

# MICHIGAN PERFORMANCE PLAN

## Fiscal Year 2018

The Michigan Office of Highway Safety Planning (OHSP), with technical assistance from the University of Michigan Transportation Research Institute (UMTRI), uses available traffic crash data to examine trends and project trend lines, using a predictive model approach. Data is based on a five-year moving average.

Underlying crash trends can be influenced by many variables, including the number of vehicle miles traveled, the number and weights of vehicles on roadways, the relative strength of state and regional economies, weather conditions, and various safety aspects involving vehicles, roadway infrastructure, and emergency medical services.

Because short-term statistical results tend to reflect longer-term norms, and following a period of steady, long-term reduction in severe crashes, fatalities, and injuries through the early 2000s, single-year fluctuations in crashes and fatalities are somewhat predictable and can be expected, even as the long-term trend continues downward.

Michigan fatalities have varied within a tight range over the 2012-2016 five-year period, ranging from 940 to 1,064. Michigan averages about 963 per year. Meanwhile, serious injuries ranged from 5,676 to 5,634 for the same period, and averaged about 5,000 per year. Fatalities for 2016 are about 10 percent higher than the overall five-year average and serious injuries are about 7 percent higher than the five-year average.

Based on these expected statistical fluctuations within an all-time low range of fatalities and injuries since 2011, it is not surprising that projections for the next few years indicate an upward short-term trend in traffic crashes and fatalities through 2019. A projected five-year trend model is the measure used by the OHSP to determine the most effective countermeasures to implement, in efforts to halt or reverse any upward trend.

Emphasizing the prevention of impaired driving crashes and consistent use of proper restraints for vehicle occupants are historically proven safety strategies. Observed daytime safety belt usage was 94.5 percent in 2016, an increase of 1.7 percent from 92.8 percent 2015.

Statistics for 2016 show that serious crashes involving alcohol and pedestrians were about the same as the most recent five-year average. Crashes involving drugs, young drivers, older drivers, bicycles, and motorcycles increased from the five-year average.

Preventing deaths and serious injuries and reducing crash severity are priority goals for the state. This means Michigan's traffic safety partners must seek the most effective countermeasures available to have a positive impact on driver behavior.

The goal of reducing fatalities and injuries on Michigan's roads drives the planning process for the state's annual Highway Safety Plan (HSP). The plan that follows is Michigan's strategy for saving lives and decreasing injuries.

The planning blueprint for FY2018 provides context for how traffic safety solutions are identified, implemented, evaluated, and improved. The HSP details Michigan's most significant traffic crash issues and problems, identifies the most effective countermeasures to address them, and reports on progress of the partners selected to implement the countermeasures.

## **PROCESS DESCRIPTION**

### **PROGRAM PURPOSE: REDUCE TRAFFIC CRASHES, FATALITIES, AND INJURIES**

Each year, the OHSP and safety partners focus on the state's primary safety goals, to reduce traffic crashes, fatalities, and injuries. Staff analysts utilize a comprehensive body of traffic crash data and research in combination with the experience and advice of traffic safety professionals from a variety of disciplines to identify root causes of traffic problems and to select the most effective countermeasures for implementation.

The focus is on actions that will save the most lives, prevent the most crashes, and prevent or reduce the most injuries. Limited resources call for strategies to be implemented where they will be most effective and monitored for results and impact. Success is measured against goals and benchmarks for fatality and injury reduction.

The OHSP staff pursues these programs with highway safety partners at the national, state, and local levels. This team-oriented approach helps ensure that Michigan's efforts are understood and coordinated among enforcement, engineering, education, and emergency medical services teams to ensure more comprehensive and interdependent traffic safety programs that save lives and reduce injuries.

#### **Pre-planning Steps**

Implementation of the current HSP occurs in conjunction with planning for the next year's HSP, beginning in November with an after action review of the HSP process. This involves identifying successes along with areas needing improvement.

Pre-planning incorporates brainstorming among staff on new and innovative strategies that could show promise along with a review of effective countermeasures. The OHSP then revises the planning process and calendar

(Exhibit 1). Effective pre-planning ensures that the OHSP's program development remains dynamic and responsive.

**Exhibit 1**

Timeline	FY2018 Highway Safety Plan Calendar	Status	Responsible Person(s)
July 1-30	FY2017 HSP After Action Review		Kilvington
Aug 1-30	Finalize grant development plan (GDP) template.		Kilvington, Sanborn
Nov 1-30	Finalize planning calendar.		Sledge, Kilvington
Jan-Feb 1	Staff shall schedule program area discussions and send Outlook appts. to Mike, Jason, Anne, Alicia, and Charlotte. Schedule time and location in Centennial or Motor Carrier meeting room.		Program Coordinators
Jan 17	Maintenance of Effort data base request due to Spencer March 17.		Simmons to work with Hamblen, Perukel, Kechkaylo, and Riley.
Feb 1- April 22	Research and prepare grant development plans. <ul style="list-style-type: none"> <li>• Conduct network meetings.</li> <li>• Review SHSP Action Plans.</li> <li>• Review other states and NHTSA programs.</li> </ul>		Program Coordinators
March	Analysis reports and data for program areas provided by UMTRI.		Riley, Kilvington
April 24- May 5	Individual program area discussions		Program Coordinators and Management Team
May 1	Draft Appendix D data request to program coordinators.		Kilvington
May 8-12	Completes review of GDPs and budgets.		Management Team
May 15-16	Meets with program coordinators on final GDPs.		Management Team
May 18	Deadline to notify program coordinators of final changes to GDPs.		Management Team
May 18	Identify grants requiring Ad Board approval. Final revision of budget spreadsheet.		Sledge
May 19	Final edits to GDPs completed.		Program Coordinators
May 26	GDPs are approved and moved to GDP approved folder.		Hamblen
May 30	Grant application development begins.		Program Coordinators
May 30	Draft Performance Plan due.		Kilvington
June 2	Draft Appendix D data due to Charlotte.		Program Coordinators
June 7	Truck Safety Fund budgets sent to grantees.		Kilvington
June 12	Draft HSP program areas and budget pages to program coordinators.		Kilvington
June 16	Reviewed work plans and budgets due to Charlotte.		Program Coordinators

June 19	Draft HSP review.		Program Coordinators and Management Team
June 20	Draft Ad Board forms due for non-state agency/programs over \$250,000		Sledge and Program Coordinators
June 21	Final draft of HSP and Performance Plan completed. All changes after this date will be HSP revisions to be made after Oct. 1.		Sledge, Kilvington
June 23	Final review of HSP.		Prince
June 26	Enter FY2018 HSP funding in GTS.		Alicia
June 30	HSP to NHTSA.		Kilvington
July 1-30	In-house grant budgets developed.		Management Team
July 7	After Action Review and Survey	Scheduled	Kilvington
August 1	OHSP in-house and MSP grants ready for OHSP Director review.		Management Team
August 1	Truck Safety Fund education and enforcement grants due for review in Magic Plus.		Kilvington and Management Team.
Aug 21-25	OHSP in-house grant reviews.		Prince
Sept 1	HSP distribution: FHWA and OHSP website.		Hengebach, Allen
Sept 2	All grants with Oct 1 start-up date ready for AO submission.		Program Coordinators and Management Team
Sept 16-20	GHSA (Mike will not be available to review grants)		N/A
Oct 1	FY2018 grant activity begins.		N/A

### Plan Organization

Development of the performance plan follows the steps of the OHSP's planning process. Crash data analysis, research, and consultation with program partners and stakeholders are continual within each step. Program and financial staff meet monthly to exchange information about HSP program activities. Grant and revision activity is monitored to ensure programs remain on track for successful completion.

The OHSP staff incorporates crash data and other information into program development and implementation whenever possible and monitors for emerging ideas and opportunities.

The planning process is identified as follows:

1. Problem Identification
2. Goal Determination and Analysis
3. Performance Measures
4. Traffic Safety Partner Input
5. Budget Development
6. Project Selection

## 1. PROBLEM IDENTIFICATION

The annual HSP planning process begins in November with comprehensive crash data analysis. The OHSP safety planning depends on a full understanding of current crash data and existing problems. The OHSP looks at many variables to determine emerging and current issues, including crash locations, time of day, driver characteristics, road conditions, environmental elements, and other mitigating factors.

The data review highlights factors that contribute to the highest percentages of fatalities and serious injuries. These key variables help determine which problem-solving goals are established. Additional factors may be considered, such as severe but non-life-threatening injuries, along with trends that could potentially increase fatalities and serious injuries, or situations for which strong countermeasures exist, may be improved most quickly using proven strategies.

Data analysis continues year-round, with intensified efforts early in the HSP and grant development plan process. The timeliness, accuracy, completeness, uniformity, integration, and accessibility of Michigan traffic crash data allows current information to be incorporated into program development and implementation. Examples of important current information include aspects such as times of the year or month that see the most alcohol-involved crashes, the correlation of driver age with fatal crash rates, areas that see the most nighttime crashes, or the demographics involved in fatal and serious injury motorcycle crashes.

The OHSP staff, working with traffic safety partners, has many tools for problem identification. Authorized safety partners and agencies can access the state crash database directly through a variety of interfaces, including websites and query tools.

For the public, the UMTRI hosts the OHSP-sponsored Michigan Traffic Crash Facts (MTCF) website at [www.michigantrafficcrashfacts.org](http://www.michigantrafficcrashfacts.org). This website features dozens of data tables addressing the most common crash data facts and comparative figures, including an archive dating back to 1992.

The website also includes fact sheets for state and county data and a query tool allowing users to build data searches, mapping tools, charts, tables and GIS capability. The MCTF site users also have access to traffic crash reporting forms (UD-10s) submitted by law enforcement officials to the Michigan State Police (MSP) Criminal Justice Information Center (CJIC) Traffic Crash Reporting Unit (TCRU).

The OHSP problem identification process is based on trend data reported from the most recent five-year period for which data is complete and available. Data analysis is conducted for the OHSP by an independent outside source to ensure that no bias is attached to the results. For FY2018 planning, the OHSP's problem identification was conducted by research statisticians from the UMTRI.

In addition, the Michigan's 2017-2018 Strategic Highway Safety Plan (SHSP) is available at [www.michigan.gov/ohsp](http://www.michigan.gov/ohsp).

