Maryland Highway Safety Office
2010 Annual Report

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TABLE OF CONTENTS

Introduction

Maryland has made hard earned progress towards reducing motor vehicle fatalities and injuries despite an increase in population. Maryland's progress has also afforded the opportunity to utilize federal incentive grant monies, including Section 402, 405, 410, 2010, 2011, 406, and 408 monies. There are, however, reasons for concern. In Maryland there are more cars on the road than ever before. By 2009, the annual vehicle miles of travel (VMT) had increased to 55.6 billion from the 1996 estimate of 45.9 billion VMT, a twenty-one percent increase. While Maryland is on target to continue with a downward trend in fatalities in 2009 and 2010, questions remain as to whether these recession-related trends will continue once the economy improves and more motorists return to Maryland's roads.

In 2009, there was a total of 96,383 police-reported motor vehicle crashes, or one every five minutes, occurring on Maryland's roadways and resulting in 48,143 injuries and 592 lives lost. The bigger picture shows that from 1998 to 2008 more than 6,900 people died on Maryland roads, and roughly 640,000 were injured at a cost of more than $45 billion.

Maryland's goal is to significantly reduce and, if possible, eliminate all motor vehicle fatalities, serious injuries, and property damage on all Maryland roads and highways. To that end, SHA has adopted the goal of *Toward Zero Deaths*, with the interim goal of halving fatalities by 2030. To address these goals, Maryland has increased its emphasis on implementing a well-coordinated plan and approach to highway safety that combines the "Four Es" of Education, Enforcement, Engineering, and Emergency Medical Services (EMS). No other recent endeavor has been as monumental to Maryland's traffic safety initiatives as the mandate by Congress for states to implement a comprehensive State Strategic Highway Safety Plan (SHSP) as a requirement by the *Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) officially passed during Federal Fiscal Year (FFY) 2006. Rather than merely being implemented as a step toward securing highway safety funding, Maryland's leadership has utilized the SHSP implementation process as an opportunity to galvanize the State's traffic safety efforts by securing commitments from a multitude of partners, many of which were not previously engaged in such programs. Maryland's SHSP provides a comprehensive framework for further reductions in highway safety fatalities and injuries on *all* public roads through the establishment of a statewide goal, objectives, key emphasis areas, and strategies. As a point of reference, a summary of Maryland's SHSP is included in this report.

The Maryland Highway Safety Office, a division within the Maryland State Highway Administration's (SHA) Office of Traffic and Safety (OOTS), serves as Maryland's designated State Highway Safety Office (SHSO). The SHA Administrator serves as the Governor's Highway Safety Representative and the Chief of the MHSO serves as Maryland's Highway Safety Coordinator. Maryland's highway safety program and SHSP are facilitated by the MHSO's staff and supported by a combination of federal highway safety incentive and innovative program funds, as well as state and local funds.

The MHSO, recognized by the U.S. Department of Transportation Secretary and created per the U.S. Highway Safety Act of 1966, conducts the State's highway safety program, one that is designed to reduce traffic crashes and deaths, injuries and property damage. The mission of the MHSO is to save lives and preventing injuries within Maryland by reducing the number and severity of motor-vehicle crashes through the administration of a comprehensive and effective network of traffic safety programs.

The FFY 2010 Annual Report is meant to provide a barometric reading of how well Maryland has done in reducing automobile crashes and fatalities over the past year. Furthermore, this report provides an opportunity to examine how closely the MHSO met the objectives outlined within the FFY 2010 Highway Safety Plan. Each programmatic section within this report attempts to provide a clear picture of activities that support those objectives. The State of Maryland FFY 2010 Highway Safety Plan (HSP) outlined the key objectives and goals of the MHSO for FFY2010. These goals and objectives or benchmarks are the "ideals" toward which we continue to strive. During FFY2010, highway safety countermeasures were designed and implemented to enhance existing state, local, and non-government efforts to modify unsafe driving behaviors by promoting safe, responsible driving. While these benchmarks presented earlier in the year are quantifiable for evaluation and accountability purposes, it should be noted that they are heavily influenced by external factors such as legislation and the publics' safe driving actions. Within the following pages the outcomes of the implemented strategies, financial investments, upcoming challenges and noteworthy achievements are detailed to brief our customers on the status of our progress made in FFY2010.

Maryland's Strategic Highway Safety Plan Summary

Maryland is on a journey to "Destination – Saving Lives," and the vehicle is the Strategic Highway Safety Plan (SHSP). The purpose for taking this journey is clear. Motor vehicle crashes are already costing Marylanders entirely too much…the toll includes not only dollars, but lives as well.

The goal of the SHSP is to reduce these crashes and the resulting fatalities and injuries by sharing resources and targeting efforts to the areas of greatest need. The SHSP is a statewide comprehensive safety plan that provides a coordinated framework for reducing fatalities and serious injuries on all public roads. The SHSP strategically establishes statewide goals, objectives, and key emphasis areas developed in consultation with federal, state, local, and private sector safety stakeholders.

The following report is a summary of Emphasis Areas and Strategies in the current SHSP that expires at the end of 2010. A new SHSP is under development and will be released in early 2011.

Strategic Highway Safety Plan Strategies

The primary goal within the SHSP is:

- To eliminate motor vehicle fatalities and serious injuries on Maryland roads and highways.

The overall strategies for the plan are as follows:

- To reduce annual motor vehicle fatalities to fewer than 550 by 2010.
- To reduce annual motor vehicle injuries to fewer than 50,000 by 2010.

The measurable objectives and strategies for each MHSO program area are designed to accomplish these overall strategies:

Aggressive Driving Prevention

- Conduct public education and outreach activities that elevate awareness of aggressive driving.
- Educate judiciary and legislatures on aggressive driving risks.
- Communicate aggressive driving factors to transportation engineering and planning communities.
- Increase aggressive driving enforcement.

Bicycle & Pedestrian Safety

- Conduct road safety audits targeting high-risk pedestrian and intersection locations.
- Develop and implement projects to reduce or eliminate safety hazards or enhance safety for road users.
- Conduct assessments of traffic and pedestrian volumes and conduct road safety audits.
- Implement effective countermeasures for areas as determined by safety assessments and road safety audits.

Data Enhancement

- Develop a tracking system to evaluate countermeasure effectiveness at high-crash intersections.

- Develop infrastructure and policies that increase appropriate access to data.
- Develop an impaired driving tracking system through citation, disposition, and treatment.
- Revise the policy and crash analysis system to identify hazardous locations.
- Develop a standardized crash reporting threshold requirement.
- Develop systems to identify, assess, and evaluate roadway risk factors.
- Improve data collection and analysis for fatal and injury run-off-the road crashes
- Improve data collection and analysis to more accurately determine the factors involved in high-risk driving and to better identify high-risk drivers and operators.

Traffic Safety Awareness for Employers

- Develop, implement, and evaluate improved work zone planning.
- Heighten the visibility of workers, vehicles, equipment, and traffic control devices.
- Ensure work zone messaging devices display information that is accurate and timely.
- Use Intelligent Transportation Systems (ITS) for advanced communication of work zones.
- Increase speed enforcement in work zones.

- Reduce the need for trucks to park on high-speed highways.
- Increase in-terminal truck enforcement and increase enforcement in high-crash locations.
- Establish virtual weigh stations.
- Educate the judiciary and the legislature on the safety risks associated with trucks and buses.

Police Traffic Services

- Educate the judiciary on the importance of penalties for violation of pedestrian laws.
- Develop effective law enforcement and judicial procedures to address the lawful operation of motorcycles.
- Develop an incentive/recognition program for law enforcement efforts.
- Identify best practices and innovative enforcement techniques for high-crash pedestrian locations and work zones.

Impaired Driving Prevention

- Increase the number and effectiveness of sobriety checkpoints and saturation patrols.
- Strengthen, expand and enhance Driving Under the Influence (DUI) courts.
- Educate legislators for stronger and more effective DUI legislation.
- Develop educational programs targeting specific high risk audiences.

Motorcycle Safety

- Create and administer a comprehensive training program for new, existing, and returning motorcycle drivers.
- Implement motorcycle licensing procedures that effectively evaluate motorcycle operator entry level knowledge and skills.

Young Driver Safety

- Review, evaluate, and improve the driver preparation program.
- Develop a program to increase enforcement, prosecution, and adjudication of young driver traffic law violations.
- Identify engineering solutions to prevent young driver crashes through road safety audits and other measures.

Occupant Protection & Child Passenger Safety

- Conduct an enforcement program that targets pickup truck drivers and passengers.
- Conduct sustained high-visibility enforcement initiatives.

- Enhance current enforcement and education programs.
- Provide more paid media in highly populated metropolitan areas.
- Conduct outreach to teens.

State Demographic Profile

According to the U.S. Census Bureau, as of December 2010, Maryland is still the wealthiest state in the United States, with a median household income of $69,193. Maryland is also a life sciences hub with over 350 biotechnology firms, making it the third-largest such cluster in the nation.

As of 2009, Maryland has an estimated population of 5,699 478, which is roughly an increase of 6% since the year 2000. Maryland ranked as the 19th most populous state despite being the 9th smallest in terms of land area.

The majority of Maryland's population is concentrated in the areas surrounding Washington, D.C. and Baltimore, the most populous city in the State. The center of population for Maryland is located on the county line between Anne Arundel and Howard Counties, in the unincorporated town of Jessup. Other major population centers include the following: Columbia in Howard County, Silver Spring, Rockville and Gaithersburg in Montgomery County, Frederick in Frederick County and Hagerstown in Washington County. The eastern, southern, and western portions of the state tend to be more rural, with cities of regional importance such as Salisbury and Ocean City on the eastern shore, Waldorf and La Plata in Southern Maryland, and Cumberland in Western Maryland.

Profile Elements	2000	2009*	Change
Population	5,296,486	5,699,478	▲ 402,992
Under Age 5	353,393	376,440	▲ 23,047
Age 18 and Over	3,940,314	4,271,121	▲ 330,807
Age 65 and Older	599,307	663,179	▲ 63,872
Female	2,738,692	2,907,051	▲ 168,359
Male	2,557,794	2,730,367	▲ 172,573
Caucasian	3,391,308	3,433,516	▲ 42,208
African-American	1,477,411	1,625,880	▲ 148,469
American Indian & Alaska Native	15,423	15,394	▼ *(29)*
Asian	210,929	277,732	▲ 66,803
Native Hawaiian & Other Pacific Islander	2,303	3,010	▲ 707
Reporting Multiple Race	103,587	114,120	▲ 10,533
Hispanic or Latino Origin	227,916	371,306	▲ 143,390
Foreign Born	518,315	692,910	▲ 174,595
Language Other Than English at Home	622,714	786,293	▲ 163,579
Persons Per Square Mile	542	583	▲ 41
Licensed Drivers	3,382,451	3,994,783	▲ 612,332
Registered Vehicles	3,847,538	4,773,777	▲ 926,239
Mean Work Travel Time (Minutes)	31.2	30.8	▼ *(0.4)*
Land Area (Square Miles)	9,774	9,774	0
Total Road Mileage	29,893	31,300	▲ 1,407
State / US Roads	5,231	5,241	▲ 10
County Roads	20,222	21,688	▲ 679
City Roads	4,440	4,623	▲ 183

Sources: U.S Geological Survey, U.S. Census Bureau, University of Maryland Capitol News Service, Maryland Department of Business & Economic Development
*2010 data unavailable

Crash Data & Trends

The following tables represent various traffic safety-related rates and trends in the State of Maryland, and were generated in conjunction with guidelines supplied by the Governors Highway Safety Association (GHSA). The tables were also designed to allow a comparison of statistics* from state to state and to provide a measure of consistency and benchmarking. In the following pages, graphs on the nationally measured issues will be presented and will detail:

- Fatality Trends,
- Fatality Rate per 100M VMT,
- Injury Trends,
- Fatal and Serious Injury Rate per 100M VMT,
- Fatality Rate per 100K Population,
- Fatal and Serious Injury Rate per 100K Population,
- Alcohol-Related Fatalities,
- Alcohol-Related Fatalities as a Proportion of All Fatalities,
- Alcohol-Related Fatality Rate per 100M VMT, and
- Percent of Population Using Safety Belts.

*Unless otherwise noted, data sources for graphs derived from Maryland Automated Accident Reporting System (MAARS). As of December 21, 2010, complete data for 2009 is unavailable due to processing difficulties encountered by the collecting agency. Though the following graphs represent 2008 trends, preliminary FARS data for 2009 show reductions and/or improvements in all categories except alcohol-related fatalities, as shown in the accompanying Objective Goal Statements. Any 2009 data sets utilized in the program area reports represent preliminary state data.

Graph A – Fatality Trends

Fatality Trends

Until 2006, fatalities on roads in Maryland were on a steadily decline of 7% over 4 years. In 2006 a spike occurred but did not dramatically affect the trend, as evidenced by 2007 and 2008 overall fatality numbers. The target of fewer than 550 fatalities by 2010 still remains the State's focus.

Graph B – Fatality Rate per 100MVMT

Fatality Rate Per 100M VMT
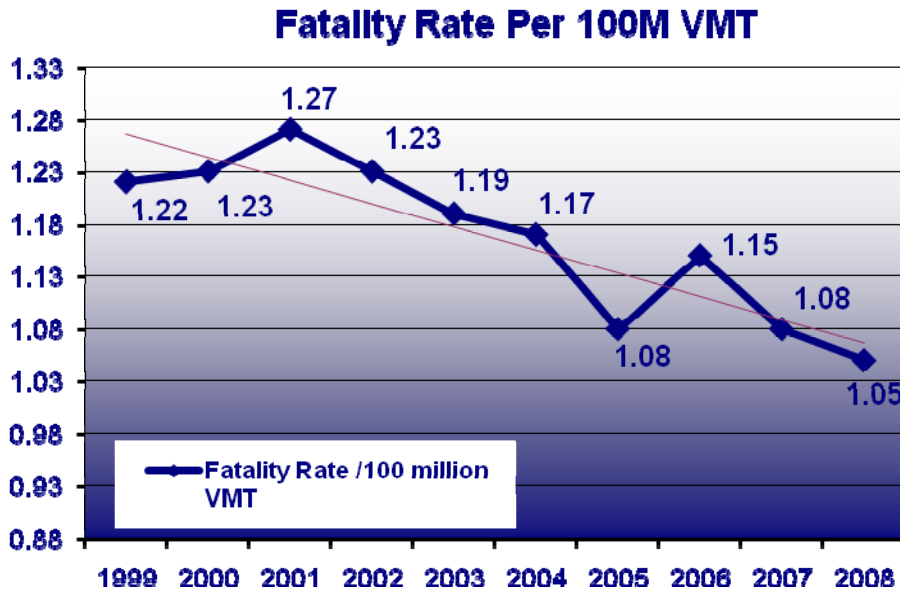
Fatality Rate

Based on the 2008 reduction in overall fatalities, the fatality rate was similarly impacted. The fatality rate for the last complete reporting period reflects a decrease of 2.7% to 1.05 per 100 million vehicle miles traveled.

Graph C – Injury Trend
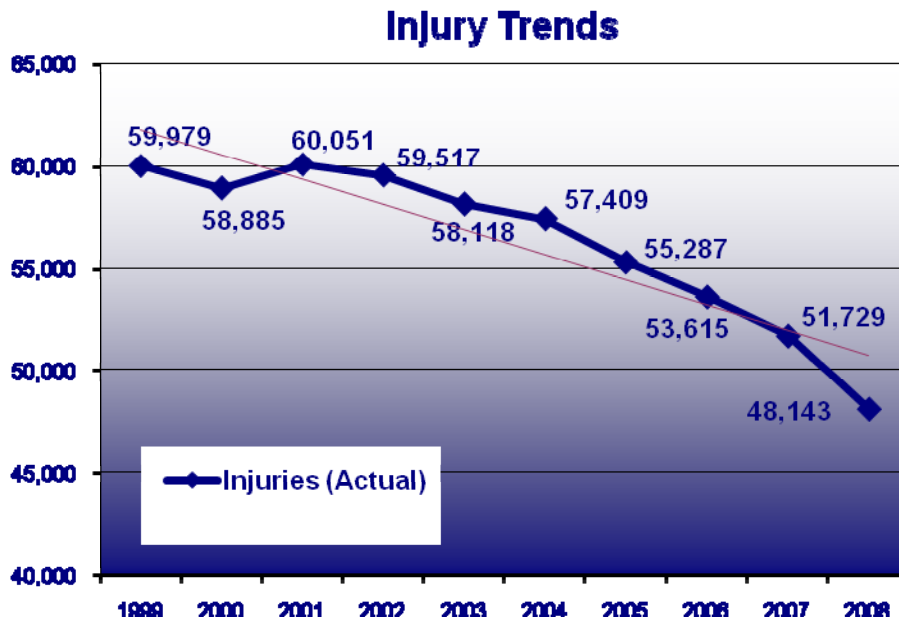
Injury Trends

Injury Trends

Injuries due to crashes on all roads in Maryland have declined by 13.9% between 2001 and 2006. The challenging areas for injury can be attributed to crashes involving aggressive driving, motorcycles and impaired driving. The target remains revised to further reduce injuries to less than 50,000 by the year 2010.

