

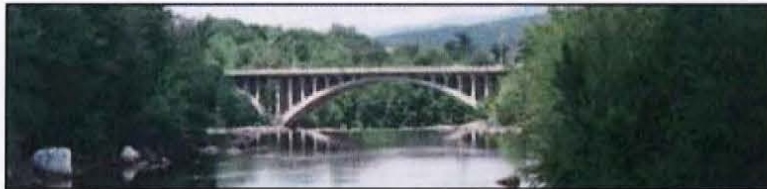
# MAINE STATE LEGISLATURE

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**State of Maine Department of Public Safety  
Bureau of Highway Safety**



**Federal Fiscal Year 2007  
Annual Highway Safety Report**

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Report Submitted: December 26, 2007



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## **Introduction**

The Maine Bureau of Highway Safety (BHS) is a Bureau within the Department of Public Safety. BHS currently consists of five full-time employees all dedicated to ensuring safe motor transportation for all traveling on Maine roads and highways.

BHS provides leadership and financial resources that develop, promote and coordinate programs designed to influence public and private policy, make systemic changes and heighten public awareness of highway safety issues. Through the administration of federal funding from the National Highway Traffic Safety Administration, the Federal Highway Administration and State Highway funds, BHS impacted each of the major identified program areas in FY 2007:

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

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 2007 (October 1, 2006 – September 30, 2007).



**Governor:**

**John E. Baldacci**

**Governor's Highway Safety  
Representative:**

**Anne H. Jordan, Commissioner**

**Director, Highway Safety Office:**

**Lauren V. Stewart**

**Contract and Grant Specialist:**

**Carl J. Hallman**

**Highway Safety Coordinators:**

**Johnny Male  
Michelle Ward**

**Administrative Assistant:**

**Laura Nichols**



## **2007 Accomplishments**

With help from all of our partners in highway safety, BHS celebrated a number of successes during Federal Fiscal Year 2007.

### ➤ **Maine Primary Seat Belt Law**

The 123<sup>rd</sup> Legislature passed a bill (LD 24) allowing for primary enforcement of a seat belt law for Maine. The law took effect in September of 2007 but allows for a "grace period" until April of 2008.

The primary belt law text:

**Sec. 1. 29-A MRSA §2081, sub-§3-A,** as amended by PL 2005, c. 12, Pt. AAA, §3, is further amended to read:

**3-A. Other passengers 18 years of age and older; operators.** When a person 18 years of age or older is a passenger in a vehicle that is required by the United States Department of Transportation to be equipped with seat belts, the passenger must be properly secured in a seat belt. Each such passenger is responsible for wearing a seat belt as required by this subsection, and a passenger that fails to wear a seat belt as required by this subsection is subject to the enforcement provisions of subsection 4. The operator of a vehicle that is required by the United States Department of Transportation to be equipped with seat belts must be secured in the operator's seat belt. Violation of this subsection is a traffic infraction for which a fine of \$50 for the first offense, \$125 for the 2nd offense and \$250 for the 3rd and subsequent offenses must be imposed. A fine imposed under this subsection may not be suspended by the court. A vehicle, the contents of a vehicle, the driver of or a passenger in a vehicle may not be inspected or searched solely because of a violation of this subsection.

**Sec. 2. 29-A MRSA §2081, sub-§4, ¶E,** as amended by PL 1997, c. 450, §3 and affected by §5, is repealed.

**Sec. 3. Warning required.** Notwithstanding the Maine Revised Statutes, Title 29-A, section 2081, subsection 3-A, a person detained solely for a violation of Title 29-A, section 2081, subsection 3-A before April 1, 2008 may only be issued a warning.

➤ Seat Belt Usage Rate

The Maine seat belt usage rate in 2002 was 59.2%. With a five-year dedicated enforcement and public education campaign the usage rate increased to 79.8% in 2007.

Seat Belt Usage Rates 1986-2007:

1986	23.0%
1991	33.0%
1995	47.0%
1997	59.0%
1998	59.0%
2002	59.2%
2004	72.3%
2005	75.8%
2006	77.2%
2007	79.8%

➤ CPS Observational Survey

In the spring of 2007, BHS contracted with the University of Maine Muskie Research Center and Safe Kids of Maine to conduct an observational survey of child passengers. The survey was conducted from March through May in all of Maine's 16 counties. Using a probability-based sampling method, 86 intersections were selected for observation. Restraint use was observed and recorded for all drivers and for all children age 11 or younger. Restraint misuse was not recorded in this survey. The overall child restraint use rate showed that **89.7%** of all children under the age of 12 were in some type of restraint. Future surveys could be more specific to age and type of restraint use and misuse.

➤ Share the Road with Motorcycles Campaign

In partnership with the Office of the Secretary of State and the United Bikers of Maine, BHS launched a very successful "Share the Road" safety campaign directed at motorcyclists and motor vehicle operators. Secretary of State Matthew Dunlap voiced two radio announcements that played statewide from May to September. In addition, a motorcycle safety television spot from Idaho was retagged for Maine and played on major television stations until September. BHS is happy to report that motorcycle fatalities have decreased from 23 in 2006 to 21 in 2007.



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### **Motor Vehicle Crash Data Trends- Fatalities**

#### **U.S. Fatality Rate:**

2004: 1.46 fatalities per 100 million VMT  
 2005: 1.47 fatalities per 100 million VMT  
 2006: 1.42 fatalities per 100 million VMT

#### **Maine Fatality Rate:**

2004: 1.30 fatalities per 100 million VMT  
 2005: 1.13 fatalities per 100 million VMT  
 2006: 1.10 fatalities per 100 million VMT

#### **Top 10 Counties by Fatalities (2006):**

Cumberland	28
York	20
Kennebec	19
Somerset	16
Androscoggin	15
Oxford	14
Penobscot	14
Hancock	12
Aroostook	11
Franklin	7

#### **Regional Motor Vehicle Crash Fatalities 2006:**

Maine	188
New Hampshire	127
Vermont	87
Massachusetts	430
Connecticut	301
Rhode Island	81

In 2006, 42,642 people were killed in the U.S. in motor vehicle crashes. In Maine, motor vehicle crashes killed 188\* people (Maine had 36,403 total reportable crashes in 2006). As of December 10, Maine has had 30,622 crashes, of which 161 were fatal crashes, causing 173 fatalities.

\*188 represents the total number of fatalities from passenger motor vehicles, motorcycles, bicycles, pedestrians, and ATVs.

**MAINE MOTOR VEHICLE CRASH DATA  
FROM 1976-2006**

<u>YEAR</u>	<u>TOTAL CRASHES</u>	<u>FATAL CRASHES</u>	<u>ALCOHOL INVOLVEMENT</u>	<u>SPEED INVOLVEMENT</u>	<u>NUMBER OF PEOPLE KILLED</u>
1976	30,147	201	136 (59.9%)		227
1977	32,183	200	131 (60.1%)		218
1978	32,719	212	147 (60%)		245
1979	29,577	203	140 (58.6%)		239
1980	27,910	234	157 (60.2%)		261
1981	26,698	186	127 (60.2%)		211
1982	30,522	151	84 (50.6%)		166
1983	31,375	198	127 (56.7%)		224
1984	34,544	211	125 (53.9%)		232
1985	36,799	189	110 (53.4%)		206
1986	40,378	190	108 (50.5%)		214
1987	43,201	212	114 (49.1%)		232
1988	40,764	231	89 (34.8%)		256
1989	43,498	175	61 (32.1%)		190
1990	37,468	196	81 (38%)		213
1991	35,046	181	73 (35.6%)		205
1992	35,548	189	85 (39.7%)		214
1993	37,819	168	74 (40%)		185
1994	37,561	167	65 (34.4%)	74 (39%)	189
1995	38,512	171	51 (27.1%)	71 (37%)	188
1996	39,760	156	55 (32.5%)	76 (45%)	169
1997	42,510	172	63 (32.8%)	71 (37%)	192
1998	40,877	176	50 (26%)	79 (41%)	192
1999	39,024	168	51 (28.2%)	79 (43%)	181
2000	37,251	159	46 (27.2%)	74 (43%)	169
2001	37,580	170	49 (25.5%)	73 (38%)	192
2002	36,979	186	42 (19.4%)	83 (38.42%)	216
2003	35,652	186	57 (27.53%)	79 (38.16%)	207
2004	35,226	178	60 (30.92%)	90 (46%)	194
2005	34,196	151	55 (32.5%)	86 (50%)	169
2006	36,403	168	64 (34%)	61 (32%)	188