The collaboration and sequencing of the HSP and the SHSP ensures uniformity among the top safety goals in Michigan, encourages a team effort in implementing safety programs, and ensures a diversity of working groups among Michigan's traffic safety stakeholders focusing on the SHSP vision of "Toward Zero Deaths on Michigan Roadways."<sup>1</sup>

This collaboration of plans, implementation, and the OHSP's continuing safety partnership with the Michigan Department of Transportation assures that the mandated goals are identical within both plans regarding fatalities, serious injuries, and the statewide fatality rate per 100 million vehicle miles traveled (100M VMT).

## 2. GOAL DETERMINATION AND ANALYSIS

The Michigan FY2018 performance plan includes goals for 2018 and beyond based on trend data analysis and five-year moving averages from 2012-2016.

Quantitative targets to reduce fatalities and serious injuries are set through crash projections based on five-year moving average crash trends using a regression predictive statistical model. The UMTRI also assisted with the development of the goals to provide objective analyses throughout the planning process for FY2018.

Goal determination for FY2018 begins with an overview of Michigan traffic crash statistics which includes the most complete five-year data available.

### Michigan Crash Data Comparison 2012-2016

	2012	2013	2014	2015	2016	Change 12-16
Total Crashes	273,891	289,061	298,699	297,203	312,172	14.0%
Fatal Crashes*	870	881	806	893	980	12.1%
People Injured	70,519	71,031	71,378	74,157	79,724	13.1%
People Killed*	940	947	901	963	1,064	13.2%
Fatality Rate (100M VMT)	1.0	1.03	.93	1.04	N/A	---
Fatal Crash Rate (100M VMT)	.9	.95	.86	.96	N/A	---
VMT (Billions)	94.3	95.1	99.1	97.8	N/A	---
Registered Vehicles (Millions)	8.10	8.17	8.21	8.8	N/A	---
Population (Millions)	9.82	9.90	9.91	9.92	N/A	---

\*FARS figures; 2016 numbers are not final FARS.

<sup>1</sup> State of Michigan Strategic Highway Safety Plan 2017-2018

Crash numbers in 2016 were up from previous years and were higher than the five-year average in most categories. Analysis is centered on any consistent causes for such changes and any potential for effective countermeasures to help reduce crashes, fatalities, and injuries in future years.

In each of the following tables, a predictive model analysis using five-year moving averages was applied to each crash category based on the identified trends.<sup>2</sup> The predicted moving average was used to calculate the predicted value for that given year. In some cases, trends are expected to increase based on the most recent five-year moving average experience. Michigan adopted a goal of a one percent decrease for each category in each subsequent year to try to stop or slow any upward trend. Future-year goals were applied from these calculations. Goals for fatalities and serious injuries are the same to remain consistent with the goals set in the Michigan SHSP. The OHSP's revised long-term goals through FY2020 follow in Exhibit 2, including annual benchmarks through 2018.

---

<sup>2</sup> University of Michigan Transportation Research Institute

Exhibit 2: OHSP 2018 Goals									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
*Fatalities	940	947	901	963	967 <sup>3</sup>	742	1,003.2	n/a	n/a
A Injuries	5,676	5,283	4,909	4,865	5,634	4,308	5,136.4	n/a	n/a
*Fatalities per 100M VMT	.99	1.00	0.93	1.03	.86 <sup>4</sup>	.85	1.02	n/a	n/a
OHSP 2018-20 Goals - based on five-year moving average									
*Injuries A, B, C	70,518	71,031	71,378	74,157	73,415	72,681	73,140	73,487	76,266
KA	6,612	6,234	5,785	5,828	5,503	5,266	5,155	4,706	4,749
KA involving alcohol	1,320	1,214	1,016	1,199	1,077	1,036	991	793	976
*KA involving drugs	410	437	378	473	468	464	508	449	544
Fatalities to unrestrained vehicle occupants	224	183	196	195	188	185	171	175	179
Daytime safety belt use--front seat occupants	93.6%	93%	93.3%	92.8%	94.5%	98%	98%	98%	98%
KA to vehicle occupants ages 0 to 8	124	84	73	86	68	59	60	49	62
KA at intersections	2,187	2,005	1,861	1,881	1,754	1,666	1,685	1,541	1,561
KA involving lane departure	2,612	2,535	2,254	2,271	2,114	1,995	2,008	1,727	1,744
KA on local roads	3,914	3,525	3,291	3,427	3,150	2,998	2,758	2,524	2,660
KA involving motorcycles	794	712	634	670	638	617	570	492	528
*KA involving pedestrians	482	529	513	560	554	549	510	494	541
KA involving bicyclists	191	194	156	175	168	165	174	136	155
KA to men	3,815	3,618	3,301	3,494	3,296	3,197	3,073	2,756	2,949
KA - drivers ages 15-20	1,382	1,186	1,036	1,095	891	774	690	540	599
KA - drivers ages 21-24	1,009	991	883	850	828	789	924	816	783
*KA - drivers ages 65+	1,135	1,094	1,104	1,017	1,007	997	1,053	1,063	976
KA - 3 to 6 pm	1,396	1,275	1,188	1,209	1,115	1,055	1,065	978	999
KA - 12 to 3 am	608	523	524	504	462	431	376	377	357
KA - noon Fri to noon Sun	2,258	2,161	1,973	2,031	1,924	1,855	1,833	1,645	1,703
KA - Jul to Sept	1,992	1,952	1,799	1,797	1,727	1,666	1,700	1,547	1,545

<sup>3</sup> The data matches the Michigan State Highway Safety Plan 2017-2018.

<sup>4</sup> The data matches the Michigan State Highway Safety Plan 2017-2018.



\*Trend analysis predictive model indicated these performance areas would increase in 2018-2020.

### Traffic Fatalities

In 2016, fatalities totaled 1,064. The most important traffic safety goal is to reduce traffic fatalities and continue downward on the path toward zero deaths. Other factors may be considered, but the critical measure of success for Michigan focuses on human life. According to Michigan researchers, the purely economic, comprehensive cost of a single traffic fatality in Michigan amounts to more than \$3.6 million. This cost alone justifies using significant resources in efforts to prevent the more than 900 fatalities that occur on average annually. This economic calculation does not take into account the personal aspects of a life lost or family and loved ones left behind.

### Fatalities and serious Injuries (KAs)

Fatal and serious injuries are the most consistent measure of severe crashes available for traffic safety planning. Fatal and serious injuries include crashes with the greatest harm and happen in sufficient numbers to perform meaningful analysis. Michigan classifies injuries according to the KABCO scale: K=fatal; A= serious; B=non-serious; C=possible; and O=none (property damage only).

Traffic Fatalities (K's) <sup>5</sup>				
Year	Actual		Year	Goal
2012	940		2017	913
2013	947		2018	1,003.2
2014	901		2019	944
2015	963		2020	1,006
2016	1,064			

Serious Injuries (A's) <sup>6</sup>				
Year	Actual		Year	Goal
2012	5,676		2017	3,978
2013	5,283		2018	5,136.4
2014	4,909		2019	3,791
2015	4,865		2020	3,747
2016	5,634			

### Vehicle Mileage Fatality Rate

The vehicle miles traveled (VMT) fatality rate adjusts the worst outcome of a crash (fatalities) by a common exposure variable (vehicle miles traveled). This measure is defined as how many people have died in vehicle-related crashes compared to the total number of miles driven on Michigan roads.

<sup>5</sup> The data matches the Michigan State Highway Safety Plans for 2017-2018.

<sup>6</sup> This data is from the state database.

The VMT fatality rate has been used nationally for many years and provides a reliable means of tracking or comparing safety progress over a long period. If fatalities decrease while miles driven increase, the state is getting safer faster than the simple fatality count suggests. If both decrease, then some of the improvement is just a factor of people driving less. If miles driven decrease while fatalities increase, then a closer examination of the data is warranted for possible problem identification.

VMT Fatality Rate <sup>7</sup>				
Year	Actual		Year	Goal
2012	.99		2017	.85
2013	1.00		2018	1.02
2014	.93		2019	.83
2015	1.03		2020	.82
2016	*Pending			

### Traffic Injuries

While Michigan strives to eliminate traffic fatalities, efforts seek to decrease the severity of crash-related injuries. Crash avoidance seeks to reduce fatalities and injuries. Crash mitigation aims to decrease the severity of crashes in relation to fatality and injury reduction.

Traffic Injuries (A's,B's,C's)				
Year	Actual		Year	Goal
2012	70,518		2017	68,838
2013	71,031		2018	73,140
2014	71,378		2019	73,487
2015	74,157		2020	76,266
2016	79,724			

### Alcohol-Impaired and Drug-Impaired Driving

Crashes involving impaired-driving (alcohol and/or drugs) are disproportionately more severe than other crashes, constituting more than 28 percent of fatal crashes from 2012 to 2016. Despite decades of education and enforcement efforts, impaired driving remains a devastating traffic safety and public health problem.

Impaired driving is usually thought of as a drunk-driving problem. Since drug-use testing began in 2008, analysts have seen increased levels of blood samples from

<sup>7</sup> This number is the number of fatalities (people) per 100 million vehicle miles traveled. This data is from the FARS database.

\*Pending FARS data release for 2016.

drivers suspected to be under the influence of drugs. Results prior to 2008 may not provide a consistent basis for comparison. Recorded incidences of drug-involved crashes are more likely to increase due to updated training for law enforcement officers, including Advanced Roadside Impaired Driving Enforcement and Drug Recognition Expert programs.

KAs involving alcohol <sup>8</sup>				
Year	Actual		Year	Goal
2012	1,320		2017	989
2013	1,214		2018	991
2014	1,016		2019	793
2015	1,199		2020	976
2016	1,189			

KAs involving drugs <sup>9</sup>				
Year	Actual		Year	Goal
2012	410		2017	391
2013	437		2018	508
2014	378		2019	449
2015	473		2020	544
2016	660			

### Seat Belt Use

Seat belts are the most effective means available to reduce injury severity and prevent deaths in a traffic crash. Increasing motorists' use of seat belts in every seat location substantially improves crash survivability and reduces societal costs of crash-involved injuries.

In compliance with federal guidelines, Michigan annually observes and records seat belt usage among daytime front-seat occupants in areas representing at least 85 percent of the state's population.