6

Graph D - Fatality & Serious Injury Rate per 100 Million Vehicle Miles Traveled

Fatal and Serious Injury Rate per 100M VMT

20.8
19.2
19
14.0
16.2
14.6
13.9
12.0
10.6
9.1

Fatality & Serious Injury Rate/(100 million VMT)

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

Fatality & Serious Injury Rate per 100 Million Vehicle Miles Traveled

The rate of fatality and serious injury related to vehicle miles traveled continued to demonstrate a decrease mainly attributed to the decrease in reported injuries during 2008.
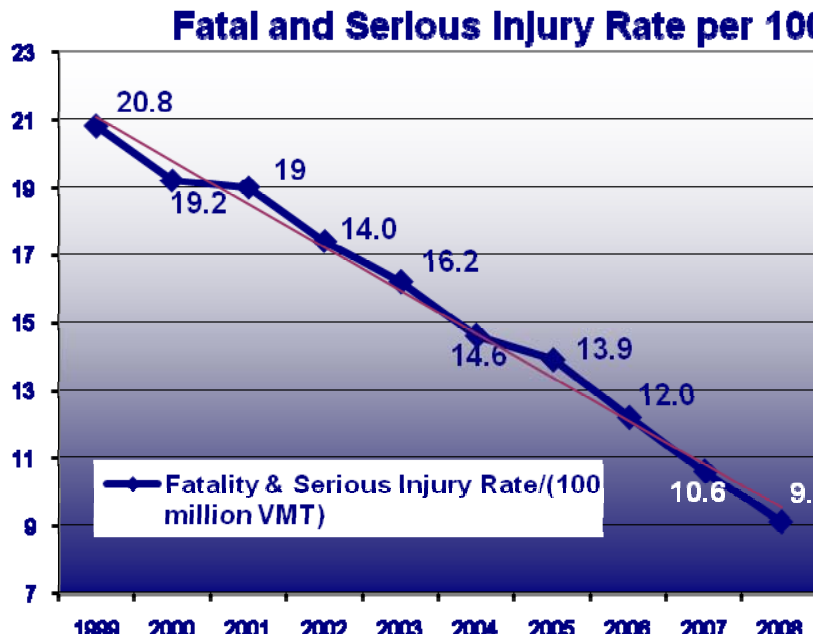
Graph E - Fatality Rate per 100,000 Population

Fatality Rate Per 100K Population

12.3
12.1
11.8
11.7
11.6
11.6
11.4
11.0
10.9
10.5

Fatality Rate/100K Population
Performance Trend

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
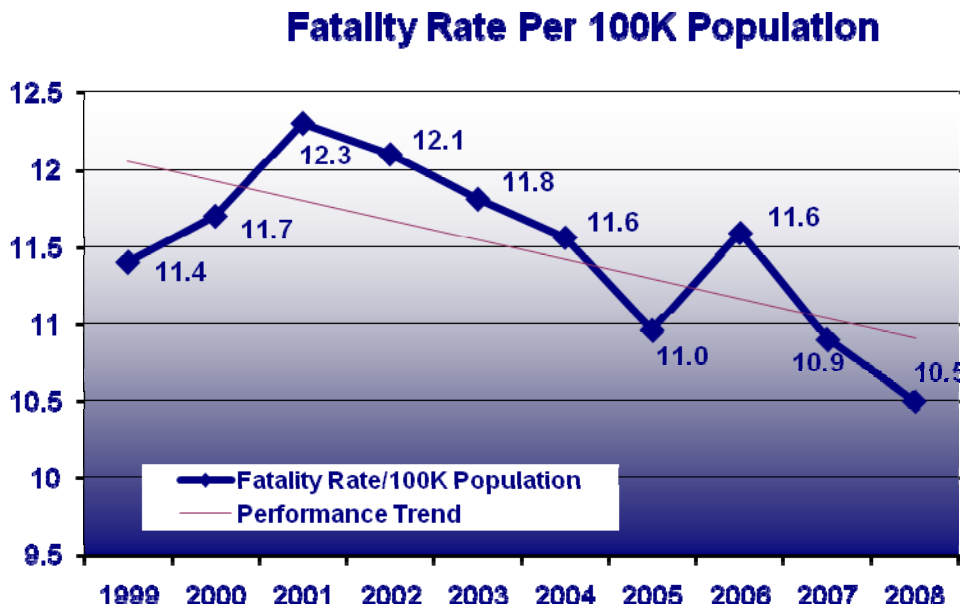
Fatality Rate per 100,000 Population

The fatality rate in relation to population decreased to 10.5 for 2008 reflecting the physical decrease in fatalities. This is a 3.7% decrease over 2007.

7

Graph F - Fatal and Injury Rate per 100,000 Population

Fatal and Injury Rate Per 100K Population

194.6
182.5
183.5
172.2
160.4
144.3
141.1
122.8
106.9
91.

Fatal & Serious Injury Rate/100K population

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
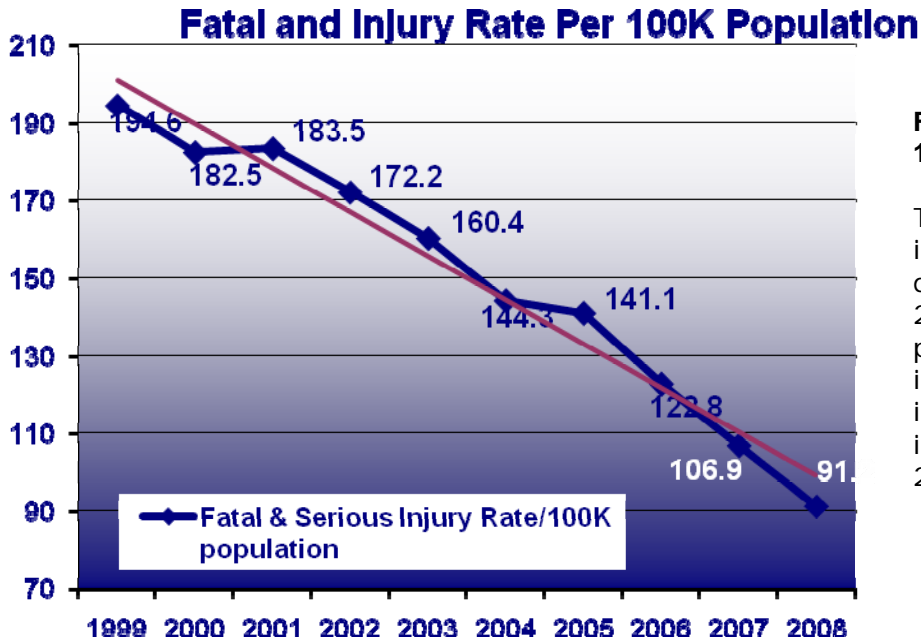
Fatal and Injury Rate per 100,000 Population

The fatality and injury rate in relation to population decreased to 106.9 for 2007 reflecting the physical decrease in injuries counteracting the increase in fatalities. This is a 13% decrease from 2006.

Graph G - Alcohol Related Fatalities

Alcohol Related Fatalities

141
159
198
193
187
211
165
189
178
152

Alcohol Related Fatalities (BAC .08+)

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

Alcohol Related Fatalities*

For 2008 fatalities in general experienced a decrease. As mentioned earlier impaired driving is one of the major areas demonstrating a negative increasing trend. The reported numbers in the chart to the left reflect the U.S. Department of Transportation's Fatal Analysis Reporting System (FARS) statistics for Maryland. FARS reported data makes use of formula based methodology. (*0.08+ BAC)

8

Graph H - Alcohol Related Fatalities as a Proportion of All Fatalities

Alcohol Related Fatalities as a Proportion of All Fatalities

Values by year:
- 1999: 0.31
- 2000: 0.33
- 2001: 0.38
- 2002: 0.37
- 2003: 0.38
- 2004: 0.40
- 2005: 0.34
- 2006: 0.36
- 2007: 0.37
- 2008: 0.3

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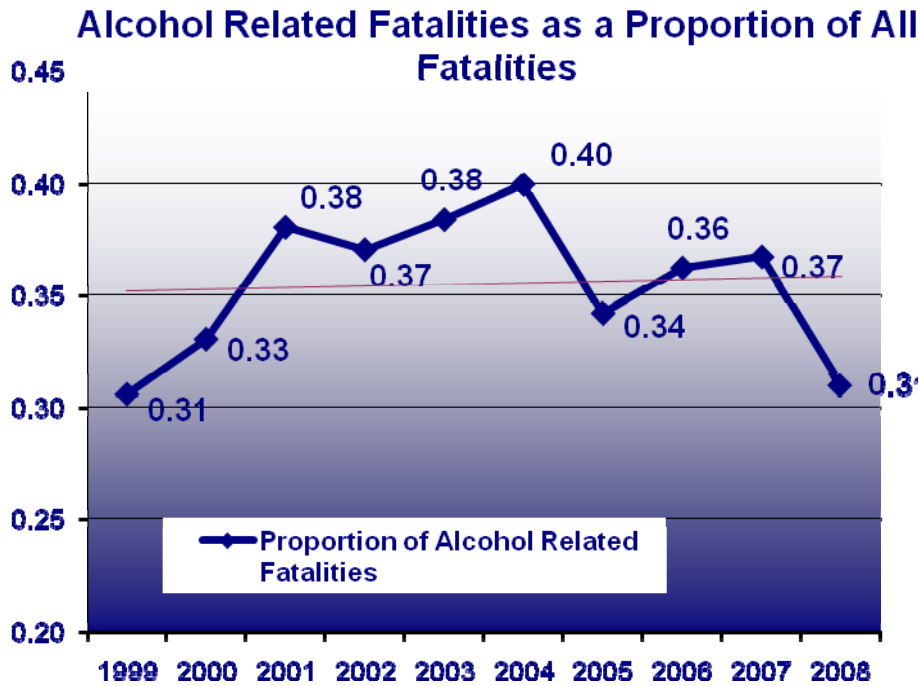
Alcohol Related Fatalities as a Proportion of All Fatalities*

Impaired driving represented a significant portion (31%) of the 592 fatalities reported during 2008.

Graph I - Alcohol Related Fatality Rate

Alcohol Related Fatality Rate Per 100M VMT

Values by year:
- 1999: 0.37
- 2000: 0.41
- 2001: 0.48
- 2002: 0.46
- 2003: 0.46
- 2004: 0.47
- 2005: 0.37
- 2006: 0.42
- 2007: 0.40
- 2008: 0.33

Legend: Alcohol Related Fatality Rate/100M VMT

Alcohol Related Fatality Rate*

The alcohol related fatality rate in relation to vehicle miles traveled decreased to .33 for 2008 reflecting the physical decrease in fatalities. This is a 17.5% decrease over 2007. (*0.01 BAC)
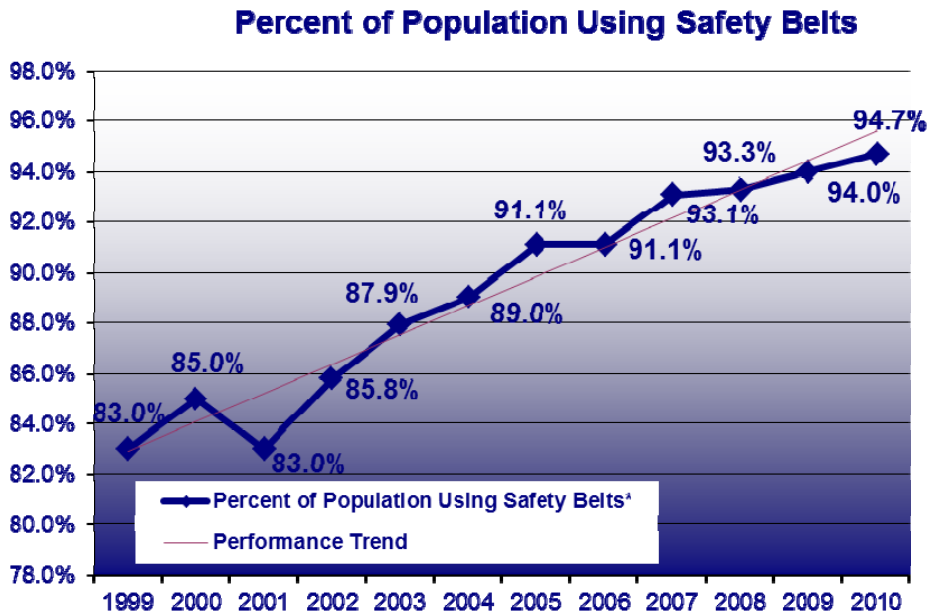
Graph J - Percent of Population Using Safety Belts

Percent of Population Using Safety Belts

Percent of Population Using Safety Belts

98.0%
96.0%
94.0%
92.0%
90.0%
88.0%
86.0%
84.0%
82.0%
80.0%
78.0%

83.0% 85.0% 83.0% 85.8% 87.9% 89.0% 91.1% 91.1% 93.1% 93.3% 94.0% 94.7%

— Percent of Population Using Safety Belts[a]
— Performance Trend

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Percent of Population Using Safety Belts

Maryland's usage of seat belts continues to trend in a positive direction with a compliance percentage of 94% being reported for 2009. This is more than a 10 percentage point increase between 2001 and 2009.

Crash Profiles By Involvement Type

Occupant Protection (Belt Usage)	% Change	2004 Base	2010 Data	2010 Goal
Statewide Belt Usage (Combined)	▲ 4.8%	89%	94.7%	95.0%
Statewide Belt Usage (Automobiles)	▲ 3.7%	90.8%	95.3%	95.0%
Statewide Belt Usage (Pick-Ups)	▲ 10.6%	79.8%	90.3%	92.3%

Fatalities by Program Area	% Change	2004 Base	2008 Data	2010 Goal
Statewide	▼ 7.9%	643	592	608
Aggressive Driving**	▲ 6.9%	58	62	52
Bicycles	▼ 41.7%	12	7	10
Inattentive Driving**	▼ 81.3%	187	35	139
Impaired Driving (BAC 0.08+) *	▼ 28.0%	211	152	206
Motorcycles	▲ 22.0%	68	83	62
New Drivers	▼ 13.1%	122	106	100
Occupant Protection (Unbelted)	▼ 10.8%	185	165	168
Older Drivers	▼ 18.3%	104	85	85
Pedestrians	▲ 22.9%	96	118	85

Injuries by Program Area	% Change	2004 Base	2008 Data	2010 Goal
Statewide	▼ 16.1%	57,409	48,143	52,469
Aggressive Driving**	▲ 46.2%	2,861	4,183	2,552
Bicycles	▼ 7.5%	705	652	552
Inattentive Driving**	▼ 56.1%	26,523	11,636	21,655
Impaired Driving	▼ 12.2%	4,886	4,291	3,069
Motorcycles	▲ 10.7%	1,416	1,568	1,333
New Drivers	▼ 26.0%	13,927	10,309	9,643
Occupant Protection (Unbelted)	▼23.3%	4,116	3,155	2,959
Older Drivers	▼ 9.1%	7,202	6,545	5,066
Pedestrians	▼ 0.5%	2,631	2,618	2,237

Fatal Crashes by Program Area	% Change	2004 Base	2008 Data	2010 Goal
Statewide	▼ 6.4%	576	539	527
Aggressive Driving**	▲ 7.7%	52	56	46
Bicycles	▼ 41.7%	12	7	10
Inattentive Driving**	▼ 78.9%	161	34	112
Impaired Driving*	▼ 25.8%	186	138	176
Motorcycles	▲ 20.0%	65	78	62
New Drivers	▼ 17.4%	109	90	88
Older Drivers	▼ 13.3%	90	78	70
Pedestrians	▲ 11.6%	95	106	86

Injury Crashes by Program Area	% Change	2004 Base	2008 Data	2010 Goal
Statewide	▼ 12.4%	37,422	32,769	33,067
Aggressive Driving**	▲ 55.4%	1,660	2,579	1,559
Bicycles	▼ 5.4%	665	629	517
Inattentive Driving**	▼ 53.0%	16,906	7,954	16,154
Impaired Driving	▼ 9.8%	3,142	2,834	2,364
Motorcycles	▲ 11.9%	1,222	1,367	1,164
New Drivers	▼ 22.8%	8,524	6,579	7,597
Older Drivers	▼ 3.8%	4,447	4,277	3,361
Pedestrians	▼ 0.8%	2,405	2,385	2,131

* Fatality Analysis Reporting System data
** A 2004 Maryland State Police change in policy redefined usage and attribution of the inattentive contributing circumstance in crash reports resulting in a lowering of crashes reported as inattentive driving related crashes.

