Southeast Michigan Traffic Crash Facts 2007

May 2008
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**Mission**
SEMCOG’s mission is solving regional planning problems — improving the efficiency and effectiveness of the region’s local governments as well as the quality of life in Southeast Michigan. Essential functions are:

- providing a forum for addressing issues which extend beyond individual governmental boundaries by fostering collaborative regional planning, and
- facilitating intergovernmental relations among local governments and state and federal agencies.

As a regional planning partnership in Southeast Michigan, SEMCOG is accountable to local governments who join as members. Membership is open to all counties, cities, villages, townships, intermediate school districts, community colleges and public universities in Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne Counties.

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SEMCOG’s primary activities support local planning through use of SEMCOG’s technical, data, and intergovernmental resources. In collaboration with local governments, SEMCOG has responsibility for adopting regionwide plans and policies for community and economic development, water and air quality, land use, and transportation, including approval of state and federal transportation projects. Funding for SEMCOG is provided by federal and state grants, contracts, and membership fees.

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All SEMCOG policy decisions are made by local elected officials, ensuring that regional policies reflect the interests of member communities. Participants serve on one or both of the policymaking bodies — the General Assembly and the Executive Committee.

Prior to policy adoption, technical advisory councils provide the structure for gaining input on transportation, environment, community and economic development, data analysis, and education. This deliberative process includes broad-based representation from local governments, the business community, environmental organizations, and other special interest and citizen groups.
Abstract
This report contains important statistical information about all traffic crashes reported in Southeast Michigan in 2007. It focuses on 10 categories of traffic crashes: all traffic crashes, injury traffic crashes, fatal traffic crashes, alcohol-involved traffic crashes, bicycle crashes, and truck/bus crashes. Sections at the end of the report contain details about safety-belt use and holiday traffic crashes. The main objective of this report is to provide useful data to aid local communities in their efforts to improve traffic safety.

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SEMCOG
Southeast Michigan Council of Governments
Information Center
535 Griswold Street, Suite 300
Detroit, MI 48226-3602
313-961-4266 • fax 313-961-4869
www.semcog.org • infocenter@semcog.org

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Table of Contents

List of Data Displays................................................................................................................................. v
2007 Quick Crash Facts............................................................................................................................. ix
2007 Crash Clock ................................................................................................................................... x
Introduction ......................................................................................................................................... 1
Glossary ............................................................................................................................................... 3
All Traffic Crashes ................................................................................................................................. 5
  Traffic Crashes by County .................................................................................................................... 6
  Traffic Crashes by Severity .................................................................................................................... 7
  Traffic Crashes by Crash Type ............................................................................................................. 8
  Age and Gender of Drivers in Traffic Crashes .................................................................................... 9
  Rate of Traffic Crash Involvement by Age Group ........................................................................... 10
  Traffic Crashes by Month, Day, and Hour ....................................................................................... 11
Injury Traffic Crashes ............................................................................................................................ 13
  Injury Traffic Crashes by County ....................................................................................................... 15
  Injury Traffic Crashes by Crash Type ................................................................................................. 16
  Age and Gender of Drivers in Injury Traffic Crashes ...................................................................... 17
  Rate of Injury Traffic Crash Involvement by Age Group ............................................................... 18
  Injury Traffic Crashes by Month, Day, and Hour ......................................................................... 19
Fatal Traffic Crashes .............................................................................................................................. 21
  Fatal Traffic Crashes by County ........................................................................................................ 23
  Fatal Traffic Crashes by Crash Type ................................................................................................. 24
  Age and Gender of Drivers in Fatal Traffic Crashes ....................................................................... 25
  Rate of Fatal Traffic Crash Involvement by Age Group ................................................................. 26
  Fatal Traffic Crash by Month, Day, and Hour .............................................................................. 27
Alcohol-Involved Traffic Crashes ............................................................................................................ 29
  Alcohol-Involved Traffic Crashes by County .................................................................................... 30
  Alcohol-Involved Traffic Crashes by Severity ................................................................................ 31
  Alcohol-Involved Traffic Crashes by Crash Type ........................................................................... 32
  Age and Gender Had-Been-Drinking Drivers in Alcohol-Involved Traffic Crashes ...................... 33
  Rate of Had-Been Drinking Traffic Crash Involvement by Age Group ........................................ 34
  Alcohol-Involved Traffic Crashes by Month, Day, and Hour ....................................................... 35
Vehicle-Deer Traffic Crashes

Vehicle-Deer Traffic Crashes by County
Vehicle-Deer Traffic Crashes by Severity
Vehicle-Deer Traffic Crashes by Month, Day, and Hour

Young-Driver Traffic Crashes

Young-Driver Traffic Crashes by County
Young-Driver Traffic Crashes by Severity and Crash Type
Age and Gender of Young Drivers in Traffic Crashes
Young-Driver Traffic Crashes by Month, Day, and Hour

Elderly Driver Traffic Crashes

Elderly Driver Traffic Crashes by County
Elderly Driver Traffic Crashes by Severity and Crash Type
Age and Gender of Elderly Drivers in Traffic Crashes
Elderly Driver Traffic Crashes by Month, Day, and Hour

Pedestrian Traffic Crashes

Pedestrian Traffic Crashes by County
Pedestrian Traffic Crashes by Severity
Pedestrian Traffic Crashes by Month, Day, and Hour

Bicycle Traffic Crashes

Bicycle Traffic Crashes by Severity
Bicycle Traffic Crashes by Month, Day, and Hour

Truck/Bus Traffic Crashes

Truck/Bus Traffic Crashes by County
Truck/Bus Traffic Crashes by Severity
Truck/Bus Traffic Crashes by Crash Type
Age and Gender of Truck/Bus Drivers in Traffic Crashes
Truck/Bus Traffic Crashes by Month, Day, and Hour

Safety-Belt Use

Injury Severity of Belted vs. Unbelted Drivers
Unbelted Drivers by Age, Gender, and Alcohol Use

Holiday Traffic Crashes

Appendix A-Vehicle Miles Traveled (VMT)
Appendix B-Registered Driver Data
List of Data Displays

Tables

Table 1  Traffic Crash Severity, 2007................................................................................................... 7
Table 2  Drivers in Traffic Crashes by Age Group and Gender, 2007................................................. 9
Table 3  Injury Traffic Crash Rate, 1998-2007.................................................................................... 14
Table 4  Traffic Crash Type by Percent Resulting in Injury, 2007...................................................... 16
Table 5  Drivers in Injury Traffic Crashes by Age Group and Gender, 2007................................. 17
Table 6  Fatal Traffic Crash Rate and VMT, 1998-2007................................................................. 22
Table 7  Crash Type by Percent Resulting in Fatality, 2007........................................................... 24
Table 8  Drivers in Fatal Traffic Crashes by Age Group and Gender, 2007.................................. 25
Table 9  Alcohol-Involved Traffic Crash Severity, 2007............................................................... 31
Table 10 Traffic Crash Type by Percent Involving Alcohol, 2007................................................ 32
Table 11 HBD Drivers in Alcohol-Involved Traffic Crashes by Age and Gender, 2007............. 33
Table 12 Vehicle-Deer Traffic Crash Severity, 2007........................................................................ 39
Table 13 Young-Drivers Traffic Crash Percentage, 1998-2007..................................................... 41
Table 14 Young Driver Traffic Crash Involvement by Age Group and Gender, 2007................. 44
Table 15 Elderly Driver Traffic Crash Percentage, 1998-2007..................................................... 47
Table 16 Elderly Driver Involvement in Traffic Crashes by Age and Gender, 2007................. 50
Table 17 Truck/Bus Traffic Crash by Severity, 2007................................................................. 60
Table 18 Traffic Crash Type by Truck/Bus Percentage, 2007......................................................... 61
Table 19 Truck/Bus Drivers in Traffic Crashes by Age and Gender, 2007.................................... 62
Table 20 Unbelted Drivers by Age and Gender, 2007................................................................. 67
Table 21 Holiday Time Periods ........................................................................................................ 69
Table 22 Fatal Holiday Traffic Crashes, 2005-2007........................................................................ 70
Table 23 Estimated Million VMT by County, 2006................................................................. 71
Table 24 Percent VMT Driven by Age Group, 1994................................................................. 71
Table 25 Estimated Million VMT by Age Group, 2006.............................................................. 72
Table 26 Southeast Michigan Registered Drivers by Age and County, January 2008............. 73
Table 27 Southeast Michigan Registered Drivers by Age and Gender, January 2008............ 74
Figures

