

2005 Southeast Michigan **T**raffic Crash Facts

August 2006

SEMCOG . . . Local Governments Advancing Southeast Michigan

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.

Responsibilities

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.

2005 Southeast Michigan Traffic Crash Facts

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Abstract

This report contains important statistical information about all traffic crashes reported in Southeast Michigan in 2005. It focuses on 10 categories of traffic crashes: all traffic crashes, injury traffic crashes, fatal traffic crashes, alcohol-involved traffic crashes, vehicle-deer crashes, young-driver traffic crashes, elderly driver traffic crashes, pedestrian 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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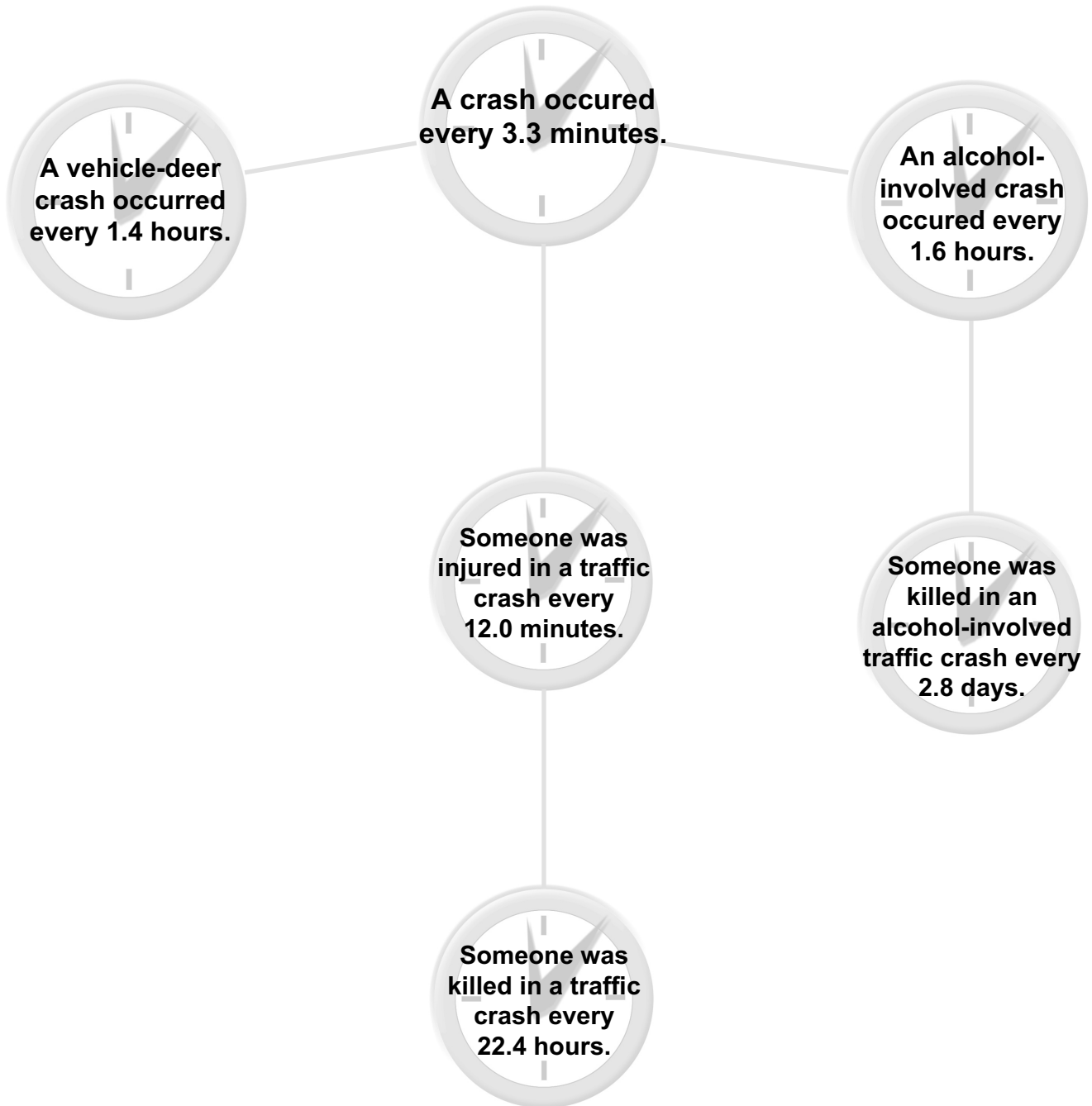
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2005 Quick Crash Facts