Program Reports

Throughout FFY 2010, the MHSO funded a variety of programs, projects and activities, with federal transportation dollars, which were intended to advance the traffic safety goals set forth by the State of Maryland. For FFY 2010, these Program Areas have been arranged to coincide with their position in the MHSO's overall set of priority Program Areas, as defined in Maryland's FFY 2010 Highway Safety Plan. Those priorities are as follows:

- Aggressive Driving Prevention
- Bicycle and Pedestrian Safety
- Data Analysis and Traffic Records
- Employer Awareness
- Police Traffic Services

- Impaired Driving Prevention
- Motorcycle Safety
- Young Driver Safety
- Occupant Protection

Each section will provide a narrative description of the program, a listing of objectives proposed in the Highway Safety Plan, strategies implemented throughout FFY 2010, challenges encountered throughout the year, and notable accomplishments achieved in FFY 2010.

As in past years, all of the program areas identified by the NHTSA as being of national priority are significant components of Maryland's traffic safety program. However, not all of the national priority program areas are addressed in this report. [MHSO's program is based on Maryland's data and problem identification, and is specifically tailored to best meet Maryland's needs.]

Measure	2009	2010
Total number of grants awarded	59	95
Total number of grant applications	67	104
Total Number Press events	21	15
Total Number of Materials Distributed (brochures, incentives)	1,045,817	750,000
Total Number of Paid Media Impressions (web, outdoor, TV, radio)	303,598,935	56,900,000
Total Number of Training Events	102	72
Total Number of Educational Presentations & Taskforce Meetings	191	131
Total Number of Campaign-Related Seat Belt Citations and Warnings	~110,000	1,632*
Total Number of Campaign-Related Reported DWI Arrests	1,047	601*
Total Number of Campaign-Related Speeding Citations and Warnings	207,500	14,443*
Total Number of Checkpoint Events	101	77
Total Number of Saturation Patrols	554	252

During the past year gaps in enforcement reporting procedures were identified. Given a new electronic reporting/evaluation system and the restructuring of the current Community Traffic Safety Program a considerable amount of overtime enforcement activity was not captured, or was captured in a non-specific manner (total citations issued v. speeding / seatbelt citations issued). Additionally, many current reporting forms for Checkpoint StrikeForce and Smooth Operator activities include enforcement statistical totals by officers that were working on straight time (match) in conjunction with officers working on highway safety overtime funds. Steps have been taken to insure comprehensive data collection for the coming year including a new reporting form for all law enforcement agencies that will capture these specific data fields. As a new Regional Traffic Safety Program is implemented in the coming months additional steps will be taken to insure all law enforcement agencies are reporting the necessary data in the proper format. The numbers reported in these activity performance measures are only a fraction of known activity

Aggressive Driving Prevention

Polling and research conducted by AAA Mid-Atlantic through the years reveal a continued growing concern with the problem of aggressive driving (i.e., traffic signal violation, improper passing, failure to drive in a single or proper lane, following too closely, failure to stop/yield right of way, or exceeding the speed limit). In an effort to combat aggressive driving, a major effort by the MHSO in 2010 was to fund and partner with law enforcement, government officials, trauma experts, and others to conduct the *Smooth Operator* Program. Developed over 11 years ago, the *Smooth Operator* Program is a multi-state public safety initiative to provide education, information and solutions for the problem of aggressive driving. After a spike in reported aggressive driving crashes in 2006, as a result of different police reporting procedures, the frequency of these kinds of crashes has begun to level off and even decline over the past three years. Better data collection by police officers has resulted in a clearer understanding of the breadth of this problem.

Objectives

- Decrease the total number of aggressive driver related crashes from 3,909 in 2004 to 3,754 or lower in 2010.
- Decrease the total number of aggressive driver related fatalities from 58 in 2004 to 52 in 2010.
- Decrease the total number of aggressive driver related injuries to 2,552 in 2010.

Accomplishments

- The MHSO oversaw the involvement of more than 80 law enforcement agencies across the region, including 55 in Maryland, and coordinated their efforts to target aggressive drivers by conducting enforcement "waves" over a four month period. This included the involvement of every barrack of the Maryland State Police across the entire state. In 2010, they issued more than 345,000 citations for aggressive driving behaviors.

- The Maryland Motor Vehicle Administration coordinated the state's massive education and awareness campaign by overseeing the highway safety grant funds used to purchase media and educational items, as well as finance major media events. These expenditures totaled $250,000.

- Two major public relations events were held for the 2010 campaign, including one in Washington, DC, the other being in Baltimore City, Maryland, which included coupling with "*Street Smart*" for a live demonstration of speed v. stopping ability of a motor vehicle. These events included representatives of all the participating law enforcement agencies and other transportation industry partners. The events added an estimated $147,259.00 to the campaign's earned media value.

- Over the course of the 4 *Smooth Operator* media waves, more than 2.5 million impressions were acquired by the campaign's radio spots alone, averaging well over 175 Target Rating Points.

- Supplementing the media efforts, 100,000 brochures were created defining the *Smooth Operator* program and its strategies to effectively address the problems of excessive speed and aggressive driving.

- A total of 8 scheduled Steering Committee meetings occurred including several teleconferences for the 'funding partners' (executive committee). Meetings included representatives from law enforcement, highway safety officials, and other partners from the private sector.

- Statewide *Smooth Operator* Law Enforcement Training Meetings were held in December, 2009 and May, 2010, More than 100 police officers and CTSP coordinators were in attendance for both meetings. The December meeting included instruction on Targeting Strategies, as well as Motor Carrier Enforcement, and the May meeting introduced the upcoming media and public education campaign to the program's law enforcement partners.

Challenges

- Maintaining Tri-State coordination for such a massive program has become more problematic as each state strives to balance its overall highway safety needs and the goals of this program.

- Providing fresh 'media hooks' to attract news crews to *Smooth Operator* events remains a huge challenge.

Bicycle & Pedestrian Safety

Over the past five years an average of 2,874 pedestrian and 772 pedalcyclist crashes have occurred each year on Maryland's roadways. On average, 108 pedestrians and 8 pedalcyclists have lost their lives each year, representing nearly 19% of Maryland's traffic fatalities. In addition, an average of 2,660 pedestrians and 577 pedalcyclists have been injured annually, representing 6% of all Maryland's traffic injuries.

The Maryland highway safety program includes a comprehensive pedestrian and bicycle safety program that promotes safe pedestrian and bicycle practices, educates drivers to share the road safely with other road users, and encourages safe facilities for pedestrians and bicyclists through a combination of education and engineering strategies. In the Washington DC and Baltimore metropolitan areas, the *StreetSmart Campaigns* continue to address pedestrian safety issues through coordinated education and enforcement activities. These efforts continue to evolve, using more sophisticated data analysis for problem identification and incorporating engineering assessments in priority areas.

The number of pedalcyclist crashes decreased slightly from 809 in 2007 to 799 in 2008; the 2010 goal for pedalcyclist crashes is 733. The number of pedalcyclists injured decreased from 645 in 2007 to 633 in 2008; the 2010 goal for pedalcyclist injuries is 552. Pedalcyclist fatalities remained consistent with 2005-2007, with 7 pedalcyclists killed in 2008; the 2010 goal for pedalcyclist fatalities is 10.

Pedestrian crashes decreased from 2,928 in 2007 to 2,902 in 2008; the 2010 goal for pedestrian-related crashes is 2,528. Pedestrian related injuries decreased from 2,667 in 2007 to 2,618 in 2008; the 2010 goal for pedestrian related injuries is 2,237, Pedestrian fatalities increased from 110 in 2007 to 115 in 2008; the 2010 goal for pedestrian fatalities is 96.

Objectives

- Decrease the total number of pedalcyclist related crashes from 875 in 2004 to 733 in 2010.
- Decrease the total number of pedalcyclist related fatalities from 12 in 2004 to 10 in 2010.
- Decrease the total number of pedalcyclist related injuries from 702 in 2004 to 552 in 2010.
- Decrease the total number of pedestrian related crashes from 2,843 in 2004 to 2,528 in 2010.
- Decrease the total number of pedestrian fatalities from 96 in 2004 to 85 in 2010.
- Decrease the total number of pedestrian injuries from 2,626 in 2004 to 2,237 in 2010.

Accomplishments

- The *StreetSmart* DC campaign, developed in partnership with the Washington Council of Governments, reached millions of people in the Washington, D.C. metropolitan area with pedestrian safety messages directed at both motorists and pedestrians.
  - The fall 2009 launch event in Bethesda, Maryland was very successful in gaining media attention and informing the public about stepped-up law enforcement activities throughout Virginia, Maryland and the DC Metropolitan area, earning an estimated 4.4 million impressions with radio and television broadcasts, and at least eight print and online articles.
  - A very successful press event was conducted in April 2010 in Silver Spring, Maryland in coordination with MWCOG, the Montgomery County Department of Police and *iDriveSmart*, a professional driver education school. The event included a graphic demonstration of the impact of aggressive driving and speed on pedestrian safety. A professional driver demonstrated the actual stopping distance for a vehicle traveling at 20, 30 and 40 miles per hour, at a crosswalk with a wire-frame mannequin representing a 10 year old boy. At 20 miles per hour, the driver was able to stop without collision. At higher speeds the car struck the mannequin with devastating consequences.
  - Transit advertising was used to reach users of the transit system about walking safely and radio advertisements emphasizing the responsibilities of motorists toward pedestrians.
  - Radio advertising was used to reach an estimated 16 million impressions during the Fall and Spring campaigns.

The *StreetSmart* Baltimore campaign, operated in collaboration with the Baltimore Metropolitan Council (BMC), continued to expand in FFY10:

- o A soft launch was initiated in May 2010 through editorials, PSAs and posted web content. The theme of the 2010 campaign was "Cross Like Your Life Depends On It", with targeted messages for both pedestrians and motor vehicle operators.
- o The media campaign was launched in July 2010, and consisted of a 4-week concentrated wave of advertising, public relations and local law enforcement. Advertising included a mix of traditional and nontraditional media.
- o Radio and television PSAs were combined with outdoor and internet advertising, as well as high visibility "street teams" who conducted direct outreach in targeted high crash areas.
- o A very successful press event was conducted in July, in coordination with the *Smooth Operator* aggressive driving campaign. The event included a graphic demonstration of the impact of aggressive driving and speed on pedestrian safety. A professional driver demonstrated the actual stopping distance for a vehicle traveling at 20, 35 and 40 miles per hour, at a crosswalk with a wire-frame mannequin representing a 10 year old boy. At 20 miles per hour, the driver was able to stop without collision. At higher speeds the car struck the mannequin with devastating consequences. The event garnered strong media coverage, reaching nearly one million people in the region.
- o Radio, television and outdoor advertising was used to reach an estimated 5 million impressions during the campaign.

- The Statewide Bicycle and Pedestrian Safety Campaign operated with the Washington Area Bicyclists Association (WABA), continued to promote the Maryland Pedestrian and Bicycle Safety Education Program in collaboration with the Maryland Safe Routes to School program. Bicycle and pedestrian safety training trailers were used to educate children on basic pedestrian safety issues and bicycle operation skills.

- The MHSO continued to provide coordination and support for bicycle and pedestrian safety initiatives statewide
  - o One meeting of the Pedestrian and Bicycle Safety Task Force was convened by MHSO to promote coordination among statewide and local safety programs. The MHSO bicycle/pedestrian coordinator serves on the Montgomery County Pedestrian Traffic Safety Advisory Committee and as SHA liaison to the Maryland Bicycle and Pedestrian Advisory Committee.
  - o MHSO reproduced and distributed copies of the "Bicycle Safety: It's a Two Way Street" booklet, and CDROMs of the Competence and Confidence adult training video and NHTSAs Law enforcement curriculum.
  - o Presentations on pedestrian safety were delivered at public health and conferences and in other venues.

- The Metro Washington Highway Safety Office (Regional Traffic Safety Program) conducted special programs for pedestrian safety in FFY10:
  - o Partnered with El Zol radio, WPGC-FM, Prince George's County Police Department to conduct targeted education of pedestrians on the importance of pedestrian safety in high-crash zones.

- The MHSO and its CTSP partners distributed more than 40,000 pieces of educational material, including StreetSmart branded materials, pedestrian safety law cards, booklets for school aged children, copies of the Bicycling in Maryland booklet and the DVD Competence and Confidence: an Adults Guide to Safe Cycling, and the "Bicycle Safety, It's a Two Way Street" booklet.

Challenges

- Pedestrian safety enforcement is a relatively low priority activity for most law enforcement agencies. Very few officers have received formal training on pedestrian laws and law enforcement operations and techniques.

- Pedestrian safety continues to be a significant problem in the high-density areas of Prince George's County and Baltimore City/County areas. Impaired pedestrians make up a significant proportion of fatalities in these areas. These are difficult crashes to countermeasure, as they are often related to substance abuse issues which go beyond the scope of existing traffic safety countermeasures.

Data Enhancement

The Data Enhancement Program's goal is to develop a comprehensive statewide traffic records system that provides traffic safety professionals with reliable, accurate, and timely data to make decisions about traffic safety problems, implement proven countermeasures, and manage and evaluate safety programs. The traffic records system encompasses the hardware, software, personnel, and procedures that capture, store, transmit, analyze, and interpret traffic safety data. The data that are managed by this system include the crash, driver licensing and history, vehicle registration and titling, commercial motor vehicle, roadway, injury control, citation/adjudication, and EMS/trauma registry data.

The Maryland Highway Safety Office is not a data owner and thus relies on many state agencies to share data and allow integration of data with MHSO-managed collection and analysis systems (what is now being called MSCAN, the Maryland Safety and Crash Analysis Network). Coordination and cooperation among agencies is facilitated through a number of ways: the Traffic Records Coordinating Committee (TRCC); direct operating agreements, such as an Memorandum of Understanding between the State Highway Administration and the Maryland State Police; and project agreements for grant funded programs and activities, such as the Crash Outcome Date Evaluation System (CODES) managed by the University of Maryland—to name a few.

Data sharing and integration is a statewide initiative, but at the county and agency level, challenges of time, money, and resources need to be overcome in order for a true statewide traffic records system to be operational. Legacy systems that vary by county and agency do not all speak the same language (consistent hardware and software usage across the state is a distinct challenge) and upgrades and new systems are not consistently adopted with statewide goals in mind. As statewide and national standards are developed, demanded, funded, and implemented, these challenges are slowly eroding, but there are still many miles to travel.

Each of the projects in Federal Fiscal Year 2010 was directed at making improvements to one or more of the components of a traffic records system (crash, EMS, driver, vehicle, court/citation, roadway), and making improvements, in a measurable way, to one or more of the quality measures for these systems (timeliness, accuracy, completeness, uniformity, accessibility, and integration). The grantees and their projects were chosen based on their experience and ability to meet these goals and to support the State in the continued development of supporting tools to aid decision-makers in highway safety improvement plans. The Data Enhancement Program is reliant on the expertise of many different agencies and this program would only be successful with their continued support.

Traffic Records Coordinating Committee, Traffic Records Assessment, and Traffic Records Strategic Plan
Maryland has continually operated a two-tiered system Traffic Records Coordinating Committee (TRCC)—Technical and Executive Councils—and both Councils adopted a new Traffic Records Strategic Plan on November 17, 2010 in order to guide statewide efforts for managing and enhancing the best available data for MHSO safety programs and all traffic safety stakeholders and partners. The Traffic Records Strategic Plan (TRSP) is a statewide plan to improve the traffic records system in order to support improvements in all safety program area planning, analysis, and reporting. Traffic and injury data is derived from a multitude of sources. The goal of the TRCC is to maintain a multi-agency approach to improving the traffic records system, and the TRSP is its guiding document. Additional information about the TRCC can be found online at:
http://stko.maryland.gov/TRCC/tabid/60/Default.aspx

On April 19, 2010, Maryland participated in a Traffic Records Assessment. 50 presenters ranging from administrators of traffic records systems to local law enforcement and engineering representatives participated. Highlights of Maryland's accomplishments since the 2005 Assessment:
- E-TIX: The Maryland State Police developed an electronic citation system that is being used by 54 law enforcement agencies, including all MSP barracks. The E-TIX platform will also allow for the addition of an electronic crash reporting component (ACRS). Federal Motor Carrier Funds have been secured in 2010 to build on E-TIX with plans for a pilot of electronic crash reporting in early 2011.
- Citation Accountability: The District Court and the Motor Vehicle Administration were acknowledged for their efforts in maintaining a citation accountability program. The State still does not have a citation tracking system (CTS) by name, as recommended in the 2005 Assessment, though both the Court and the MVA's CAS have the attributes and characteristics of a statewide, central citation data repository and the potential to function as a CTS.
- National Motor Vehicle Title Information System (NMVTIS): Maryland has become a NMVTIS State and that will enhance its title information exchanges and improve data quality.
- Maryland has developed many components of a Statewide Injury Surveillance System (SWISS). These

components include the Maryland Ambulance Information System (MAIS), electronic MAIS (eMAIS), and a Trauma Registry collected by the Maryland Institute for Emergency Medical Services Systems (MIEMSS); statewide hospital inpatient and outpatient data collected by the Health Services Cost Review Commission (HSCRC); and a statewide death certificate database housed at the Department of Health and Mental Hygiene (DHMH) Vital Statistics Administration (VSA). The components are integrated through the Maryland Crash Outcome Data Evaluation System (CODES) Project which resides at the University of Maryland's National Study Center for Trauma and Emergency Medical Systems (NSC).