Figure 1  Traffic Crashes, 1998-2007
Figure 2  Traffic Crash Rate, 1998-2007
Figure 3  Traffic Crashes by County, 2005-2007
Figure 4  Traffic Crash Rate by County, 2005-2007
Figure 5  Traffic Crash Severity, 2007
Figure 6  Traffic Crashes by Crash Type, 2007
Figure 7  Drivers in Traffic Crashes by Age Group, 2007
Figure 8  Traffic Crash Rate by Age Group, 2007
Figure 9  Traffic Crash Driver Involvement Rate by Age Group, 2007
Figure 10 Traffic Crashes by Month, 2007
Figure 11 Traffic Crashes by Day of Week, 2007
Figure 12 Traffic Crashes by Hour of Day, 2007
Figure 13 Injury Traffic Crashes, 1998-2007
Figure 14 Injury Traffic Crash Rate, 1998-2007
Figure 15 Injury Traffic Crashes by County, 2005-2007
Figure 16 Injury Traffic Crash Rate by County, 2005-2007
Figure 17 Injury Traffic Crashes by Crash Type, 2007
Figure 18 Injury Traffic Crashes by Crash Type, 2007
Figure 19 Drivers in Injury Traffic Crashes by Age Group, 2007
Figure 20 Injury Traffic Crash Rate by Age Group, 2007
Figure 21 Injury Traffic Crash Driver Involvement Rate by Age Group, 2007
Figure 22 Injury Traffic Crashes by Month, 2007
Figure 23 Injury Traffic Crashes by Day of Week, 2007
Figure 24 Injury Traffic Crashes by Hour of Day, 2007
Figure 25 Fatal Traffic Crashes, 1998-2007
Figure 26 Traffic Crash Fatalities, 1998-2007
Figure 27 Fatal Traffic Crash Rate, 1998-2007
Figure 28 Fatal Traffic Crashes by County, 2005-2007
Figure 29 Fatal Traffic Crash Rate by County, 2005-2007
Figure 30 Fatal Traffic Crashes by Crash Type, 2007
Figure 31 Drivers in Fatal Traffic Crashes by Age Group, 2007
Figure 32 Fatal Traffic Crash Rate by Age Group, 2007
Figure 33 Fatal Traffic Crash Driver Involvement Rate by Age Group, 2007
Figure 34 Fatal Traffic Crashes by Month, 2007
Figure 35  Fatal Traffic Crashes by Day of Week, 2007 ................................................................. 27
Figure 36  Fatal Traffic Crashes by Hour of Day, 2007 ................................................................. 28
Figure 37  Alcohol-Involved Traffic Crashes, 1998-2007 ............................................................... 29
Figure 38  Alcohol-Involved Traffic Crash Percentage, 1998-2007 ............................................... 29
Figure 39  Alcohol-Involved Traffic Crashes by County, 2005-2007 ............................................... 30
Figure 40  Alcohol-Involved Traffic Crash Percentage by County, 2005-2007 .................................. 30
Figure 41  Alcohol-Involved Traffic Crashes Severity, 2007 ............................................................ 31
Figure 42  Alcohol-Involved Traffic Crashes by Type, 2007 ............................................................ 32
Figure 43  HBD Drivers by Age Group in Alcohol-Involved Traffic Crashes, 2007 ......................... 33
Figure 44  Alcohol-Involved Traffic Crash HBD Driver Involvement Rate by Age Group, 2007 ....... 34
Figure 45  Alcohol-Involved Traffic Crash HBD Driver Involvement Rate by Age Group, 2007 ....... 34
Figure 46  Alcohol-Involved Traffic Crashes by Month, 2007 .......................................................... 35
Figure 47  Alcohol-Involved Traffic Crashes by Day of Week, 2007 ............................................... 35
Figure 48  Alcohol-Involved Traffic Crashes by Hour of Day, 2007 ............................................... 36
Figure 49  Vehicle-Deer Traffic Crashes, 1998-2007 ................................................................. 37
Figure 50  Vehicle-Deer Traffic Crash Percentage, 1998-2007 ....................................................... 37
Figure 51  Vehicle-Deer Traffic Crashes by County, 2005-2007 ..................................................... 38
Figure 52  Vehicle-Deer Traffic Crash Percentage by County, 2005-2007 ....................................... 38
Figure 53  Vehicle-Deer Traffic Crashes by Month, 2007 ............................................................... 39
Figure 54  Vehicle-Deer Traffic Crashes by Day of Week, 2007 ..................................................... 40
Figure 55  Vehicle-Deer Traffic Crashes by Hour of Day, 2007 ....................................................... 40
Figure 56  Young-Driver Traffic Crashes, 1998-2007 ................................................................. 41
Figure 57  Young-Driver Traffic Crashes by County, 2005-2007 ................................................... 41
Figure 58  Young-Driver Traffic Crash Percentage by County, 2005-2007 ...................................... 42
Figure 59  Young-Driver Traffic Crashes Severity, 2007 ............................................................... 42
Figure 60  Young-Driver Traffic Crashes by Crash Type, 2007 ......................................................... 43
Figure 61  Young Driver Traffic Crash Involvement by Age Group, 2007 ......................................... 44
Figure 62  Young-Driver Traffic Crashes by Month, 2007 ............................................................... 45
Figure 63  Young-Driver Traffic Crashes by Day of Week, 2007 .................................................... 45
Figure 64  Young-Driver Traffic Crashes by Hour of Day, 2007 ...................................................... 46
Figure 65  Elderly Driver Traffic Crashes, 1998-2007 ................................................................. 47
Figure 66  Elderly Driver Traffic Crashes by County, 2005-2007 ................................................... 48
Figure 67  Elderly Driver Traffic Crash Percentage by County, 2005-2007 ...................................... 48
Figure 68  Elderly Driver Traffic Crash Severity, 2007 ............................................................... 49
Figure 69  Elderly Driver Traffic Crashes by Crash Type, 2007 ....................................................... 49
Figure 70  Elderly Driver Traffic Crashes by Month, 2007 ............................................................ 50
Figure 71  Elderly Driver Traffic Crashes by Day of Week, 2007 ............................................................... 51
Figure 72  Elderly Driver Traffic Crashes by Hour of Day, 2007 ............................................................... 51
Figure 73  Pedestrian Traffic Crashes, 1998-1999 and 2002-2007 ............................................................ 52
Figure 74  Pedestrian Traffic Crashes by County, 2005-2007 ................................................................. 52
Figure 75  Pedestrian Traffic Crash Severity, 2007 .................................................................................. 53
Figure 76  Pedestrian Traffic Crashes by Month, 2007 ......................................................................... 53
Figure 77  Pedestrian Traffic Crashes by Day of Week, 2007 ................................................................. 54
Figure 78  Pedestrian Traffic Crashes by Hour of Day, 2007 ................................................................. 54
Figure 79  Bicycle Traffic Crashes, 1998-1999 and 2002-2007 .............................................................. 55
Figure 80  Bicycle Traffic Crashes by County, 2005-2007 ................................................................... 55
Figure 81  Bicycle Traffic Crash Severity, 2007 .................................................................................... 56
Figure 82  Bicycle Traffic Crashes by Month, 2007 ............................................................................. 56
Figure 83  Bicycle Traffic Crashes by Day of Week, 2007 ................................................................... 57
Figure 84  Bicycle Traffic Crashes by Hour of Day, 2007 ..................................................................... 57
Figure 85  Truck/Bus Traffic Crashes, 1998-2007 .................................................................................. 58
Figure 86  Truck/Bus Traffic Crash Percentage, 1998-2007 ................................................................. 58
Figure 87  Truck/Bus Traffic Crashes by County, 2005-2007 ............................................................... 59
Figure 88  Truck/Bus Traffic Crash Percentage by County, 2005-2007 ............................................. 59
Figure 89  Truck/Bus Traffic Crash by Severity, 2007 ........................................................................ 60
Figure 90  Truck/Bus Traffic Crashes by Crash Type, 2007 ................................................................. 61
Figure 91  Truck/Bus Drivers in Traffic Crashes by Age Group, 2007 .................................................... 62
Figure 92  Truck/Bus Traffic Crashes by Month, 2007 ....................................................................... 63
Figure 93  Truck/Bus Traffic Crashes by Day of Week, 2007 ............................................................... 63
Figure 94  Truck/Bus Traffic Crashes by Hour of Day, 2007 ............................................................... 64
Figure 95  Driver Safety-Belt Use, 1998-2007 ...................................................................................... 65
Figure 96  Driver Safety-Belt Use by County, 2005-2007 ................................................................. 65
Figure 97  Injury Severity of Belted Drivers Compared to Unbelted Drivers, 2007 .................................... 66
Figure 98  Unbelted Drivers by Age Group, 2007 ................................................................................. 67
Figure 99  Safety-Belt Use Among HBD Drivers, 2007 ...................................................................... 68
2007 Quick Crash Facts

- Vehicle miles traveled (VMT) in Southeast Michigan increased from 48,761 million miles in 2005 to 49,746 million in 2006. During 2007, 140,115 traffic crashes were reported in Southeast Michigan. These crashes resulted in 38,833 injuries and 382 fatalities. Compared with 2006, traffic crashes increased 1.4 percent, injuries decreased 2.5 percent, and the number of fatalities decreased by 2.3 percent.

Please note: 2006 VMT numbers were used to calculate the crash rates (crashes per 100 million miles) these numbers will be updated as soon as the 2007 vehicle miles of travel are available.

- There were 0.71 fatal traffic crashes for every 100 million miles traveled on Southeast Michigan roads in 2007. This is a decrease from the 2006 rate of 0.73 fatal crashes for every 100 million miles of travel.

- Of drivers involved in fatal crashes, 23.4 percent were between the ages of 16 and 24.

- Drivers in the 95 and above age group had the lowest rate of fatal traffic crashes among all with zero fatal crashes per 100 million miles traveled. The 85-94 age group had the highest rate of all licensed drivers (11.5).

- Crashes in Southeast Michigan involving alcohol increased slightly, from 5,079 in 2006 to 5,101 in 2007, while the State of Michigan saw decrease of over three percent. In Southeast Michigan, 3.6 percent of all traffic crashes involved alcohol, and 31 percent of fatal traffic crashes involved alcohol consumption.

- There were 6,280 vehicle-deer crashes in Southeast Michigan in 2007, down from 6,358 in 2006. Nearly 97 percent of collisions with deer resulted only in property damage. Although vehicle-deer crashes occurred in every month in 2007, over 37 percent of these crashes took place in October and November. Deer crashes were most common in the early morning and evening hours.

- Young drivers (ages 16-24) were involved in nearly 35 percent of all traffic crashes in 2007. Crashes among young drivers peaked at age 18 for all young drivers.

- Elderly drivers (ages 65 and older) were involved in 12.0 percent of all traffic crashes in 2007. Elderly drivers were more likely to be involved in rear-end, angle, head-on, and sideswipe crashes, but less likely to have single-vehicle crashes as compared to all other age group crashes.

- Traffic crashes involving pedestrians decreased in 2007 compared to 2006 numbers, however bicycle crashes increased over this same time period. Only 11.7 percent of crashes involving pedestrians in no injury and only 19.6 percent of all bicycle crashes resulted in no injury.

- Crashes involving commercial trucks or buses in Southeast Michigan increased 5.4 percent in 2007.

- Safety-belt use among drivers in traffic crashes increased slightly (0.6 percent) in Southeast Michigan in 2007, where 84.8 percent of drivers in crashes reported wearing their safety belts at the time of the crash. Over 87 percent of belted drivers escaped injury during their crash, compared to only 58.7 percent of unbelted drivers.
2007 Crash Clock

- A crash occurred every 3.8 minutes.
- Someone was killed in a traffic crash every 22.9 hours.
- Someone was injured in a traffic crash every 13.2 minutes.
- Someone was killed in an alcohol-involved traffic crash every 3 days.
- An alcohol-involved crash occurred every 1.7 hours.
- A vehicle-deer crash occurred every 1.4 hours.
Introduction

This report contains statistical information about all traffic crashes in Southeast Michigan reported in 2007. This information is divided into several categories.

- all traffic crashes;
- injury traffic crashes;
- fatal traffic crashes;
- alcohol-involved traffic crashes;
- vehicle-deer traffic crashes;
- young-driver traffic crashes;
- elderly driver traffic crashes;
- pedestrian traffic crashes;
- bicycle traffic crashes;
- truck/bus traffic crashes;
- safety-belt use, and
- holiday traffic crashes.

This report is part of SEMCOG’s Safety Management System and is designed to assist communities in understanding traffic safety issues.

Traffic crash data used in this report were received from the Michigan Department of State Police, Criminal Justice Information Center (CJIC).

Due to issues regarding the accuracy of some data fields, sections about pedestrian and bicycle crashes were excluded from the 2000 and 2001 Southeast Michigan Traffic Crash Facts. Some information on pedestrian and bicycle crashes is included in this year’s report. However, specific data about the age, sex, and injury severity of pedestrians and bicyclists is not available in about 25 percent of pedestrian or bicycle crashes. This information is not included in this report.
Glossary

Crash rate – The number of crashes per 100 million vehicle miles traveled.

Crash type – A crash is typed by the first injury-producing or damage-producing event, which may or may not be the most serious or significant event.

Fatal traffic crash – A fatality is counted when a person dies due to injuries from a traffic crash. Prior to 1979, deaths were counted if they occurred up to one year after the crash; in 1979, this time period was reduced to 90 days. In 1988, it was further reduced to 30 days.

Had-been-drinking (HBD) driver – Driver who had been drinking prior to the crash, as reported by the police, the coroner, or other accepted authorities.

Injury crash – A crash is counted as an injury crash when it results in at least one injury but no deaths. Injury crashes are further typed by the most severe injury caused by the crash. See “Injury severity.”

Injury severity

K (Fatal) – Any injury that results in death.

A (Incapacitating injury) – Any injury not incapacitating but evident to observers at the scene of the crash in which the injury occurred.

B (Nonincapacitating injury) – Any injury not incapacitating but evident to observers at the scene of the crash in which the injury occurred.

C (Possible injury) – Any injury reported or claimed that is not a fatal injury, incapacitating injury, or nonincapacitating injury.

Property damage only (PDO) crash – A crash that results in no fatalities or injuries, with a property damage value of $1,000.00 as a minimum reporting threshold.

Traffic crash – A crash that involves a motor vehicle in transport on a public trafficway (in Michigan) and results in injury, death, or at least $1,000.00 in property damage.

VMT – Vehicle miles traveled. In traffic crash analysis, VMT is typically measured in hundreds of millions of miles. For example, 44,000,000,000 vehicle miles traveled may be represented as 440 hundred million VMT or as 44,000 million VMT.
All Traffic Crashes

In 2007, 140,115 traffic crashes were reported in Southeast Michigan. This is an increase of 1.4 percent from 2006. The State of Michigan saw a 2.8 percent increase between 2006 and 2007 (Figure 1).

The traffic crash rate, defined as the number of traffic crashes per 100 million vehicle miles traveled (VMT), provides an alternative method of examining traffic crash trends. Figure 2 shows traffic crash rates in Southeast Michigan and the State of Michigan for 1998-2007.

Figure 1
Traffic Crashes, 1998-2007

![Traffic Crashes, 1998-2007](image)


Figure 2
Traffic Crash Rate, 1998-2007

![Traffic Crash Rate, 1998-2007](image)

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.
Traffic Crashes by County

Figure 3 shows the number of traffic crashes in each Southeast Michigan county for 2005, 2006, and 2007. Wayne County experienced the only decrease (1.1 percent) in traffic crashes from 2006 to 2007. All other counties in Southeast Michigan saw an increase in crashes.

As shown in Figure 4, the traffic crash rate increased in 2007 in all counties but Wayne County. Monroe County continued to have the lowest crash rate in the region while Macomb County experienced the highest rise in crash rate in the region in 2007.