Michigan recorded the highest seat belt use rate in the nation in 2009 at 97.9 percent. The OHSP set a benchmark goal of 98 percent. Current usage has dropped from this high level, but the current rate (94.5 percent) still qualifies Michigan as a high usage state nationally.

<sup>8</sup> Alcohol or drug impaired involved crashes are coded from the UD-10 Michigan Crash Report as crashes where at least one person involved has been drinking or taking drugs; the person drinking or taking drugs could have been a driver, a passenger, a pedestrian, or a bicyclist.

<sup>9</sup> Alcohol or drug impaired involved crashes are coded from the UD-10 Michigan Crash Report as crashes where at least one person involved has been drinking or taking drugs; the person drinking or taking drugs could have been a driver, a passenger, a pedestrian, or a bicyclist.

Fatalities to unrestrained vehicle occupants <sup>10</sup>				
Year	Actual		Year	Goal
2012	224		2017	194
2013	183		2018	171
2014	196		2019	175
2015	195		2020	179
2016	202			

Seat belt use <sup>11</sup>				
Year	Actual		Year	Goal
2012	93.6%		2017	98.0%
2013	93.0%		2018	98.0%
2014	93.3%		2019	98.0%
2015	92.8%		2020	98.0%
2016	94.5%			

### Child Passenger Safety

Seat belts are designed for adults. Children (under 8 years old or shorter than 4'9" tall) require a booster seat for the seat belt to fit and operate properly. Children under 4 years old need a certified child restraint (child safety seat).

Some parents are not sure what seat to use, how to install it properly, or why it is necessary. Police officers may not have extensive training in child safety seat usage, making it sometimes difficult to detect violations of child safety seat laws. As a result, children are often under-protected in a crash. This problem shows up more in crash-injury than crash-fatality data.

Proper child restraint use helps prevent serious internal injuries to children in a crash, particularly to the neck, spine, and internal organs.

KA injuries, passenger vehicle occupants ages 0-8 <sup>12</sup>				
Year	Actual		Year	Goal
2012	124		2017	82
2013	84		2018	60
2014	73		2019	49
2015	86		2020	62

<sup>10</sup> Unrestrained fatalities are coded from the UD-10 Michigan Crash Report as crashes including all occupant fatalities in all motor vehicles and excludes pedestrians and bicyclists. Unknowns or unavailable are not included.

<sup>11</sup> Daytime front seat observed occupants of motor vehicles as reported in the Michigan Direct Observation Safety Belt Survey.

<sup>12</sup> Includes passenger vehicles, vans, pick-up trucks and small trucks less than 10,000 pounds.

2016	112
------	-----

### Intersection Crashes

Many crashes, especially those involving left turns, occur when vehicles meet at intersections. The severity of intersection crashes is worsened by the risk of angle (T-bone) collisions during turns. About one-third of all crashes happen in or near intersections. Of this one-third in 2016, nearly half occurred at signalized intersections, about one-fourth at sign-controlled intersections, and the rest occurred at intersections with no traffic control.

Intersection crash problems can be related to roadway engineering, driver behavior, or exposure. Any program to improve safety, especially in urban areas, must address the incidence of intersection crashes.

Year	Actual	Year	Goal
2012	2,187	2017	1,483
2013	2,005	2018	1,685
2014	1,861	2019	1,541
2015	1,881	2020	1,561
2016	2,608		

### Lane Departure

Most fatal crashes happen when a car leaves its roadway lane. The driver might steer into a ditch, miss a turn, cross the centerline, or put the car into the path of another vehicle or roadside object. Lane departure includes roadway departure, but also includes incidents such as sideswipes and highly dangerous head-on crashes. Lane departure often is connected to alcohol and/or drug impaired, drowsy, and distracted driving. Any impairment makes someone more likely to drift or miss a turn. Focused and attentive driving are keys to avoiding a vehicle crash.

Year	Actual	Year	Goal
2012	2,612	2017	1,931
2013	2,535	2018	2,008
2014	2,254	2019	1,727
2015	2,271	2020	1,744
2016	2,417		

<sup>13</sup> Intersections are coded on the UD-10 Michigan Traffic Crash Report as within an intersection, intersection driveway related or within 150 feet of nearest edge of an intersection or intersection related-other.

<sup>14</sup> Lane departure crashes are coded from the UD-10 Michigan Crash Report as crashes involving a single, multiple, or parked motor vehicle that leaves its lane.

### City-County Roads

Most vehicle miles are driven on state roads, but the majority of serious crashes happen on local roads. Efforts directed to prevent or mitigate crashes directly affect safety on local as well as state roads. City, county, and other local roads include the majority of intersections and pavement miles statewide and can present unique challenges for traffic safety. Countermeasures targeting high-crash locations are almost certain to take place on local roads.

KAs on local roads <sup>15</sup>				
Year	Actual		Year	Goal
2012	3,914		2017	2,714
2013	3,525		2018	2,758
2014	3,291		2019	2,524
2015	3,427		2020	2,660
2016	3,872			

### Motorcycles

Fatalities and injuries involved with motorcycle crashes tend to fluctuate, sometimes based on factors like unseasonably nice weather, and are difficult to predict or mitigate. Motorcycle fatalities often involve just the single vehicle for many reasons. Motorcycle ridership is increasing at a steady rate in Michigan and nationally. Young motorcyclists are not seeking proper training and licensure. Many older riders have less experience and control when using today's more powerful motorcycles.

The largest increase in motorcycle use is among older riders, which also can negatively affect crash survivability. Older bodies are more likely to suffer injury and have diminished ability to recover.

KAs involving motorcycles <sup>16</sup>				
Year	Actual		Year	Goal
2012	794		2017	496
2013	712		2018	570
2014	634		2019	492
2015	670		2020	528
2016	811			

<sup>15</sup> Local road crashes are coded from the UD-10 Michigan Crash Report as crashes including all crashes on county roads, city streets, or unknown.

<sup>16</sup> Motorcycle involved crashes are coded from the UD-10 Michigan Crash Report as crashes where at least one motorcycle was present. Other users could have been another motorcyclist, passenger vehicle, truck, van, pedestrian, or a bicyclist.

## Pedestrians

Pedestrians represent nearly one in every seven traffic fatalities (15.5 percent on average) each year, and pedestrian fatalities present a unique challenge to safety planners. Behavioral interventions for improving pedestrian safety can help drivers avoid pedestrians, while others strive to keep pedestrians out of harm's way. Due to relatively high exposure and lack of experience, those most likely to be hit are younger pedestrians during daytime hours.

Due to increased body frailty of seniors, along with alcohol and/or drug use by drivers (or pedestrians) during the evening hours, older pedestrians are more likely to be hit and killed at night.

KAs to pedestrians <sup>17</sup>				
Year	Actual		Year	Goal
2012	482		2017	456
2013	529		2018	510
2014	513		2019	494
2015	560		2020	541
2016	528			

## Bicyclists

Bicyclists represent about three percent of traffic fatalities and incapacitating injuries each year. Bicycle riders are exposed to the elements and vehicles on the roadways with no physical protection other than riding gear such as helmets or body pads.

Successful countermeasures include instruction about use of high-visibility clothing and equipment, adherence to bicycle laws, and proper use of bicycle lanes. Education for motorists and law enforcement officers about bicyclist safety are proven countermeasures to help prevent crashes.

KAs to bicyclists <sup>18</sup>				
Year	Actual		Year	Goal
2012	191		2017	149
2013	194		2018	174
2014	156		2019	136
2015	175		2020	155
2016	196			

<sup>17</sup> Pedestrians are coded from the UD-10 Michigan Crash Report as crashes where at least one pedestrian was present. The pedestrian could also be a driver who exited a vehicle, motorcycle, bicycle, etc., a person on horseback or in a horse drawn buggy or a person who was in a wheelchair.

<sup>18</sup> Bicyclists are coded from the UD-10 Michigan Crash Report as crashes where at least one bicyclist was present.

## Men

Most of the risky behaviors that result in a fatal or serious injury are more common in men. Men tend to buckle up less, drink and drive more, drive faster, and drive motorcycles more frequently. These behaviors are even more prevalent in young men. Federal surveys of travel trips estimate that men do about 61 percent of the nation's driving, so it is expected that male drivers are involved in more crashes.

Men are consistently two-thirds or more of all traffic fatalities. Fatal and serious injuries are significantly higher among men.

KAs to men <sup>19</sup>				
Year	Actual		Year	Goal
2012	3,815		2017	2,807
2013	3,618		2018	3,073
2014	3,301		2019	2,756
2015	3,494		2020	2,949
2016	4,001			

## Young Drivers<sup>20</sup>

Younger drivers crash more often due to inexperience and a tendency for greater risk taking, especially among young male drivers.

Crash survivability is higher among young drivers because young bodies are less vulnerable to damage than older passengers. Typically, the lack of experience among younger drivers, including poor judgment and driver errors of greater severity or at higher speeds, can offset survivability.

Of those killed in crashes involving young drivers, about one in three are the drivers, one-third are passengers with a young driver, and one-third are other drivers, passengers, and pedestrians. Drivers under 18 may participate in Graduated Driver Licensing, which allows gradual exposure to greater driving demands under structure and supervision.

Crash involvement per driver peaks at age 18, with no supervision, more exposure, and incomplete driving skills. Persons under 21 may not legally drink, which limits impaired crashes involving underage drivers. Alcohol-involved crashes tend to peak at 21, the age of legal access to alcohol. As a sense of responsibility and driving experience increase, and brain development becomes complete by the mid-20s, crash involvement drops significantly. By age 25, the most dangerous years are past, and after 35 the risk of crash injury tends to follow the average.

<sup>19</sup> Men are coded from the UD-10 Michigan Crash Report as any male killed or incapacitated in a crash. He could be a driver, passenger, pedestrian, or bicyclist.

<sup>20</sup> Young drivers ages 15-20 and 21-24 are coded from the UD-10 Michigan Crash Report as any crash involving at least one driver age 15-20 or 21-24. The driver of the other car may also fall in the any age categories.