There were 43 total recommendations in the Assessment and they have been incorporated into the TRSP and will be tracked by the TRCC Technical and Executive Councils; current and future 408 projects will be funded based on the project objectives addressing the Assessment recommendations and associated performance measures in the TRSP.

Projects
In FFY2010, the MHSO funded the following projects to work toward accomplishing the Traffic Records (Data Enhancement) Program objectives.

Comprehensive Crash Outcome Data Evaluation System (C-CODES)
The broad vision of the Crash Outcome Data Evaluation System (CODES) initiative has been to reduce the number and severity of traffic crashes by using State linked and analyzed data to support programmatic and outcome-based policy decisions (e.g., the need for a law or law change). The National Highway Traffic Safety Administration (NHTSA) CODES program allows the National Study Center (NSC) to partner with data owners from across the state so that motor-vehicle safety related data files can be integrated. CODES uses a data methodology facilitated by NHTSA that links State-level crash data with medical data, such as hospital and emergency medical services data. Often, because of the lack of personally identifiable information from one data file to another, crash and outcome data are linked probabilistically using CODES2000 software and analyzed using a technique called multiple imputation. Using data from data partners and the imputation techniques, CODES is able to compile statewide databases related to highway safety and to produce comprehensive traffic safety data analyses and reports for the Maryland Highway Safety Office. Once analyzed by the NSC, data can be used persuasively by state and local highway safety officials to develop, implement, enhance and evaluate highway safety initiatives, to identify highway safety priorities, and to establish future areas of research and coordination. CODES strives to help the MHSO focus its efforts so that priorities are identified strategically using data outputs. CODES data have been used throughout the year in response to requests from legislators, NHTSA, state and local agencies, and other highway safety groups.

Throughout FFY2010 the following reports were prepared by the NSC and made available for use by the MHSO and other traffic safety officials from across the State:
1. State and County-specific Fact Books (or 'Fact Sheets').
2. The Traffic Safety Fact Book – This report is prepared annually for the Maryland Highway Safety Office (MHSO). This report was completed by November for the previous year of crash data.
3. Benchmark/Highway Safety Plan – Was prepared for use by the MHSO in planning and setting priorities for the MHSO.
4. Annual CPT Tour Data – These data were gathered and provided to the State Highway Administration (SHA) Administrator for use in making site visits to each jurisdiction throughout the State.
5. Action Measure Tools and Annual Driving Survey – The NSC prepared templates with guidance by the MHSO to present behavioral measures being collected through convenience sampling across the State. Over 12,000 tools were collected, compiled, and analyzed by the NSC.
6. Community Traffic Safety Program (CTSP) Status Report Outputs – This tool gave CTSPs the ability to set performance measures and to easily track process outputs through an Access-based data file. CTSPs had the ability to track all outputs through a cumulative compiled report that was auto-populated as they completed each of their grant quarters.

Additional objectives/activities of the NSC C-CODES Project:
1. Participated on Model Impaired Driving Records Information System (MIDRIS) task force.
2. Continued collaborating with the MVA on the Promising Practices project.
3. Continued collaborating with the Maryland Institute for Emergency Medical Services Systems (MIEMSS) on various data analysis projects.
4. Continued the DriveCam project, finishing data collection and preparing analysis plans.
5. OCME motorcycle helmet study – Data collection was completed for this project. Photographs of motorcycle helmets were being taken and helmets divided into one of three groups: full helmet, ¾ helmet

and ½ shell helmets. Over three hundred sets of photos documenting the type of helmet worn in motorcycle crashes that resulted in the serious injury or death of the operator were collected for this project. Approximately 20% of the helmets were classified as non-compliant for Department of Transportation (DOT) standards.
6. Preliminary results were compiled and shared at a briefing presentation with NHTSA.
7. Southern Maryland DriveCam – Over 200 families were enrolled in DriveCam in a series of 5 phases which concluded in September, 2010. The NSC continued with data coding and began cleansing and compiling data for future analysis. Researchers have begun planning analyses to compare pre-survey data, with actual driving behaviors, and then exit interview results. A post review of driving records is being considered for inclusion in the study to compare driving records of DriveCam for Life enrolled families in comparison to other teen drivers who were never enrolled in DriveCam.
8. FARS BAC partnership – Analysts at the NSC served as liaisons between Maryland Trauma Centers and FARS analysts to foster the exchange of blood alcohol concentration (BAC) data for all drivers involved in a fatal crash. Through this process, the number of unknown alcohol test results was reduced.

The NSC is uniquely positioned to provide detailed data analyses relating to highway safety because of the NHTSA CODES infrastructure. The NSC has established strong relationships with other state data partners, giving it the ability to serve as a 'repository' for numerous data sets related to highway and motor vehicle safety. These data owners feel secure in working with the NSC because of its unique origin in operating from within the University of Maryland umbrella. This arrangement provides the necessary infrastructure to support, maintain and uphold Health Insurance Portability and Accountability Act (HIPAA) rules and regulations, Institutional Review Board (IRB) research protocols that define such things as participant confidentiality, and the ability to employ an agreed upon Memorandum of Understanding (MOU) with data owners. Such detailed protocols guarantee the safe-guarding and integrity of all data sets and data partners. Additionally, this structure provides the NSC with the autonomy and opportunity to reach the ultimate goal of the project, to provide the traffic safety community and general public with access to data interpretation, research results and other analytical services through online data requests. Finally, by employing a very unique and multi-disciplined work force (e.g., researchers, epidemiologists, data analysts, strategic planners, and community programmers), the NSC has the ability to use a public health problem-solving approach when addressing all traffic safety concerns.

<u>Towson University Extended Education & Online Learning – Safety and Transportation Knowledge Online (STKO)</u>
The STKO project aims at all highway safety professionals in need of timely, accurate, complete, and uniform safety information, as well as documents, policies, and manuals related to transportation, highway safety, and incident response. The STKO environment handles data requests from other public agencies along with requests from private entities. Users are able to interact, share information, and schedule and sign up for events related to law enforcement, transportation safety, and various safety programs. The portal also grants assigned content managers the ability to control and monitor their own web space within the STKO environment so they can further disseminate information to other users and agencies. STKO includes an expanding library of all relevant policies and procedures, as well as administrative records and data collection and reporting.

Top Five Accomplishments

1. Provided hosting and content management for the Data Driven Approaches to Crime and Traffic Safety (DDACTS) program, acquired the DDACTS domain, and developed hosting for all nationwide DDACTS related information.
2. Traffic Safety Data Request Form – Built a data request form for the Traffic Safety Data section of STKO that provides location-specific data meant only for the Maryland State Highway Administration and its approved traffic safety partners.
3. Implemented document management modules to help better disseminate information and track document downloads.
4. Built the Impaired Driving Supplemental Funding Application tool using Adobe Design Cycle that allowed users to submit electronically.
5. Populated content for all Maryland Traffic Safety Programs – an array of related documents, news articles, analysis tools, media and event promotions, and survey linkages to all of the Safety Program areas.

STKO Highlights
1. Provided a central informational hub for all TRCC related news and information:

- The usage results of the TRCC section within STKO can be seen through the number of document downloads that occurred for documents posted up until September 30, 2010. The average download per document has more than doubled from last year's benchmark of an average of 95 downloads per document to an average of 205 downloads per document.

Technical Meeting Agendas	1609
Technical Meeting Minutes	1649
MD Traffic Records Assessment Report 2010	102
MD Traffic Records Assessment Report 2005	324
Executive Meeting Agenda	213
Executive Meeting Minutes	614
Total	**4511**
Average download per document	**205**

2. Developed hosting and content management for DDACTS.
    - The successes of these activities were met by configuring the DDACTS.com domain to point to the newly developed DDACTS section within STKO, as well as populating this section with numerous DDACTS resources, related articles and documents that have been utilized by agencies nationwide. The full results of hosting and managing the DDACTS content is noted with the extent of information available within this section of STKO, as well as the fact that the DDACTS pages have had over 260 unique visitors over the past fiscal year.

3. Developed online report request form and data retrieval for any Safety Program and task force requiring such needs, as well as replicated form framework for other agencies requiring online data retrieval. (This is in addition to, and separate from, the CODES Data Request Form.)
    - The full results of the Traffic Safety Data Request Form can be noted from the 15 requests that have been made between the time periods of the launch of the form in July, 2010 until September 30, 2010.

4. Continued the maintenance of current databases as well as providing new data repositories that will house information relating to safety programs, along with state specific and national documents, manuals and policies for use by Maryland first responders and related agencies.
    - The success of this objective was met by developing and implementing simple databases (such as membership databases and application forms) that were integrated into the DotNetNuke (DNN) framework to help with content and information management. The success was also met by the several document modules that were implemented that also allowed for better information and report dissemination.
    - The usage results of the document modules can be seen through the number of document downloads that has occurred for documents posted up until September 30, 2010:

Highway Safety Plan (Benchmark Report)	
HSP FFY 2011	68
HSP FFY 2010	129
HSP FFY 2009	325
Total	**522**

Highway Safety Office Annual Report	
Annual Report FFY 2009	438
Annual Report FFY 2008	285
Annual Report FFY 2007	256
Total	**979**

2010 1st, 2nd & 3rd Quarter AMT Outputs	
Aggressive Driving	126
Bicyclist	102
Impaired Driving	105
Mature Drivers	98
Motorcycles	91
Occupant Protection	95
Pedestrian	96
Younger Driver	102
Total	**815**

2009 AMT Outputs	
Aggressive Driving	99
Bicyclist	98
Impaired Driving	88
Mature Drivers	89
Motorcycles	91
Occupant Protection	104
Pedestrian	95
Younger Driver	88
Total	**752**
Total document downloads -	**3068**
Average download per document -	**139**

Towson University Crash Reporting System (CRS)

There are approximately 180 law enforcement agencies (LEAs) in Maryland that prepare vehicle crash reports for submission to the Maryland State Police. In order to standardize the format and content of these reports, and to expedite their submission, a consensus of State and local agency representatives has agreed in principle to develop an Automated Crash Reporting System (ACRS) that will be made available to LEAs. Development has begun; training and three pilot programs are planned for late 2010/early 2011.

LEAs that elect to use the planned ACRS will find it significantly easier and faster to collect and/or report crash information. The system also will ensure the collection of a standard data set on each crash and expedite the saving of that data in the MSCAN database. The end results will include quicker and more accurate reporting of crash information to traffic safety partners, and better and faster identification of causal factors and possible road improvements that may reduce crashes in the future.

The new crash report will be MMUCC-compliant, meeting the minimum standards for data collection as recommended by NHTSA.

The Maryland Highway Safety Office awarded a grant to Towson University's Information Systems Solutions to provide project management support for the MSP ACRS project. The planned objectives for this project assumed that project staff would be actively involved in the actual building of key systems. Therefore, it was expected that they would have direct responsibility for improving crash data being submitted electronically. Project staff supported efforts to gather requirements, develop a project schedule, and work with essential parties to start the development of a MMUCC-compliant Automated Crash Reporting System (ACRS).

Project management activities for the ACRS system are being managed directly by the Maryland State Police Information Technologies Division. Towson University provided support in connecting the MSP project manager to the TRCC Technical and Executive Councils. General activities of the ACRS project include:

- MSP is utilizing 3 developers hired through CapWIN for user interface development.
- CapWIN is utilizing 2 internal developers for core system development.
- SHA's experience with the eMAARS development coupled with MSP/Central Records are providing the validation rules for data handling.
- MSP and the User Group are developing end user interface requirements to be sure officers are presented with the most friendly, efficient interface possible.
- The ACRS system is currently defined as:
    - MSP/CapWIN-managed application which officers use to enter and forward approved reports.
    - MSP/CRD provides quality checks and legal filtering, plus existing duties.
    - CapWIN provides public access over Web.
    - SHA will provide analytics and data to local partners and advise on the development of a MMUCC-compliant crash data collection system.

Major milestones completed in FFY2010 include:
- Functional Requirements completed.
- ACRS Data Dictionary completed.
- XML Schema (draft) completed.
- System Design Document completed.
- Continued Development of "Restaurant Style" user interface.
- Refined and continued rule validation implementation.
- Received input on UI design from National Institute of Safety Research.
- Began design and implementation of new reporting module.
- Received preliminary approval for new report format from MSP.
- Continued development of crash diagramming module (Core diagramming module at 85% complete).

The MHSO-funded (408) project with Towson ISS also included assistance for the Traffic Records Coordinator in improving the State's overall traffic safety programs. The work performed in providing support to the TRCC Coordinator was effective in moving the TRCC councils forward and organizing the councils for the betterment of traffic safety. For the next grant year (FFY2011), ISS and MHSO have realigned objectives to focus on supporting the TRCC Coordinator and TRCC Councils.

The TRCC, having completed a Traffic Records Assessment in April, 2010 and a FHWA Crash Data Improvement Program Assessment, moved to draft and adopt a new Traffic Records Strategic Plan (TRSP). With the bulk of project management duties for ACRS being handled by MSP, the TU project manager directed grant-funded activities to supporting the completion of the TRSP and assisting the Traffic Records Coordinator with project management of all traffic records projects overseen by the TRCC.

<u>Towson University Maryland Safety and Crash Analysis Network (MSCAN)</u>

Top Five Accomplishments
- Developed the core MSCAN application.
- Developed two modules for select users.
- Set up the GIS environment at MHSO–OOTS Hanover SHA Complex.
- Presented MSCAN at TUgis conference.

- Presented MSCAN at the Traffic Records Forum.

The project team began development of MSCAN based on requirements gathered during the previous year. MSCAN will extend data querying, reporting, and analytical tools to highway safety coordinators, planners and engineers, and law enforcement. This application will help develop data-based strategies for reducing the number of crashes, especially fatalities and injuries.

A key goal was to develop a core framework for the application which would serve as the foundation for focused modules. The modules will allow users access to specific datasets and functionality based on authentication. The application will be deployed on site at MHSO and will serve a wide array of users.

Additionally, CGIS worked with stakeholders during development to identify future enhancements to MSCAN. The following are highlights from the completed objectives for FFY2010:
- CGIS developed the mapping application on internal development servers. Basic query, print, and reporting tools were built into the application. A GIS database was also designed and populated with relevant data.
- CGIS worked with SHA staff to set up the GIS development environment at MHSO. ArcGIS desktop, ArcGIS Server, ArcSDE, and Adobe Flex were installed. The required Web services were put into place in the development environment.
- CGIS worked with staff from MHSO and the University of Maryland National Study Center to determine requirements for two modules: Candidate Safety Improvement Sections (CSIS), and Program Area tools. The team developed the CSIS module to display information based on Oracle processes previously developed at MHSO. The module took the output from that process and converted it to enable display on the map. The Program Area module allowed crashes to be ranked and displayed based on program areas in each jurisdiction. Thus, coordinators can quickly assess issues in their jurisdictions.
- CGIS worked with MHSO staff to develop data for the CSIS module and for traffic citations. CGIS continued to work with all of the counties and Baltimore city to maintain each jurisdiction's street centerline as well as addressing ranges. This involved attending Centerline Working group meetings and maintaining the statewide roads database as updates were pushed up from each county. The addressing data is now serving multiple state applications, including StateStat, Greenprint, AgPrint, the Maryland ARRA site, and several others located here: http://www.imap.maryland.gov/portal/applications.asp
- The application was demonstrated at the TUgis conference in May, and then to a group of engineers in June.
- MSCAN was demonstrated at the Traffic Records Forum in July and received very positive, enthusiastic reviews.
- Work progressed rapidly during the final few weeks of the project, as the need for a web service to locate crashes in eMAARS and ACRS emerged. CGIS was able to build a web service quickly that will be available for both systems.

MSCAN is directed at meeting the State Highway Administration's need for a managed network of data analysis and reporting. This system will not be limited to the analysis of crash data but will include other sources of information related to safety on our roads. MSCAN will allow users to perform analysis and create reports through an intranet/internet interface. Towson University has provided expertise and support for the development of the GIS components of MSCAN, but MSCAN is a total system being developed by the State Highway Administration for use by all state partners working to reduce traffic fatalities and injuries. MSCAN can be considered the major component of the proposed State Traffic Records System, a concept recommended by NHTSA for states to adopt in order to provide the timely and quality data to support traffic safety countermeasures. MSCAN is a long-term project that will support highway safety professionals in the development and tracking of such countermeasures.

This design will allow various agencies throughout the state to perform analysis and conduct studies. Some of the planned system features are:

- **Safety and Crash Analysis Node (SCAN)** – system design to perform analysis of crash data at intersections and sections along Maryland roadways.
- **Commercial Vehicle Reporting System (CVRS)** – will highlight commercial vehicle information and support the federal SafetyNET system.