Source: FARS Data and MDOT

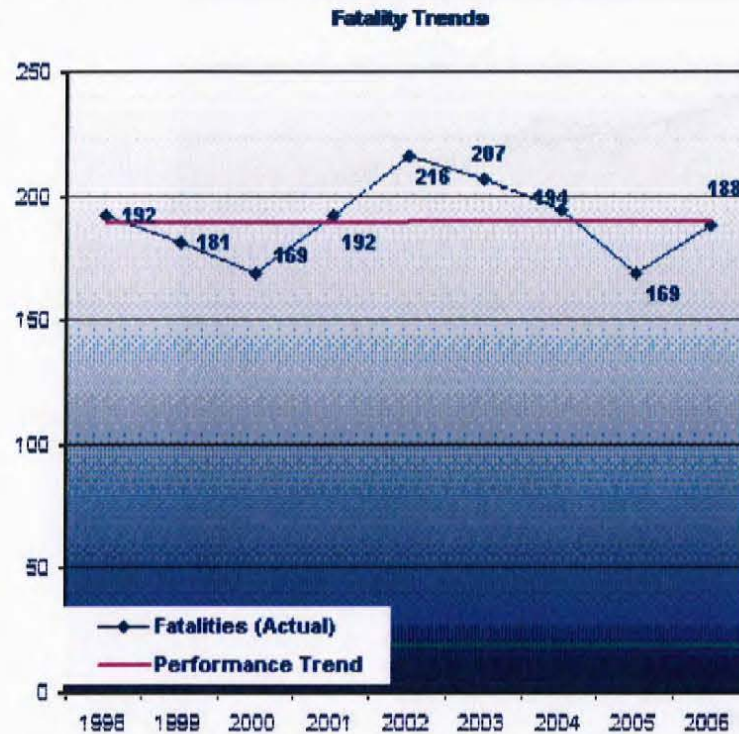


## Crash Data Summary

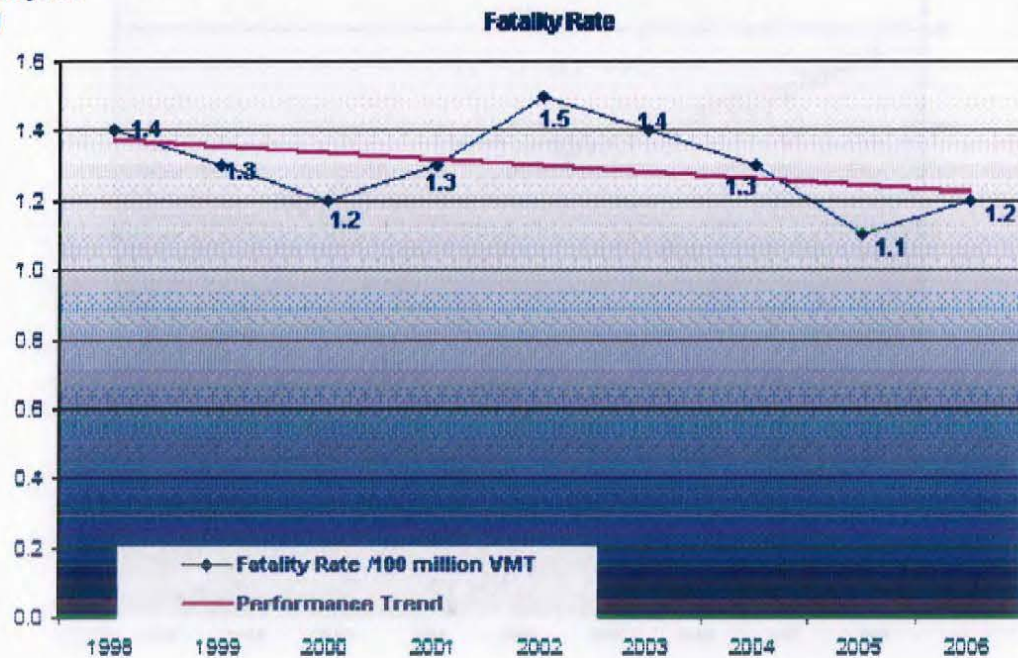
<b>Fatalities (Actual)</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	192	181	169	192	216	207	194	169	188
<b>Fatality Rate /100 million VMT</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	1.4	1.3	1.2	1.3	1.5	1.4	1.3	1.1	1.2
<b>Serious Injuries (Actual)</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	1,334	1,298	1,271	1,222	1,237	1,091	1,119	1,030	996
<b>Fatality &amp; Serious Injury Rate/(100 million VMT)</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	11.5	10.6	10.2	9.8	10.14	8.8	8.8	7.9	7.8
<b>Fatality Rate/100K Population</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	15.5	14.4	14.2	14.9	16.8	16.1	14.7	12.7	14.2
<b>Fatal &amp; Serious Injury Rate/100K population</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	122.9	118.5	113.3	109.4	112.9	100.9	99.8	90.7	89.5
<b>Alcohol Related Fatalities</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	50	51	46	49	42	57	60	55	64
<b>Proportion of Alcohol Related Fatalities</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	26.0	28.2	25.4	25.5	19.4	27.5	30.9	32.5	34.0
<b>Alcohol Related Fatality Rate/100M VMT</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	0.37	0.36	0.33	0.34	0.28	0.39	0.4	0.36	0.42
<b>Percent of Population Using Safety Belts*</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	59.00%				59.20%		72.60%	75.80%	77.20%
<b>Speed Related Fatalities</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	75	73	67	66	65	69	79	86	72
<b>Percent of Speed Related Fatalities</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	0.42	0.43	0.42	0.38	0.34	0.37	0.44	0.50	0.38
<b>Motorcycle Fatalities</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	15.0	16.0	18.0	14.0	13.0	20.0	22.0	15.0	23.0



**Goal: Reduce Fatalities**  
**Actual Result: Fatalities Increased**



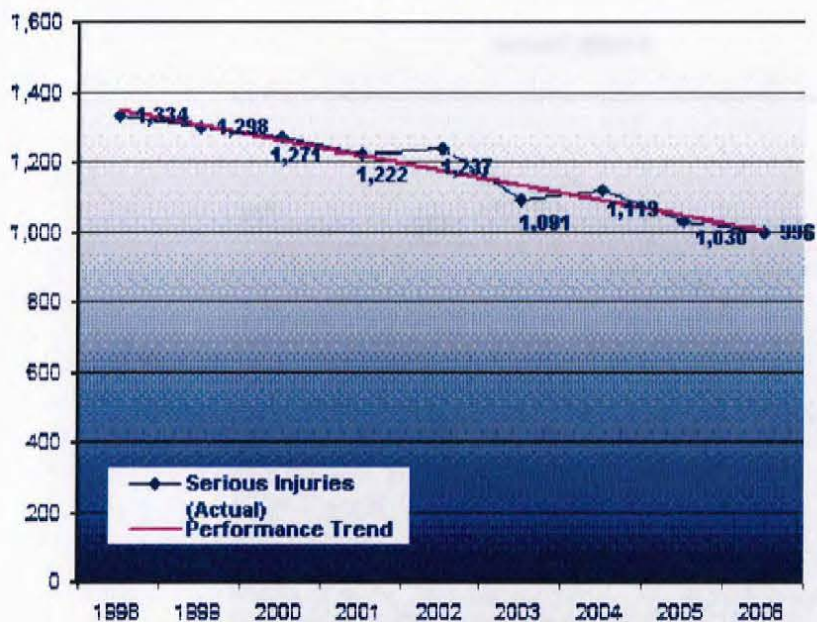
**Goal: Reduce Fatality Rate/VMT**  
**Actual Result: Increased**



