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STATE OF MAINE

HIGHWAY SAFETY ANNUAL REPORT



Fiscal Year 2002

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STATEWIDE HIGHWAY SAFETY PROGRAM

The goals of Maine's statewide highway safety program are to save lives and to prevent or mitigate the severity of injuries suffered in motor vehicle crashes occurring on the state's roadways. The Bureau of Highway Safety (BHS) provides leadership and support for the attainment of these goals through its administration of the federal 402 program and the coordination of state and local initiatives directed toward the state's highway safety priorities.

The success of the comprehensive statewide program is the cumulative result of progress in many individual areas of traffic safety. This Annual Report highlights the achievements of Maine's State 2002 highway safety program and documents the status of the goals and objectives established in the 2002 Highway Safety Plan. The primary goals of the statewide highway safety program are listed below.

Goals

- *Reduce the fatal crash rate per 100 million VMT from the 1996 level of 1.22.*
- *Reduce the fatality rate per 100 million VMT from the 1996 level of 1.33.*
- *Reduce the injury crash rate per 100 million VMT from the 1996 level of 93.2.*
- *Reduce the injury rate per 100 million VMT from the 1996 level of 132.4.*
- *Reduce the property damage crash rate per 100 million VMT from the 1996 level of 218.8.*

Status of Goals

The table below shows the crash rates for the State of Maine for 1997-2001.

State of Maine Crash Rates

Rates per 100M VMT	1997	1998	1999	2000	2001
Fatal Crash Rate	1.33	1.32	1.20	1.11	1.17
Fatality Rate	1.48	1.44	1.29	1.18	1.31
Injury Crash Rate	94.7	87	82	81	79
Injury Rate	137.2	114.9	116.9	115.0	111.0
Property Damage Crash	232.9	217.7	196.3	180.0	182.0

Maine's crash, fatality, and injury rates have not followed a consistent trend between 1997 and 2001, the most recent year for which data are available. As the table above shows, there were decreases in all of the rates between 1997 and 2000. While the injury crash rate and injury rate decreased slightly in 2001, there were increases in the remaining rates. In 2001, there were 79 injury crashes and 111 injuries per 100 million VMT, compared to an injury crash rate of 93.2 and an injury rate of 132.4 in 1996. In addition to exceeding the state's goals related to non-fatal injury crashes, the goal for property damage crashes was also surpassed; in 2001 there were 182.0 property damage crashes per million VMT, compared to 218.8 in 1996. Overall the progress has been both significant and positive.

The table below shows that the numbers of non-fatal injury crashes and non-fatal injuries have decreased substantially, to levels below the 1996 baseline figures of 11,839 crashes and 16,820 injuries. The number of fatal crashes in 1996 was 156; those crashes resulted in 169 fatalities. The trend has been to increase in both the number of fatal crashes and fatalities. While the increase is slight, any upward trend is not acceptable. Overall, each of categories has declined with the exception of a slight increase in the number of fatal crashes and fatalities.

State of Maine Total Crashes

	1997	1998	1999	2000	2001
Fatal Crashes	172	176	168	159	167
Fatalities	192	192	181	169	188
Injury Crashes	12,221	11,583	11,472	11,538	11,251
Injuries	17,710	15,303	16,414	16,415	15,902
Property Damage Crashes	30,052	28,998	27,559	25,713	26,051

ALCOHOL AND OTHER DRUG COUNTERMEASURES

Combating impaired driving continues to be a priority of Maine's highway safety program. The program strategies in this area recognize the importance of coupling highly visible enforcement with a strong public information campaign. The State's commitment in this area is evident in the tougher anti-drinking and driving legislation, which went into effect in July 1998. This commitment is especially strong in the area of underage drinking and driving. Underage drinking and driving remains a persistent problem: In 2001, 18% of those arrested for operating under the influence were under 21 years old. The importance of sustaining a strong statewide impaired driving program is evidenced by the fact that over 70% of the OUI arrests in the ten-year period through 2001 have been by municipal police agencies.

Objective

- *Reduce the rate of alcohol-involved fatalities from the five-year average of 34.92% (1992-1996) to 30% by 12/31/02.*

Status of Objective

Far exceeding the objective established for 2002, the proportion of fatal crashes that involved alcohol dropped from a five-year average of 34.92% (1992-1996) to 26% in 1998. We have had a slight rise in the rate to 28.8% in 2001. The success in surpassing the 2002 objective stated in the 2002 Highway Safety Plan can be attributed to a number of different strategies that were undertaken.

2002 Program Strategies

Enforcement

A cornerstone of Maine's impaired driving program has been enforcement. In the prior year, funding was provided to state, county, and municipal agencies to allow them to increase their enforcement efforts to counter impaired driving. These efforts have involved both patrols and roadblocks. Additional funding was provided to enable enforcement agencies to purchase both state-of-the-art enforcement "tools" and educational equipment to reduce the incidence of impaired driving.