Figure 3
Traffic Crashes by County, 2005-2007

<table>
<thead>
<tr>
<th>County</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>5,628</td>
<td>5,097</td>
<td>5,401</td>
</tr>
<tr>
<td>Macomb</td>
<td>25,261</td>
<td>22,660</td>
<td>23,798</td>
</tr>
<tr>
<td>Monroe</td>
<td>4,709</td>
<td>3,891</td>
<td>4,050</td>
</tr>
<tr>
<td>Oakland</td>
<td>41,958</td>
<td>37,415</td>
<td>37,781</td>
</tr>
<tr>
<td>St. Clair</td>
<td>4,774</td>
<td>4,278</td>
<td>4,425</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>11,795</td>
<td>10,344</td>
<td>10,787</td>
</tr>
<tr>
<td>Wayne</td>
<td>63,159</td>
<td>54,480</td>
<td>53,873</td>
</tr>
</tbody>
</table>


Figure 4
Traffic Crash Rate by County, 2005-2007

<table>
<thead>
<tr>
<th>County</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>277</td>
<td>237</td>
<td>251</td>
</tr>
<tr>
<td>Macomb</td>
<td>379</td>
<td>334</td>
<td>351</td>
</tr>
<tr>
<td>Monroe</td>
<td>226</td>
<td>172</td>
<td>179</td>
</tr>
<tr>
<td>Oakland</td>
<td>313</td>
<td>274</td>
<td>277</td>
</tr>
<tr>
<td>St. Clair</td>
<td>287</td>
<td>244</td>
<td>253</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>312</td>
<td>262</td>
<td>273</td>
</tr>
<tr>
<td>Wayne</td>
<td>330</td>
<td>284</td>
<td>281</td>
</tr>
</tbody>
</table>

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.
Traffic Crashes by Severity

Of the 140,115 traffic crashes in Southeast Michigan in 2007, nearly 21 percent resulted in some degree of injury. A total of 355 fatal crashes resulted in the deaths of 382 people, which is more than two percent lower than 2006 total. Figure 5 shows how traffic crashes in 2007 were distributed by severity. Table 1 shows the number of crashes of each severity as well as the number of fatalities and injuries caused by the crashes.

Figure 5
Traffic Crash Severity, 2007

Table 1
Traffic Crash Severity, 2007

<table>
<thead>
<tr>
<th>Crash Severity</th>
<th>Number of Traffic Crashes</th>
<th>Number of Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal</td>
<td>355</td>
<td>382</td>
</tr>
<tr>
<td>A-level injury</td>
<td>2,297</td>
<td>2,834</td>
</tr>
<tr>
<td>B-level injury</td>
<td>6,237</td>
<td>7,612</td>
</tr>
<tr>
<td>C-level injury</td>
<td>20,393</td>
<td>28,387</td>
</tr>
<tr>
<td>Injury and fatality subtotal</td>
<td>29,282</td>
<td>39,215</td>
</tr>
<tr>
<td>PDO</td>
<td>110,833</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140,115</td>
<td></td>
</tr>
</tbody>
</table>

Traffic Crashes by Crash Type

Figure 6 shows how traffic crashes were distributed among the various crash types in 2007. As in previous years, the most common type of crash was rear-end (34.4 percent). The least common type of crash was head-on (4.7 percent).

Figure 6
Traffic Crashes by Crash Type, 2007

Age and Gender of Drivers in Traffic Crashes

Figure 7 shows how the 262,473 drivers involved in traffic crashes in 2007 were distributed among the age groups. Table 2 breaks down age groups by gender. The age group with the greatest involvement in traffic crashes was the 16-24 age group (21.0 percent of drivers in traffic crashes), followed by the 35-44 age group (17.6 percent). Fewer than seven percent of all drivers in crashes were age 65 older.

Figure 7
Drivers in Traffic Crashes by Age Group, 2007

![Chart showing distribution of drivers by age group]


Table 2
Drivers in Traffic Crashes by Age Group and Gender, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>15 and below</td>
<td>204</td>
<td>272</td>
</tr>
<tr>
<td>16 to 24</td>
<td>25,901</td>
<td>29,265</td>
</tr>
<tr>
<td>25 to 34</td>
<td>20,968</td>
<td>24,177</td>
</tr>
<tr>
<td>35 to 44</td>
<td>20,639</td>
<td>25,473</td>
</tr>
<tr>
<td>45 to 54</td>
<td>17,863</td>
<td>22,634</td>
</tr>
<tr>
<td>55 to 64</td>
<td>10,674</td>
<td>14,177</td>
</tr>
<tr>
<td>65 to 74</td>
<td>4,267</td>
<td>5,839</td>
</tr>
<tr>
<td>75 to 84</td>
<td>2,773</td>
<td>3,361</td>
</tr>
<tr>
<td>85 to 94</td>
<td>651</td>
<td>790</td>
</tr>
<tr>
<td>95 and above</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Unknown</td>
<td>2,056</td>
<td>4,468</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>106,010</strong></td>
<td><strong>130,475</strong></td>
</tr>
</tbody>
</table>

Rate of Traffic Crash Involvement by Age Group

Figure 8 shows the traffic-crash rate for each age group in 2007. According to 2006 VMT estimates, drivers age 65-74 had the lowest crash rate of any age group, at 225 crashes per 100 million VMT. Drivers age 95 or older had the highest rate followed by the 85-94 and 16-24 age groups (3,317, 1,655, and 1,123 crashes per 100 million VMT, respectively).

Figure 9 shows how many drivers were in traffic crashes out of every hundred drivers in each age group. There were just under 12 drivers age 16-24 involved in crashes for every hundred registered drivers in that age group, which was the highest rate of any group.

Figure 8
Traffic Crash Rate by Age Group, 2007

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.

Figure 9
Traffic Crash Driver Involvement Rate by Age Group, 2007

Source: MSPTCD, Michigan Department of State (MDOS), and SEMCOG, 2007.
Traffic Crashes by Month, Day, and Hour

More traffic crashes (13,702) occurred during December than any other month in 2007. July had the fewest crashes (10,181) in 2007 (Figure 10).

Figure 11 shows that more traffic crashes took place on Fridays than any other day of the week (23,361), and that Sundays had the fewest crashes (14,758).

Figure 10
Traffic Crashes by Month, 2007


Figure 11
Traffic Crashes by Day of Week, 2007

Figure 12 shows the total number of traffic crashes that took place during each hour interval in 2007. The fewest crashes — 1,286 — took place between 4 a.m. and 5 a.m. The time of day with the greatest number of crashes was the period from 3 p.m. to 6 p.m., with one out of every four traffic crashes taking place during these hours.

Figure 12
Traffic Crashes by Hour of Day, 2007

Injury Traffic Crashes

An injury traffic crash is any crash that results in an injury, but not a fatality. Crashes that result in fatalities are discussed in the section on fatal crashes.

As shown in Figure 13, injury traffic crashes in Southeast Michigan decreased in 2007 — the 11th consecutive year of decline. Injury crashes were down 2.2 percent in Southeast Michigan and 1.0 percent in Michigan compared to 2006. Figure 14 shows the number of injuries caused by traffic crashes for the years 1998-2007. Injuries decreased 2.5 percent in Southeast Michigan and 1.7 percent in Michigan from 2006 to 2007.

Figure 13


Figure 14
Traffic Crash Injuries, 1998-2007

In 2007, injury traffic crash rates decreased for Southeast Michigan and the State of Michigan by one (Figure 15).

Table 3 shows the steadily declining injury traffic crashes in Southeast Michigan and the State of Michigan over a 10-year span, all while VMTs have been on the rise.

Figure 15
Injury Traffic Crash Rate, 1998-2007

![Graph showing injury traffic crash rate from 1998 to 2007 for Southeast Michigan and the State of Michigan](graph.png)

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.

Table 3
Injury Traffic Crash Rate, 1998-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Injury Traffic Crashes</th>
<th>VMT (in Millions)</th>
<th>Injury Traffic Crash Rate (Crashes per 100 Million VMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Southeast Michigan</td>
<td>Michigan</td>
<td>Southeast Michigan</td>
</tr>
<tr>
<td>1998</td>
<td>47,200</td>
<td>91,137</td>
<td>42,513</td>
</tr>
<tr>
<td>1999</td>
<td>44,387</td>
<td>87,820</td>
<td>42,924</td>
</tr>
<tr>
<td>2000</td>
<td>43,767</td>
<td>87,043</td>
<td>44,167</td>
</tr>
<tr>
<td>2001</td>
<td>40,869</td>
<td>80,922</td>
<td>45,304</td>
</tr>
<tr>
<td>2002</td>
<td>39,610</td>
<td>80,567</td>
<td>46,067</td>
</tr>
<tr>
<td>2003</td>
<td>37,591</td>
<td>76,598</td>
<td>47,085</td>
</tr>
<tr>
<td>2004</td>
<td>36,483</td>
<td>73,118</td>
<td>47,681</td>
</tr>
<tr>
<td>2005</td>
<td>32,541</td>
<td>66,729</td>
<td>47,471</td>
</tr>
<tr>
<td>2006</td>
<td>29,576</td>
<td>60,176</td>
<td>49,746</td>
</tr>
<tr>
<td>2007</td>
<td>28,927</td>
<td>59,550</td>
<td>49,746</td>
</tr>
</tbody>
</table>

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.
Injury Traffic Crashes by County

In 2007 injury crashes decreased in five of seven Southeast Michigan counties. The largest decrease taking place in St. Clair County (6.1 percent)

Five out of seven counties had injury crash rates lower or the same than those seen in 2006 except for Monroe and Washtenaw Counties, which had a slight increase (Figure 17). Still, Macomb and Wayne Counties’ injury crash rates were slightly higher than the regional rate of 58 injury crashes per 100 million VMT. The crash rate in Macomb County for 2007 was 74 injury crashes per 100 million VMT — the highest in the region.

Figure 16
Injury Traffic Crashes by County, 2005-2007


Figure 17
Injury Traffic Crash Rate by County, 2005-2007

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.
Injury Traffic Crashes by Crash Type

Figure 18 shows rear-end crashes accounted for more injury crashes (35.0 percent) than any other crash type in 2007, and sideswipe crashes made up the smallest portion (6.4 percent).

Table 4 shows a comparison of injury crashes to all crashes by crash type. This type of comparison shows that head-on crashes were the most likely to result in injury, with nearly 35.3 percent of all head-on crashes causing injury. Only 8.8 percent of all sideswipe crashes caused injury in 2007.

Figure 18
Injury Traffic Crashes by Crash Type, 2007

Table 4
Traffic Crash Type by Percent Resulting in Injury, 2007

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Injury Crashes</th>
<th>All Crashes</th>
<th>Percent Resulting in Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncoded/errors/other/unknown</td>
<td>1,067</td>
<td>7,912</td>
<td>13.5%</td>
</tr>
<tr>
<td>Single vehicle</td>
<td>6,658</td>
<td>27,892</td>
<td>23.9%</td>
</tr>
<tr>
<td>Head-on</td>
<td>2,347</td>
<td>6,647</td>
<td>35.3%</td>
</tr>
<tr>
<td>Angle</td>
<td>6,888</td>
<td>28,393</td>
<td>24.3%</td>
</tr>
<tr>
<td>Rear-end</td>
<td>10,121</td>
<td>48,197</td>
<td>21.0%</td>
</tr>
<tr>
<td>Sideswipe</td>
<td>1,846</td>
<td>21,074</td>
<td>8.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28,927</strong></td>
<td><strong>140,115</strong></td>
<td><strong>20.6%</strong></td>
</tr>
</tbody>
</table>

Age and Gender of Drivers in Injury Traffic Crashes

Figure 19 and Table 5 show that more drivers in the 16-24 age group were involved in injury traffic crashes than any other age group. The number of drivers in injury crashes in each age group decreases as age increases except for the 25-34 and 35-44 age groups. For example, drivers age 65 or older were involved in 4,295 injury crashes in 2007, or 7.8 percent of all injury crashes, lower than any of the younger age groups except drivers age 15 or younger. Male drivers made up a majority of drivers in injury crashes.