Goal: Reduce Injuries

Actual Result: Decrease

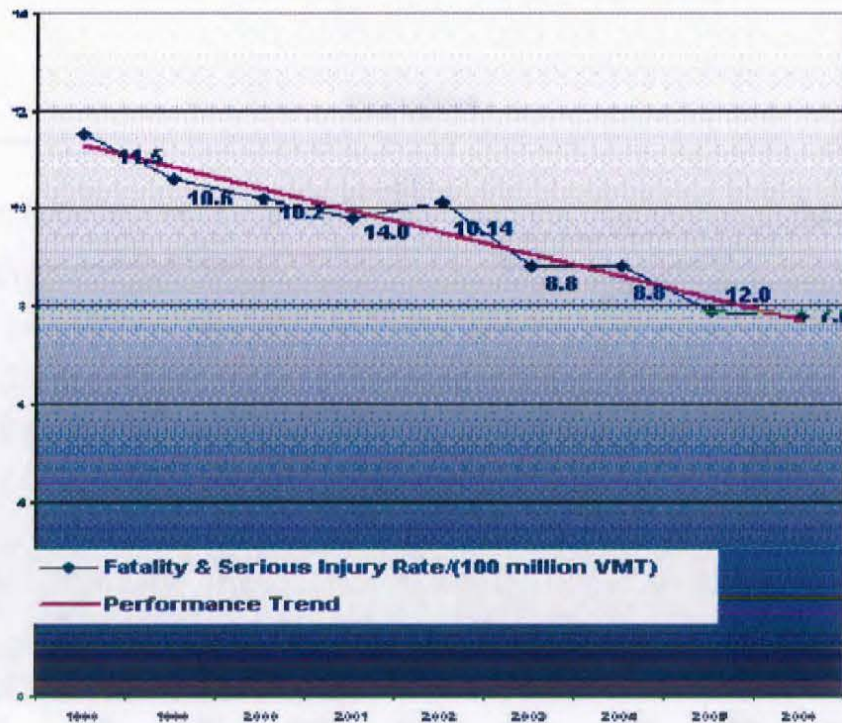
**Injury Trends**



Goal: Reduce Fatal and Injury Rate/VMT

Actual Result: Decrease

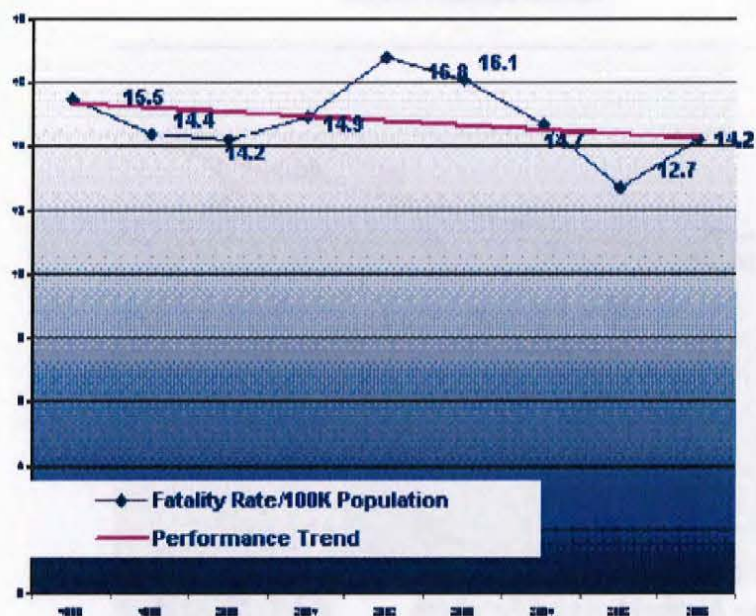
**Fatal and Serious Injury Rate per 100M VMT**





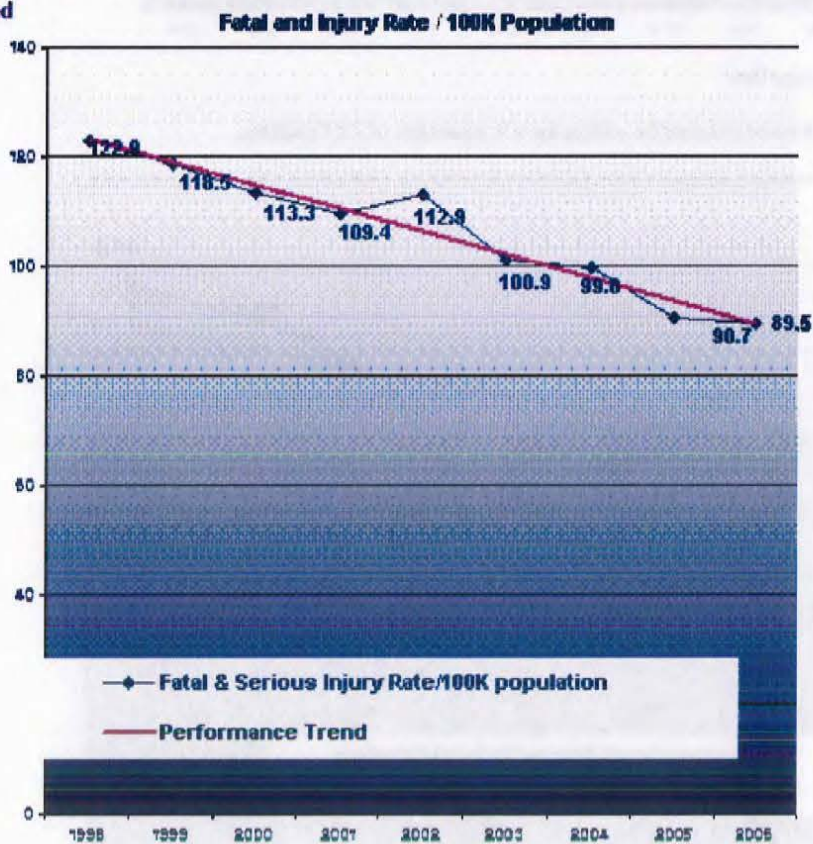
**Goal: Reduce Fatality Rate/100K Population**

