. Your Zip Code: \_\_\_\_\_
4. About how many miles did you drive last year?  
 Less than 5,000  5,000 to 10,000  10,001 to 15,000  More than 15,000
5. What type of vehicle do you drive most often?  
 Passenger car  Pickup truck  Sport utility vehicle  Minivan  Full van  Other
6. How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle or pickup?  
 Always  Nearly always  Sometimes  Seldom  Never
7. Compared to the last couple of years, would you say you now wear your seat belt:  
 Much less often  Less often  About the same  More often  Much more often
8. What do you think the chances are of getting a ticket if you don't wear your seat belt?  
 Always  Nearly always  Sometimes  Seldom  Never
9. In the past 60 days, have you seen or heard about extra enforcement where police were looking at seat belt use?  
 Yes  No  
 If yes, where did you see or hear about it? (Check all that apply):  
 Newspaper  Radio  TV  Poster  Web site  Police checkpoint  
 Other \_\_\_\_\_  
 If yes, what did it say:  
 Click It or Ticket  Drive Sober or Get Pulled Over  Buckle Up. No Excuses!  
 Survive Your Drive  Other \_\_\_\_\_
10. In the past 60 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages? \_\_\_\_\_ (number of times)
11. In the past 60 days, have you read, seen or heard anything about police enforcement of alcohol impaired driving (or drunk driving) laws?  Yes  No
12. What do you think the chances are of someone getting arrested if they drive after drinking?  
 Always  Nearly always  Sometimes  Seldom  Never
13. On a local road with a speed limit of 30 mph, how often do you drive faster than 35 mph?  
 Always  Nearly always  Sometimes  Seldom  Never
14. In the past 60 days, have you read, seen or heard anything about police enforcement of speed laws?  
 Yes  No
15. What do you think the chances are of getting a ticket if you drive over the speed limit?  
 Always  Nearly always  Sometimes  Seldom  Never
16. How often do you talk on a hand-held cellular phone when you drive?  
 Always  Nearly always  Sometimes  Seldom  Never
17. How often do you send text messages or emails on a hand-held cellular phone when you drive?  
 Always  Nearly always  Sometimes  Seldom  Never

**Marketing Flowchart**