- **Fatal Crash Tracking System (FaCTS)** – tracks and analyzes fatal crash data and provides support for the federal FARS systems.
- **Visual Interchange (VI)** – Search, view and compiles data located at interchanges. High resolution aerial photos of the area will also be available.
- **Construction Maintenance Zone (CMZone)** – will supply a collection system for the SHA work zone crash form as well as an analysis and reporting system.
- **Maryland Highway Safety System (MHSS)** – provides information to support the Maryland Highway Safety Office (MSHO) network of safety programs.

This is only an initial list of features. As new types of data are collected and more and more uses are discovered new features would be added.

<u>Maryland Institute for Emergency Medical Services Systems – NEMSIS-compliant EMS Pre-hospital Data Management Enhancement</u>

MIEMSS serves as the lead EMS agency responsible for the coordination and evaluation of the Maryland EMS System and is empowered under Maryland COMAR, Title 30. The existing pre-hospital data management system is presently comprised of two data standards, the paper based, optical scan system, Maryland Ambulance Information System (MAIS), and the electronic, web-based eMAIS.

This project provided the financial support for the release of a Request for Proposal (RFP) and the assessment means for the best technical and economical solution through a competitive bid process. The most important outcome of this project was the determination of the best "off the self" product that met NEMSIS 2.2.1 requirements, while flexible enough to meet Maryland standards. The combination of these crucial data requirements will enhance the understanding of vehicular crashes through a better determination of cause, effect, and outcome. This knowledge base will provide the important components of effective prevention planning and response management for all stakeholders statewide.

Another important outcome is the reliable and valid pre-hospital data linkage, to associated data sets such as those found in the CODES. This will enhance the accuracy, completeness, and timeliness for a more comprehensive understanding of crashes. More specifically, the benefactors in this partnership will include: Maryland State Highway Administration, Maryland Highway Safety Office, National Study Center for EMS and Trauma, and all CODES partners (DMHM, Medical Examiner, etc), Maryland State Police Aviation Command and Fatal Accident Reporting System, Maryland Hospital Association, Local and State Law Enforcement agencies.

Top Five Accomplishments
- The RFP was released on February 24, 2010. MIEMSS received five "qualified" vendor proposals by closing date. A seven member technical evaluation team (3 MIEMSS and 4 Maryland EMS community representatives) was created to review each proposal. A qualitative scoring instrument was developed so that each proposal could be scored and ranked on technical merit. Two bids best met the requirements/desirables set forth in the RFP.
- Contract specifics were reviewed again with ImageTrend (first choice) representatives. Intent to award was made to ImageTrend and a presentation was made to the Board of Public Works June 9th. They approved the contract and it was officially awarded on June 11, 2010.
- An extensive review of the ImageTrend Dynamic Run Form (DRF) and specifically the DRF application used in New Hampshire EMS was conducted. The overall functionally was deemed acceptable, based upon NEMSIS 2.2.1 standards, and fully acceptable with modifications based upon Maryland EMS protocols and specific stakeholder identified needs.
- This version, now referred to as eMEDS (electronic Maryland EMS Data System), will be implemented on in January, 2011 in three EMSOPs (Emergency Medical Services Operational Programs) and two commercial ambulance companies. During a 30-day period, all definitional and functional aspects will be reviewed and any questions addressed.
- Training of key instructors for three initial EMSOPs (Harford, Queen Anne's and Cecil) began with the completion of their respective "workbook." All assets (EMS companies, Units, personnel, hospitals etc.) associated with each EMSOP was documented and loaded to the application. Access privileges were set so that appropriate administrators, officers, and providers have access to approved records/data.

Maryland's effort to bring its pre-hospital EMS dataset under one statewide standard, with the incorporation of the NEMSIS national and certain non-national data elements/responses, the Maryland EMS Protocols, and the specific needs of other users, is very close to completion with the execution of the contract with ImageTrend.

The resulting effort has enabled Maryland to transition from an increasingly fragmented system with ever growing number of individual EMSOP vendors back to one standard statewide and nationally. This open architecture under a national standard can easily be used as the complete ePCR system. It can also serve as the front end for capturing and back for analysis/reporting, while downloading billing information to any billing service an EMSOP might want to continue their contract with. Additionally, with COMAR 30.03.04 now in place, there is an infrastructure ready to transition from MAIS/eMAIS to the NEMSIS 2.2.1 standard within CY2011. Looking to the future, MIEMSS will be poised for an easer transition to NEMSIS 3.0, when available. These steps make the linkage to ancillary data sets like those found in CODES, FARS, and HSCRC all the more achievable. With this effort comes a system that will provide all users a better means for system evaluation, measures of service performance, and the planning for a safer highway and road environments.

Employer Awareness

The Maryland Traffic Safety Awareness For Employers (T-SAFE) Project was designed to be an employer-specific traffic safety investment program that increases traffic safety awareness among Maryland employers and their employees. The objective of this program is to provide employers with the tools and resources needed to protect their most important asset, their employees, while driving on and off the job. The benefits of implementing a workplace traffic-safety program include the reduction of traffic-related injuries, deaths, and the economic losses associated with traffic crashes to the employer, the employee, and the overall community. The main focus of the project is to share traffic safety information not only with employees but also with their customers. While this is an investment program to help employers reduce crashes and costs, the program looks at the startling financial losses being suffered statewide and nationally. More importantly, the program encourages employers to adopt policies against distracted driving, impaired driving, promoting seatbelt use and participating with the Annual *Drive Safely Work Week* Campaign (DSWW) and other statewide safety initiatives.

The estimated economic impact of fatalities and injuries sustained in motor vehicle crashes on Maryland roadways reached $5.7 billion in 2008 and each motor vehicle fatality costs approximately $6.4 million. Overall, a critically injured crash survivor costs society approximately $222,000. The total cost of motor vehicle crashes in the state of Maryland is more than $7.4 billion annually and crashes are the number one cause of fatal workplace accidents. While the economic costs of motor vehicle crashes is greatly important to note, it is also important to understand that driver improvement programs are also extremely important. A commitment to safety is based on the understanding that the entire management team commits itself to fully developing and maintaining a safe environment. Currently, the MHSO has maintained communication with all T-SAFE members by providing e-news updates, resource materials, downloadable resource kits and materials along with making presentations, setting up safety displays and attending health and safety events.

Objectives

- Reduce the number of crashes from 104,103 in 2004 to 99,981in 2010.
- Reduce the number of fatalities from 643 in 2004 to 608 in 2010.
- Reduce the number of injuries from 53,753 in 2004 to 43,069 in 2010.

Accomplishments

- The MHSO supported National *Sleep Awareness Week* (NSAW), a comprehensive public education campaign that is helping to increase the understanding about the importance of sleep. NSAW promotes the importance of a good night's sleep for good health, safety, productivity and overall well-being. Sleep, fatigue and alertness continue to be an important issue, as more Americans are overwhelmed by today's 24-7 culture. The MHSO issued a press release, distributed materials, sent a statewide email blast, created web advertisements, distributed public service announcements, utilized the statewide DMS, and used other social norming websites to convey safety messages during the week long campaign.

- In April, the MHSO supported the National No Phone Zone Day. This nationwide effort was created to honor victims of distracted driving and to educate the public about the deadly driving habits that killed nearly 6,000 people in 2008. A public service announcement was aired during the Oprah Winfrey Show, fast fact sheets were created, materials were distributed to a number of partners, a message reminding

motorist to make the cars a "No Phone Zone" was displayed statewide on the digital message signs, internet and intranet advertising was used to spread the messages to a larger audience.

- Public service announcements were aired to support "No Phone Zone Day" on the following networks: ESPN, BET, TOON, TBSC, and SCFI. The MHSO had a very successful year utilizing the internet, posting web banners and posting traffic safety messages on social media networks.

- The MHSO attended the 2010 Auto Show in Baltimore where traffic safety brochures and materials were provided to the visiting public. The interactive display consisted of educating the public, discussing current traffic safety laws and administering more than 1200 random Action Measure Tool Surveys to the public to gain their knowledge about traffic safety. These tools measure self-reported knowledge, attitudes, and behaviors for various program areas and help to measure program impacts.

- Maryland has a new hands-free cell phone law which took effect October 1, 2010. The MHSO hosted a press conference along with other partners to introduce the new law. During the press conference, a number of dignitaries spoke including Maryland's Secretary of Transportation, Maryland State Police Superintendent, and several safety advocates and legislative leaders. The press event received coverage during the local news as numerous reporters from the Baltimore and Washington media outlets were in attendance. Each reporter received a complete digital media press kit which included all of the materials that were sent to all partners. Throughout the month of October, the MHSO was able to communicate with target audiences internally and externally through State, Local and private organizations about the new cell phone law. Advertisements and marketing efforts including community outreach activities, utilizing traditional earned media efforts, paid marketing strategies and the internet were all primary outlets to publicize information about the new law.

- SHA has installed approximately 20 cell phone law signs along Maryland roadways at state border crossings. The installation of additional signs will continue into FFY 2011.

- SHA was instrumental in distributing information to its employees about the new hands-free law. For the entire week, each employee received a copy of the e-mail blast with safety tips during the week long campaign. Additionally, more than 300 T-SAFE members received the same type of e-mail messages.

- The MHSO and T-SAFE supported the 2010 National *Drive Safely Work Week* Campaign (DSWW) Specifically the MHSO placed emphasis on educating the public via the internet. Daily safety tips and resource material was sent out to partners via Constant Contact throughout the entire week. A press release was provided to partners who were encouraged to share the valuable information with their employees, family members, and neighbors. A complete digital media CD was created that included the new hands-free law information.

- The Injured Workers Insurance Found (IWIF), a T-SAFE Program Partner, created fact sheets, elevator flyers and sent daily educational messages to their employees to support the 2010 DSWW. IWIF also supported the MHSO by embedding MHSO's web banner and CSFL website to the IWIF site. IWIF was very instrumental in educating their employees about Maryland's new cell phone law. Approximately 5 percent of the claims processed by IWIF and 10 percent of cost claims are linked to motor vehicle related crashes. IWIF insures 30 percent of the businesses in the States and policy holders receive traffic safety information as well.

- The MHSO collaborated with the Maryland Carefirst BlueCross/BlueShield (BC/BS) Organization to support DSWW. During the campaign week, BC/BS ran the cell phone reminders via intranet, sent daily e-mail blast messages to all employees.

- Throughout the year, the T-SAFE Program Coordinator sent emails to partners with updates on traffic safety topics, new programs, statewide initiatives and activities to keep employers informed. The T-SAFE Program also provides resource materials to partners as requested.

- In FFY 2010, the T-SAFE Program partnered with the Public Employees Safety Association. The organization's goal is to promote health and safety through crash prevention programs, professional meetings and group discussions of mutual safety concerns. This year, T-SAFE supported PESA by doing a presentation on distracted driving at the Spring Conference. More than 150 public employees attended the conference.

- Throughout the year, the SHA Choose Safety for Life website has been an excellent resource for traffic safety information. The MHSO has provided program updates to include all the programs and initiatives related to distracted driving, drowsy driving, the T-SAFE Program and all the other priority programs coordinated by the MHSO.

- The MHSO distributed 50,000 cell phone law cards statewide to educate the public about the new hands-free cell phone law. Every MVA Office statewide received 500 or 1,000 law cards as well. Also, the MHSO has continued to distribute the texting information citation card as requested.

- According to the Action Measure Tool survey results, approximately 75% of the population surveyed in the following jurisdictions: Baltimore City, Carroll County, Frederick County, Prince Georges County, and Montgomery County reported using a cell phone while driving. In those same counties, 32% of the respondents surveyed strongly agreed with passing a state law banning hand-held cell phone use while driving.

Challenges

- Creating new partnerships and recruiting new businesses has been challenging and the MHSO will continue to work toward establishing new contacts with area businesses and organizations.

- Businesses have been slow to adopt including traffic safety education during safety management meetings.

- The MHSO must increase networking opportunities by stressing the importance of traffic safety education.

- T-SAFE program needs more timely and accurate distracted driving data to distribute to partners.

- Developing appropriate training for law enforcement to enforce the cell phone law has been challenging and will continue to be addressed in FFY 2011.

- Developing criteria to strengthen the cell phone and texting laws is a work in progress.

Police Traffic Services

The MHSO administers a variety of federally funded highway safety programs and projects and almost every program includes a law enforcement component. Many of these programs cross over into multiple enforcement agencies across Maryland on the state, county and local levels, and successful deployment of these programs require skillful coordination of efforts. The MHSO has developed many unique activities and programs that are specifically targeted towards aiding in the coordination and successful deployment of law enforcement activities that support MHSO objectives, and includes a close partnership with both the Maryland Chiefs of Police Association and the Maryland Sheriff's Association.

Objectives

- Reduce the number of crashes from 104,103 in 2004 to 99,981 in 2010.
- Reduce the number of fatalities from 643 in 2004 to 608 in 2010.
- Reduce the number of injuries from 53,753 in 2004 to 43,069 in 2010.
- Ensure MHSO's programmatic efforts are successfully complemented by efficient and advanced law enforcement involvement through education, incentives and recognition.
- Improve data collection and causational analysis relating to fatal and near fatal crashes.

Accomplishments

- In conjunction with the Maryland Chiefs of Police Association and the Maryland Police & Correctional Training Commission the two week Managing Traffic Enforcement Program Seminar was conducted with the Maryland Highway Safety Office and the NHTSA Region-3 office. This seminar was conducted on two occasions during FFY 2010. The seminar was attended by 32 police supervisors and

CTSP Coordinators from across the State. In-depth instruction on various components of overseeing a Traffic Enforcement program including strategic planning, traffic engineering concepts, and insight into implementing all three "E's" of highway safety.

- A three day Maryland Crash Reconstruction Conference, sponsored by the Maryland Sheriff's Association was held to review advanced topics in crash investigation. Nationally known experts in crash investigation techniques were brought in to teach seminars on a variety of topic areas. 135 Maryland law enforcement officers, all specializing in Crash Investigation attended this conference and student critiques were overwhelmingly positive.

- Development of the Traffic Safety Specialist (T.S.S.) designation program continued in a Multiagency partnership between the Maryland Police & Correctional Training Commission, the Maryland Chiefs of Police Association, the Maryland Sheriff's Association and the MHSO to recognize Officers across the state who have attained a high level of training and expertise in traffic enforcement During FFY 2010, 123 officers received TSS I certification and 4 officers received the TSS II certification.

- The Maryland Crash Reconstruction Committee met approximately every month to refine its Training curriculum and schedule of classes, assign students to classes, resolve training issues, and discuss pressing issues with crash reporting in the field. This group, comprised solely of Crash Reconstructionists, continues to function at a high level of sophistication, dedication, and professionalism. It likewise continues to examine and tackle tough training and reporting issues such as acquiring and properly reporting Blood Alcohol Concentration on drivers involved in fatal crashes.

- Two Advanced Collision Investigation classes were held regionally and 64 police students were graduated from this training.

- Two Crash Reconstruction Classes were held regionally and 38 police students were graduated from this training.

- There were a total of 6 advanced Crash Reconstruction topics offered by the MCRC across the State including a Crash Scene Photography classes; one Crash Data Retrieval Course; one Human Factors in Traffic Crash Reconstruction class; one Crush Determination for Crash Reconstruction class; and one Reconstruction Instructor Development course. Most classes reached the goal on the number of students to be trained although some scheduling difficulties were encountered and are being addressed by the MCRC. Nevertheless 103 student officers were trained as a result of these course offerings.

- There were 258 student officers (all Maryland Law Enforcement) trained at various levels of Crash Reconstruction during the project year.

- The Maryland State Police held one command summit in 2010. This command summit was sponsored by the MSP Field Operations Bureau and attendance was mandatory for each troop and barrack commander. This summit was held in May, 2010 and featured a presentation by the Superintendent and the Chief of the Field Operations Bureau. Presentations on the Impaired Driving, Aggressive Driving, and Grants Management Programs were offered to the commanders as well as an hour-long presentation from MHSO on Crash Data & Program Updates, Grant Funding and the MHSO Strategic Highway Safety Plan. Fifty commanders were in attendance for this session as well as all six troop commanders.

- In conjunction with the Maryland Chiefs of Police Association, the MHSO continued its 'Traffic Safety IS Public Safety' program across the State. This internal marketing initiative continues to emphasize the importance of traffic enforcement as a key element in a patrol officer's basic duties. In addition to the distribution of marketing tools such as special law enforcement posters and law cards, the program also involved a variety of training opportunities including It All Starts with a Traffic Stop as well as incentive items.

- In conjunction with the Maryland Chiefs of Police Association, the MHSO expanded and refined the program guidelines for the 2010 Chief's Challenge. The newly reformatted Chief's Challenge title change to the Law Enforcement Challenge now better represents all agencies involved in the program and involved enforcement activities that included occupant protection, impaired driving and aggressive driving. 75 agencies participated this year in the program and included 22 award category winners. These

winners were announced and recognized at a ceremonial luncheon attended by 300 law enforcement officers, senior executives and highway safety officials.