**Actual Result: Increased**



**Goal: Reduce Fatal/Injury Rate/100K Population**

**Actual Result: Decreased**

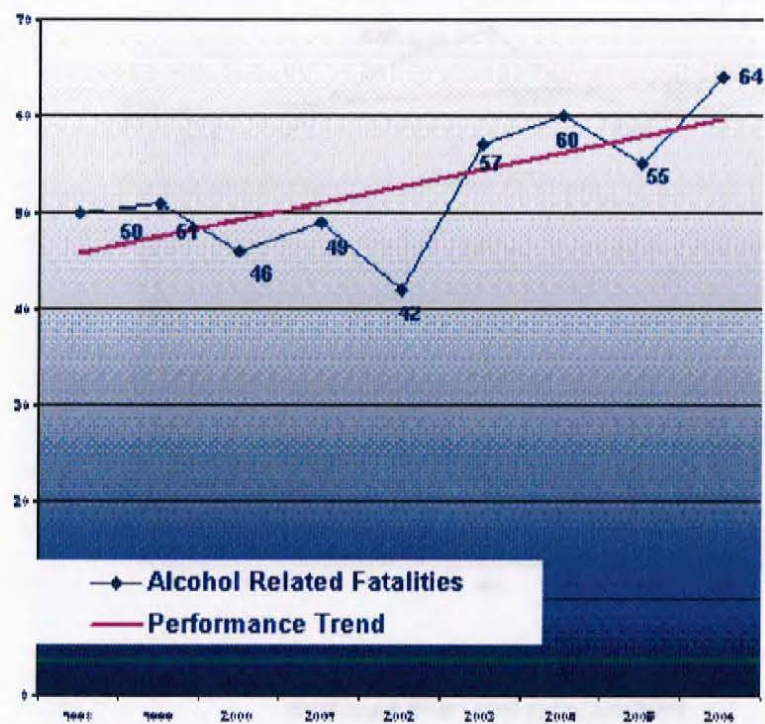




**Goal: Reduce Alcohol Fatalities**

**Actual Result: Increased**

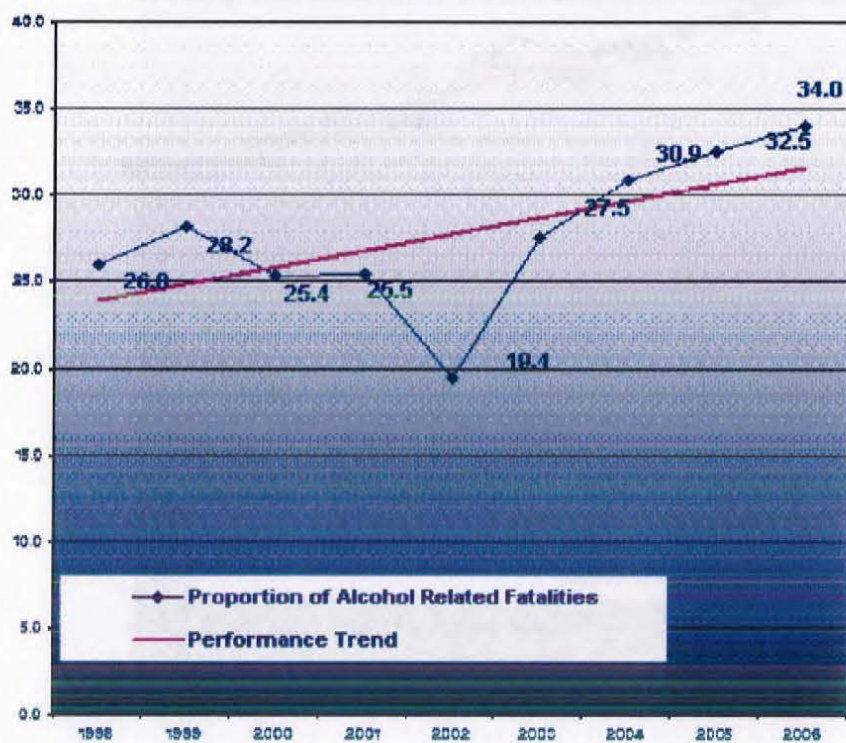
**Alcohol Related Fatalities**



**Goal: Reduce Alcohol Fatality Proportion**

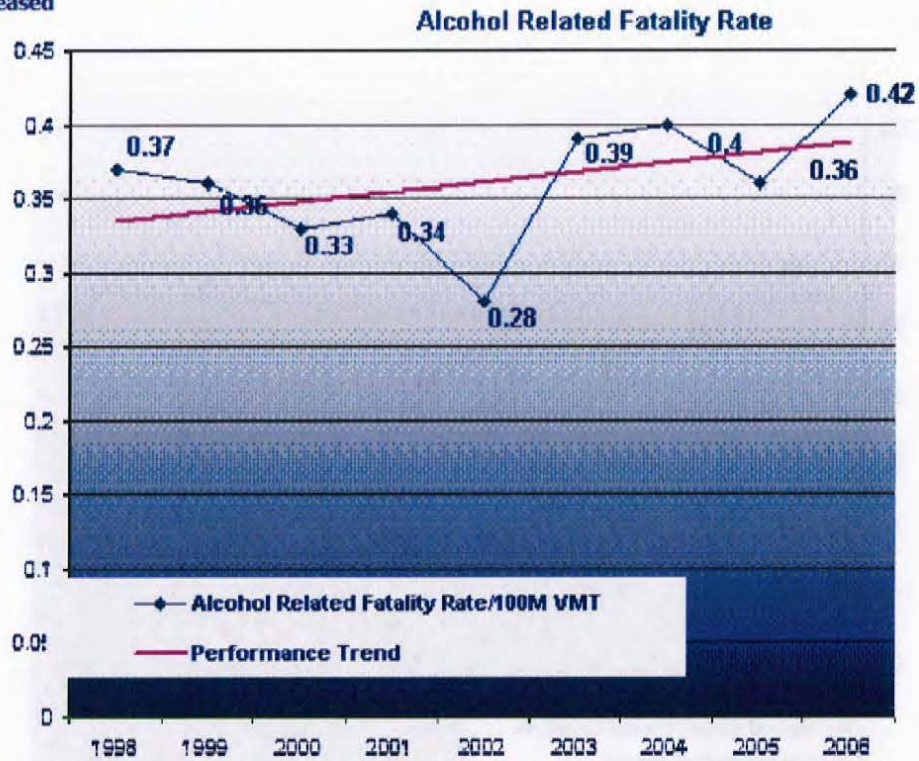
**Actual Result: Increased**

**Alcohol Related Fatalities as a Proportion of All Fatalities**



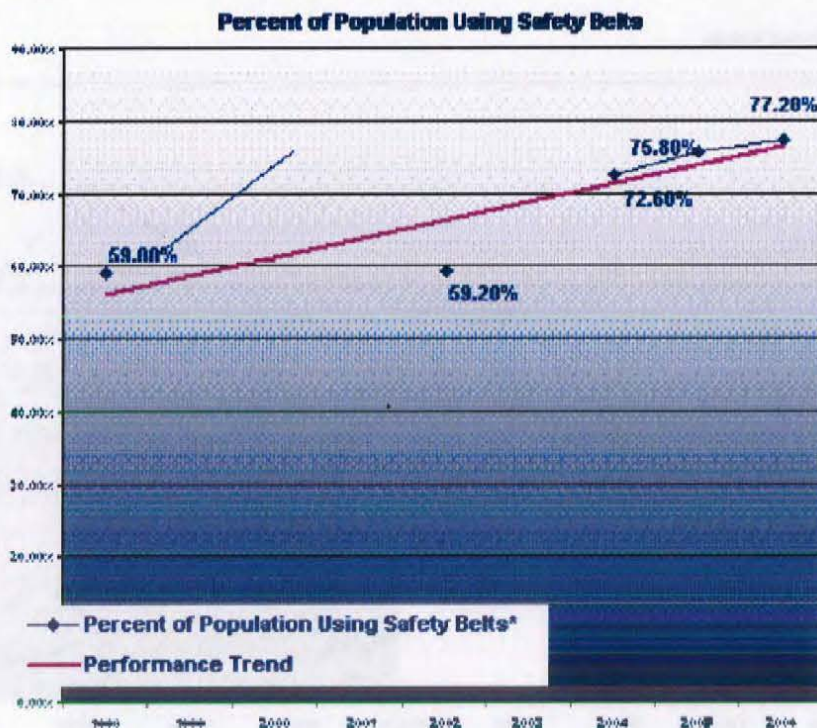
**Goal: Reduce Alcohol Fatality Rate/VTM**