KAs involving drivers ages 15 to 20				
Year	Actual		Year	Goal
2012	1,382		2017	768
2013	1,186		2018	690
2014	1,036		2019	540
2015	1,095		2020	599
2016	1,217			

KAs involving drivers ages 21 to 24				
Year	Actual		Year	Goal
2012	1,009		2017	884
2013	991		2018	924
2014	883		2019	816
2015	850		2020	783
2016	1,048			

### Senior Drivers<sup>21</sup>

Michigan ranks eighth in the nation for the number of drivers age 65 or older per 1.1 million licensed drivers. For each mile traveled, fatal crash rates increase noticeably starting at age 70 and are highest among drivers 85 and older. Senior drivers typically have slower reaction times among other age-related challenges as they continue to drive in their later years.

KAs involving drivers age 65 and older				
Year	Actual		Year	Goal
2012	1,135		2017	973
2013	1,094		2018	1,053
2014	1,104		2019	1,063
2015	1,017		2020	976
2016	1,240			

### Afternoon Rush Hour

High exposure leads to high crash numbers. At the end of the work and school day, more cars are on the road, drivers are more tired or perhaps in a hurry, and more crashes and fatalities tend to occur. Late afternoon is not disproportionately negative, but it is the time when most traffic fatalities occur in Michigan.

<sup>21</sup>Drivers 65 and older are coded from the UD-10 Michigan Crash Report as any male killed or incapacitated in a crash. He could be a driver, passenger, pedestrian, or bicyclist.

The morning rush hour does not peak as much, perhaps because drivers are fresher. Late-day drivers are more likely to be tired or preoccupied. This effect worsens during the week as fatigue builds, tempers flare, and attention spans drift. Friday is the worst day for late afternoon crashes and fatalities. Dinner and “happy hour” times are the peak times of alcohol-involvement for drivers over 21. Seat belt usage also tends to be lower in the evening than in the morning.

KAs from 3 p.m. to 6 p.m.				
Year	Actual		Year	Goal
2012	1,396		2017	1,065
2013	1,275		2018	1,065
2014	1,188		2019	978
2015	1,209		2020	999
2016	1,394			

### Nighttime Driving

Late-night traffic is lighter but crashes tend to be disproportionately more severe and more likely to involve alcohol. The period from midnight to 3 a.m. includes bar closing time and is the peak time for alcohol impaired driving. Late night also is when seat belt usage is usually the lowest. Alcohol exacerbates drowsiness, making late-night drivers even less alert and competent.

Alcohol involvement in crashes starts rising around 9 p.m., but does not spike until midnight. Alcohol-involved crashes peak between 2 to 3 a.m., when bars close. After 4 a.m., severe crashes diminish.

KAs from midnight to 3 a.m.				
Year	Actual		Year	Goal
2012	608		2017	382
2013	523		2018	376
2014	524		2019	377
2015	504		2020	357
2016	620			

### Weekend Driving

Serious crashes spike almost every weekend. Increased alcohol and/or drug use, nighttime driving, visiting unfamiliar areas, traffic congestion around popular venues, and decreased attention all contribute to a higher rate of serious crashes on Friday and Saturday evenings.

Noon Friday to noon Sunday represents a peak crash time, which includes both Friday after-work and Saturday night traffic. The Saturday night crash peak actually takes place early Sunday morning (after midnight), while the weekend peak begins early Friday afternoon as people leave work or school.

KAs from noon Friday to noon Sunday				
Year	Actual		Year	Goal
2012	2,258		2017	1,680
2013	2,161		2018	1,833
2014	1,973		2019	1,645
2015	2,031		2020	1,703
2016	2,326			

### Summer Travel

Summer months see more miles traveled on Michigan roadways as people travel to tourist destinations. From 2012 to 2016, September emerged as Michigan's worst month for fatalities. October had the highest number of alcohol-involved fatalities. Serious crashes are most common from June to November.

KAs from July to September				
Year	Actual		Year	Goal
2012	1,992		2017	1,559
2013	1,952		2018	1,700
2014	1,799		2019	1,547
2015	1,797		2020	1,545
2016	2,111			

## 3. PERFORMANCE MEASURES

The OHSP tracks numerous metrics to analyze results, set program goals, and monitor progress on identified crash problems. Crash data are key elements in performance review, as discussed in Section 2. Each project implemented and tracked has established goals and metrics applied by program staff in partnership with grantees and safety experts. Monitoring and evaluation is an ongoing process that leads to results assessment and improved future plans.

Publications available for improved performance measurement include the Annual Evaluation Report and Michigan Traffic Crash Facts.

The NHTSA and the Governors Highway Safety Association (GHSA) have agreed on a minimum set of performance measures to be used by state and federal agencies in the development and implementation of behavioral highway safety plans and programs. Those measures are detailed in Exhibits 3 and 4.

Fatality numbers are from the Fatal Analysis Reporting System (FARS); the rest come from state databases and surveys. Goals are copied from Section 2 or set by the same procedure, from the normalized trend values to reduce the effects of annual variation. That is, if last year was unusually good for a program area, next year's goal should realistically assume some regression to the five-year moving average.

FARS data for 2016 was not available before the FY2018 Performance Plan was finalized. The relevant boxes have been noted as “Pending” for later completion.

**Exhibit 3: Traffic Safety Performance Measures for States and Federal Agencies Crash Data and Goals** <sup>22</sup>

	Actual						2017	Goal		
	2012	2013	2014	2015	2016	5-year average		2018	2019	2020
Traffic fatalities	940	947	901	963	1,064	<b>963</b>		1,003.2	n/a	n/a
Serious ("A") Injuries in traffic crashes <sup>23</sup>	5,676	5,283	4,909	4,865	5,634	<b>5,273</b>		5,136.4	n/a	n/a
Fatalities per 100 million VMT	.99	1.0	.93	.98	Pending	Pending		1.02	n/a	n/a
	Actual						2017	Goal		
	2012	2013	2014	2015	2016	5-year average		2018	2019	2020
<b>Rural fatalities per 100 million VMT</b>	1.41	1.53	1.33	1.98	Pending	Pending	Pending	Pending	Pending	Pending
<b>Urban fatalities per 100million VMT</b>	.79	.77	.76	.56	Pending	Pending	Pending	Pending	Pending	Pending
Unrestrained passenger vehicle occupant fatalities, all seat positions	224	183	196	190	Pending	Pending	185	181	178	Pending
Fatalities in crashes involving a driver or motorcycle operator with a BAC .08+	261	249	215	267	Pending	Pending	185	171	158	Pending
Speed-related fatalities	251	255	235	264	Pending	Pending	230	228	226	Pending
Motorcyclist fatalities	138	138	112	141	Pending	Pending	110	109	108	Pending
Unhelmeted motorcyclist fatalities	64	67	52	57	Pending	Pending	50	49	48	Pending
Drivers age 20 or younger in fatal crashes	137	130	119	153	Pending	Pending	87	76	66	Pending
Pedestrian fatalities	130	148	148	166	Pending	Pending	145	144	142	Pending
Bicycle Fatalities	19	27	22	33	Pending	Pending	20	19	18	Pending
Safety belt use (daytime, observed) <sup>24</sup>	93.6%	93.0%	93.3%	92.8%	94.5%	<b>93.4%</b>	98.0%	98.0%	98.0%	98.0%
Safety belt citations issued during grant-funded enforcement activities (FY) <sup>25</sup>	17,701	15,772	16,496	18,843	14,019	<b>16,566</b>	No Goals	No Goals	No Goals	No Goals
Impaired driving arrests made during grant-funded enforcement activities (FY) <sup>26</sup>	1,926	2,196	1,196	2,109	1,269	<b>1,739</b>	No Goals	No Goals	No Goals	No Goals
Speeding citations issued during grant-funded enforcement activities (FY) <sup>27</sup>	4,451	4,175	5,061	8,317	6,926	<b>5,786</b>	No Goals	No Goals	No Goals	No Goals

\*Predictions based on a trend analysis predictive model indicated these performance areas would increase in 2017-2020.

<sup>22</sup> FARS Data Used Unless Otherwise Indicated

<sup>23</sup> State Data Used

<sup>24</sup> State Direct Observational Seat Belt Study by Michigan State University

<sup>25</sup> State Data Used

<sup>26</sup> State Data Used

<sup>27</sup> State Data Used

**Exhibit 4: Traffic Safety Performance Measures for States and Federal Agencies  
GHS/NHTSA Recommended Standardized Goal Statements  
Michigan Highway Safety Planning Goals 2015-2018**

Performance Measure Identifier	Goal Statement
C-1	To prevent traffic fatalities from increasing from 963 in 2015 to 1,003.2 by December 31, 2018.
C-2	To prevent serious ("A") traffic injuries from increasing from 4,865 in 2015 to 5,136.4 by December 31, 2018.
C-3	To prevent fatalities/VMT from increasing from .98 percent in 2015 to 1.02 percent by December 31, 2018.
The goals below were established using a trend-line analysis and five-year moving averages based on 2012-2016 data.	
C-4	To decrease unrestrained passenger vehicle occupant fatalities in all seating positions 5 percent from the 2015 value of 190 to 181 by December 31, 2018.
C-5	To decrease alcohol impaired driving fatalities in which a driver has at least a .08 BAC 40 percent from the 2015 value of 267 to 171 by December 31, 2018.
C-6	To reduce speeding-related fatalities 14 percent from the 2015 value of 264 to 228 by December 31, 2018.
C-7	To reduce motorcyclist fatalities 2 percent at the 2015 value of 141 to 109 by December 31, 2018.
C-8	To reduce un-helmeted motorcyclist fatalities 14 percent at the 2015 value of 57 to 49 by December 31, 2018.
C-9	To reduce drivers age 20 or younger involved in fatal crashes 50 percent at the 2015 value of 153 to 76 by December 31, 2018.
C-10	To reduce pedestrian fatalities 13 percent from the 2015 value of 166 to 144 by December 31, 2018.
C-11	To reduce bicyclist fatalities 42 percent from the 2015 value of 33 to 19 by December 31, 2018.
B-1	To increase statewide observed seat belt use of front seat outboard occupants in passenger vehicles to 98 percent through December 31, 2018.

#### 4. TRAFFIC SAFETY PARTNER INPUT

Input from traffic safety partners is critical to the development of the HSP and for selecting projects. The OHSP solicits feedback on programs effectiveness, new directions to pursue, and promising new programs.