Figure 19
Drivers in Injury Traffic Crashes by Age Group, 2007

![Figure 19](image)


Table 5
Drivers in Injury Traffic Crashes by Age Group and Gender, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Unknown</td>
</tr>
<tr>
<td>15 and below</td>
<td>48</td>
<td>76</td>
<td>2</td>
</tr>
<tr>
<td>16 to 24</td>
<td>6,119</td>
<td>6,396</td>
<td>7</td>
</tr>
<tr>
<td>25 to 34</td>
<td>4,895</td>
<td>5,241</td>
<td>4</td>
</tr>
<tr>
<td>35 to 44</td>
<td>4,864</td>
<td>5,453</td>
<td>6</td>
</tr>
<tr>
<td>45 to 54</td>
<td>4,256</td>
<td>4,950</td>
<td>2</td>
</tr>
<tr>
<td>55 to 64</td>
<td>2,567</td>
<td>3,014</td>
<td>2</td>
</tr>
<tr>
<td>65 to 74</td>
<td>1,094</td>
<td>1,341</td>
<td>0</td>
</tr>
<tr>
<td>75 to 84</td>
<td>672</td>
<td>828</td>
<td>0</td>
</tr>
<tr>
<td>85 to 94</td>
<td>173</td>
<td>179</td>
<td>0</td>
</tr>
<tr>
<td>95 and above</td>
<td>3</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>295</td>
<td>681</td>
<td>2,217</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24,986</strong></td>
<td><strong>28,164</strong></td>
<td><strong>2,240</strong></td>
</tr>
</tbody>
</table>

Rate of Injury Traffic Crash Involvement by Age Group

The 65-74 age group had the lowest rate of injury crashes per 100 million VMT in 2007 (54 crashes) (Figure 20). The 95-and-above age group had the highest rate (804), followed by the 85-94 age group (404) and the 16-24 age group (255).

Figure 21 shows the rate of driver involvement in injury crashes for every hundred registered drivers. In 2007, 2.6 drivers age 16-24 were involved in traffic crashes for every hundred registered drivers in that age group. This was the highest rate of involvement of any age group. Drivers age 15 and below had the lowest rate of involvement, at 0.5 drivers for every hundred drivers registered.

Injury Traffic Crashes by Month, Day, and Hour

As Figure 22 shows, June was the month in 2007 with the most injury traffic crashes (2,619) even though December was the month with the most overall crashes (Figure 10). March, with 2,196 injury crashes, was the month with the fewest. More injury traffic crashes occurred on Fridays (4,826) than any other day. Sundays (3,184) had the fewest injury crashes of any day (Figure 23).

Figure 22
Injury Traffic Crashes by Month, 2007

![Graph showing injury traffic crashes by month from January to December. Injuries are highest in June with 2,619 crashes, and lowest in March with 2,196 crashes.](source: MSPTCD and SEMCOG, 2007)


Figure 23
Injury Traffic Crashes by Day of Week, 2007

![Graph showing injury traffic crashes by day of week from Sunday to Saturday. Injuries are highest on Friday with 4,826 crashes, and lowest on Sunday with 3,184 crashes.](source: MSPTCD and SEMCOG, 2007)

Figure 24 shows the total number of injury traffic crashes that took place during each hour interval in 2007. Following the same general pattern as total crashes (Figure 12), injury crashes were least frequent between 4 a.m. and 5 a.m. (264 injury crashes) and most common between 3 p.m. and 6 p.m. One out of every four injury crashes took place between 3 p.m. and 6 p.m.

Figure 24
Injury Traffic Crashes by Hour of Day, 2007

Fatal Traffic Crashes

A fatal traffic crash is a traffic crash that causes a death within 30 days of the crash. Fatal traffic crashes decreased 1.9 percent in Southeast Michigan in 2007. Fatal traffic crashes also decreased 1.5 percent in the state as a whole between 2006 and 2007. Figure 25 shows the number of fatal traffic crashes in Michigan and Southeast Michigan for 1998-2007.

Figure 26 shows that in 2007 traffic crash fatalities remained unchanged in the State of Michigan and decreased by nearly two percent in the Southeast Michigan between 2006 and 2007.

Figure 25

![Graph showing fatal traffic crashes from 1998 to 2007 for Southeast Michigan and State of Michigan.]


Figure 26
Traffic Crash Fatalities, 1998-2007

![Graph showing traffic crash fatalities from 1998 to 2007 for Southeast Michigan and State of Michigan.]

The rate of fatal traffic crashes per 100 million miles traveled decreased in Southeast Michigan between 2006 and 2007 (Figure 27). Table 6 shows how the number of fatal traffic crashes compared to VMT for 1998-2007.

Figure 27  
Fatal Traffic Crash Rate, 1998-2007

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.

Table 6  
Fatal Traffic Crash Rate and VMT, 1998-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatal Traffic Crashes</th>
<th>VMT (in Millions)</th>
<th>Fatal Traffic Crash Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Southeast Michigan</td>
<td>Michigan</td>
<td>Southeast Michigan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Crashes per 100 Million VMT</td>
</tr>
<tr>
<td>1998</td>
<td>463</td>
<td>1,235</td>
<td>42,513</td>
</tr>
<tr>
<td>1999</td>
<td>465</td>
<td>1,249</td>
<td>42,924</td>
</tr>
<tr>
<td>2000</td>
<td>450</td>
<td>1,237</td>
<td>44,167</td>
</tr>
<tr>
<td>2001</td>
<td>470</td>
<td>1,206</td>
<td>45,304</td>
</tr>
<tr>
<td>2002</td>
<td>420</td>
<td>1,175</td>
<td>46,067</td>
</tr>
<tr>
<td>2003</td>
<td>448</td>
<td>1,172</td>
<td>47,085</td>
</tr>
<tr>
<td>2004</td>
<td>396</td>
<td>1,055</td>
<td>47,681</td>
</tr>
<tr>
<td>2005</td>
<td>360</td>
<td>1,030</td>
<td>48,761</td>
</tr>
<tr>
<td>2006</td>
<td>362</td>
<td>1,002</td>
<td>49,746</td>
</tr>
<tr>
<td>2007</td>
<td>355</td>
<td>987</td>
<td>49,746</td>
</tr>
</tbody>
</table>

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.
Fatal Traffic Crashes by County

Fatal traffic crashes increased in 2007 in Monroe and Wayne Counties (Figure 28). Monroe and Wayne Counties also saw increases in their fatal crash rate (Figure 29).

Figure 28
Fatal Traffic Crashes by County, 2005-2007

![Graph showing fatal traffic crashes by county from 2005 to 2007.](image)


Figure 29
Fatal Traffic Crash Rate by County, 2005-2007

![Graph showing fatal traffic crash rate per 100 million VMTs by county from 2005 to 2007.](image)

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.
Fatal Traffic Crashes by Crash Type

More than 49 percent of all fatal crashes in 2007 were single-vehicle crashes (Figure 30). Angle crashes made up the next biggest portion of fatal crashes with 20 percent.

Table 7 shows that head-on crashes were the most likely to result in a fatality, with one out of every 130 head-on crashes resulting in a death. Rear-end and sideswipe crashes were the least likely to cause a death.

Figure 30
Fatal Traffic Crashes by Crash Type, 2007

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Fatal Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Percent Resulting in Fatality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncoded/errors/other/unknown</td>
<td>18</td>
<td>7,912</td>
<td>0.23%</td>
</tr>
<tr>
<td>Single vehicle</td>
<td>176</td>
<td>27,892</td>
<td>0.63%</td>
</tr>
<tr>
<td>Head-on</td>
<td>51</td>
<td>6,647</td>
<td>0.77%</td>
</tr>
<tr>
<td>Angle</td>
<td>71</td>
<td>28,393</td>
<td>0.25%</td>
</tr>
<tr>
<td>Rear-end</td>
<td>28</td>
<td>48,197</td>
<td>0.06%</td>
</tr>
<tr>
<td>Sideswipe</td>
<td>11</td>
<td>21,074</td>
<td>0.05%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>355</strong></td>
<td><strong>140,115</strong></td>
<td><strong>0.25%</strong></td>
</tr>
</tbody>
</table>

Age and Gender of Drivers in Fatal Traffic Crashes

Figure 31 shows the age distribution of drivers involved in fatal traffic crashes in 2007. Slightly more than 58 percent of drivers in fatal crashes were age 44 or younger. Table 8 divides age groups by gender of the driver. Male drivers outnumbered female drivers in fatal crashes by more than two-and-a-half times.

Figure 31
Drivers in Fatal Traffic Crashes by Age Group, 2007

![Figure 31](image_url)


Table 8
Drivers in Fatal Traffic Crashes by Age Group and Gender, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>15 and below</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>16 to 24</td>
<td>36</td>
<td>95</td>
</tr>
<tr>
<td>25 to 34</td>
<td>22</td>
<td>80</td>
</tr>
<tr>
<td>35 to 44</td>
<td>28</td>
<td>57</td>
</tr>
<tr>
<td>45 to 54</td>
<td>19</td>
<td>60</td>
</tr>
<tr>
<td>55 to 64</td>
<td>13</td>
<td>41</td>
</tr>
<tr>
<td>65 to 74</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>75 to 84</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>85 to 94</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>95 and above</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

| Total        | 147    | 383  | 30      | 560   |

Rate of Fatal Traffic Crash Involvement by Age Group

Figure 32 shows the rate of fatal traffic crashes per 100 million VMT for each age group. No drivers age 95 or older were involved in a fatal traffic crash in 2007. Of all drivers age 16-94, drivers 35-44 and 65-74 had the lowest fatal crash rate with 0.6 fatal crashes per 100 million VMT. Drivers age 85-94 had the highest fatal crash rate (11.5).

Figure 33 shows the number of drivers involved in fatal crashes compared to the number of registered drivers in that age group. By this measurement, drivers age 65-74 were least likely to be involved in a fatal traffic crash — 9.8 drivers in this age group were in fatal crashes for every hundred thousand registered drivers. Drivers age 15 and below were most likely to be in a fatal crash (29.8), followed by drivers age 16-24 (27.7).

Figure 32
Fatal Traffic Crash Rate by Age Group, 2007

![Graph showing fatal crash rate by age group.]

Source: MSPTCD and SEMCOG, 2006 VMTs were used with 2007 data. 2007 VMTs will be available soon.

Figure 33
Fatal Traffic Crash Driver Involvement Rate by Age Group, 2007

![Graph showing driver involvement rate by age group.]

Fatal Traffic Crash by Month, Day, and Hour

More fatal traffic crashes took place in June 2007 than any other month (38) (Figure 34). February 2007 had the fewest fatal crashes (19).

Figure 35 shows the total number of fatal crashes that occurred on each day of the week in 2007. Saturdays in 2007 saw the most fatal crashes (66), even though Fridays had the most overall crashes (Figure 11). Tuesday had the fewest fatal crashes (39).

Figure 34
Fatal Traffic Crashes by Month, 2007


Figure 35
Fatal Traffic Crashes by Day of Week, 2007

The 9 a.m. to 10 a.m. hour had the most fatal traffic crashes (22), followed by both 7 p.m. to 8 p.m. and 8 p.m. to 9 p.m. with 21 fatal traffic crashes each (Figure 36). The periods with the fewest fatal crashes were 4 a.m. to 5 a.m. and 6 a.m. to 7 a.m., with eight fatal crashes each.

Figure 36

Alcohol-Involved Traffic Crashes

Beginning in 2000, an alcohol-involved crash is defined as a traffic crash where a driver, pedestrian, or cyclist had been drinking prior to the crash as reported by police, the coroner, or other accepted authorities. Alcohol-involved crashes no longer include crashes where drugs other than alcohol were a factor.

There was a slight increase in alcohol-involved traffic crashes in Southeast Michigan and a decrease in Michigan’s alcohol-involved crashes in 2007 (Figure 37).

The alcohol-involved crash percentage decreased in Southeast Michigan and in the state (Figure 38).

Figure 37
Alcohol-Involved Traffic Crashes, 1998-2007

![Graph showing alcohol-involved traffic crashes from 1998 to 2007 for Southeast Michigan and State of Michigan.]


Figure 38
Alcohol-Involved Traffic Crash Percentage, 1998-2007

![Graph showing alcohol-involved traffic crash percentage from 1998 to 2007 for Southeast Michigan and State of Michigan.]

Alcohol-Involved Traffic Crashes by County

Figure 39 shows that only Oakland and Wayne Counties saw a decrease in alcohol-involved traffic crashes (3.6 and 3.1 percent respectively).

Figure 40 shows that once again Wayne County has the lowest percentage of alcohol-involved crashes in the region. Monroe County had the highest percentage of alcohol-related crashes — nearly six out of every 100 crashes in Monroe County in 2007 involved alcohol.

Alcohol-Involved Traffic Crashes by Severity

Over 79 percent of all traffic crashes that did not involve alcohol did not result in any injuries, compared to just over 60 percent of alcohol-involved crashes. Alcohol-involved crashes were 11 times as likely to be fatal as non-alcohol-involved crashes. Figure 41 shows how the severity of alcohol-involved crashes compared to all other crashes in 2007.