**Actual Result: Increased**



**Goal: Increase Safety Belt Use**

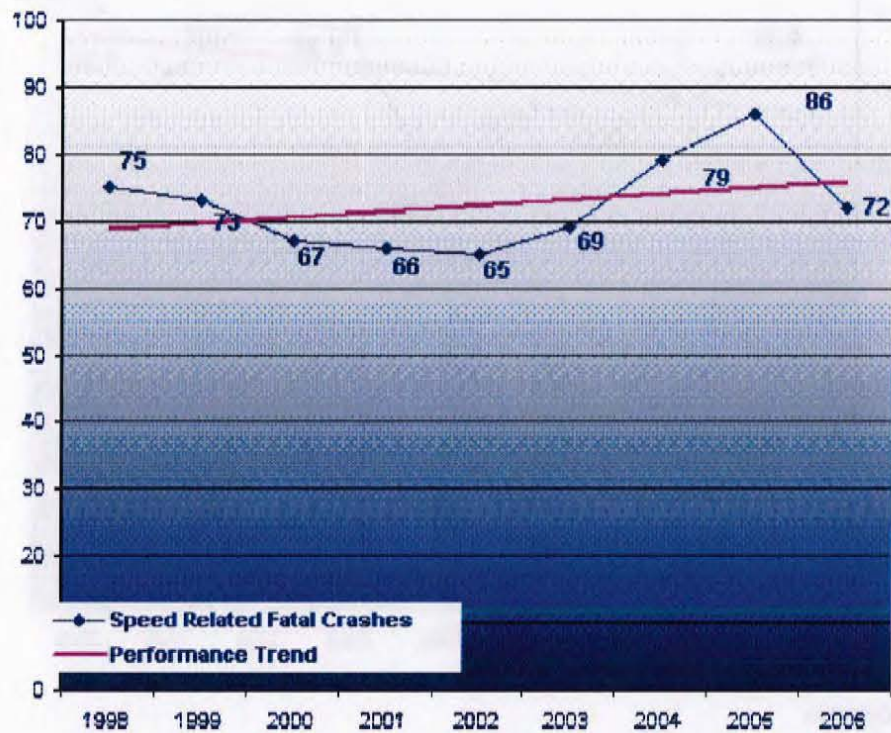
**Actual Result: Increased**





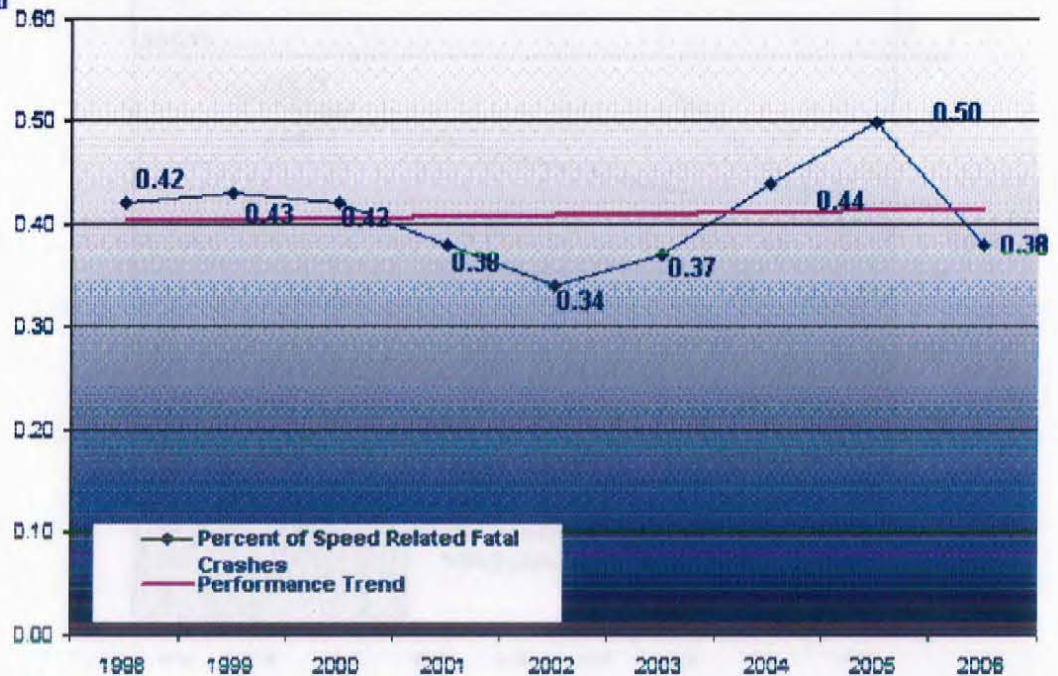
**Goal: Reduce Speed Related Fatal Crashes**

**Actual Result: Decreased**



**Goal: Reduce Percentage of Speed Related Fatal Crashes**

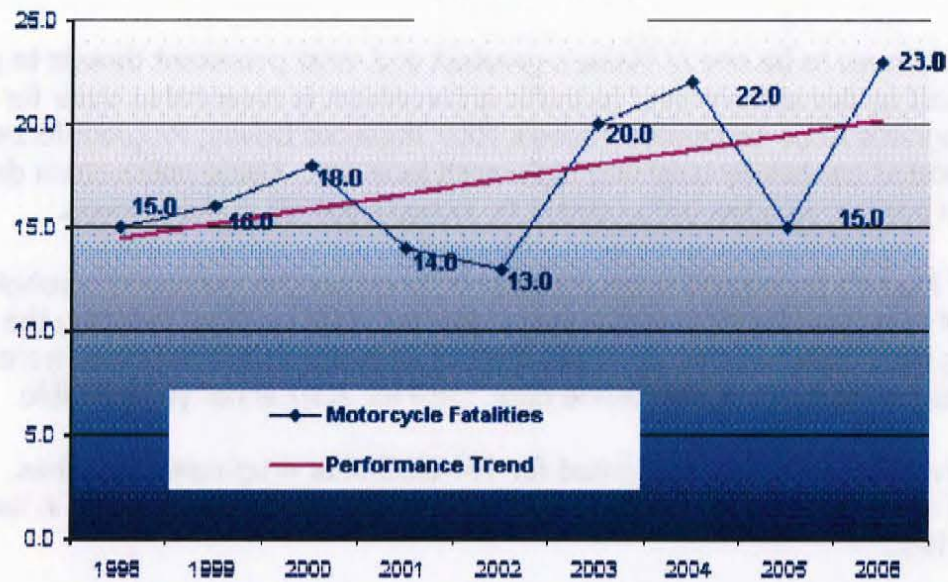
**Actual Result: Decreased**





**Goal: Reduce Motorcycle Fatalities**  
**Actual Result: Increased**

**Motorcycle Fatalities**



## **Impaired Driving Program**

Impaired driving continues to be one of Maine's greatest and most persistent threats to public safety. A strong commitment by law enforcement to traffic enforcement is essential in order for any of BHS's impaired driver programs to be successful. Maine's 2007 Impaired Driving Program focused on reducing alcohol-related crashes by targeting high crash locations. Using police crash data, BHS was able to identify and partner with law enforcement to increase patrols in those areas.

The overall goal of Maine's Impaired Driving Program is to reduce the number of alcohol-related crashes. As part of that goal, the BHS performance goal for 2007 included reducing the alcohol-related fatality rate from 36% to 34%. In 2006, 34% of all motor vehicle fatalities were alcohol-related. These rates are based on actual Maine data. Data for 2007 is not yet available.

In 2006, young drivers (ages 16-24) accounted for 190 alcohol or drug-related crashes. This represents 10% of all alcohol related crashes. Five teen drivers that were involved in fatal crashes tested positive for BAC.

The use of dedicated enforcement strategies combined with public awareness and education are key components to reducing the injuries and deaths attributed to impaired driving. In addition, local community programs must continue to put forth their independent efforts to reduce impaired driving crashes. Sending the message to the public that impaired driving will not be tolerated is essential.

The following are results from our Impaired Driving Program:

- In 2006, 10,569 people were arrested for operating under the influence of liquor or drugs in Maine. In 2007, between June 29 and September 4, BHS funded 56 law enforcement agencies for the annual summer impaired driving enforcement campaign. As a result, Maine law enforcement stopped more than 13,775 drivers and made 359 OUI arrests.
- During the 2007 National OUI Campaign (August 17 to September 3) Maine law enforcement made 123 OUI arrests and 6,685 traffic stops.
- The cost for overtime for participating law enforcement was \$257,281.83.
- OUI arrests increased 67% from 2006. Participation by law enforcement increased by 62%.



Alcohol-Related Fatalities\*:

2002	50
2003	75
2004	70
2005	60
2006	74

\* NHTSA Statistics

Top 10 Counties for Alcohol-Related Fatalities (2006):

Kennebec	13
Cumberland	10
Somerset	8
Androscoggin	8
York	7
Hancock	6
Oxford	6
Washington	4
Penobscot	4
Franklin	3

Drug Recognition Expert Program

Maine currently has 95 active Drug Recognition Experts (DRE), down from 106 at our peak last year. Sixteen students attended a DRE school in March. Fifteen of those students went on to complete their certification process and have been credentialed by the IACP. We also had 7 new instructors complete their certification process by instructing in the March school.

The Department of Human Services Health and Environmental Testing Lab received approximately 337 urine samples sent in by DRE's for analysis as of the date of this report. This number included approximately 40 training samples during the certification process.

Responding to concerns of DRE's not being available when needed, a pilot project was initiated (in 2005) to certify a DRE at a County Correctional Facility. The theory behind this project was that having a DRE located at a common intake site would be more convenient than trying to call out a DRE. An officer from the Cumberland County Sheriff's Office was recruited with a primary responsibility of working in the jail during the evening shift. After a two-year period, it was determined that the DRE at the jail had no significant impact. As a statewide trend it is noted that some of the senior DRE's are having a difficult time logging the minimum number of evaluations and that newer DRE's within their agencies are getting the call outs for the evaluations. Recruitment is still a problem in northern and downeast Maine.

In 2005 all DRE's were requested to enter their evaluations into the national DRE database for use in tracking state and national trends. The request increased the number of evaluations entered but not at the level anticipated. As a result, in 2006 DRE's were required to enter data prior to renewal of their DRE certification. The Pacific Institute currently manages the database and has been working with various states to customize reports for participating agencies.



### SFST and Drug Identification

BHS funded six Standardized Field Sobriety Testing (SFST) student classes at the Maine Criminal Justice Academy and supported two off site classes. One of the off site classes was at Acadia National Park where National Park Rangers went through the SFST program for the second year.