Meetings, conferences, progress reports from grantees, and discussions in person, by telephone, and by email provide valuable information that works its way into the OHSP programs.

The OHSP staff involved the following individuals, groups, government agencies, and reports in the planning process:

2016 Motorcycle Safety Program Assessment  
AAA Foundation for Traffic Safety  
ABATE Michigan  
American Motorcyclist Association  
Ann Arbor Police Department  
Association of National Stakeholders in Traffic Safety Education  
Beaumont Hospital  
Centers for Disease Control  
Child Passenger Safety instructors  
Child Passenger Safety partners  
City of Ann Arbor  
City of Detroit  
City of Grand Rapids  
City of Royal Oak  
Colorado Highway Safety Office 2016 ThinkFast Evaluation Report  
Connecticut Highway Safety Office  
Corktown Economic Development  
Countermeasures That Work  
Criminal Justice Information Center  
Detroit Greenways Coalition  
Detroit Public Bike Share  
Detroit Riverfront Conservancy  
Downtown Detroit Partnership  
DTSgis  
ESRI  
Evidence from Safety Research to Update Cycling Training Materials in Canada by Weddell, Winter, and Teschke  
Federal Highway Administration  
Ford Driving Skills for Life  
Glengariff Group  
Governors Highway Safety Association  
Governor's Traffic Safety Advisory Commission Drivers Age 24 and Younger Action Team  
Governor's Traffic Safety Advisory Commission Pedestrian and Bicyclist Safety Action Team

Grand Rapids Police Department  
Grand Valley State University  
Grant Project Directors  
Helen DeVos Children's Hospital  
Insurance Institute for Highway Safety 2016 Traffic Safety Facts  
International Association of Chiefs of Police  
Juvenile probation officers  
Kent County  
Law Enforcement Grant Project Directors  
Law Enforcement Roundtable Participants  
League of Michigan Bicyclists  
Lexis Nexis  
Local School Districts  
Magistrates' Association  
Michigan Association of Chiefs of Police  
Michigan Association of District Court Magistrates  
Michigan Association of District Court Probation Officers  
Michigan Department of Community Health  
Michigan Department of Health and Human Services  
Michigan Department of State  
Michigan Department of Technology, Management, and Budget  
Michigan Department of Transportation  
Michigan Drunk Driving Audit  
Michigan Judicial Institute  
Michigan Licensed Beverage Association  
Michigan Sheriffs' Association  
Michigan state Police  
Michigan State Police Criminal Justice Information Center (CJC)  
Michigan State Police Precision Driving Track  
Michigan State Police's Narcotic Intel Analysts  
Michigan State University  
Michigan Tech University (Roadsoft)  
Michigan Traffic Crash Facts  
Midtown Detroit Inc  
Mothers Against Drunk Driving Michigan  
Motorcycle Safety Action Team and Partners  
Motorcycle Safety Foundation  
Muskegon County Sheriff's Department  
National Association of State Motorcycle Safety Administrators  
National Cooperative Highway Research Program Report: a Guide for Reducing Collisions involving Young Drivers  
National Highway Traffic Safety Administration  
National Highway Traffic Safety Administration's "Community How To Guides On Underage Drinking Prevention"  
National Research Council's "Reducing Underage Drinking"  
Norton Shores Police Department



Office of Highway Safety Planning  
Office of Highway Safety Planning underage drinking enforcement grantees  
Office of Juvenile Justice and Delinquency Prevention's "Guide to Enforcing Impaired Driving Laws for Youth"  
Office of Juvenile Justice and Delinquency Prevention's "Strategies to Reduce Underage Alcohol Use"  
OHSP overtime enforcement grant project directors  
OHSP underage drinking enforcement project directors  
Pedestrian and Bicycle Information Center  
Police Chief Magazine  
Probation Officers  
Prosecuting Attorneys Association of Michigan  
Rhode Island Highway Safety Office 2015 ThinkFast Evaluation Report  
Royal Oak Optimist Club  
Royal Oak Police Department  
Royal Oak School District  
Safe Kids West Michigan  
Safe Routes to School  
Save A Life Tour, Inc.  
Skilled Motorcyclist Association Responsible, Trained, and Educated Riders  
Southeast Michigan Council of Governments  
State Court Administrators Office  
State of Michigan Strategic Highway Safety Plan  
ThinkFast Interactive  
Traffic Injury Research Foundation  
Transportation Improvement Association  
Transportation Research Center for Livable Communities  
U.P. Criminal Justice Administrators  
U.S. Military  
University of Michigan Transportation Research Institute  
Upper Peninsula Law Enforcement Administrators  
Washtenaw Biking and Walking Coalition  
Wayne State University  
Western Michigan University

### **Governor's Traffic Safety Advisory Commission**

Michigan is the only state to have a state-level traffic safety commission in place since the early 1940s. In 2002, the State Safety Commission and the Safety Management System were merged to create the Governor's Traffic Safety Advisory Commission (GTSAC).

The membership of the commission was expanded to include representatives from local units of government. The GTSAC consists of:

- the Michigan Governor (or a designee);

- State directors (or designees) of the Departments of Health and Human Services, Education, State, State Police, and Transportation, the Office of Highway Safety Planning, the Office of Services to the Aging; and
- three local representatives from the county, city, and township levels.

The GTSAC meets quarterly. Traffic safety advocates within the state can help develop the agenda, available through OHSP's website [www.michigan.gov/ohsp-gtsac](http://www.michigan.gov/ohsp-gtsac).

Communication among the GTSAC members and traffic safety advocates throughout Michigan can be accomplished through the website along with an electronic state information delivery system that has more than 200 members. Website members receive news from the GTSAC along with general traffic safety news and information.

### **Strategic Highway Safety Plan**

In December 2016, the GTSAC approved a statewide SHSP, which was signed by the Governor in January 2017. The SHSP identifies priority areas for the GTSAC member agencies to address traffic safety efforts in the state. Each priority area includes an action team created to facilitate communication, coordinate individual agency efforts, and keep moving toward achieving the SHSP goals and objectives.

The OHSP staff participates in these action teams and incorporates information and recommendations from the SHSP into the annual Michigan HSP. Action plans are updated frequently to reflect emerging issues or completed action items. The next SHSP update will occur in 2018 for 2019-2022.

### **Program Area Network Meetings**

In addition to the GTSAC Action Teams, the OHSP program staff members serve as subject matter experts for specific traffic safety program areas. These staff members work with a network of partners across the state and nation to help generate ideas, highlight problems, and work together to identify appropriate strategies to resolve them. This network of partners gives the OHSP program staff the ability to determine how and where to leverage available resources, and to determine whether model programs are working as planned and why, along with a ready list of partners having needed skills, knowledge or unique expertise throughout Michigan.

### **Traffic Safety Summit**

The Michigan Traffic Safety Summit is an annual three-day conference for traffic safety practitioners to discuss traffic safety issues. The summit is the state's central event for traffic safety information sharing. It allows the OHSP and other partners to share promising ideas, solicit input and feedback from partners, and highlight best practice programs from local, state, and national levels.

## **Additional Planning Resources**

The OHSP consults a wide variety of resources for problem identification, priority setting, program selection, and grant awards. These ensure that Michigan is utilizing best practices and using the most effective means of reducing deaths and injuries.

These resources include:

- The Michigan Department of State Police Strategic Plan and other state and local plans.
- National plans, priorities, and programs, including those from the United States Department of Transportation (USDOT), Federal Highway Administration (FHWA), and the NHTSA.
- The NHTSA publication “Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices.”
- NCHRP Report 622, “Effectiveness of Behavioral Highway Safety Countermeasures.”
- The NHTSA publication “Traffic Safety Performance Measures for States and Federal Agencies.” (DOT 811 025)
- The GHSA publication “Guidelines for Developing Highway Safety Performance Plans.”
- The NHTSA publication “The Art of Appropriate Evaluation: A Guide for Highway Safety Program Managers.” (DOT HS 811 061)
- The UMTRI publication “Evaluating Traffic Safety Programs: A Manual for Assessing Program Effectiveness.”
- The NHTSA publication “HSP Review Content Guide” updated in 2016.
- Public Awareness Survey Recommendations of the NHTSA-GHSA Working Group Number 397, October 2010.
- American Association of State Highway and Transportation Officials, the Transportation Research Board and the Association of Transportation Safety Information Professionals publications and conferences.
- Michigan Strategic Highway Safety Plan 2017-2018.
- Academic publications and research reports.

- Staff participation on committees and associations, including: the GTSAC Action Teams, the Michigan Association of Chiefs of Police, Prevention Network, the Michigan Coalition to Reduce Underage Drinking, the Michigan Deer Crash Coalition, regional Traffic Safety Networks, the Michigan Sheriff's Association, the Michigan Driver and Traffic Safety Education Association, and other state-level and federal associations.
- Feedback from grantees during the implementation, monitoring, and evaluation of traffic safety projects.
- Input provided by the general public.
- The OHSP staff attendance at state, regional, and national conferences and seminars to network and learn about developing tools, trends, countermeasures, and programs.

## 5. BUDGET DEVELOPMENT

The budgeting process takes into account prior year funding awards and carry-forward amounts for each funding source along with new funding sources. This budget serves as the basis for allocating funding requests among traffic safety programs.