Public Information and Education

A number of community mini-grants this past year has funded local initiatives to educate the public about the dangers of impaired driving and to promote alternatives to driving after drinking. Additionally, public information and education campaigns at the state level were supported, with funds used to develop, obtain and distribute printed materials and promotional items.

Training Programs

Training was provided to the sellers and servers of alcoholic beverages in both the identification of underage purchasers and in the detection of impairment in customers.

OCCUPANT PROTECTION

Occupant restraint usage has been a particular problem in Maine, and is targeted as a priority program area. In the absence of a mandatory use law for adults until early 1996, the rate at which motorists in Maine wore their safety belts was about half the national rate. The state has taken an incremental approach to requiring restraint use by vehicle occupants, beginning in 1983, when children up to four years of age were required to be secured in a child safety seat. The upper age limit for required restraint use was raised to 13 in 1987 and to 18 in 1991. Since 1996, all adults have been required to wear seat belts.

Observational studies of restraint use among occupants of all ages showed that the usage rate increased from 50% in 1995 to 61% in 1997. The preliminary results of a 2002 observational study showed the usage to be 59% as did the 1998 study. The methodology for conducting the observational seat belt use survey and the estimation formulas used to compute the rates changed between the 1997 and 1998 surveys. Hence, the results of the surveys are not strictly comparable. The strategies developed and implemented in the occupant protection program area should lead to significant increases in usage in the future.

Objectives

- *Increase the correct use of child safety seats for vehicle occupants from birth to age four from the base line rate of 83.65% in 1997 by 3% by 12/31/02.*
- *Increase the safety belt usage rate for vehicle occupants four through fourteen years of age by 10% from the base line rate of 75.5% in 1997.*
- *Increase the safety belt usage rate for vehicle occupants 15 through 18 years of age by 10% from the base line of 58% in 1997.*
- *Increase the safety belt usage rate for vehicle occupants ages 19 and older by 10% from the base line of 59% in 1997.*

Status of Objectives

Based on preliminary data from the *2002 Maine Safety Belt Use Survey*, Maine has met only one of the four objectives established in the 2002 Highway Safety Plan. The correct use of child safety seats for vehicle occupants under the age of four rose from 83.65% in 1997 to 95.9% in 2002, exceeding the target set for December 2002.

With regard to the safety belt usage rates for vehicle occupants four to 14 years of age and 15 to 18 years of age, similar success was not experienced. Rather, the usage rates for both of these age groups dropped. The usage rate for the four to 14 year old group dropped from 75.5% in 1997 to 63% in 1998 to 57.6% in 2002, while the rate for the 15 to 18 year old group dropped from 58% in 1997 to 43% in 1998 and increased to 55% in 2002. These declines, however, should be interpreted with caution since the methodology for conducting the observational seat belt use survey and the estimation formulas used to compute the rates changed between the 1997 and 1998 surveys. Hence, the results of the two surveys are not strictly comparable.

The safety belt usage rate for vehicle occupants ages 19 and older remained at the 1997 level of 59% in 1998. In 2002 the survey was conducted using the ages affected by secondary enforcement of 18 and older. The usage rate for this group was 58.46% in the preliminary data.

2002 Program Strategies

To accomplish these objectives, a number of different program strategies were undertaken. The strategies included: 1) child passenger safety education program, 2) child seat programs, 3) special enforcement targeting the under 18 population, 4) public information and education, 5) programming targeting schools, business, and governmental entities, 6) community-based programming initiatives, and 7) safety belt use study.

Child Passenger Safety Education Program

Provide funds to the child passenger safety education effort in the Department of Human Services which will support the Child Safety Seat Program, bicycle, pedestrian and school bus safety efforts, safe communities and other highway safety programs. The position has been vacant since September 30, 2002 and with the current State budget situation it is unclear when it will be permissible to begin the hiring process. In the interim, other Bureau of Health personnel are making the extra effort to continue child passenger safety work functions.

Child Safety Seat Programs

The Child Safety Seat Program continued in 2002. Funding allowed the acquisition and distribution of infant, toddler, and booster seats and special needs seats. The Department of Human Services was the BHS's primary partner in this program.

Public Information and Education

A variety of public information and education activities were conducted to further the causes of increased use of occupant restraints and the correct

installation and use of child safety seats. A brochure was developed in cooperation with the Bureau of Health, Maine Department of Human Services and State Farm Insurance. To date, approximately 300,000 brochures have been distributed. The AAA office in Portland, Maine developed an informational brochure to use in the travel packets, office locations and for general distribution. Currently we are partnering with Maine Safe Kids in their efforts to promote safe transportation of children four through eight in restraint systems.