DRE's coordinated and taught 1 major DITEP (Drug Identification Training for Educational Professionals) program in the Millinocket area this year. The IACP sponsored program teaches educational professionals how to identify drug abuse in students. The second part of the program teaches key school staff how to conduct evaluations on students identified as being impaired.

The Maine Criminal Justice Academy coordinated with Major Dale Lancaster of the Maine State Police and his training staff to bring all State Police personnel up to date on their SFST proficiency. Trooper Kyle Willette and other SFST instructors held 5 classes statewide to ensure that approximately 100 troopers and sergeants received the updated training. We will be using this model to approach other agencies throughout Maine to encourage the updated training.

### "What's Your Excuse?"

For the summer and holiday impaired driving enforcement activities, BHS purchased airtime and created a new television spot entitled "What's Your Excuse?" Special thanks go to Trooper Edmund Furtado, Troop B of the Maine State Police, for doing this with us.





## **Occupant Protection Program**

The overall goal of Maine's Occupant Protection Program is to increase safety belt use for all occupants, thereby decreasing deaths and injuries resulting from motor vehicle crashes. In 2006, there were 135 fatalities involving passenger vehicles. Of those 135, 65 occupants were unrestrained (48%).

In May, BHS funded the "Buckle Up. No Excuses!" safety belt enforcement campaign in conjunction with the national "Click It or Ticket" campaign that ran from May 21 to June 3. There were 79 Maine law enforcement departments who participated in this campaign, which was a small increase in participation from last year. (Note: Maine has 143 police departments of which 49 have 5 or fewer personnel.) The total traffic statistics for this program include 9,885 traffic stops made with 11,863 tickets and warnings, 1,555 safety belt summons, and 1,176 safety belt warnings given. The overtime cost for this high visibility enforcement program was \$141,102.49, paid out of federal 402 funds.

A NHTSA approved occupant protection observational survey was conducted immediately after the "Buckle Up. No Excuses!" campaign. This survey showed a voluntary seat belt usage rate increase of 2.8% from 77% to 79.8%. BHS stated a goal of reaching 80% voluntary usage by 2008. The national usage rate for 2007 is 81%.

BHS sponsored the 2007 Monster Truck Jam during the national "Click It or Ticket" campaign, and purchased radio and television advertising during that time period.

BHS mailed informational packets describing the 2007 seat belt campaign to all school district superintendents and high school principals across the state. The intent was to encourage those educators to reach out to their students, who represent Maine's young driver population, and educate those younger drivers on the importance of always wearing their seat belt.





In partnership with Mid-Coast EMS Council, BHS funds a very successful seat belt education program using both Convincer and Rollover simulators. In 2007, through various schools, safety fairs, college campuses, expos, and work-related health and safety events, more than 15,000 Maine citizens of all age groups were educated about the importance of using seat belts. A variety of activities were used to reach Mainers, including fatal vision goggle demonstrations, a seatbelt challenge, and hosting guest speakers at public events.

Targeting driver-training programs remained a priority of this program this past year. Over 900 driver-training students in 48 classes heard presentations on over a dozen different training programs. While the Convincer and Rollover simulators are geared toward teens and adults, several hundred children received safety belt demonstrations when they attended various expos this past year.



## **Child Passenger Safety Program**

The goal of the Child Passenger Safety (CPS) Coordinator is to promote correct use of and safe practices for child safety seats, booster seats, and other child safety restraints among Maine parents, caregivers, and children.

In 2006, the Child Passenger Safety Seat Program site managers were notified that they must become certified Child Passenger Safety Technicians by September 2007, or have one onsite to educate and demonstrate installations of car seats to parents. All sites have complied (two sites who did not comply have chosen to not continue in the program). All fitting stations in Maine now have certified CPS Technicians on site.

The Maine Injury Prevention Program provided 2,311 car seats to income eligible families in the past year. Eligible families include those from Maine's Hispanic, Somalian, and other minority populations. There were 315 car seats provided to fitting stations throughout Maine in September and October alone.

A CPS Technician training was held at the Maine Criminal Justice Academy. At that training, 13 law enforcement officers became certified technicians, representing law enforcement agencies from around the state. Maine currently has 13 certified law enforcement officers, including one Maine State Trooper.

A Safe Transportation For All Children training conference was held in August for CPS Technicians. This training was a collaborative effort between the Maine and New Hampshire CPS programs. Special needs seats were provided at this program by BHS.





The Maine Child Passenger Safety for School Transportation Vehicles Program was formed this year. This program provides advisory and consultative support to early childhood education programs in the design and implementation of appropriate transportation components for their preschool age participants. Three school CPS resource teams have been developed in the southern, western, and central regions of Maine. A northern region team will be developed during the 2008 fiscal year. These teams offer CPS training sessions to early childhood education program staff and bus drivers in their region. Training consists of the selection, installation, and use of child safety restraint systems appropriate for the population of children being transported.

All Program team members have attended trainings on transporting children with special needs in school vehicles, and have expanded the regional training programs to include segments on children with special health care needs.



## **Traffic Records**

The overall goal of Maine's Traffic Records Coordinating Committee is to continue to develop a comprehensive traffic records system that provides users with timely, complete, accurate and usable traffic data. During FY2007, Maine spent over \$116,000.00 in Section 408 funds on projects to move us toward that comprehensive system.

In FY2007, Maine was awarded a Section 408 grant in the amount of \$500,000.00. Using the suggestions from the 2006 Traffic Records Assessment, projects and improvements (to assist us in more timely identification of highway safety problems and more effectively manage our highway safety programs) were included in the application. Please see Maine's 2007 application for 408 funds for more detailed information about our Traffic Records Plan.

### **EMS Mobile Data Units**

BHS partnered with Maine Emergency Medical Services to bring EMS data in full compliance with NEMSIS and provide online access to run report data. This project was implemented through the acquisition of laptop computers, software, and training for EMS providers on submitting EMS patient/run reports in electronic format and in compliance with NEMSIS. There were 75 laptop "toughbook" computers purchased for this project in 2007 (project year 1), and 75 more laptops will be purchased in 2008 (project year 2).



## **Police Traffic Services**

### **2007 Speed Enforcement**

In 2006, speed accounted for 38% of all motor vehicle fatalities in Maine and continues to be a rising factor in motor vehicle fatalities. This year BHS offered grants to law enforcement agencies who demonstrated a community speed problem. Details included each agency's high crash locations, locations of speed-related fatal crashes, high-ticket areas and areas of community complaints. We offered an over-time grant to 56 agencies across the state, including the Maine State Police, with the sole objective of reducing the number of speed related crashes.

Agencies receiving the grant were required to conduct speed details in identified high crash locations. The Maine State Police conducted a yearlong program while the remainder of the agencies conducted a program from June to September. Speed enforcement included saturation patrols, speed radar traps and aircraft patrols. The total cost of the project was \$235,962.00.

As a result of combined law enforcement efforts, 17,774 traffic stops were conducted, and 9,572 speed summons and 7,034 speed warnings were issued. Many departments reported that the public was very positive regarding the increased enforcement efforts.

In 2006, BHS conducted a pilot speed enforcement project with several agencies and the Maine State Police. Results show that speed related fatalities decreased from 50% of all crashes in 2005 to 38% of all crashes in 2006. (Statistics for the 2007 project are not yet available.)

### **Law Enforcement Equipment Purchase**

BHS purchased 179 in-cruiser video cameras for law enforcement this year. The cost of all units was nearly \$900,000.00. These units are used by Maine law enforcement for recording all traffic safety stops. The units are an integral part in the prosecution of OUI violators in court proceedings.

### **Law Enforcement Challenge**

BHS conducted "The Chiefs' Challenge", a first year pilot program that included 4 law enforcement agencies. Our challenge was modeled after the International Association of Chiefs of Police Law Enforcement Challenge and required local agencies to conduct a self-assessment of their existing traffic safety programs. Each participating agency showcased their traffic safety programs by presenting information on department policy, training, incentives, and what each department does to promote public information and enforcement that reduce crashes, deaths and the resulting economic loss. Successful programs showed evidence of reduced injuries and saved lives. We hope to expand the Challenge for 2008.



## Crash Reconstruction

The Maine State Police Traffic Safety Unit includes three units. One of these groups, the Crash Analysis Unit, provides specialized expertise, support and technical assistance for major crash incidents. The unit is responsible for training and providing support to reconstruction specialists from every law enforcement agency in Maine. Personnel are actively involved in testing, training, and the development and incorporation of new techniques.