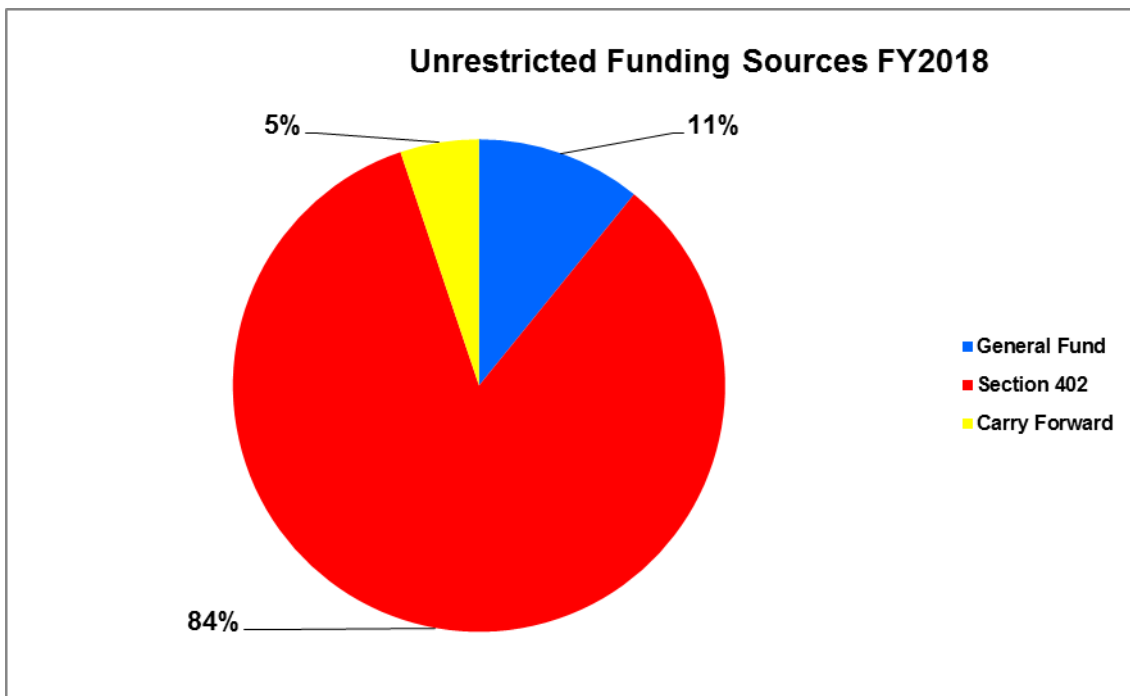
Before approving budgets for individual program areas, the HSP management team considers the merits of individual program funding requests along with:

- Program funding levels and liquidation rates from previous years.
- Related program funding.
- Special funding sources.
- Statewide long-range goals.

Strategies are reviewed to determine which should be fully funded, which can proceed with amendments, and which are not currently feasible. This process can shift the initial budget requests among program areas to accommodate essential or promising projects that warrant special support. Exhibits 3, 4, and 5 illustrate the projected sources of funding, program level budgets, and the distribution of funding by type.

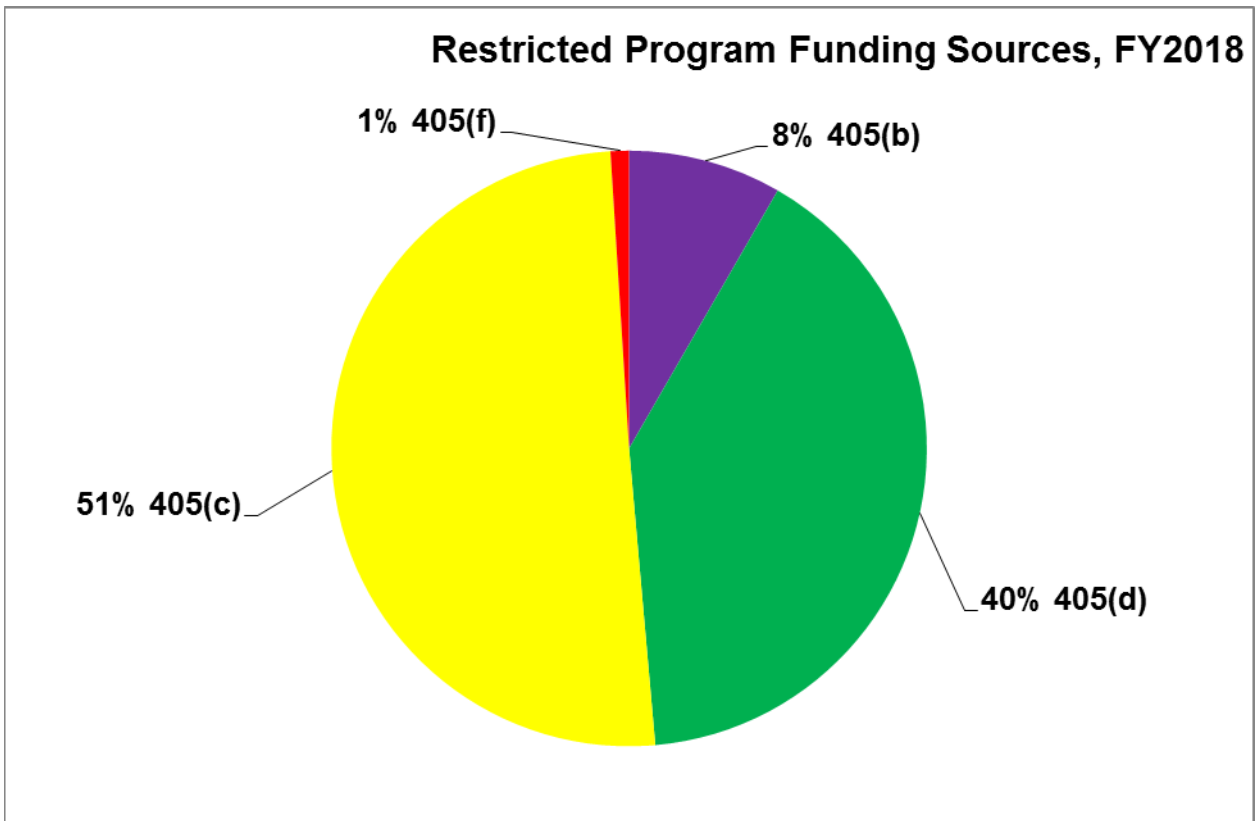
**EXHIBIT 5: Unrestricted Program Funding Sources FY2018**

<b>State General Fund</b>	<b>Section 402</b>	<b>Section 402 Carry Forward</b>
\$612,000	\$4,739,131	\$292,000



**EXHIBIT 6: Restricted Program Funding Sources FY2018**

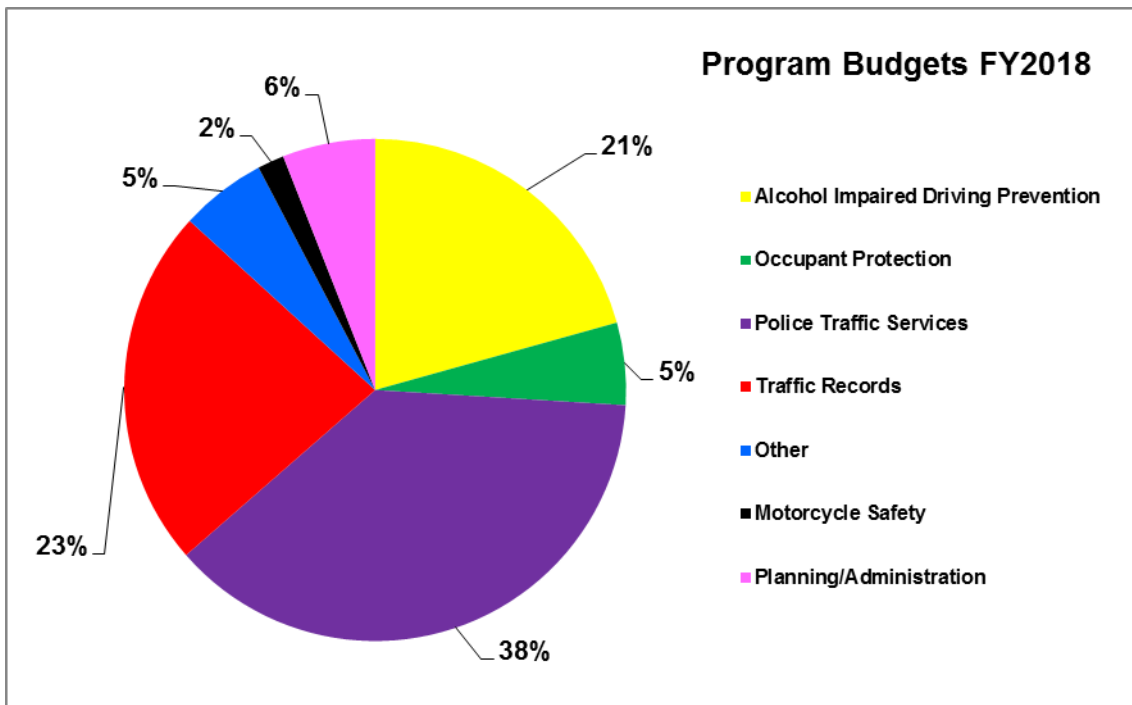
<b>405(b) Occupant Protection</b>	<b>405(c) Traffic Records</b>	<b>405(d) Impaired Driving Prevention</b>	<b>405(f) Motorcycle Safety</b>	<b>425(h) Nonmotorized Safety</b>
\$1,164,000	\$5,629,000	\$7,046,000	\$140,000	\$922,000



**EXHIBIT 7: Program Budgets FY2018**

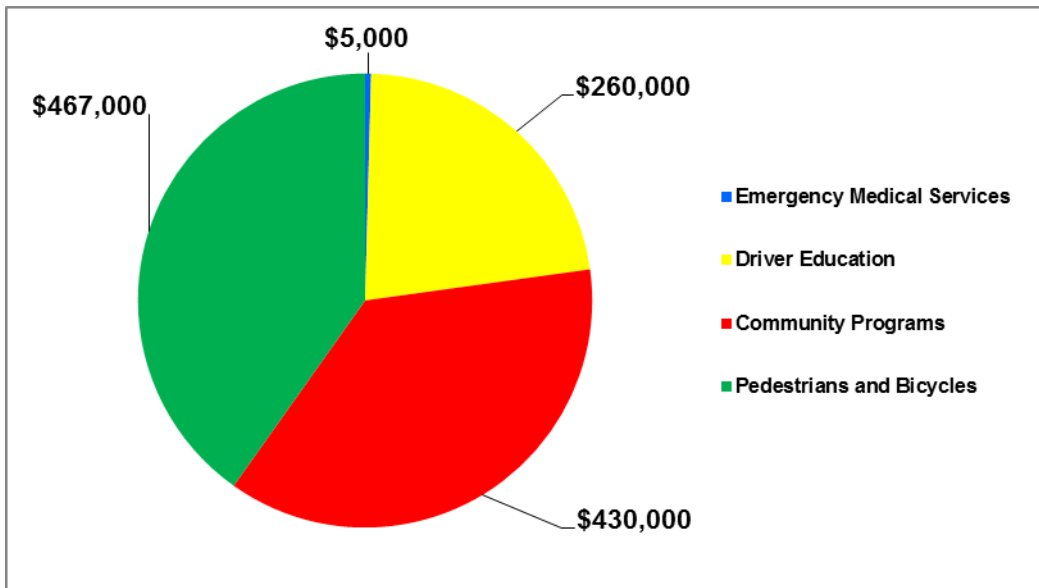
Impaired Driving Prevention	Occupant Protection	Police Traffic Services	Planning and Administration
\$4,334,000	\$1,109,000	\$7,885,000	\$1,252,140

Traffic Records	Motorcycle Safety	*Other Programs
\$4,860,000	\$360,000	\$1,162,000



**EXHIBIT 8: \*Other Program Budgets FY2018**

<b>Pedestrians and Bicycles</b>	<b>Community Programs</b>	<b>Driver Education</b>	<b>Emergency Medical Services</b>
\$467,000	\$430,000	\$260,000	\$5,000





\*Note: Due to rounding, the percentages do not equal 100 percent.