Programming Targeting Schools, Businesses, and Governmental Entities

Grant funds were used to support a full-time position under the *Safety Belt Education Project*. This person has presented complete educational programs at schools, businesses, governmental agencies, and other sites. A seat belt convincer and a rollover machine have been used in these programs. A greater number of businesses have become involved in the seat belt effort through support of the *Network of Employers for Traffic Safety (NETS)* program. A new component for the under-ten year old age group has been added to the education project. We now have a robot called Willy B. Safe. He has made a few appearances at safety fairs and sport events and the program is being marketed to school and day care programs.

Community-based Programming Initiatives

A number of mini-grants of \$500 to \$5000 have been used to promote local solutions to local problems throughout the state; these efforts have included programs to increase safety belt use and child safety seat use.

Safety Belt Use Study

The most recent statewide observational survey of seat belt use was conducted in the fall of 2002. The data is in a preliminary status and a report is currently under revision.

POLICE TRAFFIC SERVICES

The Police Traffic Services program area covers all aspects of enforcement of Maine's traffic laws. Traffic law enforcement plays a major role in deterring drunk and drugged driving, speeding, and other dangerous behaviors that contribute to crashes, as well as encouraging positive behaviors such as occupant restraint use. Experience has shown that a combination of highly visible enforcement and public information and education is needed to achieve and sustain significant results.

Objective

- *Reduce the rate of speed-related fatal crashes by 5% from 44% in 1996 to 39% in 2002.*

Status of Objective

Maine has made progress toward its objective to reduce speed-related crashes. Between 1996 and 2001, the proportion of fatal crashes in which speed was a contributing factor dropped from 44% to 37.6%, exceeding the 2002 target of 39%.

2002 Program Strategies

The strategies for meeting the objective established in the 2002 Highway Safety Plan included specialized law enforcement training; procurement of speed enforcement, traffic control, and accident reconstruction equipment; and public information and education. Highlighted below are the key activities undertaken in 2002.

Law Enforcement Training

A wide range of specialized law enforcement training was conducted for agencies at all jurisdictional levels. This included training in drug recognition (DRE course), accident investigation, accident reconstruction, improved data collection and processing, the use of radar and laser speed detection equipment and evidential breath testing instruments, and training for EMS dispatchers. The training programs were facilitated through the support of a highway safety training coordinator position at the Maine Criminal Justice Academy.

Equipment

Grant funding enabled highway safety agencies, including enforcement agencies, to purchase equipment needed for safety programs. This equipment included radar, speed display screens, data processing equipment, traffic control cones, and accident reconstruction equipment.

Public Information and Education

A statewide public information and education campaign supported the enforcement and training programs by educating the public about the dangers of speeding and the importance of enforcement activities in ensuring the safety of the motoring public.

PUPIL TRANSPORTATION

The Pupil Transportation Program area continues to assure that Maine's pupil transportation is among the safest in the nation. In 2001, there were 110 crashes involving school vehicles down from 142 in 1997. None of the school vehicle occupants were fatally injured. While school vehicles are traditionally one of the safest means of travel on the highway, when crashes occur, the results can be devastating. Most fatalities and injuries to bus occupants occur outside the bus. These usually result from an illegal or unsafe action by a motorist, an error on the part of the bus driver, or unsafe behavior on the part of the children being transported.

Objective

- *Maintain (improve upon if possible) the current excellent safety record of Maine's pupil transportation system.*

Status of Objective

The number of crashes involving school buses in Maine remains very low, with no fatal or serious injury crashes having occurred over the past several years, 1997-2001, there were 633 crashes involving school buses. The number of school bus crashes dropped from 142 in 1997 to 110 in 2001, representing a decline of approximately 22.5%.

2002 Program Strategies

Maine's success in the area of school bus safety can be attributed to activities designed to provide safety training to school bus drivers and students who ride buses and to the acquisition of safety equipment for school buses.

A position which had been previously funded for the Maine Association for Pupil Transportation (MAPT) is now funded only by the organization. The Executive Director is responsible for coordinating most of the association functions including on-going education for drivers, school children, teachers, parents and Maine's motoring public.

Training Programs

Safety training was delivered to school bus drivers and students. Each year both regional and a statewide conference are held for all people involved in pupil transportation in Maine. This forum provides many training programs presented by both pupil transportation professionals and related field personnel.