The Crash Analysis Unit includes the Crash Reconstruction Unit (and computer data retrieval), the Forensic Mapping Unit, and the Vehicle Autopsy Unit. Although these programs have distinctly focused areas of expertise, they function cohesively to bring specialized resources together to provide the most complete crash investigation possible. Over the past few years, training and new equipment have allowed us to utilize improved techniques and achieve better results across the various disciplines of traffic crash investigation.

### CRASH RECONSTRUCTION UNIT

Reconstructing a crash involves the close analysis of all scene evidence, vehicle condition and position, driver history and a number of other environmental, mechanical, and human factors in order to determine the cause(s) of a crash. This expertise is generally utilized for complicated crashes, often involving serious or fatal injuries.

The Crash Analysis Unit is responsible for providing training, support, and certification for Maine's 52 reconstruction specialists. All reconstruction reports are carefully reviewed and approved before being disseminated to prosecutors and the public as appropriate. Technical crash reconstruction reports must be very detailed, requiring an average of 18 hours to complete, draft and approve.

In 2006, the reconstruction unit performed 336 reconstructions. Of these, 104 were fatal crashes and 37 involved commercial motor vehicles.

In May of 2006 the Maine State Police in cooperation with NAPARS (National Association of Professional Accident Reconstruction Specialists) and BHS partnered to host a commercial vehicle reconstruction course in Augusta. Reconstruction specialists, engineers, and industry specialists from all over the United States and Canada attended the course, representing 18 states and 1 Canadian province. 30 members of the Maine State Reconstruction program attended the course and passed the final exam. Ten commercial vehicles were provided for skid testing and operation by each student to better understand the challenges associated with investigating these crashes. Many new advanced techniques were introduced and demonstrated during the course, focusing on air brake systems and heavy truck dynamics.

In June of 2007, funding provided by BHS allowed the Maine State Police to host an Advanced Motorcycle Reconstruction course. The course was instructed by Wade Bartlett of Mechanical Forensics Engineering Services, LLC of New Hampshire. 33 reconstruction specialists from Maine



attended the training and received the latest techniques in reconstructing motorcycle crashes. In 2007, 28 crashes were reconstructed involving motorcycles.

The Maine State Police Traffic Safety Unit has three troopers trained in the retrieval and analysis of crash data from a vehicle's Airbag Control Modules (ACM). These troopers are the only individuals in Maine trained and certified to extract this data from vehicles involved in serious crashes. The data is used to augment and corroborate the crash reconstruction results.

The CDR toolkit is a reconstruction tool that is extremely valuable in conducting a complete crash investigation. This allows officers to download information such as pre-crash speed, throttle position, and brake position data. We are also able to extract important information such as seatbelt usage, Delta V (change in velocity), PDOF, and rollover information. This is a tool that we use to validate and corroborate our reconstruction techniques, as well as aiding in the determination of the effects of crash pulse.

In 2006, funding from BHS was used to purchase upgraded CDR software and equipment. This has allowed us to access ACM data from a larger number of vehicles, specifically 2006 GM and older (1994) vehicles.

## FORENSIC MAPPING

Forensic mapping is the process of accurately documenting crash scene evidence with electronic measuring equipment (total stations). Once the scene has been measured, it can be downloaded, imported to CAD software and used to generate scale diagrams. The State Police currently has five sets of equipment located throughout the state and Troopers trained to operate them.

In 2006 BHS provided funding to purchase new data collectors and software programs. With this new equipment, Sgt. Rick McAlister and Tr. Darren Foster conducted a Mapscenes® Pro 2006 course in Augusta. Thirteen students attended from various law enforcement agencies. One of the key improvements in the new software is the ability to provide 3D rendering of crash scenes. This allows us to better depict, analyze, and portray a crash scene for prosecutors' presentation in court. These data collectors were used to diagram 75 crash scenes in 2006. This represents a 38% increase over the previous year.

## VEHICLE AUTOPSY UNIT

A 'vehicle autopsy' is an extensive post-crash inspection of a crash vehicle to determine what, if any, mechanical defect(s) may have contributed to a motor vehicle crash. Particular focus is placed on steering, braking, and suspension components of motor vehicles.

Conducting post crash inspections is an important tool in determining crash causation factors, verifying reconstruction techniques, verifying Principal Direction of Force (PDOF) angles through damage documentation, and matching occupant injuries to vehicle damage. The vehicle autopsy unit is the only investigative entity providing this service within the state of Maine at this time.

Currently 48% of the requests for post crash inspections come from agencies other than the State Police. This program is a vital service to those agencies investigating fatal crashes.

There are eight certified autopsy specialists currently in the program. These include sworn Troopers, Motor Carrier Inspectors, and Motor Vehicle Inspectors with specialized expertise in several areas including engine repair, automatic transmission, suspension and steering, brakes, electrical systems, and engine performance.

In 2006 BHS provided \$15,766.000 in funding for the purchase of ten new tool kits for use by vehicle autopsy specialists when performing post crash inspections. Utilizing this equipment, the Vehicle Autopsy Unit performed 75 post-crash inspections in 2006.



## Noteworthy Programs

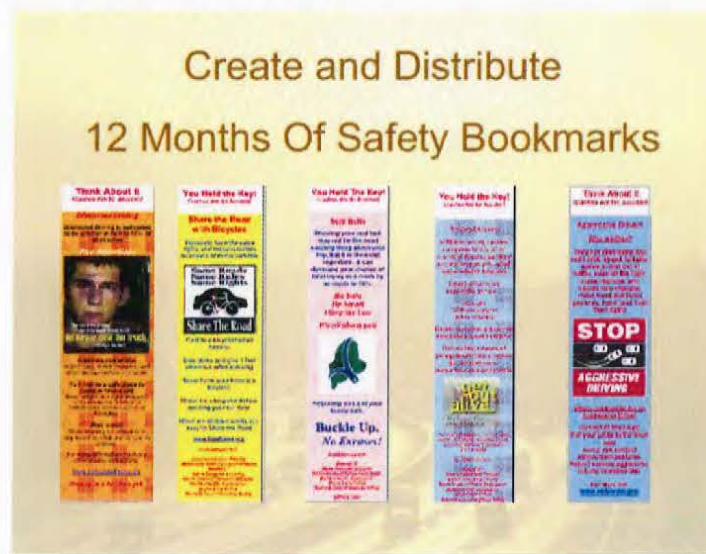
### 12 Months of Safety Bookmarks

This year BHS organized an educational program to develop a single Maine specific highway safety message, and put that message on a bookmark. Each month provided an opportunity for a new safety message to be produced. The idea for this project came from the Strategic Communication Plan of the Maryland Highway Safety Program.

Experts agree the majority of crashes are not accidents. They are caused by human behaviors and therefore, "You Hold the Key! Crashes are No Accident" tops each month's message. BHS used a "Think About It" theme this year throughout our State Highway Safety Plan media initiatives, so that message was included on the back of each bookmark.

Over 600,000 bookmarks were distributed by state and local law enforcement, and through educational opportunities around the state.

Some bookmark topics included Distracted Driving, Bicycle Safety, Share the Road, "Buckle Up. No Excuses!", Teen Drivers, and Aggressive Driving.



### Partnerships and the Strategic Highway Safety Plan

Over the past two years BHS has partnered with the Maine Department of Transportation, the Maine Turnpike Authority, Department of Health and Human Services and many others in working toward the identified initiatives within the statewide **Strategic Highway Safety Plan** to substantially reduce the number of injuries and deaths related to crashes on our highways. BHS will continue to explore new partnerships and continue to strengthen existing partnerships with more agencies (governmental and non-governmental, local, state, law enforcement and non-law enforcement) in our efforts to increase our chances of affecting behavioral changes and educating Maine citizens about all matters related to behavioral traffic safety.

### Maine Driving Dynamics

Maine Driving Dynamics is a 5-hour driver improvement course designed on the premise that a crash is not an accident. Each year, approximately 5,000 people take this BHS-funded course to receive a 3-point credit on their driver license. In 2007 BHS certified AAA's on-line driver improvement course for point credit.