- The 49th Maryland Chiefs of Police Association (MCPA) Annual Training seminar was held in November, 2010. This year's seminar was an inaugural combination of the Maryland Chiefs of Police and Maryland Sheriff's Associations for a three day training event. MHSO continues to broaden its exposure and influence with these two groups and received an entire day of the seminar to provide instruction on Data Driven Approaches to Crime and Traffic Safety (DDACTS) and other contemporary training topics to its attending law enforcement executives. Experts from NHTSA, BJA, as well as high ranking police officials from across the country were brought in to provide this daylong instruction. There were over 196 registered attendees. Critiques from attendees were overwhelmingly positive.

- In conjunction with the University of Maryland the MHSO promoted and helped to facilitate the Institute for Advanced Law Enforcement Studies (DUI Institute). This nationally known police course provides an intensive, advanced instructional program for Law Enforcement officers who desire a comprehensive understanding of impaired driving issues and are committed to taking a leadership role in DUI enforcement. There were twenty-eight graduates from the 2010 session, the seventh such class to be offered.
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- Given its level of partnership and activity in conjunction with the Maryland Highway Safety Office, and all associated initiatives, the Maryland Chiefs of Police Association was one of ten state associations to receive a special SACOP (State Association Chiefs of Police) grant to assist with highway safety efforts for a third consecutive year.

Challenges

- Given the unpredictability of the work/court schedules of police officers, attendance and filling available seats in law enforcement training sessions is problematic. Attending non-mandatory outside training is a secondary priority for law enforcement and unforeseen circumstances frequently prevents full rosters in all training classes, even those that involve costly instruction.

- Changing the police culture, especially as it relates to changing ambivalent attitudes regarding highway safety requires a patient multi-strategy approach. It requires top down support as well as sufficient credibility to be accepted by mid-level supervisors and line officers. Recruiting active participation requires officer incentives, recognition and diligent personal relationship management at all levels.

- Frequent turnover in law enforcement agencies disrupts continuity. Highway safety 'champions' are frequently promoted, reassigned or retired. New personnel must be frequently groomed and indoctrinated.

Impaired Driving Prevention

On average, 189 persons die annually in Maryland due to alcohol-related crashes, and more than 5,000 persons are injured; 2008 figures for alcohol-related traffic fatalities involving drivers with a .08+ in Maryland include 152 deaths. Approximately 26 percent of the total traffic fatalities were alcohol-related. In 2008, 24,000 arrests were made for DUI in Maryland, averaging 66 arrests per day. According to NHTSA, "impaired driving can be defined as a reduction in the performance of critical driving tasks due to the effects of alcohol or other drugs. It is a serious crime that kills every 30 minutes nationally, and in Maryland, it equates to 13 deaths a month or a death every 58 hours. The number of alcohol and drug-related crashes decreased from 8,610 in 2007 to 8,137 in 2008, having exceeded our Strategic Highway Safety Plan objective of decreasing impaired driving crashes to 8,173 by 2010. The MHSO's efforts to combat impaired driving have primarily been focused on enforcement and public information campaigns. The MHSO continues to partner with local and state law enforcement agencies, AAA Mid-Atlantic, the Washington Regional Alcohol Program, DUI/Drug Courts, Mothers Against Drunk Driving, and this past year, with the Governor's Executive Committee to study and develop recommendations for the development of a comprehensive impaired driver case management program titled Maryland Alcohol Safety Action Program. Newly incorporated into the Impaired Driving Prevention activities in 2010, and continuing into FFY 2011 is the adopted goal of *Toward Zero Deaths*, with the interim goal of halving fatalities by 2030.

The MHSO's Impaired Driving Program is highly supported and influenced by the statewide Impaired Driving Coalition made up of more than 280 members, consisting of representatives from federal, state and county agencies, non-profits and not-for profit organizations, law enforcement agencies; hospitals, institutions for higher education, advocate agencies; employers, and related agencies with an involvement in highway safety. The coalition is dedicated to education and awareness through enforcement initiatives, local and statewide media campaigns ranging from paid and earned media activities, and countless prevention efforts. The legislative subcommittee of the Impaired Driving Coalition, in coordination with Neil Pedersen, Governor's Highway Safety Representative and State Highway Administrator tracks and ensures that the recommendations submitted by the Maryland Task Force to Combat Driving Under the Influence of Drugs and Alcohol submitted in 2008, are addressed. To date, a number of recommendations have been completed and several others are under development, including the study of a DUI Tracking System via the Traffic Records Coordinating Committee and a pending grant to conduct an inventory of statewide data systems that would have a stake in the development of such a system.

In early December 2009 Governor O'Malley signed an Executive Order that convened an Executive Committee to study the feasibility of the MASAP, develop and propose a business model for this comprehensive program. The Executive Committee studied issues related to a comprehensive monitoring, rehabilitation, education, and enforcement program to help address the needs of a first time, repeat, or high risk offender, as well as increase accountability of and services provided to impaired drivers and help reduce recidivism. The Special Multi-Agency Initiative was titled Maryland Alcohol Safety Action Program (MASAP). This recommendation is modeled after the successful VASAP model operating in Virginia since 1972. The Committee was active from June 2010 - December 2010 and a report submitted for consideration. The Committee was chaired by State Highway Administrator and Governor's Representative for Highway Safety, Mr. Neil J. Pedersen and Co-Chaired by Mr. Patrick McGee, Director of the Division of Parole and Probation, Department of Public Safety and Correctional Services. The lead staff person was the MHSO's Chief, Program Advisory Section and Impaired Driving Prevention Coordinator.

The Impaired Driving Campaign continues to combat impaired driving from a multi-faceted, data driven approach. It includes s high visibility enforcement program coupled with an intense marketing effort. The campaign is specifically designed for high-risk areas. The *Checkpoint Strikeforce* Campaign specifically targeted its enforcement efforts along rural roadways to support the NHTSA and Maryland crash data that show rural roadways to be at greater risk for impaired driving. . A significant effort was put toward this ad campaign and educational outreach in Maryland. The creative ads were written and produced to connect with the target audience of 21-35 year old males. The ads utilized the findings of the campaign's opinion poll to create messages that hit home with the target audience. The 2009 media impressions for CPSF include: Radio: 19,390,000, TV: 2,531,011, Outdoor: 998,456. In addition to this launch, more than 8,304 ads will run on a total 20 broadcast stations which represent 5 cable TV stations, 14 radio stations and one major network in Maryland between August and January 2, 2011.

The *Tipsy?Taxi!* and *SoberRide* campaigns continue to provide free cab rides to would be drunk drivers. Several law enforcement DUI trainings were held. A special marketing and education campaign was used to target Latino based establishments and Maryland continues to operate DUI Courts. Over 12,000 Christmas tree tags that asked Marylanders to designate a sober driver were distributed statewide, as well as over 8,300 wine bags and vinyl window clings for local liquor stores to increase awareness of designating a sober driver during the holidays. In addition, the state launched for its third year its annual marquee program, asking local partners and the SHA to ask drivers to "Report Drunk Drivers. Call 911". Local law enforcement agencies, local business partners, law enforcement and other stakeholders graciously participate in this month long initiative in addition to increased enforcement.

Finally, the Impaired Driving Campaign successfully launched its social marketing campaign, DUI Is For Losers. The project was intended for local efforts to be heightened during the Winter and Spring months while *Checkpoint Strikeforce* is operating under sustained enforcement activities. This project unveiled a website as part of the Choose Safety for Life site and highlights the consequences of impaired driving, alternative to driving impaired, shares actual stories of families who have lost a loved one to an impaired driving crash and provides links to useful resources. The program is targeted to the hard to reach 21 - 35 year old male. It implemented extremely creative media outreach strategies including never used before projection advertising on the side of the Baltimore Central Booking Facility adjacent to the highly traveled Interstate 83. Likewise a unique approach was taken to place vinyl, life-sized images of impaired men and women with catchy phrases on their shirts on the floors inside the bathrooms of 7 Baltimore City bars and 3 Anne Arundel County bars. The bathroom advertising was extremely well received and created incredible viral marketing and was even picked up by a Japanese newspaper

featuring the program and its unique marketing strategy. This strategy alone garnered a conservative 50,000 impressions.

Objective

- Decrease the total number impaired driving related crashes from 8,556 in 2004 to 8,173 in 2010*.
- Decrease the total number of impaired driving related fatalities from 215 in 2004 to 206 in 2010*.
- Decrease the total number impaired driving related injuries from 4,572 in 2004 to 3,069 in 2010*.

Accomplishments

- Law enforcement from all 23 Counties and Baltimore City participated in *Checkpoint Strikeforce* during FFY 2010.

- Nearly 55,000 motorists were stopped by *Checkpoint Strikeforce* checkpoints and saturation patrols yielding approximately 597 DUI/DWI arrests in FFY 2010.

- The goal for FFY 2010 was 192 *Checkpoint Strikeforce* activities, and the actual results are as follows: 252 saturation patrols and 77 checkpoints, for a total of 329 enforcement activities with an average of 13 activities per Checkpoint team.

- The media launch for Maryland's *Checkpoint Strikeforce* campaign was able to achieve more than 1,249,720 media impressions via both 13 television broadcast hits combined with print coverage across the state. Overall the combined effort of all campaign media outreach efforts, press events, radio sponsored wet demonstrations, print and television coverage has leveraged over 3.5 million media impressions conservatively during the 2009 campaign. Results of the 2010 campaign will not be available until after January 2, 2011.

- Among all program advocates, grantees and CTSP's including Tipsy? Taxi!, *SoberRide*, and the Christmas Tree Tag Campaign, the MHSO and its network exceeded the previous year's distribution numbers, distributing conservatively over 400,000 pieces of educational and awareness materials.

- The Washington Regional Alcohol Program (WRAP) continued and successfully completed another year of outreach programs in the Montgomery and Prince George's Counties high schools. WRAP's coordinator was able to open new doors and bring new schools on board in both counties, now reaching 42 percent of the Montgomery County's high schools, and 16 percent of Prince George's County high schools. Overall the program reached approximately 4,500 students, an increase of 110 percent over the previous year.

- A total of four press events were held in 2010; one for *SoberRide* and one for Tipsy?Taxi's! July 4th campaign, one for the kick-off of the *Checkpoint Strikeforce*. Drunk Driving. Over the Limit. Under Arrest. campaign, which coincided with the National Impaired Driving crackdown, and finally one to highlight the accomplishments of the statewide impaired driving program during the annual Maryland Remembers Memorial in December 2009.

- WRAP's *SoberRide* campaign provided over 3,000 free cab rides this year, 620 of them were specific to Montgomery and Prince George's Counties. AAA's *Tispy?Taxi!* campaign was also highly successful in its program, over 400 rides to would be drunk drivers in Baltimore and surrounding areas.

- The DUI for Losers campaign distributed over 35,000 coasters to local bars statewide and approximately 300 posters.

- Discussions were held with the Judicial Training Institute to develop and implement an education course for judges, but a formal training was not confirmed for this year. However, a formal program for prosecutors and law enforcement was funded in FY 2010. A total of four trainings were conducted in the Annapolis, Frederick, Harford County and Prince George's County. A total of 152 prosecutors from States Attorneys Offices were represented in the trainings from Baltimore City, Howard, Frederick, Montgomery, Prince George's, and Harford County, Washington, Garrett, Anne Arundel, Talbot, and Calvert counties. Law enforcement from across the state were tremendously represented at the trainings with ; 731 Breath Operators, 40 DUI College participants, 40 Traffic Specialists, 138 DRE's, 28 DRE

30

Student's, 229 AES Officers in In-service, 104 new AES Officers, and over 700 in roll call and other trainings for a total of 1890 participants.

- The three DUI Courts in Maryland have shown tremendous success, averaging 25 active participants, graduating on average 12 participants and through monitoring, having demonstrated anywhere from a 0 - 1 percent recidivism rate among graduates who have been tracked for anywhere from 12 - 18 months.

- MADD's Court Monitoring program successfully completed its first full year of monitoring, analyzing the data recorded in Anne Arundel, Baltimore, Montgomery and Prince George's Counties. The trends identified in these courts were: Excessive Use of Probation Before Judgment (PBJ); Inadequate or no use of Ignition Interlocks; Pleas bargains to lesser convictions; And police officer failure to appear. MADD has agreed to share the results with the Chief Judge of the District Court of Maryland and use the data to help heighten awareness among judges, prosecutors and law enforcement in an effort to increase conviction rates, reduce the use of PBJ and increase the use of ignition interlocks in these jurisdictions.

Challenges

- The Impaired Driving Program has made significant strides in the last several years; however, it continues to struggle with outreach to the Judiciary.

- Enforcement support continues to remain a strong threat to the overall program. While law enforcement is supportive of impaired driving prevention, the commitment to the sobriety checkpoint program is very weak. Unfortunately, Maryland law enforcement, more than ever, is sold on the deployment of saturation patrols over sobriety checkpoints some 3 to 1. Additionally, for FFY 2011, MHSO was informed that the Maryland State Police will no longer be conducting Sobriety Checkpoints, although they will continue to utilize Saturation Patrols on targeted roadways.

- Maryland continues to look for solutions to hiring a Traffic Safety Resource Prosecutor.

- While new laws were passed in Maryland during the 2009 Legislative Session, the laws were stripped of their original intent and will need revisions to meet the objectives of the Task Force and make significant impact on the issue. The 2010 Legislative Session did not prove to be fruitful and efforts to adopt legislation to require ignition interlock for all offenders died.

Motorcycle Safety

After several years of dramatic increases, motorcycle fatalities have declined in the last two years. Compared to the historic high of 97 in 2007, motorcycle-involved fatalities fell by 14% and 30% in 2008 and 2009, respectively.

There is a positive trend in motorcycle crash fatalities but it is unlikely that Maryland will meet its established targets for injury and crash reduction by 2010. These targets were calculated in 2004, before the tremendous increase in motorcycle ridership in 2005 and 2006 and concomitant increase in motorcycle crashes. And, while motorcycle-involved fatalities decreased from 2008 to 2009; injury and total crashes both increased by 4 percent during that same period.

The reported motorcycle crash record indicates that a disproportionate number of these crashes are single-vehicle crashes when compared to all traffic crashes for all vehicle types. Excessive speed on the part of the motorcycle rider continues to be a predominant factor in fatal motorcycle crashes and aggressive driving by a minority of riders continues to be a problem for state and local law enforcement agencies. In addition, motorist inattention and failure to yield right of way continues to be a significant problem in motorist-motorcyclist crashes.

The motorcycle safety program continues to focus on three major areas: rider training, rider responsibility and driver awareness. Rider responsibility includes proper licensing and skill training, the use of protective equipment, and responsible riding behavior. Riders are reached through outreach at public events and by collaboration with leaders within the motorcycling community. Driver awareness includes recognition of motorcycles as part of the traffic mix and proper scanning for motorcycles before initiating traffic movements, notably left turns across oncoming traffic. Driver awareness is achieved through paid and earned media campaigns, including radio advertisements and targeted cable television advertisements.

Motorcycle crashes increased from 1803 in 2008 to 1884 in 2009; the 2010 target is 1,508. Motorcyclist injuries increased from 1,568 in 2008; the 2010 target is 1,333. Fatalities decreased dramatically from 83 in 2008 to 67 in 2009; the 2010 target is 65.

Objectives

- Decrease the total number of motorcycle related crashes from 1,570 in 2004 to 1,508 in 2010.
- Decrease the total number of motorcycle related fatalities from 68 in 2004 to 65 in 2010.
- Decrease the total number of motorcycle related injuries from 1,388 in 2005 to 1,333 in 2010.

Accomplishments

- FFY 2010 marked the third year that specific funds have been allocated toward motorcycle safety as a part of RSTP activities. Funds were allocated to counties with the highest number of motorcycle-involved crashes. These funds may only be used on motorcycle safety overtime traffic law enforcement initiatives. Enforcement was focused on both motorcyclists and motorists.

- To kick off Motorcycle Safety Month, MHSO and MVA partnered with ABATE of Washington County and the Washington County Sheriff's Office for a press event at the Hagerstown MVA branch. As a part of this event, the MVA Motorcycle Safety Program conducted a *Fast Track* license testing session. Motorcyclists who did not possess a motorcycle license or endorsement were allowed to take a knowledge test, an on-motorcycle skills test and if successful, obtain their motorcycle license or endorsement all at one time.

- During May, motorcycle safety month, MVA also conducted outreach at the *Dick Gelfman Ride Across Maryland* charity motorcycle ride. MVA participated as vendors to reach out to participants and to distribute motorcycle safety campaign materials. MVA staffed the event, and distributed safety promotional items and educational material.

- Maryland's overhead highway dynamic messaging signs (DMS) across the state displayed a "SHARE THE ROAD WITH MOTORCYCLES LOOK TWICE FOR BIKES" message at the beginning of Motorcycle Safety Month, in late May to promote motorist awareness of increased presence of motorcycles during the Rolling Thunder Rally in May and DelMarVa bike week in mid-September. Hundreds of thousands of motorists across the state were exposed to these important safety messages.