Table 9 shows that 31 percent of all fatal crashes in Southeast Michigan in 2007 involved alcohol, and nearly 15 percent of all A-level injury crashes involved alcohol.

Table 9

<table>
<thead>
<tr>
<th>Crash Severity</th>
<th>Alcohol-Involved Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Alcohol-Involved Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal</td>
<td>110</td>
<td>355</td>
<td>31.0%</td>
</tr>
<tr>
<td>A-level injury</td>
<td>341</td>
<td>2,297</td>
<td>14.8%</td>
</tr>
<tr>
<td>B-level injury</td>
<td>606</td>
<td>6,237</td>
<td>9.7%</td>
</tr>
<tr>
<td>C-level injury</td>
<td>954</td>
<td>20,393</td>
<td>4.7%</td>
</tr>
<tr>
<td>PDO</td>
<td>3,090</td>
<td>110,833</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,101</strong></td>
<td><strong>140,115</strong></td>
<td><strong>3.6%</strong></td>
</tr>
</tbody>
</table>

Alcohol-Involved Traffic Crashes by Crash Type

Crashes involving alcohol in 2007 were most often single-vehicle crashes, followed by rear-end crashes (Figure 42). This pattern is different from the one shown by crashes that did not involve alcohol, where rear-end crashes were most common, followed by angle crashes. More than one out of every 12 single-vehicle crashes in 2007 involved alcohol (Table 10).

Figure 42
Alcohol-Involved Traffic Crashes by Type, 2007

Table 10
Traffic Crash type by Percent Involving Alcohol, 2007

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Alcohol-Involved Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Alcohol-Involved Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncoded/errors/other/unknown</td>
<td>152</td>
<td>7,912</td>
<td>1.9%</td>
</tr>
<tr>
<td>Single vehicle</td>
<td>2,256</td>
<td>27,892</td>
<td>8.1%</td>
</tr>
<tr>
<td>Head-on</td>
<td>347</td>
<td>6,647</td>
<td>5.2%</td>
</tr>
<tr>
<td>Angle</td>
<td>568</td>
<td>28,393</td>
<td>2.0%</td>
</tr>
<tr>
<td>Rear-end</td>
<td>1,215</td>
<td>48,197</td>
<td>2.5%</td>
</tr>
<tr>
<td>Sideswipe</td>
<td>563</td>
<td>21,074</td>
<td>2.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,101</strong></td>
<td><strong>140,115</strong></td>
<td><strong>3.6%</strong></td>
</tr>
</tbody>
</table>

Age and Gender Had-Been-Drinking Drivers in Alcohol-Involved Traffic Crashes

Drivers between the ages of 16 and 44 accounted for more than 64 percent of had-been-drinking (HBD) drivers in 2007. Figure 43 shows the percent of HBD drivers in each age group in 2007.

Table 11 shows the numbers of HBD drivers in each age group by gender. In 2007, there were more than 2.2 male drinking drivers in crashes for every one female drinking driver in a crash.

Figure 43
HBD Drivers by Age Group in Alcohol-Involved Traffic Crashes, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>15 and below</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>16 to 24</td>
<td>645</td>
<td>1,314</td>
</tr>
<tr>
<td>25 to 34</td>
<td>497</td>
<td>1,272</td>
</tr>
<tr>
<td>35 to 44</td>
<td>510</td>
<td>1,085</td>
</tr>
<tr>
<td>45 to 54</td>
<td>420</td>
<td>858</td>
</tr>
<tr>
<td>55 to 64</td>
<td>162</td>
<td>399</td>
</tr>
<tr>
<td>65 to 74</td>
<td>47</td>
<td>131</td>
</tr>
<tr>
<td>75 to 84</td>
<td>14</td>
<td>36</td>
</tr>
<tr>
<td>85 to 94</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>95 and above</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,310</strong></td>
<td><strong>5,128</strong></td>
</tr>
</tbody>
</table>

Rate of Had-Been Drinking Traffic Crash Involvement by Age Group

Figure 44 shows the number of HBD drivers in each age group per 100 million miles traveled by that age group. The 16-24 age group had the highest number of HBD drivers compared to the number of miles traveled, and the 95 and above age group having none.

Figure 45 shows the number of HBD drivers compared to the number of registered drivers in each age group, with the 16-24 age group having the highest rate of HBD drivers and the 95 and above age group having the lowest rate of zero.

Figure 44
Alcohol-Involved Traffic Crash HBD Driver Involvement Rate by Age Group, 2007

Source: MSPTCD and SEMCOG, 2006 VMT’s were used with 2007 data. 2007 VMT’s will be available soon.

Figure 45
Alcohol-Involved Traffic Crash HBD Driver Involvement Rate by Age Group, 2007

Alcohol-Involved Traffic Crashes by Month, Day, and Hour

Figure 46 shows the number of alcohol-involved traffic crashes that took place during each month of 2007. December had the most alcohol-involved crashes (474) as well as the most crashes overall (Figure 10). April saw the fewest alcohol-involved crashes (387).

As shown in Figure 47, alcohol-involved traffic crashes increase on the weekends, the opposite of the pattern shown by all crashes (Figure 11). Saturdays had the most alcohol-involved crashes (1,135) and Tuesdays saw the fewest (496).

More alcohol-involved crashes (644) took place between 2 a.m. and 3 a.m. than during any other hour interval in 2007 (Figure 48). Because of the relatively small number of overall crashes taking place during that hour (Figure 12), nearly one out of every four traffic crashes that took place between 2 a.m. and 3 a.m. involved alcohol.

Figure 48
Alcohol-Involved Traffic Crashes by Hour of Day, 2007

Collisions between deer and motor vehicles increased in 2007 in the State of Michigan by 1.7 percent and decreased in Southeast Michigan by 1.2 percent (Figure 49).

The percentage of all crashes that involved deer in Southeast Michigan decreased to 4.5 percent in 2007, making this the second highest rate since SEMCOG began keeping records in 1993. The deer-crash rate also decreased slightly in Michigan to 19.1 percent (Figure 50).

Figure 49


Figure 50

Vehicle-Deer Traffic Crashes by County

Car-deer crashes decreased in Livingston, Monroe, Washtenaw, and Wayne Counties in 2007. Figure 51 shows the number of vehicle-deer crashes in each county in 2005-2007.

Livingston County continues to lead the region in vehicle-deer crash percentage (Figure 52). More than one out of every five crashes in Livingston County in 2007 involved a deer.

Figure 51
Vehicle-Deer Traffic Crashes by County, 2005-2007

![Vehicle-Deer Traffic Crashes by County, 2005-2007](chart)

**Source:** MSPTCD and SEMCOG, 2007.

Figure 52
Vehicle-Deer Traffic Crash Percentage by County, 2005-2007

![Vehicle-Deer Traffic Crash Percentage by County, 2005-2007](chart)

**Source:** MSPTCD and SEMCOG, 2007.
Vehicle-Deer Traffic Crashes by Severity

Crashes with deer accounted for over five percent of all PDO crashes in Southeast Michigan in 2007 (Table 12). There was one vehicle-deer crash that was fatal in Southeast Michigan in 2007, and nearly 97 percent of all crashes with deer resulted only in property damage.

Table 12
Vehicle-Deer Traffic Crash Severity, 2007

<table>
<thead>
<tr>
<th>Crash Severity</th>
<th>Vehicle-Deer Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Vehicle-Deer Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal</td>
<td>1</td>
<td>355</td>
<td>0.3%</td>
</tr>
<tr>
<td>A-level Injury</td>
<td>10</td>
<td>2,297</td>
<td>0.4%</td>
</tr>
<tr>
<td>B-level Injury</td>
<td>61</td>
<td>6,237</td>
<td>1.0%</td>
</tr>
<tr>
<td>C-level Injury</td>
<td>122</td>
<td>20,393</td>
<td>0.6%</td>
</tr>
<tr>
<td>PDO</td>
<td>6,086</td>
<td>110,833</td>
<td>5.5%</td>
</tr>
<tr>
<td>Total</td>
<td>6,280</td>
<td>140,115</td>
<td>4.5%</td>
</tr>
</tbody>
</table>


Vehicle-Deer Traffic Crashes by Month, Day, and Hour

Figure 53 shows the number of vehicle-deer crashes that took place in each month of 2007. More than 37 percent of all deer crashes took place in October or November. Deer crashes peaked in November at 1,308. August had the fewest vehicle-deer crashes at 205.

Figure 53
Vehicle-Deer Traffic Crashes by Month, 2007

Figure 54 shows the number of vehicle-deer crashes in 2007 by the day on which they occurred. Most deer crashes occurred on Fridays (979); the fewest occurred on Sundays (750).

Deer crashes were most likely to occur during evenings or early mornings (Figure 55). The pattern of deer crashes by time of day is quite different from the pattern of all traffic crashes (Figure 12). The morning peak in deer crashes is slightly higher than the evening peak, and crashes decrease sharply during daylight hours.

Figure 54
Vehicle-Deer Traffic Crashes by Day of Week, 2007


Figure 55
Vehicle-Deer Traffic Crashes by Hour of Day, 2007

Young-Driver Traffic Crashes

A young driver is commonly defined as a driver between the age of 16 and 24. Young-driver crashes increased 0.8 percent in Southeast Michigan between 2006 and 2007 (Figure 56). Table 13 shows young-driver crash percentages for 1998-2007.

Figure 56
Young-Driver Traffic Crashes, 1998-2007

![Graph showing young-driver traffic crashes](source)


Table 13
Young-Driver Traffic Crash Percentage, 1998-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Young-Driver Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Young-Driver Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>63,510</td>
<td>186,693</td>
<td>34.0%</td>
</tr>
<tr>
<td>1999</td>
<td>64,415</td>
<td>191,006</td>
<td>33.7%</td>
</tr>
<tr>
<td>2000</td>
<td>67,351</td>
<td>193,955</td>
<td>34.7%</td>
</tr>
<tr>
<td>2001</td>
<td>61,929</td>
<td>180,739</td>
<td>34.3%</td>
</tr>
<tr>
<td>2002</td>
<td>61,243</td>
<td>174,770</td>
<td>35.0%</td>
</tr>
<tr>
<td>2003</td>
<td>60,308</td>
<td>171,105</td>
<td>35.2%</td>
</tr>
<tr>
<td>2004</td>
<td>58,711</td>
<td>164,900</td>
<td>35.6%</td>
</tr>
<tr>
<td>2005</td>
<td>55,173</td>
<td>157,284</td>
<td>35.1%</td>
</tr>
<tr>
<td>2006</td>
<td>48,541</td>
<td>138,165</td>
<td>35.1%</td>
</tr>
<tr>
<td>2007</td>
<td>48,949</td>
<td>140,115</td>
<td>34.9%</td>
</tr>
</tbody>
</table>

Young-Driver Traffic Crashes by County

Figure 57 shows the number of young-driver crashes in each county in 2005-2007. All Southeast Michigan counties except Wayne, experienced an increase in young-driver crashes; at 10 percent, Livingston County had the greatest increase.

Wayne County continued to have the lowest young-driver traffic crash percentage in the region at 31.0 percent (Figure 58). Except for Wayne, all counties have young-driver crash rates at or above the regional traffic crash percentage of 34.9 percent.

Figure 57
Young-Driver Traffic Crashes by County, 2005-2007

Figure 58
Young-Driver Traffic Crash Percentage by County, 2005-2007

Young-Driver Traffic Crashes by Severity and Crash Type

Just over 77 percent of traffic crashes involving young drivers resulted in property damage only. Figure 59 shows the severity of crashes involving young drivers in 2007. When compared to all other drivers, young drivers were more likely to have rear-end, angle, and head-on crashes and less likely to have single vehicle or sideswipe crashes than all drivers (Figure 60).

Figure 59
Young-Driver Traffic Crashes Severity, 2007

![Pie chart showing the severity of crashes involving young drivers in 2007. PDO (Property Damage Only) accounts for 77.1% of crashes, with Fatal crashes at 0.2%, A-level injuries at 1.6%, B-level injuries at 5.1%, and C-level injuries at 16.0%.


Figure 60
Young-Driver Traffic Crashes by Crash Type, 2007

![Pie chart showing the types of crashes involving young drivers in 2007. Rear-end crashes account for 38.9%, Angle crashes for 22.8%, Head-on crashes for 5.7%, Single vehicle crashes for 16.5%, and Sideswipe crashes for 12.4%.