### Motorcycle Safety Maps

Throughout 2007 BHS distributed 24,600 Maine Motorcycle Safety maps to offices of the Bureau of Motor Vehicles, Maine Department of Tourism, AAA, police departments, motorcycle dealerships, and to local motorcycle clubs. There are motorcycle safety messages printed all through the map, as well as guides for several scenic tours.

### Lewiston Youth Advisory Council/ "Smashed Video"

The Lewiston Youth Advisory Council (LYAC) applied for and received a grant from BHS for production of a 30 minute video aimed at teens about the hazards of impaired driving and the importance of making good decisions. The LYAC hired a local film production company to professionally produce the video. They showed the "premiere" at the Flagship Cinema in Auburn to a capacity crowd that included many media representatives. It is the LYAC's intent to show the film to high school health classes and to driver education classes throughout the state.



## **Challenges**

### **Young Drivers**

Deaths to and by young drivers (ages 16-24) continue to present a challenge for BHS. In 2006, 59 young drivers were involved in fatal crashes that resulted in 71 deaths (38% of 2006 fatalities). Young drivers and occupants represented 38 of those 71 deaths.

Of particular concern is that the majority of teen and young drivers and occupants were NOT wearing safety belts. Through November, Maine's young driver related deaths have totaled 40. Of those, 28 are young males and 12 are young females. Seat belts were used in only 9 of the 40 deaths. Our challenge remains to find the right combination of education, enforcement and media that reaches this age category.

### **Effective Media Plan**

BHS continues to work toward delivering and evaluating a comprehensive paid and earned media plan that reaches our target audiences across the state. In 2007 we purchased media to support the national enforcement campaigns and to address the growing concerns of motorcycle crashes and teen driver crashes.

### **Alcohol Crashes**

As is the case in many states, Maine's alcohol-related crashes and deaths continue to rise despite our increased enforcement efforts. Our plan for 2008 includes increased participation in high visibility enforcement campaigns and more effective public education during the campaigns.

### **Traffic Records**

Maine continues efforts to improve our statewide traffic records systems to ensure that timely and accurate data is available to all users for problem identification and effective program planning.

### **Motorcycle Fatalities**

Motorcycle fatalities are still a great concern. Although motorcycle fatalities slightly decreased in 2007, more public awareness, education, and enforcement is still needed.



### **Paid Media Summary**

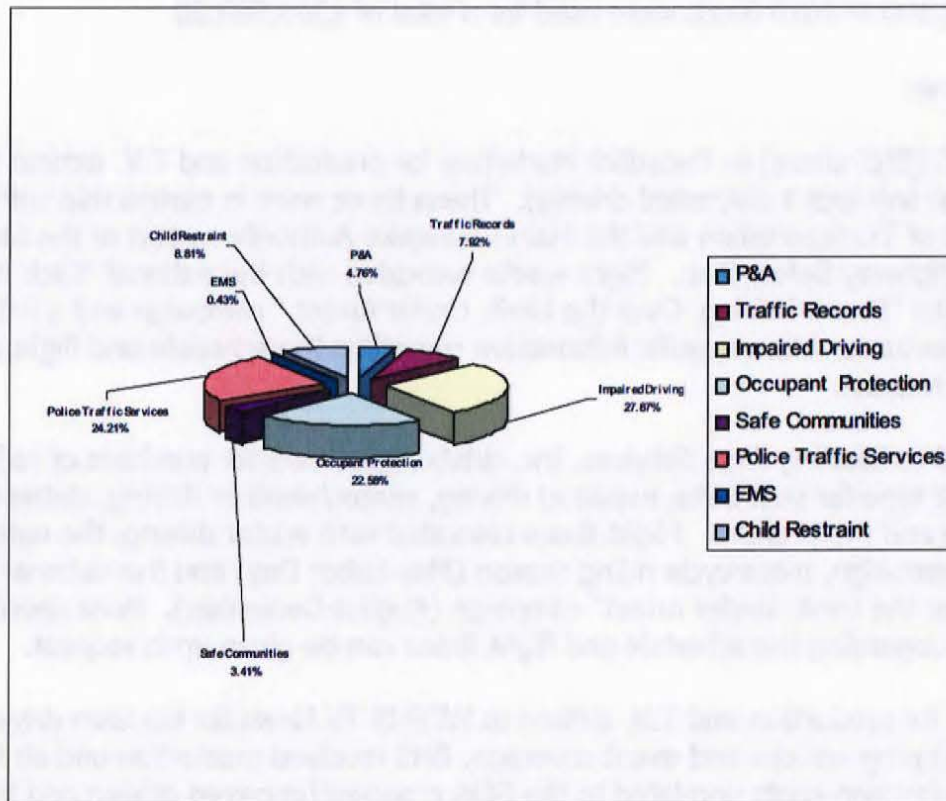
During 2007, BHS committed significant funds toward paid media to address seat belts, impaired driving, winter/weather driving, distracted driving, teen driving and motorcycles. In all, \$364,460 in 402 funds and \$25,100 in 2010 funds were used for a total of \$389,560.00.

A breakdown follows:

- \$100,000.00 (BHS share) to Swardlick Marketing for production and T.V. airtime for 3 safety spots (2 seat belt and 1 distracted driving). These three were in partnership with the Maine Department of Transportation and the Maine Turnpike Authority as part of the Strategic Combined Highway Safety Plan. Flight weeks coincided with the national "Click It or Ticket" campaign, the "Drunk Driving. Over the Limit. Under Arrest." campaign and a full summer run for lane departures. More specific information regarding the schedule and flight times can be given upon request.
- \$192,480.00 to Leading Edge Services, Inc. d/b/a Marketeers for purchase of radio and television air time for seat belts, impaired driving, winter/weather driving, distracted driving, teen driving and motorcycles. Flight times coincided with winter driving, the national "Click It or Ticket" campaign, motorcycle riding season (May-Labor Day) and the national "Drunk Driving. Over the Limit. Under Arrest" campaign (August-December). More specific information regarding the schedule and flight times can be given upon request.
- \$50,000.00 for production and T.V. airtime to WCSH5 TV News for the teen driver "Get Out Alive" (GOA) program tips and event coverage. BHS received production and air for two additional television spots unrelated to the GOA program (impaired driving and teen driving).
- \$47,080.00 to Clear Channel Radio to sponsor the 2007 Monster Jam Truck Event. This program was run in conjunction with the national "Click It or Ticket" (CIOT) high visibility enforcement campaign and primarily targeted males age 18-34 who drive pickup trucks. Beginning in April 2007 and ending with the last day of the national CIOT campaign in June, BHS received radio and television advertising for being a sponsor of the 2007 Monster Jam Truck Event. Two new seat belt radio spots (one 30-second and the other 15-second) were created. The 30-second radio spot was produced using the voice of the driver of the most popular Monster Truck, Gravedigger. During the six-week period, 2,089 30-second commercials aired on ten Clear Channel radio stations throughout Maine. In addition, we had 657 audio tags (CIOT) on the Monster Jam promotional radio commercials and CIOT audio and visual tags on 855 promotional television commercials. "Buckle Up. No Excuses!" was printed on 14,000 tickets sold at the Ticketmaster counter. BHS received 126 general admission tickets that were distributed at three live Dunkin Donut ticket give away events held on May 24, 25, and 30 at the Ellsworth and two Bangor Dunkin Donut locations. The tickets were dispersed by local law enforcement during a live radio event with two local radio talk show hosts.



## Fiscal Year Summary



## Fiscal Year Expenditure Summary

	402	405	163	408	410	2010	2011	Total	% of Total
P&A	\$91,934		\$14,867					\$106,800	4.41%
Traffic Records	\$88,233		\$25,306	\$152,454				\$177,760	7.34%
Impaired Driving	\$218,340				\$406,868			\$625,208	25.82%
Occupant Protection	\$459,605	\$47,043						\$506,648	20.92%
Safe Communities	\$76,583							\$76,583	3.16%
Police Traffic Services	\$543,158							\$543,158	22.43%
EMS	\$9,607							\$9,607	0.40%
Child Restraint	\$105,169						\$92,397	\$197,566	8.16%
Motorcycle						\$90,169		\$90,169	3.72%
<b>TOTAL</b>	<b>\$1,592,628</b>	<b>\$47,043</b>	<b>\$40,173</b>	<b>\$152,454</b>	<b>\$406,868</b>	<b>\$90,169</b>	<b>\$92,397</b>	<b>\$2,421,731</b>	