- MHSO continued its motorist and rider awareness campaign with WPGC-FM and the popular on-air personality Big Tigger. Paid advertising was combined with free-run advertising and extensive on-air promotion and special events targeting riders with messages on rider training and drivers on motorist awareness of motorcycles. Once again, Big Tigger served as the spokesperson of the campaign on radio and at special events. The campaign concluded with the *BikeFest* special event at the Maryland International Raceway in August.

- MHSO partnered with the DC Metro Club Association (DCMCA), a coalition of Washington metropolitan area rider organizations, the Mid-Atlantic Police Motorcycle Riding Committee (MAPMRC), and WPGC radio to produce the 2nd Annual Motorcycle Safety Cookout in June, 2010. Motor Officers from MAPMRC conducted skill course demonstrations and free safety inspection of motorcycles at the event.

- RTSP coordinators developed a range of local motorcycle initiatives, including outreach at local events, preparing press releases, conducting paid and earned media campaigns, and working with motorcyclist stakeholders to develop plans for motorcycle safety at the local level.

- The combined radio and cable television campaigns achieved an estimated 1.8 million impressions, the broadest reach achieved to date for motorcycle safety.

- The MVA coordinated outreach events, including DelMarVa Bike Week using the *SmartTrainer* motorcycle safety simulator to promote formal rider training.

- MVA conducted "Fast Track Licensing" events during the riding season. This expedited the process for application and testing, and the process was very well received by motorcyclists.

- MHSO convened one meeting of the Motorcycle Task Force to promote promising practices in education and enforcement and to ensure coordination of local programs. Additional meetings were conducted with RTSP Task Forces and with members of the motorcycling community.

- The MHSO Coordinator participated in the NHTSA Tri-Regional Motorcycle Safety Summit in August, and is working with motorcycle safety coordinators in NHTSA Region 3 on a coordinated 2011 motorcycle safety campaign.

Challenges

- Although there was a decrease in motorcycle-involved fatalities, the number of crashes and injuries remain high. Since there is a fine line between a serious injury and death in a motorcycle crash, there is a possibility of a return to historically high levels of motorcycle-involved fatalities.

- Traffic enforcement for motorcycle safety is difficult to target effectively, when motorcycle traffic is heavily dependent on weather, and is a small portion of all traffic, even on fair-weather weekend days.

Occupant Protection

National and statewide data have proven that one of the single most effective ways to prevent serious injuries and death in a traffic crash is the proper use of an adult seat belt and child safety seats. In Maryland, seat belt use messaging and enforcement permeates virtually every enforcement operation and media message, from its Occupant Protection (OP) Program to aggressive or impaired driving-related activities. Thanks to a vast network of media partners and a community of law enforcement that has proven to consistently and effectively enforce the State's OP laws, Maryland achieved a seat belt use rate of 94.72% in 2010. This increase marks the third straight year of an increase and, while falling slightly short of the stated goal of 95% use, represents one of the highest use rates in the entire nation.

In terms of county-specific data, only observed belt use among Maryland's NHTSA sites is officially taken into consideration. The following chart represents the change in use rate among those 10 counties and Baltimore City:

Seat Belt Use Rate by County 2006-2010
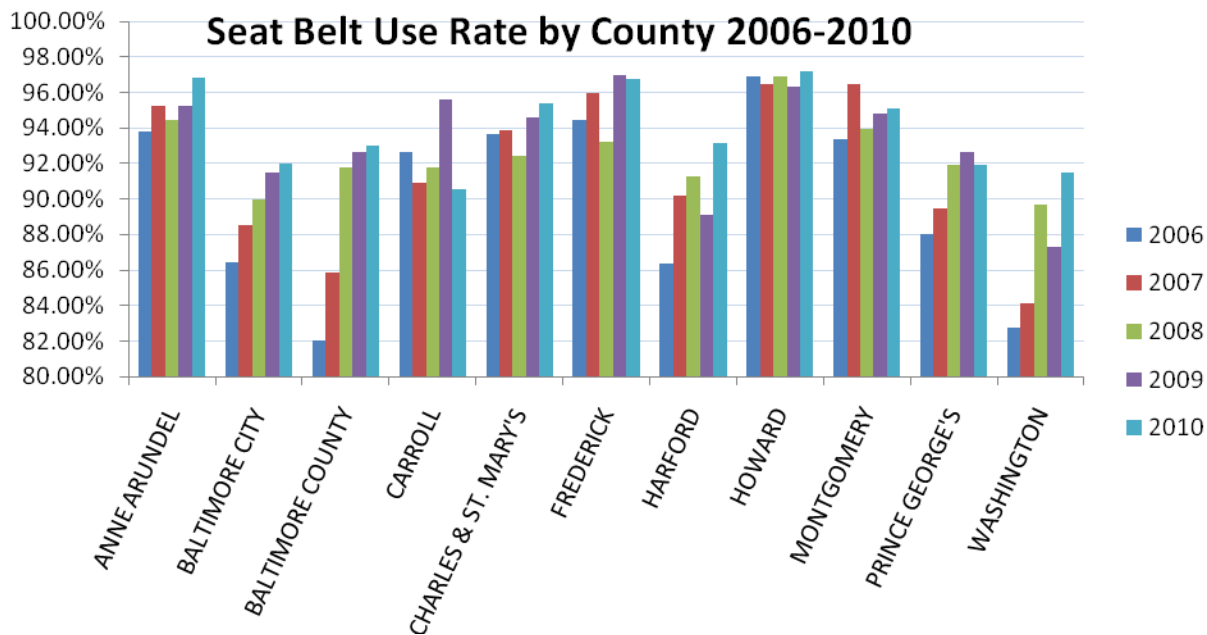
Figures at the close of FFY 2009 indicated that safety equipment was in use by only 51.05% of those killed in Maryland traffic crashes but used by just slightly less than 85% of those injured in similar crashes. Preliminary data for 2010 shows a slight increase in the number of belted fatalities with roughly 58% of those killed in traffic

crashes being listed as having proper safety equipment (adult seat belts) in use. The number of those injured but who also wore their seat belt has also risen to about 88%, according to preliminary 2010 data.

In FFY 2010, the MHSO spent nearly $466,500 in *Click it or Ticket* media. This dollar amount allowed for significant airtime to be purchased in the DC and Baltimore television and radio markets, with additional expenditures through internet sites and unconventional sources such as gas pump tops. Media messaging was placed with the following partners, and at the corresponding amounts:

Medium	Partner	Amount Invested
Outdoor – Gas Pump Tops	All Over Media	$ 26,125
Radio	Baltimore & DC (Various)	$ 338,065
Television	Mid-Atlantic Sports Network & Comcast Cable	$ 102,315
	Total	$ 466,505

In FFY 2010, the MHSO's media purchases related to adult seat belt safety messages earned more than 25 million impressions. Extensive additional value was provided by the MHSO's media partners, including vehicles for contest giveaways, free media placements, community event participation, and other promotional activities. Streaming media and internet-based advertising was utilized, with additional behavioral information being collected through radio and television partner websites. The gas pump top advertisements placed through All Over Media were innovative and offered the ability to geo-target media placements to within a mile of an unbelted fatality. Additionally, belt messages were included in other highway safety ads such as the Smooth Operator program.

Similar to FFY 2009, the media buying was split into two distinct periods, namely a main buy in May for the national *Click it or Ticket* mobilization, and a smaller "reinforcement" period at the end of November. Messaging in all aspects of *Click it or Ticket* is consistent with common elements being "Seat belts save lives," "Buckle up every trip, every time," and a consistent emphasis on both the main *Click it or Ticket* campaign theme as well as messaging to buckle up at night.

Consistent with national trends, the MHSO targets its main bulk of media buying to the 18-44 year old male demographic, but continued emphasis was placed on reaching out to the African American and Hispanic populations in FFY 2010. Additionally, women continued to play a key role in the FFY 2010 target demographic for two reasons, namely their ability to affect behavior in men and their tendency to misuse seat belts (placing the strap behind their shoulders) at a higher rate than men.

Pickup truck drivers in the Baltimore Designated Market Area (DMA) are targeted though a specialized campaign called *Buckle Up Tough Guy.* Since this campaign's implementation, the use rate among pickup truck drivers and passengers has increased statewide by approximately five percentage points and that increase is actually much higher in the Baltimore DMA.

In FFY 2010, the MHSO has received roughly 1600 responses to the Occupant Protection Action Measure Tool (AMT), a tool used to measure knowledge, attitudes, and behaviors regarding Maryland seat belt and child passenger safety laws. A sampling of most relevant results from FFY 2010 is as follows:

- Approximately 78.2 percent of respondents are between the ages of 16 and 44;
- Roughly 46 percent were male;
- Just over 62 percent declared their race to be white, 23 percent declared their race as black, 6 percent declared race to be Hispanic, and the remaining 9 percent responded with another race;
- 55 percent listed their primary vehicle as a passenger car, 26 percent listed their vehicle as an SUV or van, and just over 7 percent listed their vehicle as a pickup truck;
- 77 percent of respondents stated that they wear a seat belt "all of the time" and 20 percent stated that they wear the seat belt "Most of the time" or "Some of the time." Less than 1 percent listed their seat belt use as "Never";
- More than 90 percent responded that they knew Maryland has a primary seat belt law and cross tabulation of data showed that of the 10 percent that responded incorrectly or did not know the answer, the largest number of incorrect responses came from respondents that declared their race as Asian;

- Only 60 percent of respondents felt that they were likely to get a ticket if they did not wear their seat belt but the overwhelming majority of respondents felt that if they did receive a ticket for non-use, that it would be justified;
- Child passenger safety-related questions yielded positive knowledge, attitudes and behaviors in regard to the safe transportation of children and in regard to Maryland CPS laws; and
- More than 94 percent of respondents indicated that they had seen or heard *Click it or Ticket* messaging throughout radio, television, outdoor, or print media outlets.

The Maryland Law Enforcement Challenge (MLEC) continues to be facilitated by the MHSO's Occupant Protection Program Coordinator. In May 2010, award winners in the numerous categories were announced to a collection of roughly 300 assembled police chiefs, sheriffs and other law enforcement. More than 80 agencies are actively participating in MLEC-related activities such as media and enforcement for occupant protection, aggressive driving and impaired driving. This program is continuously enhanced and adapted to meet the needs of Maryland Law Enforcement and the MHSO's numerous traffic safety program goals, and is a highly effective vehicle for maintaining effective communications regarding enforcement operations, promoting desired media messaging, and coordinating community-based events.

MHSO's network of RTSPs incorporates seat belt-related activities into all aspects of programming and events. In particular, school based programs involving young drivers contain a consistent seat belt use message, and RTSPs sponsor high school activities and competitions with a seat belt specific focus. One such program, which has been created by the MHSO for FFY 2011, is called *Making it Click.* This program is a revision of a former MHSO program called *Pacesetters. Making it Click* combines the entire school population (faculty, staff, parents and student) with law enforcement personnel to increase seat belt use at a particular high school through enforcement and education activity.

In addition to *Making it Click*, Maryland's RTSPs were heavily involved in FFY 2010 with a program called *Buckle Up For a Buck.* This program is conducted in partnership with local area banks and credit unions and positively reinforces drivers that are observed to be buckled. Utilizing donated funds from the financial partners, the RTSPs and enforcement partners have selected various locations throughout the State. At these sites, the RTSPs and officers distribute one dollar bills to drivers that are observed to be buckled. Locations are selected to allow for distribution in such a manner that does not cause congestion or other disturbances (i.e. at red lights) and the overwhelming reaction to these events have been extremely positive, even garnering coverage on national media outlets such as MSNBC. To date, four counties have participated but RTSPs and the MHSO will engage financial partners and law enforcement agencies throughout the State in an attempt to expand this program in FFY 2011.

Objectives

- To increase the statewide observed seat belt use of front seat outboard occupants in passenger vehicles 1.6 percentage points from the 2008 calendar base year average usage rate of 93.4 percent to 95.0 percent by December 31, 2010.

- To decrease unrestrained passenger vehicle occupant fatalities in all seating positions 13.0 percent from the 2008 calendar base year average of 142 to 123 by December 31, 2010.

Accomplishments

- Maryland attained a 94.72 percent safety belt use rate during the 2010 observations, representing roughly seven tenths of a percentage point increase from the previous year.

- More than 25 million total impressions were achieved on $465,000 in media purchases, for a total cost per impression of approximately 1.8 cents. In contrast, cost per impression in FFY 2009 was roughly 2.5 cents.

- Roughly 100,000 citations for adult safety belt use non-compliance were issued throughout FFY 2010.

- During FFY 2010, Maryland applied for, and consequently received, a demonstration grant project through NHTSA for night time seat belt enforcement. Total value of this project is $900,000 over the next three years. Planning is still underway for an implementation for the first wave in May 2011.

Challenges

- Seat belt use in fatal crashes, as reported to the MAARS, is likely under-reported. Continuing to increase

the accuracy of reporting will be a major point of emphasis concerning seat belt use data in FFY 2011.

- Reaching Maryland's diverse population is often challenging given the vast number of different media outlets and the limited funding for the program.

- A shift to night time enforcement will take place for the May 2011 *Click it or Ticket* campaign. Logistical planning is underway and the MHSO will facilitate coordination among law enforcement in Maryland's more populated areas to achieve a reduction in night time unbelted fatalities.

- Maryland does not commit overtime enforcement funding to seat belt enforcement and relies on law enforcement agencies throughout the State to conduct enforcement on regular patrol time. Maryland has a law enforcement base that is committed to enforcing the State's belt laws but future competing priorities or a lack of sufficient resources could have a detrimental effect on belt enforcement activities.

Young Driver Safety

Young driver crashes, injuries, and fatalities are on a generally declining trend; however, young driver issues remain a concern in many communities across the state. The focus of traffic safety programs goes well beyond traditional driver education to involve young people and their parents, law enforcement, and schools in addressing this persistent traffic safety issue.

Total young driver crashes declined for the sixth consecutive year, down from 18,993 in 2007 to 17,344 in 2008, the fewest number of young driver crashes since before 1998. The number of injuries decreased from 11,666 in 2007 to 10,309 in 2008, the lowest level since 2000. The number of fatal crashes declined slightly from 98 in 2007 to 90 in 2008, the number of fatalities also decreased from 112 in 2007 to 106 in 2008.

Existing young driver programs focus on four major areas: driving skill and decision-making, occupant protection, impaired driving, and the Maryland graduated driver licensing (GDL) system. A wide variety of high school-based programs have been implemented to address impaired driving, including mock crashes, impaired driving simulators, Fatal Vision goggles simulation exercises, Crash Dynamics and promotion of alcohol-free after-Prom parties. In 2009, Maryland high schools participated in the Making it Click program in partnership with Regional Traffic Safety Programs and local law enforcement to promote safety belt use within high schools. A grant was provided to the Motor Vehicle Administration in 2009 that aimed at providing parents with the tools to encourage active participation in their teen's learning to drive experience. MVA will also evaluate the parent involvement in teen driving, parents lack of knowledge of the risks associated with teen driving, parent's role in the licensing process as well as the availability and quality of the educational materials/resources for parents of young drivers. To see further reductions in teen auto fatalities, innovative technologies and approaches to young driver safety need to be explored to augment other interventions for young drivers.

Objectives

- Reduce annual crashes involving young drivers from 20,882 in 2004 to 20,283 in 2010
- Reduce annual fatalities involving young drivers by from 122 in 2004 to 100 in 2010.
- Reduce annual injuries involving young drivers from 13,927 in 2004 to 9,643 in 2010.

Accomplishments

- The Maryland Highway Safety Office, in partnership with Ford Motor Company and the Ford Driving Skills for Life program and the Governors Highway Safety Association hosted a FREE Hands-On Training Event in October in support of National Teen Driver Safety Week. The program allowed newly licensed teens between the ages of 15-19 or those that hold valid drivers permit to get behind the wheel to become a safer more experienced driver. Within a controlled environment and under close supervision teens were trained through classroom-like learning and hands-on instruction behind the wheel of specially equipped vehicles that simulated wet or potentially dangerous driving conditions. The road courses were designed to teach and focus on four key skills: speed management, space management, vehicle handling and hazard recognition.

- The comprehensive young driver program, *I AM*, was repeated at Owings Mills High School in Baltimore County. The program includes an intensive kick-off week of driver safety programs and follow-up

programs that are delivered to students and parents later in the year. Based upon previous program evaluations the program was refined and revamped as a part of the Baltimore County young driver initiative. Further state-wide expansion for the program is being discussed currently.

- The Maryland Highway Safety Office funded a grant in partnership with the Motor Vehicle Administration to direct an Assessment of Drivers Education Curriculum. The purpose of this project was to update and enhance driving instruction and education through the creation and implementation of a new Driver Improvement Program. As a direct result of the project a comprehensive set of recommendations was proposed and presented to the Motor Vehicle Administration and the State of Maryland.