All Other Traffic Crashes

![Pie chart showing the types of crashes involving all other drivers in 2007. Rear-end crashes account for 34.4%, Sideswipe crashes for 15.0%, Uncoded/Errors/Other/Unknown crashes for 5.6%, Angle crashes for 20.3%, Single vehicle crashes for 19.9%, and Head-on crashes for 4.7%.

Age and Gender of Young Drivers in Traffic Crashes

Figure 61 shows how many young drivers of each specific age were involved in traffic crashes in 2007. Crashes among young drivers peaked at age 18 as a group with over 7,628 crashes, although male drivers experienced higher totals. Table 14 breaks down each age by gender.

Figure 61
Young Driver Traffic Crash Involvement by Age Group, 2007

Table 14
Young Driver Traffic Crash Involvement by Age Group and Gender, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>16</td>
<td>2,411</td>
<td>2,753</td>
</tr>
<tr>
<td>17</td>
<td>3,442</td>
<td>3,801</td>
</tr>
<tr>
<td>18</td>
<td>3,444</td>
<td>4,184</td>
</tr>
<tr>
<td>19</td>
<td>3,152</td>
<td>3,828</td>
</tr>
<tr>
<td>20</td>
<td>2,996</td>
<td>3,213</td>
</tr>
<tr>
<td>21</td>
<td>2,726</td>
<td>3,116</td>
</tr>
<tr>
<td>22</td>
<td>2,685</td>
<td>2,945</td>
</tr>
<tr>
<td>23</td>
<td>2,556</td>
<td>2,657</td>
</tr>
<tr>
<td>24</td>
<td>2,489</td>
<td>2,768</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25,901</td>
<td>29,265</td>
</tr>
</tbody>
</table>

Young-Driver Traffic Crashes by Month, Day, and Hour

Crashes involving young drivers were most frequent in January (4,910) and December (4,892) and least frequent in July. When grouped by day of week, young-driver crashes followed the same pattern as all crashes (Figure 11), with most crashes taking place on Fridays (8,395) and the fewest taking place on Sundays (5,299). Figures 62 and 63 show these numbers in greater detail.

Figure 62
Young-Driver Traffic Crashes by Month, 2007

![Young-Driver Traffic Crashes by Month, 2007](image)


Figure 63
Young-Driver Traffic Crashes by Day of Week, 2007

![Young-Driver Traffic Crashes by Day of Week, 2007](image)

Figure 64 shows the number of young-driver traffic crashes grouped by the hour they occurred. As with all traffic crashes in 2007 (Figure 12), traffic crashes involving young drivers were most frequent between 3 p.m. and 6 p.m. and least frequent between 4 a.m. and 6 a.m.

Figure 64
Young-Driver Traffic Crashes by Hour of Day, 2007

Elderly Driver Traffic Crashes

An elderly driver is commonly defined as a driver who is age 65 or older. Figure 65 shows the number of traffic crashes involving elderly drivers in Southeast Michigan in 2007, regardless of the cause of the crash. Crashes involving elderly drivers in Southeast Michigan increased 1.5 percent in 2007, ending a nine-year decline.

Twelve percent of all traffic crashes in Southeast Michigan in 2007 involved an elderly driver (Table 15).

![Graph of Elderly Driver Traffic Crashes, 1998-2007](image)

Source: MSPTCD and SEMCOG, 2007. *Michigan data was not available.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Elderly-Driver Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Elderly-Driver Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>21,393</td>
<td>186,693</td>
<td>11.5%</td>
</tr>
<tr>
<td>1999</td>
<td>21,109</td>
<td>191,006</td>
<td>11.1%</td>
</tr>
<tr>
<td>2000</td>
<td>20,456</td>
<td>193,955</td>
<td>10.5%</td>
</tr>
<tr>
<td>2001</td>
<td>19,903</td>
<td>180,739</td>
<td>11.0%</td>
</tr>
<tr>
<td>2002</td>
<td>19,370</td>
<td>174,770</td>
<td>11.1%</td>
</tr>
<tr>
<td>2003</td>
<td>18,984</td>
<td>171,105</td>
<td>11.1%</td>
</tr>
<tr>
<td>2004</td>
<td>18,363</td>
<td>164,900</td>
<td>11.1%</td>
</tr>
<tr>
<td>2005</td>
<td>17,957</td>
<td>157,284</td>
<td>11.4%</td>
</tr>
<tr>
<td>2006</td>
<td>16,597</td>
<td>138,165</td>
<td>12.0%</td>
</tr>
<tr>
<td>2007</td>
<td>16,857</td>
<td>140,115</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

Elderly Driver Traffic Crashes by County

Figures 66 and 67 show the number of elderly driver traffic crashes in each county as well as the elderly driver traffic crash percentage by county. The region as a whole saw an increase in elderly driver crashes even though Wayne and Macomb Counties saw slight decreases.

Macomb County continued to have the highest percentage of elderly driver crashes in the region at 13.2 percent. Livingston County had the lowest percentage in the region at 8.9 percent.

Figure 66
Elderly Driver Traffic Crashes by County, 2005-2007

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>407</td>
<td>455</td>
<td>480</td>
</tr>
<tr>
<td>Macomb</td>
<td>3,338</td>
<td>3,161</td>
<td>3,152</td>
</tr>
<tr>
<td>Monroe</td>
<td>518</td>
<td>437</td>
<td>451</td>
</tr>
<tr>
<td>Oakland</td>
<td>4,987</td>
<td>4,636</td>
<td>4,829</td>
</tr>
<tr>
<td>St. Clair</td>
<td>579</td>
<td>528</td>
<td>560</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>1,046</td>
<td>938</td>
<td>1,041</td>
</tr>
<tr>
<td>Wayne</td>
<td>7,082</td>
<td>6,442</td>
<td>6,344</td>
</tr>
</tbody>
</table>


Figure 67
Elderly Driver Traffic Crash Percentage by County, 2005-2007

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>7.2%</td>
<td>8.9%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Macomb</td>
<td>13.2%</td>
<td>13.9%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Monroe</td>
<td>11.0%</td>
<td>11.2%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Oakland</td>
<td>11.9%</td>
<td>12.4%</td>
<td>12.8%</td>
</tr>
<tr>
<td>St. Clair</td>
<td>12.1%</td>
<td>12.3%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>8.9%</td>
<td>9.1%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Wayne</td>
<td>11.2%</td>
<td>11.8%</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

**Elderly Driver Traffic Crashes by Severity and Crash Type**

Nearly 76 percent of all traffic crashes involving elderly drivers resulted in property damage only (Figure 68), compared to 79.1 percent of all traffic crashes (Figure 5).

Elderly drivers were more likely to be involved in rear-end, angle, head-on, and sideswipes crashes and less likely to be involved in single vehicle crashes when compared to all other driver crashes (Figure 69).

**Figure 68**
**Elderly Driver Traffic Crash Severity, 2007**

![Pie chart showing crash severity percentages.](chart1.png)


**Figure 69**
**Elderly Driver Traffic Crashes by Crash Type, 2007**

**Elderly Drivers Traffic Crashes**
- Rear-end: 35.2%
- Angle: 29.1%
- Sideswipe: 16.8%
- Head-on: 6.3%
- Single vehicle: 8.2%
- Uncoded/errors/other/unknown: 4.3%

**All Other Traffic Crashes**
- Rear-end: 15.0%
- Sideswipe: 15.0%
- Single vehicle: 19.9%
- Angle: 20.3%
- Head-on: 4.7%
- Uncoded/ errors/ other/ unknown: 5.6%

Age and Gender of Elderly Drivers in Traffic Crashes

In 2007, 17,723 elderly drivers were involved in traffic crashes in Southeast Michigan. Over half of these drivers were in the 65-74 age group. Table 16 shows the distribution of elderly drivers in traffic crashes by age and gender.

Table 16
Elderly Driver Involvement in Traffic Crashes by Age and Gender, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>65 to 74</td>
<td>4,267</td>
<td>5,839</td>
</tr>
<tr>
<td>75 to 84</td>
<td>2,773</td>
<td>3,361</td>
</tr>
<tr>
<td>85 to 94</td>
<td>651</td>
<td>790</td>
</tr>
<tr>
<td>95 and above</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7,705</td>
<td>10,009</td>
</tr>
</tbody>
</table>


Elderly Driver Traffic Crashes by month, Day, and Hour

Elderly driver crashes were most common in October (1,607) and least common in April (Figure 70).

Figure 70
Elderly Driver Traffic Crashes by Month, 2007

In 2007, crashes involving elderly drivers occurred more often on Fridays and least often on Sundays (Figure 71).

Figure 72 shows the number of elderly driver traffic crashes grouped by the hour during which they occurred. The peak time for elderly driver crashes was between 2 p.m. and 4 p.m., with a noticeable drop after these hours. This is different from the pattern of all traffic crashes (Figure 12), where the afternoon peak lasts for three hours, from 3 p.m. to 6 p.m. Elderly driver crashes also do not appear to have the morning peak between 7 a.m. and 9 a.m. that is shown among all traffic crashes.

Figure 71
Elderly Driver Traffic Crashes by Day of Week, 2007


Figure 72
Elderly Driver Traffic Crashes by Hour of Day, 2007

Pedestrian Traffic Crashes

A pedestrian is typically defined as a person traveling on foot. Crashes in Southeast Michigan involving pedestrians totaled 1,299 in 2007 (Figure 73), a 7.3 percent decrease from 2006.

Figure 73

![Pedestrian Traffic Crashes Graph]


Pedestrian Traffic Crashes by County

Wayne County had the highest number of pedestrian crashes in 2007, followed by Oakland and Macomb Counties (Figure 74).

Figure 74
Pedestrian Traffic Crashes by County, 2005-2007

![Pedestrian Traffic Crashes by County Graph]

Pedestrian Traffic Crashes by Severity

Figure 75 shows 4.9 percent of the traffic crashes involving pedestrians in 2007 were fatal, compared to 0.3 percent of all crashes; only 11.7 percent of pedestrian crashes resulted in no injury, compared to 79.1 percent of all crashes (Figure 5). Due to ongoing issues with the data, it is not possible to compare the injury severity of pedestrians with the injury severity of drivers, although it may be reasonable to assume that in most cases pedestrians are injured more severely than drivers.

Figure 75
Pedestrian Traffic Crash Severity, 2007

![Pie chart showing pedestrian crash severity distribution]


Pedestrian Traffic Crashes by Month, Day, and Hour

Traffic crashes involving pedestrians (Figure 76) peaked in the months of May (127) and October (133). February had the fewest pedestrian crashes with 87.

Figure 76
Pedestrian Traffic Crashes by Month, 2007

![Graph showing pedestrian traffic crashes by month]

In 2007, pedestrian crashes were less likely to take place on Sundays and Saturdays than any other days of the week. The lowest pedestrian crash total was 149 on Sundays, and the highest number was 234 on Fridays (Figure 77).

Pedestrian crashes, like all crashes, were more frequent during daylight hours, with most pedestrian crashes taking place in the late afternoon and evening hours (Figure 78).

Figure 77
Pedestrian Traffic Crashes by Day of Week, 2007

![Pedestrian Traffic Crashes by Day of Week, 2007](image)


Figure 78
Pedestrian Traffic Crashes by Hour of Day, 2007

![Pedestrian Traffic Crashes by Hour of Day, 2007](image)

Bicycle Traffic Crashes

A bicycle is defined in the 2000 Michigan Traffic Crash Facts Book as a device propelled by human power upon which a person may ride. Under this definition, a bicycle may have two or three wheels. Traffic crashes in Southeast Michigan involving bicycles increased 11 percent between 2006 and 2007 (Figure 79).

Wayne County led the region in bicycle crashes, followed by Macomb County and Oakland County. Livingston and Washtenaw Counties were the only counties to experience decreases in traffic crashes involving bicycles (Figure 80).

Figure 79

![Diagram showing bicycle traffic crashes from 1998 to 2007 in southeast Michigan.]


Figure 80
Bicycle Traffic Crashes by County, 2005-2007

<table>
<thead>
<tr>
<th>County</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>13</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Macomb</td>
<td>202</td>
<td>194</td>
<td>245</td>
</tr>
<tr>
<td>Monroe</td>
<td>25</td>
<td>20</td>
<td>26</td>
</tr>
<tr>
<td>Oakland</td>
<td>223</td>
<td>210</td>
<td>234</td>
</tr>
<tr>
<td>St. Clair</td>
<td>30</td>
<td>29</td>
<td>38</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>64</td>
<td>80</td>
<td>71</td>
</tr>
<tr>
<td>Wayne</td>
<td>433</td>
<td>406</td>
<td>434</td>
</tr>
</tbody>
</table>

Bicycle Traffic Crashes by Severity

Traffic crashes involving bicycles (Figure 81) are more severe than overall crashes (Figure 5), but less severe than crashes involving pedestrians (Figure 75). More than 19.6 percent of crashes involving bicycles resulted in no injuries, compared to 79.1 percent of all crashes and 11.7 percent of pedestrian crashes.