## 6. PROJECT SELECTION

Projects are selected based on the potential for impacting traffic safety problems and moving Michigan toward achieving statewide traffic safety goals.

Problem identification yields projects to pursue, which leads to budget development and grant solicitation. The problems to address, including target areas and countermeasures, are selected in advance. This process includes potential grantees, but is not dependent on volunteers or proposals from the field.

For research-based projects, the OHSP sends out requests for proposals which are distributed to an approved list of university and not-for-profit research agencies. Until selected, the grantee is denoted in the HSP as “To Be Determined” or TBD. Once a grantee is selected, the HSP is revised to reflect the name of the agency awarded the project. The OHSP actively seeks out grantees with particular expertise in problem areas under consideration.

When recommending programs, the OHSP program staff considers:

- Population to be reached
- Extent of problem in the target population
- Supporting data
- Where and when implementation must take place
- Expected effectiveness of the proposed project
- Available competent partners to implement projects
- Most efficient and effective means of implementing the program
- Available funding sources

Programs such as training, public information, and mobilization campaigns are coordinated by the OHSP. Some projects can be handled more effectively at the local level where the community experiencing the problem may need a unique ability to address its causes and react more quickly with countermeasures. The OHSP remains available for consultation and technical assistance on these projects.

### **Grant Development Plans**

Following project selection and dialogue with OHSP leadership about traffic safety priorities, the OHSP staff prepares the grant development plans (GDPs). The GDP assists in ensuring sufficient preparations are made before grant development and project implementation begin, and it also serves as documentation for the program area. The OHSP staff members develop GDPs as a team effort to best address projects that overlap network areas, and these GDPs serve as valuable internal planning tools.

Each GDP contains:

- Information about the strategy the project will pursue
- Potential grantees
- Funding levels and sources
- Project goals and objectives
- Project schedules

Exhibit 9 is an example of the GDP form.

**EXHIBIT 9: FY2018 Grant Development Plan Form**

Program Area  
Level Number

---

Grant Development Plan

Due date

---

Strategy Name

Background/Problem Statement

Program Goal(s) (AER)

Project Description(s) (AER)

Impact Statement (*What will happen if we do not have this program?*)

Funding Recommendation

Information sources and partners consulted

How will this strategy be achieved? Why was this strategy selected? How will the program be evaluated for effectiveness?

Is this proposal tied to an OHSP reported metric? If so, identify the metric and explain the relationship.

Year of funding?		Will the strategy continue next year?	Y N
Expected grantee		Estimated budget	\$
October 1 start-up required?	Y N	Project continuation from FY2017?	Y N
Seed-funding grant needing post-OHSP continuation plan?	Y N	If so, does it have one?	Y N

Funds for Program Management Section in-house grant?	Y N	Funds for Communication Section in-house grant?	Y N
For the benefit of locals?	Y N	PI&E materials being made?	Y N
Contractual costs?			Y N
Personnel costs?			Y N
Indirect costs?	Y N	If so, indirect rate	
Program income?	Y N	If so, how much?	
Any equipment?	Y N	If so, matching funds	
Equipment over \$5,000 per item?	Y N	If so, matching funds	
Out-of-state travel?	Y N	If so, purpose of travel?	
SHSP Strategy?	Y N	Ad board approval	Y N

Additional Notes

Funding level justification ( <i>How did you determine the requested funding amount?</i> )			
Prior Liquidation Issues?			
Liquidation History (as applicable; use n/a for non-grant years)			
Fiscal Year	Liquidation Amount	Liquidation Percentage	
FY2014			
FY2015			
FY2016			
Three year overall average			
Funding Level Justification (how did you determine the requested funding amount?)			
Funding Source(s)		Amount(s)	
		\$	
		\$	
Author:	Date:	Author:	Date:
Approval:	Date:	Approval:	Date:

Following development of GDPs, the OHSP program staff meets with the HSP management team to discuss plans for the next fiscal year, using their GDPs as the basis for discussion.

Discussions begin with an overview of the traffic crash data and problem identification followed by an overview of the GDPs selected to address the identified problems. This presents an opportunity for questioning and discussion, bringing out detail and emphasis that might be lost in pages of text.

**Management Team Review**

The OHSP management team reviews the material presented for final selection of the grant projects that will receive funding. This review includes a summary of factors staff members consider in developing programs and recommendations, which provides an office-wide rather than program area-specific perspective.

In this way, greater attention can be placed on budget limitations and on balancing demands and opportunities in various program areas. Grant development begins with final GDP approval. In addition, the OHSP staff share their list of projects with one another to become more aware of plans and partnership opportunities in other program areas.

### Exhibit 10: Telephone Survey Results

The surveys for 2014, 2015, and 2016 included 400 Michigan drivers. "N/A" indicates the question was not asked. Other questions related to demographics and other driving behaviors may have been asked in each survey. NOTE: Percentages may not equal 100 percent due to rounding.

<b>IMPAIRED DRIVING</b>			
<b>In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	N/A	<b>June 2014</b>	N/A
<b>August 2014</b>	1 time: 5.3% 2 times: 2% 3 times: 1% 4 times: 0.5% Over 5 times: 0.8%	<b>September 2014</b>	1 time: 3.3% 2 times: 1.8% 3 times: 0.5% 4 times: 0.3% Over 5 times: 0.8%
<b>May 2015</b>	N/A	<b>June 2015</b>	N/A
<b>August 2015</b>	1 time: 3% 2 times: 2.8% 3 times: 0.3% 4 times: 0.3% Over 5 times: 1.1%	<b>September 2015</b>	1 time: 3% 2 times: 2.5% 3 times: 1.3% 4 times: 0.5% Over 5 times: 1.5%
<b>May 2016</b>	N/A	<b>June 2016</b>	N/A
<b>August 2016</b>	1 time: 2.8% 2 times: 4% 3 times: 0.8% 4 times: 0% Over 5 times: 1%	<b>September 2016</b>	1 time: 2% 2 times: 2.8% 3 times: 0.8% 4 times: 0.8% Over 5 times: 1.3%
<b>IMPAIRED DRIVING</b>			
<b>In the past 30 days, have you read, seen, or heard anything about alcohol-impaired driving enforcement by police?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	N/A	<b>June 2014</b>	N/A
<b>August 2014</b>	Yes: 26.3% No: 72%	<b>September 2014</b>	Yes: 31.3% No: 67%

	Undecided/Refused: 1.8%		Undecided/Refused: 1.8%
<b>May 2015</b>	N/A	<b>June 2015</b>	N/A
<b>August 2015</b>	Yes: 16.5% No: 81.8% Undecided/Refused: 1.8%	<b>September 2015</b>	Yes: 32% No: 65% Undecided/Refused: 3.3%
<b>May 2016</b>	N/A	<b>June 2016</b>	N/A
<b>August 2016</b>	Yes: 18.8% No: 78.8% Undecided/Refused: 2.5%	<b>September 2016</b>	Yes: 22.3% No: 77% Undecided/Refused: 0.8%

**IMPAIRED DRIVING**

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

<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	N/A	<b>June 2014</b>	N/A
<b>August 2014</b>	Almost certain: 14.8% Very likely: 27.5% Somewhat likely: 24.5% Somewhat unlikely: 6% Very unlikely: 9.5% Undecided/Refused: 17.8%	<b>September 2014</b>	Almost certain: 17.5% Very likely: 26.8% Somewhat likely: 26.3% Somewhat unlikely: 8% Very unlikely: 8% Undecided/Refused: 13.6%
<b>May 2015</b>	N/A	<b>June 2015</b>	N/A
<b>August 2015</b>	Almost certain: 16.5% Very likely: 22.8% Somewhat likely: 26% Somewhat unlikely: 9% Very unlikely: 0.5% Undecided/Refused: 5.3%	<b>September 2015</b>	Almost certain: 17.5% Very likely: 24.5% Somewhat likely: 25.8% Somewhat unlikely: 7.5% Very unlikely: 8% Undecided/Refused: 16.8%
<b>May 2016</b>	N/A	<b>June 2016</b>	N/A
<b>August 2016</b>	Almost certain: 14.8% Very likely: 27% Somewhat likely: 23.3% Somewhat unlikely: 7.8% Very unlikely: 10.8% Undecided/Refused: 16.5%	<b>September 2016</b>	Almost certain: 12.8% Very likely: 27.3% Somewhat likely: 25% Somewhat unlikely: 8.3% Very unlikely: 9.8% Undecided/Refused: 17.1%