- The Southern Maryland *DriveCam* program continued data collection entering into the final phase of the study. The in-car video system captured young driver knowledge, attitudes and behaviors relating to driving. It also captured the direct effect on young driver behavior and parental involvement in young driver monitoring. This initiative has received extensive earned media attention across the state and in other states.

- Training of RTSP coordinators and statewide distribution of the *Critical 60* program developed by Howard Community College through a grant funded by MHSO. The program focuses on positive road attitudes and on-the-road decision-making, behaviors, parent and teen involvement as well as tactile abilities.

- The Superintendent of Public Schools in St. Mary's County, with the active support of the CTSP coordinator, continued its prior success in relation to the aggressive young driver safety campaign that requires high school parking permit holders and their parents to sign a safe driver code of conduct. Drivers who receive citations for unsafe driving are subject to progressive sanctions, including the potential loss of parking privileges.

- MHSO and RTSP coordinators distributed an estimated 80,000 pieces of educational material to young drivers and their parents, to law enforcement officers, and to others. These materials included young driver law summaries, Young Driver GDL Booklet produced by Maryland Highway Safety Office (MHSO), YOU hold the keys brochure produced by MVA in partnership with MHSO, Walk Safe!, Drive Safe! Educational DVDs produced by Montgomery County Maryland, Office of Public Information, MVA Rookie Driver materials, assessment tools, and topical flyers and brochures on key young driver issues, including alcohol risk awareness, occupant protection, aggressive driving, Teens and Trucks, Can I Borrow Your Car DVD, Is It Worth It brochure produced by GEICO Educational Foundation.

- Increased support and involvement for younger driver's safety from parents and guardians, teens, schools, local community organizations and agencies.

- Statewide distribution of the new younger driver informational booklet to teens, parents, law enforcement and other community organizations and partners during enforcement and awareness initiatives.

- Parent Education & Involvement in Teen Driving grant administered by the Motor Vehicle Administration completed development of the projects Parent Involvement Education Brochure. Plans for statewide distribution were developed and implementation has begun.

- MHSO convened four meetings of the Young Driver Task Force to promote promising practices and programs and to provide networking opportunities and ensure coordination among local/statewide programs and partners. The SHSP Young Driver Safety Emphasis Area team also convened two meetings.

- Based upon objectives for the Younger Driver Safety program, the MHSO was able to meet and exceed the program objectives. Total young driver crashes declined for the sixth consecutive year, down from 18,993 in 2007 to 17,344 in 2008, the fewest number of young driver crashes since before 1998, reaching the 2010 goal for total crashes. The number of injuries decreased from 11,666 in 2007 to 10,309 in 2008, reaching the 2010 goal for total injuries. The number of fatal crashes declined slightly from 98 in 2007 to 90 in 2008, the number of fatalities reaching the 2010 goal for fatal crashes. The total number of all fatalities decreased from 112 in 2007 to 106 in 2008 slightly higher then the projected 2010 goal of 100.

Challenges

- In previous years, the MVA in Loveville has administered a teen/parent information session but, due to economic hardships, the program has been terminated. This program was valuable and the MHSO would like to establish similar programs across the State.

- Currently, there is no accurate way to measure if the information disseminated made an impact on driver behaviors.

- Due to improvements in Maryland's GDL laws made during the 2009 legislative session, education efforts and outreach continue to help inform the motoring public about the changes in law.

- There will be renewed education efforts to inform the motoring public about the changes in laws affecting young drivers.

- Due to budget constraints there are no safety related incentive items to distribute amongst the RTSPs, younger drivers, parents or community partners.

Financial Management

The Finance and Information Systems Section (FISS) successfully implemented a web-based, user-friendly grants management system, SHARP (Safe Highways Application & Reporting Program).   Grant review for FFY2011 was shorter and more efficient than previous years due to SHARP. The finance staff persevered in spite of a vacant position for the entire year.

Accomplishments

- Organizations submitted their FFY2011 Applications and downloaded their Project Agreements using SHARP.

- All grantees were trained on how to create and complete their post-award documents including Progress Reports, Reimbursement Claims, Pre-Approval forms and Project Modifications. Single audit and equipment tracking forms have been incorporated into SHARP to help with better project monitoring.

- A Federal Aid Reimbursement Voucher was submitted in GTS every month in FFY2010.

Challenges

- FFY10 was a year of transition moving from a paper-based system to an online system. There was a huge learning curve for all parties. Surveys and focus groups were done to gather opinions and suggestions for improvements.

- A major challenge to the finance staff was having a vacant Finance Manager position and a relatively new Finance Chief. The vacancy created a burden on the existing Finance Manager and Finance Chief positions. Hopefully, this position will be filled in FFY2011.

- The *MHSO Financial Management Manual* which provides instructions on finance-related tasks was not completed as hoped. This is due to the limited staff and the move to an online system will require revisions to instructions already created.

- Additional challenges include revising the general application for FFY2012 and training staff and grantees on SHARP.

Office Management

The Office Management Section (OMS) currently consists of an Office Manager, one Business Services Specialist, and during the summer at least two Interns from the Maryland Department of Transportation Fellows Internship Program. The Interns work along with the Business Services Specialist and the Office Manager with

the overall responsibility to provide administrative support to the Chief of the Maryland Highway Safety Office, the Deputy Chief, the Chief of the Safety Programs Section, the Chief of the Program Advisory Section, the Chief of the Financial and Information Section, 12 program area coordinators, and the Financial and Information Technology Sections. OMS continues to provide support to the expanding program areas and the division as a whole, including coordinating events, bids for location, resources, and determining necessary materials. In addition, the OMS has a lead role in training the new staff on the current policies and procedures, location of files, electronic forms, and implementation of new policies and/or training as necessary. An important part of the Office Manager's duties center around grants management, and thus, the OM sits on the Grants Management Team. The Office Manager works with the FISS to establish an annual grantee monitoring schedule that conforms to the monitoring policy. Site visits will continue to be coordinated as required by MHSO policy.

Accomplishments

During FFY 2010, the OMS negotiated a new grant with the University of Maryland, Baltimore for the staffing grant (12 program area staff and 2 office management staff). Once the grant was executed, the OMS worked side-by-side with UMB to ensure that all employees were transferred in a timely manner as well as all their benefits and leave balances. The OMS has assumed the Human Resource responsibilities of the Division. Including personnel issues with benefits, time, travel, expenses, tracking training, and leave requests. In addition, the Office Manager is responsible for the negotiation and recruiting of new staff members. The activities listed above will continue to be monitored and additional policies will be written in FFY2011.

Challenges

- During FFY 2011, the OMS will continue to implement new components to the Resource Inventory Database, specifically, measures to increase the efficiency of the existing system.

- In addition, the OMS will work with MHSO management staff and UMB to implement the reorganization of the Community Traffic Safety Program (CTSP) to a Regional Traffic Safety Program (RTSP).

- The reorganization will include the advertising, interviewing, and hiring of 11 RTSPs and eliminating the CTSP as well as establish new policies and procedures.

- The OMS will continue to provide administrative support by assisting with preparation for major press events, coordinating various MHSO annual events, and automating general use office forms and templates. With the increasing responsibilities of the MHSO, the OMS is vital to the organization's continued success and positive growth.

Fiscal Summary

Program	402	405	410	406	408	2010	2011	Totals	% of Total
Aggressive Driving	$3,721	$0	$0	$0	$0	$0	$0	$3,721	.05%
Inattentive Driving	$110,442	$0	$0	$0	$0	$0	$0	$110,442	1.49%
Impaired Driving	$0	$0	$1,517,376	$0	$0	$0	$0	$1,517,376	20.47%
Motorcycles	$0	$0	$0	$12,681	$0	$85,639	$0	$98,320	1.33%
Occupant Protection	$25,178	$739,663	$0	$0	$0	$0	$288,078	$1,052,919	14.20%
Pedestrian/Bicycle Programs	$25,849	$0	$0	$3,752	$0	$0	$0	$29,601	.40%
Safety Programs	$460,441	$0	$0	$438,526	$0	$0	$0	$898,967	12.12%
Diversity	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Data Analysis	$197,910	$0	$0	$0	$571,525	$0	$0	$769,435	10.38%
Community Programs	$1,525,068	$0	$0	$0	$0	$0	$0	$1,525,068	20.57%
Enforcement	$106,785	$0	$701,779	$332,997	$0	$0	$0	$1,141,561	15.39%
Emergency Medicine	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Planning & Administration	$266,847	$0	$0	$0	$0	$0	$0	$266,847	3.6%
TOTALS	**$2,722,241**	**$739,663**	**$2,219,155**	**$787,956**	**$571,525**	**$85,639**	**$288,078**	**$7,414,257**	**100.00%**

* Law Enforcement is utilized for various program areas, but is represented in this graph separately for analysis purposes.

Traffic Safety Outlook

The Maryland Highway Safety Office is the State's leading voice for highway safety. It has a treasured history of improving the lives of Maryland citizens and motorists. Engaged, proactive involvement with numerous agencies and partners has been critical to achieving this success. Maryland has and will continue to emphasize activities to be carried out through the established network of local CTSPs, enforcement agencies, state and local governmental agencies, community-based groups, non-profit and not-for-profit organizations, associations, hospitals, institutions of higher education, and the private sector.

As stewards of federal highway safety funds, and ultimately of taxpayer dollars, MHSO has always looked to achieve maximum efficiency and maximum benefits from the programs it funds. In order to continue and sustain this stewardship, the recent collaborative development of the SHSP was facilitated by MHSO. Adopted in 2006, the extensive process of developing the SHSP included buy-in from traditional and unique partners, the identification of critical highway safety issues, the development of strategies to address those problems, and the culmination of long term goals that would benefit all Marylanders. Maryland has already, or is close to achieving the goals set forth in the SHSP, and will continue to seek programs and strategies to maintain continuous reductions in crash fatalities and injuries. Another example is the inclusion of non-traditional stakeholders in highway safety related initiatives. MHSO will continue to work with these groups and stimulate a lasting, effective relationship.

The MHSO continues to be heavily involved with the Governors Highway Safety Association (GHSA). The GHSA is a non-profit association representing the highway safety offices of states, territories, the District of Columbia, and Puerto Rico. The GHSA provides leadership and representation for the states and territories to improve traffic safety, influence national policy, and enhance program management. The Maryland Highway Safety Coordinator and MHSO Chief was recently re-elected GHSA Chairman. While the volunteer position may create an extra workload, the benefits are immense. Access to federal highway safety activities and other highway safety coordinators in other states, and their corresponding policies and practices is an immeasurable benefit to the MHSO and to the State of Maryland.

The MHSO's ultimate objective is to reduce motor vehicle crashes, deaths, and associated injuries on Maryland's roads. The MHSO maintains a firm commitment to Maryland's traffic safety needs and it is staunchly dedicated to its partnership with NHTSA. Maryland will continue to work to strengthen the State's traffic safety relationships with other states, particularly those in the Region III, to save lives throughout Maryland and beyond.

Overall Impact Objectives

- To decrease traffic fatalities 4.0 percent from the 2008 calendar base year average of 591 to 568 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland has achieved its targeted fatality reduction in 2009 by decreasing traffic fatalities by more than 4% of the base year to a total of 547 traffic fatalities in 2009.

- To decrease serious traffic injuries 21.0 percent from the 2008 calendar base year average of 4,544 to 3,579 by December 31, 2010.

  - Maryland state crash data indicate that Maryland is progressing toward its 2010 targeted reduction in serious traffic injuries. In 2009 Maryland experienced a 3.5% reduction in serious traffic injuries to a total of 4383.

- To decrease fatalities/VMT 5.0 percent from the 2008 calendar base year average of 1.05 to 1.00 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland achieved its targeted fatality rate reduction by attaining a fatality rate of .98 in 2009.

- To decrease rural fatalities/VMT 7.0 percent from the 2008 calendar base year average of 1.58 to 1.47 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland achieved its targeted rural fatality rate reduction by attaining a rural fatality rate of 1.42 in 2009.

- To decrease urban fatalities/VMT 2.0 percent from the 2008 calendar base year average of 0.87 to 0.85 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland achieved its targeted urban fatality rate reduction by attaining an urban fatality rate of .82 in 2009..

- To decrease unrestrained passenger vehicle occupant fatalities in all seating positions 13.0 percent from the 2008 calendar base year average of 142 to 123 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland is progressing toward its 2010 targeted reduction in unrestrained passenger vehicle occupant fatalities. In 2009 Maryland experienced a 9.2% reduction in unrestrained fatalities to a total of 129.

- To decrease alcohol impaired driving fatalities 13.0 percent from the 2008 calendar base year average of 152 to 132 by December 31, 2010.

  - *Note: Alcohol-Impaired driving fatalities are all fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 or greater.*

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland has experienced an increase in alcohol impaired driving fatalities to a total of 162.

- To decrease speeding-related fatalities 11.0 percent from the 2008 calendar base year average of 191 to 169 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland is progressing toward its 2010 targeted reduction in speeding-related fatalities. In 2009 Maryland experienced a 4.2% reduction in speeding-related fatalities to a total of 184.

- To decrease motorcyclist fatalities 2.0 percent from the 2008 calendar base year average of 91 to 89 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland has achieved its targeted reduction in motorcyclist fatalities by experiencing more than a 2% reduction of the base year to a total of 69 motorcycle fatalities in 2009.

- To decrease un-helmeted motorcyclist fatalities 10.0 percent from the 2008 calendar base year average of 10 to 9 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland has achieved no increase and no decrease in un-helmeted motorcyclist fatalities in 2009. The number of un-helmeted motorcyclist fatalities in 2009 remained at 10.

- To decrease drivers age 20 or younger involved in fatal crashes 4.0 percent from the 2008 calendar base year average of 94 to 90 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland is progressing toward its 2010 targeted reduction in fatalities involving drivers age 20 or younger. In 2009 Maryland experienced a 2.2% reduction in fatalities involving drivers age 20 or younger to a total of 91.

- To reduce pedestrian fatalities 2 percent from the 2008 calendar base year average of 116 to 114 by December 31, 2010.

  - Preliminary FARS Data from 2009 (ARF) indicate that Maryland has achieved its targeted reduction in pedestrian fatalities by experiencing more than a 2% reduction of the base year to a total of 113 pedestrian fatalities in 2009.

- To increase statewide observed seat belt use of front seat outboard occupants in passenger vehicles 1.6 percentage point(s) from the 2008 calendar base year average usage rate of 93.4 percent to 95.0 percent by December 31, 2010.

  - Observed Seat Belt Use surveys for 2010 indicate that Maryland is progressing toward its 2010 targeted increase in seat belt use. As compared to 2008, Maryland experienced a 1.3% increase in seat belt use of front seat outboard occupants in passenger vehicles to a total of 94.7%.

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List of Acronyms

AAA	American Automobile Association
CODES	Crash Outcome Data Evaluation System
CIOT	*Click it or Ticket*
CPS	Child Passenger Safety
CPSF	*Checkpoint Strikeforce*
CTSP	Community Traffic Safety Program
DA&TC	Data Analyst and TRCC Coordinator
DC	District of Columbia
DHMH	Department of Health and Mental Hygiene
DRE	Drug Recognition Expert
DSWW	*Drive Safely Work Week*
DTF	Diversity in Traffic Safety Task Force
DUI	Driving Under the Influence
DWI	Driving While Intoxicated
EC	Executive Council
ED	Emergency Department
EMS	Emergency Medical Services
F&PMS	Financial and Program Monitoring Specialist
FARS	Fatality Analysis Reporting System
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FISS	Finance and Information Systems Section
FMIS	Financial Management Information System
GAS	Grant Applicant Seminar
GHSA	Governors Highway Safety Association
GMS	Grants Management System
HSCRC	Health Services Cost Review Commission
HSP	Highway Safety Plan
IDC	Impaired Driving Coalition
MAARS	Maryland Automated Accident Reporting System
MCFSBU	Maryland Committee for Safety Belt Use
MCPA	Maryland Chiefs of Police Association
MDOT	Maryland Department of Transportation
MHSO	Maryland Highway Safety Office
MIEMSS	Maryland Institute for Emergency Medical Services Systems
MSP	Maryland State Police
MVA	Motor Vehicle Administration
NHTSA	National Highway Traffic Safety Administration
NSC	National Study Center for Trauma and EMS
OOTS	Office of Traffic and Safety
PD	Police Department
PSA	Public Service Announcement
SAFETEA-LU	Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users
SHA	Maryland State Highway Administration
SHSO	State Highway Safety Office
SHSP	Strategic Highway Safety Plan
SOTF	*Smooth Operator* Task Force
SRTS	Safe Routes to School
TF	Task Force
TRCC	Traffic Records Coordinating Committee
TRTCC	Traffic Records Technical Coordinating Committee
T-SAFE	Traffic-Safety Awareness For Employers
UMCP	University of Maryland at College Park
US	United States
VMT	Vehicle Miles Traveled
WRAP	Washington Regional Alcohol Program
YDTF	Young Driver Task Force