TRAFFIC RECORDS, TRAFFIC ENGINEERING SERVICES AND EMERGENCY MEDICAL SERVICES

Maine continues to support improvements in the areas of traffic records, traffic engineering, and emergency medical services. Traffic records improvements are essential to the tracking of crashes, the accurate identification and characterization of traffic safety problems, and evaluation of countermeasures. With the increasing emphasis on data-driven performance-based programming, this capability becomes crucial. For specific applications, traffic-engineering solutions remain a highly viable alternative to more costly enforcement or other programs to alter driver behavior. Examples of such cost-effective measures are treatments to control traffic flow at high-accident intersections and improvements to decrease collisions with fixed objects; the latter may involve removal of the fixed object, attenuation of crash impact, such as with shock-absorbing barrels, or better signage to warn motorists of the danger. Emergency medical services remains an area for consideration, since the availability of prompt, high-quality medical treatment can mean the difference between life and death to the victim of a traffic crash.

Objective

- *Promote "Systemic Improvements" in Maine's overall Highway Safety Program*

Status of Objective

In 2002, Maine continued its implementation of initiatives in these three areas that are designed to improve the state's overall highway safety system.

Regarding traffic engineering, the Maine Department of Transportation (MDOT) has continued to fund all of their own initiatives. We continue to work closely with them. The improvements to the collection of crash data at the scene of the crash is seen as a valued improvement to the work of MDOT engineers.

With regard to EMS services, support was provided for EMS technicians to obtain the necessary training to maintain or upgrade their level of licensure.

2002 Program Strategies

Traffic Records

In the area of traffic records, Phase One of the Maine Mobile Accident Information Reporting System was completed. As a result, law enforcement personnel can enter crash data electronically from the field. Phase Two is also complete, which involves the electronic transfer of crash data between field sites and the central statewide system. Improvements have included the acquisition of data processing equipment; programming to collect, store and analyze crash, EMS, and information on the use and effectiveness of safety equipment, including seat belts, child safety seats and helmets. Phase Three and Four are nearing completion as we bring all of the law enforcement departments on-line with the Maine Crash Reporting System. It was expected that by the end of calendar year 2002 at least eighty percent of the departments would be participating in electronic crash information collection. At the end of calendar year 2002 the database contained nearly 20,000 crashes (approximately one half) and approximately 85.5% of the departments are using electronic submission. In January, 2003 the Maine State Police is implementing the Maine Crash Reporting System (MCRS) department wide. On average Maine has 38,000 crashes and the Maine State Police cover 20% of those crashes.

EMS Services

Funds were made available to local emergency medical services to help offset the costs of training needed to maintain or upgrade their level of licensure. In addition, support was made available to assist services in obtaining the necessary equipment to respond to traffic crashes. Support was also provided for public information campaigns and for the procurement and distribution of printed materials and promotional items.

PROGRAM MANAGEMENT

The Bureau of Highway Safety (BHS) is responsible for the coordination and implementation of Maine's comprehensive highway safety program. This includes the administration of the National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration (FHWA) 402 program. Within this framework, the BHS works with its partners and networks to identify highway safety problems in Maine and collectively develop strategies and programs to address these areas of concern.

Objectives

- *Maintain BHS's leadership role in setting goals and priorities for the state's Highway Safety Program.*
- *Identify highway safety problems and solutions to reduce fatalities and injuries on Maine's highways.*
- *Administer the Highway Safety Program in full compliance with state and federal laws, regulations, and guidelines.*
- *Provide direction, guidance, and assistance to support the efforts of public and private partners to improve highway safety.*
- *Develop and maintain policies and procedures that provide for the effective, efficient, and economical operation of the highway safety program.*
- *Continue to assess training needs and coordinate and support training and development programs for Maine's traffic safety professionals.*

Status of Objectives

Some of the specific accomplishments associated with the management of the 402 program include:

- A Federal Cost Summary allocating \$760,000.00 for NHTSA and FHWA Section 402 highway safety programs was implemented.
- 89 new projects and continuation projects were awarded.

2002 Program Strategies

The strategies developed to meet the goals for the management of the 402 highway safety program are described below. The descriptions highlight the major activities that were undertaken in conjunction with each strategy.

Maine's Highway Safety Plan

The BHS prepared and submitted Maine's Highway Safety Strategic Plan for FY 2002.

Planning and Administration

The traffic records initiatives undertaken will have a major impact on Maine's ability to accurately identify traffic safety problems, e.g., to identify trends in the numbers and locations of crashes, crash causation, and the use of safety equipment, to evaluate the effectiveness of the programs undertaken, and therefore, to efficiently allocate resources. Funds apportioned to the planning and administration function also provided salary support to BHS personnel and made it possible to increase the skills of staff through attendance at conferences and workshops.

Statewide Public Information and Education

Major statewide public information and education campaigns focused on increasing the public's awareness of the importance of using occupant restraints, restraining children between the ages of four and eight, the dangers of impaired driving and the promotion of alternatives to driving after drinking, the potential consequences of speeding, and garnering support for the state's enforcement efforts.