<b>SEAT BELT USE</b>					
<b>How often do you use seat belts when you drive or ride in a car, van, sports utility vehicle, or pick-up truck?</b>					
<b>PRE-SURVEYS</b>			<b>POST SURVEYS</b>		
<b>May 2014</b>	Always:	94%	<b>June 2014</b>	Always:	92%
	Most of the time:	3.5%		Most of the time:	6%
	Some of the time:	1%		Some of the time:	0.8%
	Rarely:	0.3%		Rarely:	0.8%
	Undecided/Never:	1.3%		Undecided/Never:	0.5%
<b>August 2014</b>	Always:	96.5%	<b>September 2014</b>	Always:	97.2%
	Most of the time:	2.8%		Most of the time:	2%
	Some of the time:	0.5%		Some of the time:	0.5%
	Rarely:	0.3%		Rarely:	0%
	Undecided/Never:	0%		Undecided/Never:	0.3%
<b>May 2015</b>	Always:	93.4%	<b>June 2015</b>	Always:	95%
	Most of the time:	4.1%		Most of the time:	2.3%
	Some of the time:	1%		Some of the time:	0.3%
	Rarely:	0.3%		Rarely:	0.3%
	Undecided/Never:	1.3%		Undecided/Never:	2.3%
<b>August 2015</b>	Always:	90.9%	<b>September 2015</b>	Always:	93%
	Most of the time:	6.5%		Most of the time:	5.3%
	Some of the time:	1.8%		Some of the time:	1.3%
	Rarely:	0.3%		Rarely:	0.3%
	Undecided/Never:	0.5%		Undecided/Never:	0.3%
<b>May 2016</b>	Always:	91.1%	<b>June 2016</b>	Always:	93.7%
	Most of the time:	7.1%		Most of the time:	4.3%
	Some of the time:	0%		Some of the time:	0.5%
	Rarely:	0.5%		Rarely:	0.3%
	Undecided/Never:	1.4%		Undecided/Never:	1.1%
<b>August 2016</b>	Always:	94.7%	<b>September 2016</b>	Always:	95.5%
	Most of the time:	2.5%		Most of the time:	2.5%
	Some of the time:	1.5%		Some of the time:	0.8%
	Rarely:	0.3%		Rarely:	0.5%
	Undecided/Never:	1.1%		Undecided/Never:	0.8%

<b>SEAT BELT USE</b>			
<b>In the past 30 days, have you read, seen, or heard anything about seat belt enforcement by police?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	Yes: 11.3% No: 87.8% Undecided/Refused: 1%	<b>June 2014</b>	Yes: 42.5% No: 56.5% Undecided/Refused: 1%
<b>August 2014</b>	Yes: 32.3% No: 67% Undecided/Refused: 0.8%	<b>September 2014</b>	Yes: 31.7% No: 66.8% Undecided/Refused: 1.5%
<b>May 2015</b>	Yes: 11% No: 86.8% Undecided/Refused: 2.3%	<b>June 2015</b>	Yes: 30.8% No: 67.5% Undecided/Refused: 1.8%
<b>August 2015</b>	Yes: 20.2% No: 77.6% Undecided/Refused: 2.3%	<b>September 2015</b>	Yes: 28.8% No: 69.3% Undecided/Refused: 2%
<b>May 2016</b>	Yes: 12.3% No: 85.3% Undecided/Refused: 2.5%	<b>June 2016</b>	Yes: 27.8% No: 69.3% Undecided/Refused: 3%
<b>August 2016</b>	Yes: 23.1% No: 74.4% Undecided/Refused: 2.5%	<b>September 2016</b>	Yes: 22.2% No: 76.6% Undecided/Refused: 1.3%



<b>SEAT BELT USE</b>			
<b>What do you think the chances are of getting a ticket if you do not wear your seat belt?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	Very Likely: 33.1% Somewhat likely: 30.3% Somewhat unlikely: 12% Very unlikely: 19% Undecided/Refused: 5.6%	<b>June 2014</b>	Very Likely: 36.3% Somewhat likely: 28.8% Somewhat unlikely: 11.5% Very unlikely: 14.8% Undecided/Refused: 8.6%
<b>August 2014</b>	Very Likely: 42.5% Somewhat likely: 19.7% Somewhat unlikely: 9.3% Very unlikely: 15.3% Undecided/Refused: 13.2%	<b>September 2014</b>	Very Likely: 40.3% Somewhat likely: 24.3% Somewhat unlikely: 11.6% Very unlikely: 15% Undecided/Refused: 8.8%
<b>May 2015</b>	Very Likely: 35.5% Somewhat likely: 22.8% Somewhat unlikely: 11.4% Very unlikely: 18.8% Undecided/Refused: 11.5%	<b>June 2015</b>	Very Likely: 34.7% Somewhat likely: 23.6% Somewhat unlikely: 13.1% Very unlikely: 18.6% Undecided/Refused: 0.1%
<b>August 2015</b>	Very Likely: 39.1% Somewhat likely: 23% Somewhat unlikely: 11.4% Very unlikely: 16.1% Undecided/Refused: 10.5%	<b>September 2015</b>	Very Likely: 40.6% Somewhat likely: 24.5% Somewhat unlikely: 8.3% Very unlikely: 14.5% Undecided/Refused: 12.1%
<b>May 2016</b>	Very Likely: 36.5% Somewhat likely: 27.2% Somewhat unlikely: 14% Very unlikely: 13.7% Undecided/Refused: 8.7%	<b>June 2016</b>	Very Likely: 40.9% Somewhat likely: 24% Somewhat unlikely: 11.1% Very unlikely: 16.9% Undecided/Refused: 7.1%
<b>August 2016</b>	Very Likely: 37.8% Somewhat likely: 26.5% Somewhat unlikely: 10.1% Very unlikely: 13.5% Undecided/Refused: 12.2%	<b>September 2016</b>	Very Likely: 38.5% Somewhat likely: 21.9% Somewhat unlikely: 10.3% Very unlikely: 16.1% Undecided/Refused: 13.2%

<b>SPEEDING</b>			
<b>On a local road with a speed limit of 25 mph, how often do you drive faster than 35 mph?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	Most of the time: 5% Half of the time: 10.3% Rarely: 40.3% Never: 44.5% Undecided/Refused: 0%	<b>June 2014</b>	Most of the time: 7.8% Half of the time: 8% Rarely: 41.5% Never: 42.3% Undecided/Refused: 0.5%
<b>August 2014</b>	N/A	<b>September 2014</b>	N/A
<b>May 2015</b>	Most of the time: 6.5% Half of the time: 11.3% Rarely: 40.5% Never: 41.5% Undecided/Refused: 0.3%	<b>June 2015</b>	Most of the time: 5.5% Half of the time: 8% Rarely: 43.3% Never: 42.5% Undecided/Refused: 0.8%
<b>August 2015</b>	N/A	<b>September 2015</b>	N/A
<b>May 2016</b>	Most of the time: 8% Half of the time: 5.8% Rarely: 44.3% Never: 41.8% Undecided/Refused: 0.4%	<b>June 2016</b>	Most of the time: 5.8% Half of the time: 7.5% Rarely: 43% Never: 43.3% Undecided/Refused: 0.5%
<b>August 2016</b>	N/A	<b>September 2016</b>	N/A
<b>SPEEDING</b>			
<b>On a road with a speed limit of 70 mph, how often do you drive faster than 75 mph?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	Most of the time: 17.3% Half of the time: 15.5% Rarely: 31% Never: 36.3% Undecided/Refused: 0%	<b>June 2014</b>	Most of the time: 16% Half of the time: 15% Rarely: 33.8% Never: 35% Undecided/Refused: 0.3%
<b>August 2014</b>	N/A	<b>September 2014</b>	N/A
<b>May 2015</b>	Most of the time: 22.8% Half of the time: 12.8% Rarely: 33.8% Never: 30.8% Undecided/Refused: 0%	<b>June 2015</b>	Most of the time: 17% Half of the time: 15.3% Rarely: 31.5% Never: 36.3% Undecided/Refused: 0%
<b>August 2015</b>	N/A	<b>September 2015</b>	N/A
<b>May 2016</b>	Most of the time: 21.3% Half of the time: 16% Rarely: 30% Never: 32.8% Undecided/Refused: 0%	<b>June 2016</b>	Most of the time: 16.3% Half of the time: 16% Rarely: 36.3% Never: 31% Undecided/Refused: 0.5%
<b>August 2016</b>	N/A	<b>September 2016</b>	N/A

<b>SPEEDING</b>			
<b>In the past 30 days, have you read, seen, or heard of anything about speed enforcement by the police?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	Yes: 25% No: 73.8% Undecided/Refused: 1.3%	<b>June 2014</b>	Yes: 24.5% No: 74.5% Undecided/Refused: 1%
<b>August 2014</b>	N/A	<b>September 2014</b>	N/A
<b>May 2015</b>	Yes: 20.5% No: 79% Undecided/Refused: 0.5%	<b>June 2015</b>	Yes: 21.5% No: 77.3% Undecided/Refused: 1.3%
<b>August 2015</b>	N/A	<b>September 2015</b>	N/A
<b>May 2016</b>	Yes: 21.5% No: 76.8% Undecided/Refused: 1.8%	<b>June 2016</b>	Yes: 29% No: 70.3% Undecided/Refused: 0.8%
<b>August 2016</b>	N/A	<b>September 2016</b>	N/A
<b>SPEEDING</b>			
<b>What do you think the chances are of getting a ticket if you drive over the speed limit?</b>			
<b>PRE-SURVEYS</b>		<b>POST SURVEYS</b>	
<b>May 2014</b>	Very Likely: 23.5% Somewhat likely: 41.8% Somewhat unlikely: 17% Very unlikely: 15.3% Undecided/Refused: 2.5%	<b>June 2014</b>	Very Likely: 25.8% Somewhat likely: 38.8% Somewhat unlikely: 19% Very unlikely: 12.3% Undecided/Refused: 4.3%
<b>August 2014</b>	N/A	<b>September 2014</b>	N/A
<b>May 2015</b>	Very Likely: 23.3% Somewhat likely: 38.5% Somewhat unlikely: 15.8% Very unlikely: 15.3% Undecided/Refused: 7.3%	<b>June 2015</b>	Very Likely: 26% Somewhat likely: 38% Somewhat unlikely: 17.8% Very unlikely: 13.5% Undecided/Refused: 4.8%
<b>August 2015</b>	N/A	<b>September 2015</b>	N/A
<b>May 2016</b>	Very Likely: 24.3% Somewhat likely: 38.5% Somewhat unlikely: 19.3% Very unlikely: 13.3% Undecided/Refused: 4.8%	<b>June 2016</b>	Very Likely: 26.5% Somewhat likely: 37.3% Somewhat unlikely: 19.8% Very unlikely: 12.3% Undecided/Refused: 4.3%
<b>August 2016</b>	N/A	<b>September 2016</b>	N/A