Figure 81
Bicycle Traffic Crash Severity, 2007


Bicycle Traffic Crashes by Month, Day, and Hour

Bicycle crashes were more common in warmer months, unlike pedestrian crashes. This is likely due to the difficulties of bicycling in snowy or icy conditions. Bicycle crashes peaked in the month of July at 185 crashes and hit a low point in February with 12 crashes (Figure 82).

Figure 82
Bicycle Traffic Crashes by Month, 2007

As with pedestrian crashes and all crashes, bicycle crashes were more common on weekdays (Figure 83). Fridays had the most bicycle crashes (184) and Sundays had the fewest (106).

Bicycle crashes follow a time-of-day pattern that is similar to pedestrian crashes, with most crashes occurring in the late afternoon and early evening hours (Figure 84).

Figure 83
Bicycle Traffic Crashes by Day of Week, 2007


Figure 84
Bicycle Traffic Crashes by Hour of Day, 2007

Truck/Bus Traffic Crashes

Truck/bus traffic crashes are crashes that involve a commercial truck or bus. Truck/bus crashes increased in 2007 in both Southeast Michigan and Michigan (each by 5.4 percent) (Figure 85).

Southeast Michigan continues to have a higher percentage of truck/bus crashes than the State of Michigan (Figure 86). In 2007, more than one out of every 20 traffic crashes (5.1 percent) in Southeast Michigan involved a commercial truck or bus.

Figure 85
Truck/Bus Traffic Crashes, 1998-2007


Figure 86
Truck/Bus Traffic Crash Percentage, 1998-2007

Truck/Bus Traffic Crashes by County

Figure 87 shows the number of truck/bus traffic crashes in each Southeast Michigan county in 2005-2007. Only Monroe and Oakland counties experienced a drop in truck/bus crashes in 2007.

Monroe County continued to lead the region in truck/bus traffic crash percentage at nearly eight percent. The counties with the lowest truck/bus crash percentages were Livingston and Oakland (Figure 88).

Figure 87
Truck/Bus Traffic Crashes by County, 2005-2007

<table>
<thead>
<tr>
<th>County</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>231</td>
<td>191</td>
<td>218</td>
</tr>
<tr>
<td>Macomb</td>
<td>1,209</td>
<td>921</td>
<td>1,075</td>
</tr>
<tr>
<td>Monroe</td>
<td>394</td>
<td>321</td>
<td>318</td>
</tr>
<tr>
<td>Oakland</td>
<td>1,727</td>
<td>1,417</td>
<td>1,390</td>
</tr>
<tr>
<td>St. Clair</td>
<td>207</td>
<td>171</td>
<td>181</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>629</td>
<td>518</td>
<td>525</td>
</tr>
<tr>
<td>Wayne</td>
<td>4,014</td>
<td>3,209</td>
<td>3,404</td>
</tr>
</tbody>
</table>


Figure 88
Truck/Bus Traffic Crash Percentage by County, 2005-2007

<table>
<thead>
<tr>
<th>County</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>4.1%</td>
<td>3.7%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Macomb</td>
<td>4.8%</td>
<td>4.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Monroe</td>
<td>8.4%</td>
<td>8.2%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Oakland</td>
<td>4.1%</td>
<td>3.8%</td>
<td>3.7%</td>
</tr>
<tr>
<td>St. Clair</td>
<td>4.3%</td>
<td>4.0%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>5.3%</td>
<td>5.0%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Wayne</td>
<td>6.4%</td>
<td>5.9%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

Truck/Bus Traffic Crashes by Severity

More than 82 percent of truck/bus crashes resulted in property damage only, compared to 79.1 percent of all traffic crashes (Figure 89). There were 34 fatal truck/bus crashes, which is 0.5 percent of all truck/bus crashes. Table 17 shows the number of truck/bus crashes compared to all crashes for each severity level.

Figure 89
Truck/Bus Traffic Crash by Severity, 2007

Table 17
Truck/Bus Traffic Crash by Severity, 2007

<table>
<thead>
<tr>
<th>Crash Severity</th>
<th>Truck/Bus Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Truck/Bus Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal</td>
<td>34</td>
<td>355</td>
<td>9.6%</td>
</tr>
<tr>
<td>A-level Injury</td>
<td>114</td>
<td>2,297</td>
<td>5.0%</td>
</tr>
<tr>
<td>B-level Injury</td>
<td>293</td>
<td>6,237</td>
<td>4.7%</td>
</tr>
<tr>
<td>C-level Injury</td>
<td>834</td>
<td>20,393</td>
<td>4.1%</td>
</tr>
<tr>
<td>PDO</td>
<td>5,836</td>
<td>110,833</td>
<td>5.3%</td>
</tr>
<tr>
<td>Total</td>
<td>7,111</td>
<td>140,115</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

Truck/Bus Traffic Crashes by Crash Type

Figure 90 shows how truck/bus crashes and all other crashes were distributed among crash types. Crashes involving commercial trucks and buses were more often sideswipes and less often angle crashes, single-vehicle, rear-end, or head-on crashes when compared to all other crashes. Just over 13.1 percent of all sideswipe crashes involved a commercial truck or bus (Table 18).


Table 18
Traffic Crash Type by Truck/Bus Percentage, 2007

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Truck/Bus Traffic Crashes</th>
<th>All Traffic Crashes</th>
<th>Truck/Bus Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncoded/errors/other/unknown</td>
<td>739</td>
<td>7,912</td>
<td>9.3%</td>
</tr>
<tr>
<td>Single vehicle</td>
<td>639</td>
<td>27,892</td>
<td>2.3%</td>
</tr>
<tr>
<td>Head-on</td>
<td>168</td>
<td>6,647</td>
<td>2.5%</td>
</tr>
<tr>
<td>Angle</td>
<td>1,097</td>
<td>28,393</td>
<td>3.9%</td>
</tr>
<tr>
<td>Rear-end</td>
<td>1,707</td>
<td>48,197</td>
<td>3.5%</td>
</tr>
<tr>
<td>Sideswipe</td>
<td>2,761</td>
<td>21,074</td>
<td>13.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,111</strong></td>
<td><strong>140,115</strong></td>
<td><strong>5.1%</strong></td>
</tr>
</tbody>
</table>

Age and Gender of Truck/Bus Drivers in Traffic Crashes

Of the truck or bus drivers whose ages were recorded, 54.6 percent were in the 35-54 age group (Figure 91). Table 19 shows the age and gender of truck or bus drivers in crashes in 2007. Most of those drivers were male.

Figure 91
Truck/Bus Drivers in Traffic Crashes by Age Group, 2007

Table 19
Truck/Bus Drivers in Traffic Crashes by Age and Gender, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>15 and below</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>16 to 24</td>
<td>16</td>
<td>252</td>
</tr>
<tr>
<td>25 to 34</td>
<td>93</td>
<td>1,116</td>
</tr>
<tr>
<td>35 to 44</td>
<td>212</td>
<td>1,807</td>
</tr>
<tr>
<td>45 to 54</td>
<td>299</td>
<td>1,722</td>
</tr>
<tr>
<td>55 to 64</td>
<td>146</td>
<td>833</td>
</tr>
<tr>
<td>65 to 74</td>
<td>9</td>
<td>166</td>
</tr>
<tr>
<td>75 to 84</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>85 to 94</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>95 and above</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Unknown</td>
<td>11</td>
<td>136</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>789</td>
<td>6,048</td>
</tr>
</tbody>
</table>

Truck/Bus Traffic Crashes by Month, Day, and Hour

Traffic crashes involving trucks and buses were more frequent during May and June (Figure 92) and least frequent in July. Truck/bus crashes were much more common on weekdays, with just over 90 percent of truck/bus crashes taking place during the Monday-Friday period (Figure 93).

Figure 92
Truck/Bus Traffic Crashes by Month, 2007

![Graph showing truck/bus traffic crashes by month in 2007.]


Figure 93
Truck/Bus Traffic Crashes by Day of Week, 2007

![Graph showing truck/bus traffic crashes by day of week in 2007.]

When grouped by hour of day (Figure 94), truck/bus crashes were likely to peak during daylight hours, unlike all traffic crashes (Figure 12).

**Figure 94**  
**Truck/Bus Traffic Crashes by Hour of Day, 2007**

Safety-Belt Use

Use of safety belts by drivers in traffic crashes increased slightly in 2007 in Southeast Michigan (Figure 95). Nearly 85 percent of drivers in crashes reported that they were wearing their safety belts at the time of the crash. Figure 96 shows safety-belt use in each county. Macomb and Wayne Counties were below 90 percent safety-belt usage in 2007. Wayne County continued to have the lowest rate of belt use at 74.9 percent. Macomb and St. Clair Counties showed slight decreases in safety-belt usage in crashes.

Figure 95
Driver Safety-Belt Use, 1998-2007

![Safety-belt use chart](chart.png)


Figure 96
Driver Safety-Belt Use by County, 2005-2007

![Safety-belt use by county chart](chart.png)

Injury Severity of Belted vs. Unbelted Drivers

More than 87 percent of belted drivers escaped injury altogether, but only 59 percent of unbelted drivers were uninjured (Figure 97). These figures should not be confused with crash severity, which is determined by the most severe injury outcome in a crash.

Figure 97
Injury Severity of Belted Drivers Compared to Unbelted Drivers, 2007

Belted Drivers

Uncoded/ errors 1%

Fatal 0.0%

A-level injury 0.5%

B-level injury 1.9%

C-level injury 9.3%

No injury 87.5%

Unbelted Drivers

No injury 58.7%

Uncoded/ errors 3%

Fatal 2.3%

A-level injury 8.9%

C-level injury 14.6%

B-level injury 12.5%

Unbelted Drivers by Age, Gender, and Alcohol Use

Nearly 50 percent of drivers not wearing their safety belts during a crash were between the ages of 16 and 34 (Figure 98). Table 20 shows that more than twice as many males as females were not wearing their safety belts at the time of a crash.

Figure 98
Unbelted Drivers by Age Group, 2007

![Graph showing Unbelted Drivers by Age Group, 2007]


Table 20
Unbelted Drivers by Age and Gender, 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Drivers by Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>15 and below</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>16 to 24</td>
<td>188</td>
<td>464</td>
</tr>
<tr>
<td>25 to 34</td>
<td>147</td>
<td>371</td>
</tr>
<tr>
<td>35 to 44</td>
<td>131</td>
<td>267</td>
</tr>
<tr>
<td>45 to 54</td>
<td>112</td>
<td>236</td>
</tr>
<tr>
<td>55 to 64</td>
<td>64</td>
<td>133</td>
</tr>
<tr>
<td>65 to 74</td>
<td>17</td>
<td>45</td>
</tr>
<tr>
<td>75 to 84</td>
<td>16</td>
<td>34</td>
</tr>
<tr>
<td>85 to 94</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>95 and above</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>10</td>
<td>46</td>
</tr>
</tbody>
</table>

Drivers who had been consuming alcohol were more than 10 times as likely as non-drinking drivers to not wear their safety belts. Nearly nine percent of drinking drivers were unbelted at the time of a crash, compared to nearly one percent of all other drivers (Figure 99).

**Figure 99**  
**Safety-Belt Use Among HBD Drivers, 2007**

**Drinking Drivers**
- Belted: 72.0%
- Unbelted: 8.5%
- Unknown: 19.6%

**All Other Drivers**
- Belted: 85.1%
- Unbelted: 0.8%
- Unknown: 14.2%

Holiday Traffic Crashes

Holiday periods as defined by the National Safety Council vary according to the day of the week on which the holiday falls. Time periods for holidays that always fall on the same day of the week (such as Memorial Day and Thanksgiving) will always be the same length, and time periods for holidays determined by date (such as Fourth of July and Christmas) will vary from year to year (Table 21).

Table 21
Holiday Time Periods

<table>
<thead>
<tr>
<th>Holiday day of week</th>
<th>Holiday period begins</th>
<th>Holiday period ends</th>
<th>Number of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>6:00 p.m. Friday</td>
<td>11:59 p.m. Monday</td>
<td>$3 \frac{1}{4}$</td>
</tr>
<tr>
<td>Monday</td>
<td>6:00 p.m. Friday</td>
<td>11:59 p.m. Monday</td>
<td>$3 \frac{1}{4}$</td>
</tr>
<tr>
<td>Tuesday</td>
<td>6:00 p.m. Friday</td>
<td>11:59 p.m. Tuesday</td>
<td>$4 \frac{1}{4}$</td>
</tr>
<tr>
<td>Wednesday</td>
<td>6:00 p.m. Tuesday</td>
<td>11:59 p.m. Wednesday</td>
<td>$1 \frac{1}{4}$</td>
</tr>
<tr>
<td>Thursday</td>
<td>6:00 p.m. Wednesday</td>
<td>11:59 p.m. Sunday</td>
<td>$4 \frac{1}{4}$</td>
</tr>
<tr>
<td>Friday</td>
<td>6:00 p.m. Thursday</td>
<td>11:59 p.m. Sunday</td>
<td>$3 \frac{1}{4}$</td>
</tr>
<tr>
<td>Saturday</td>
<td>6:00 p.m. Thursday</td>
<td>11:59 p.m. Sunday</td>
<td>$3 \frac{1}{4}$</td>
</tr>
</tbody>
</table>

Table 22 shows the number of fatal crashes and fatalities that took place in Southeast Michigan during selected holidays in 2005-2007. The number of days in each holiday period is listed in brackets after the year. The number of alcohol-related fatal crashes and fatalities is listed in parentheses.

Table 22
Fatal Holiday Traffic Crashes, 2005-2007

<table>
<thead>
<tr>
<th>Holiday Period</th>
<th>Fatal Crashes (alcohol-involved fatal crashes)</th>
<th>Persons Killed (persons killed in alcohol-involved crashes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[number of whole days]</td>
<td></td>
</tr>
<tr>
<td>Memorial Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>3 (1)</td>
<td>4 (1)</td>
</tr>
<tr>
<td>2006</td>
<td>8 (3)</td>
<td>10 (4)</td>
</tr>
<tr>
<td>2005</td>
<td>3 (1)</td>
<td>3 (1)</td>
</tr>
<tr>
<td>Fourth of July</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>1 (1)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>2006</td>
<td>10 (6)</td>
<td>10 (6)</td>
</tr>
<tr>
<td>2005</td>
<td>5 (2)</td>
<td>6 (3)</td>
</tr>
<tr>
<td>Labor Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>7 (4)</td>
<td>8 (4)</td>
</tr>
<tr>
<td>2006</td>
<td>2 (1)</td>
<td>2 (1)</td>
</tr>
<tr>
<td>2005</td>
<td>5 (2)</td>
<td>2 (2)</td>
</tr>
<tr>
<td>Thanksgiving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>7 (1)</td>
<td>7 (1)</td>
</tr>
<tr>
<td>2006</td>
<td>5 (3)</td>
<td>5 (3)</td>
</tr>
<tr>
<td>2005</td>
<td>7 (4)</td>
<td>7 (4)</td>
</tr>
<tr>
<td>Christmas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>4 (1)</td>
<td>4 (1)</td>
</tr>
<tr>
<td>2006</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>2005</td>
<td>3 (2)</td>
<td>3 (2)</td>
</tr>
<tr>
<td>New Year Holiday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007/08</td>
<td>5* (1)*</td>
<td>5* (1)*</td>
</tr>
<tr>
<td>2006/07</td>
<td>2 (2)</td>
<td>2 (2)</td>
</tr>
<tr>
<td>2005/06</td>
<td>4 (1)</td>
<td>5 (1)</td>
</tr>
<tr>
<td>2004/05</td>
<td>4 (4)</td>
<td>4 (4)</td>
</tr>
</tbody>
</table>

* Incomplete data for 2007/2008 New Year Holiday. This count does not include crashes that took place in 2008.
Appendix A-Vehicle Miles Traveled (VMT)

Data about VMT in each county in 2006 come from the Michigan Department of Transportation (MDOT). These estimates (Table 23) come from information about traffic volumes provided by local agencies through the Highway Performance Monitoring System (HPMS).

Table 23
Estimated Million VMT by County, 2006

<table>
<thead>
<tr>
<th>County</th>
<th>VMT (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston</td>
<td>2,148</td>
</tr>
<tr>
<td>Macomb</td>
<td>6,783</td>
</tr>
<tr>
<td>Monroe</td>
<td>2,261</td>
</tr>
<tr>
<td>Oakland</td>
<td>13,651</td>
</tr>
<tr>
<td>St. Clair</td>
<td>1,752</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>3,951</td>
</tr>
<tr>
<td>Wayne</td>
<td>19,200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49,746</strong></td>
</tr>
</tbody>
</table>


The results of a 1994 SEMCOG survey were used to estimate VMT for each age group in 2006. As part of this survey, 18,344 randomly selected participants kept diaries detailing their driving habits. The percentages of miles driven by each age group in the 1994 survey were used to partition the 2006 VMT for Southeast Michigan among the age groups. Table 24 shows the percent of all VMT driven by each age group.

Table 24
Percent VMT Driven by Age Group. 1994

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percent VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 and below</td>
<td>0.378%</td>
</tr>
<tr>
<td>16 to 24</td>
<td>9.883%</td>
</tr>
<tr>
<td>25 to 34</td>
<td>17.706%</td>
</tr>
<tr>
<td>35 to 44</td>
<td>28.200%</td>
</tr>
<tr>
<td>45 to 54</td>
<td>20.597%</td>
</tr>
<tr>
<td>55 to 64</td>
<td>11.587%</td>
</tr>
<tr>
<td>65 to 74</td>
<td>9.048%</td>
</tr>
<tr>
<td>75 to 84</td>
<td>2.424%</td>
</tr>
<tr>
<td>85 to 94</td>
<td>0.175%</td>
</tr>
<tr>
<td>95 and above</td>
<td>0.002%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The percentages for each age group were then multiplied by the total VMT driven in Southeast Michigan in 2006 to obtain an estimate for the number of miles driven by each age group in 2006 (Table 25).

Table 25  
Estimated Million VMT by Age Group, 2006

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Estimated 2006 VMT (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 and below</td>
<td>188</td>
</tr>
<tr>
<td>16 to 24</td>
<td>4,916</td>
</tr>
<tr>
<td>25 to 34</td>
<td>8,808</td>
</tr>
<tr>
<td>35 to 44</td>
<td>14,028</td>
</tr>
<tr>
<td>45 to 54</td>
<td>10,246</td>
</tr>
<tr>
<td>55 to 64</td>
<td>5,764</td>
</tr>
<tr>
<td>65 to 74</td>
<td>4,501</td>
</tr>
<tr>
<td>75 to 84</td>
<td>1,206</td>
</tr>
<tr>
<td>85 to 94</td>
<td>87</td>
</tr>
<tr>
<td>95 and above</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49,746</strong></td>
</tr>
</tbody>
</table>

Appendix B-Registered Driver Data

Data on the numbers of registered drivers were obtained from the Michigan Department of State (MDOS). The numbers of registered drivers used in this report are the numbers that were registered as of January 2008 (Table 26).

As of January 2008, there were 3,381,440 drivers registered in Southeast Michigan counties, a 1.1 percent decrease over January 2007. Wayne County remained the only county with more than one million registered drivers. Monroe County had the fewest registered drivers in the region at nearly 118,000. Wayne County registered drivers decreased 2.4 percent from January 2007.

The 45-54 age group remained the largest registered drivers age group for the second year in a row. This was the largest age group in all counties except Washtenaw where 35-44 made up the largest age group.

There are slightly more female registered drivers (3.8 percent) than male registered drivers in Southeast Michigan (Table 27).

Table 26
Southeast Michigan Registered Drivers by Age and County, January 2008

<table>
<thead>
<tr>
<th>Age</th>
<th>Livingston</th>
<th>Macomb</th>
<th>Monroe</th>
<th>Oakland</th>
<th>St. Clair</th>
<th>Washtenaw</th>
<th>Wayne</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 and below</td>
<td>1,450</td>
<td>4,549</td>
<td>875</td>
<td>8,029</td>
<td>1,023</td>
<td>1,705</td>
<td>5,893</td>
<td>23,524</td>
</tr>
<tr>
<td>16 to 24</td>
<td>21,007</td>
<td>88,618</td>
<td>17,691</td>
<td>130,425</td>
<td>17,748</td>
<td>38,462</td>
<td>159,020</td>
<td>472,971</td>
</tr>
<tr>
<td>25 to 34</td>
<td>18,027</td>
<td>105,614</td>
<td>17,367</td>
<td>154,178</td>
<td>17,261</td>
<td>49,223</td>
<td>199,004</td>
<td>560,674</td>
</tr>
<tr>
<td>35 to 44</td>
<td>28,797</td>
<td>123,822</td>
<td>21,927</td>
<td>185,313</td>
<td>23,338</td>
<td>47,788</td>
<td>228,493</td>
<td>659,478</td>
</tr>
<tr>
<td>45 to 54</td>
<td>31,649</td>
<td>126,688</td>
<td>24,901</td>
<td>196,616</td>
<td>25,894</td>
<td>46,166</td>
<td>233,204</td>
<td>685,118</td>
</tr>
<tr>
<td>55 to 64</td>
<td>21,991</td>
<td>91,704</td>
<td>18,270</td>
<td>142,477</td>
<td>19,582</td>
<td>35,032</td>
<td>174,472</td>
<td>503,528</td>
</tr>
<tr>
<td>65 to 74</td>
<td>10,807</td>
<td>52,568</td>
<td>9,897</td>
<td>70,755</td>
<td>11,358</td>
<td>16,138</td>
<td>92,806</td>
<td>264,329</td>
</tr>
<tr>
<td>75 to 84</td>
<td>5,138</td>
<td>34,296</td>
<td>5,633</td>
<td>43,799</td>
<td>6,470</td>
<td>8,882</td>
<td>62,682</td>
<td>166,900</td>
</tr>
<tr>
<td>85 to 94</td>
<td>1,197</td>
<td>8,863</td>
<td>1,275</td>
<td>11,960</td>
<td>1,679</td>
<td>2,339</td>
<td>16,548</td>
<td>43,861</td>
</tr>
<tr>
<td>95 and above</td>
<td>29</td>
<td>210</td>
<td>30</td>
<td>303</td>
<td>52</td>
<td>61</td>
<td>372</td>
<td>1,057</td>
</tr>
<tr>
<td>Total</td>
<td>140,092</td>
<td>636,932</td>
<td>117,866</td>
<td>943,855</td>
<td>124,405</td>
<td>245,796</td>
<td>1,172,494</td>
<td>3,381,440</td>
</tr>
</tbody>
</table>

### Southeast Michigan Registered Drivers by Age and Gender, January 2008

<table>
<thead>
<tr>
<th>Age</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 and below</td>
<td>11,698</td>
<td>11,826</td>
<td>23,524</td>
</tr>
<tr>
<td>16 to 24</td>
<td>231,233</td>
<td>241,738</td>
<td>472,971</td>
</tr>
<tr>
<td>25 to 34</td>
<td>280,457</td>
<td>280,217</td>
<td>560,674</td>
</tr>
<tr>
<td>35 to 44</td>
<td>333,246</td>
<td>326,232</td>
<td>659,478</td>
</tr>
<tr>
<td>45 to 54</td>
<td>350,573</td>
<td>334,545</td>
<td>685,118</td>
</tr>
<tr>
<td>55 to 64</td>
<td>258,845</td>
<td>244,683</td>
<td>503,528</td>
</tr>
<tr>
<td>65 to 74</td>
<td>139,061</td>
<td>125,268</td>
<td>264,329</td>
</tr>
<tr>
<td>75 to 84</td>
<td>91,813</td>
<td>75,087</td>
<td>166,900</td>
</tr>
<tr>
<td>85 to 94</td>
<td>24,717</td>
<td>19,144</td>
<td>43,861</td>
</tr>
<tr>
<td>95 and above</td>
<td>588</td>
<td>469</td>
<td>1,057</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,722,231</strong></td>
<td><strong>1,659,209</strong></td>
<td><strong>3,381,440</strong></td>
</tr>
</tbody>
</table>

SEMCOG Officers
2007-2008

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City of Walled Lake

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Regional Education Service Agency

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Green Oak Township

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Ira Township

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