- Vehicle miles traveled (VMT) in Southeast Michigan increased from 47,681 million miles in 2004 to 48,761 million in 2005. During 2005, 157,284 traffic crashes were reported in Southeast Michigan. These crashes resulted in 43,680 injuries and 391 fatalities. Compared with 2004, traffic crashes decreased 4.6 percent, injuries decreased 10.7 percent, and fatalities decreased 7.3 percent.
- There were 0.74 fatal traffic crashes for every 100 million miles traveled on Southeast Michigan roads in 2005. This is a decrease from the 2004 rate of 0.83 fatal crashes for every 100 million miles of travel.
- Of drivers involved in fatal crashes, nearly 19.0 percent were between the ages of 45 and 54.
- Drivers in the 95 and above age group had the lowest rate of fatal traffic crashes among all at 0.0 fatal crashes per 100 million miles traveled. The 16-24 age group had the highest rate of all licensed drivers (22.1).
- Crashes involving alcohol decreased from 6,207 in 2004 to 5,442 in 2005. In Southeast Michigan, 3.5 percent of all traffic crashes involved alcohol, but over 34 percent of fatal traffic crashes involved alcohol consumption.
- There were 6,097 vehicle-deer crashes in Southeast Michigan in 2005, down from 6,196 in 2004. 97 percent of collisions with deer resulted only in property damage. Although vehicle-deer crashes occurred in every month in 2005, 38.2 percent of these crashes took place in October and November. Deer crashes were most common in the early morning hours and in the evening.
- Young drivers (ages 16-24) were involved in over 35 percent of all traffic crashes in 2005. Crashes among young female drivers peaked at age 17 and for all young male drivers peaked at age 18.
- Elderly drivers (ages 65 and older) were involved in 11.4 percent of all traffic crashes in 2005. Elderly drivers were more likely to be involved in angle, head-on, and sideswipe crashes, but less likely to have single-vehicle or rear-end crashes.
- Traffic crashes involving pedestrians or bicycles decreased in 2005 compared to 2004 numbers. Only 12.0 percent of crashes involving pedestrians resulted in no injury and only 16.8 percent of all bicycle crashes resulted in no injury.
- Crashes involving commercial trucks or buses in Southeast Michigan decreased 4.1 percent in 2005.
- Safety-belt use among drivers in traffic crashes increased in Southeast Michigan in 2005, where 84.3 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 60 percent of unbelted drivers.

2005 Crash Clock



Introduction

This report contains statistical information about all traffic crashes in Southeast Michigan reported in 2005. 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, other than a fatal injury, that prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before 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.

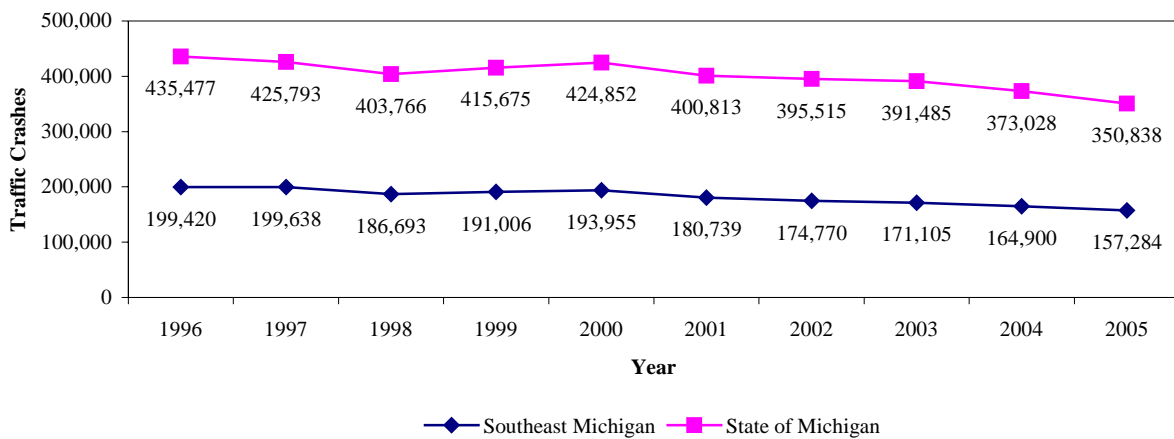
VMT – Vehicle miles traveled. In traffic crash analysis, VMT is typically measured in hundreds of millions of miles. For example, 44,000,000,000 vehicle miles traveled may be represented as 440 hundred million VMT or as 44,000 million VMT.

All Traffic Crashes

In 2005, 157,284 traffic crashes were reported in Southeast Michigan. This is a decrease of 4.6 percent from 2004. The State of Michigan saw a 5.9 percent decrease between 2004 and 2005 (Figure 1).

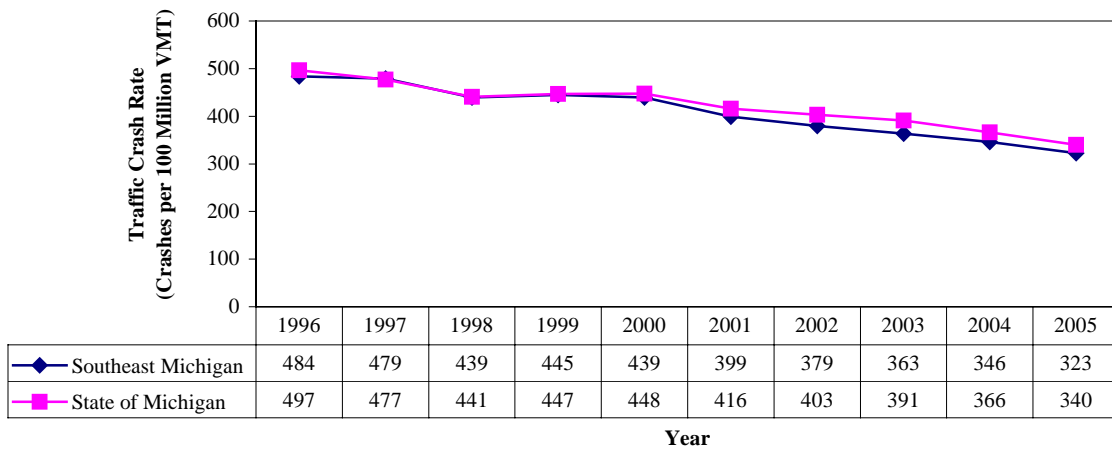
The traffic crash rate, defined as the number of traffic crashes per 100 million vehicle miles traveled (VMT), provides an alternative method of examining traffic crash trends. Figure 2 shows traffic crash rates in Southeast Michigan and the State of Michigan for 1996-2005.

Figure 1
Traffic Crashes, 1996-2005



Source: Michigan State Police Traffic Crash Database (MSPTCD) and SEMCOG, 2005.

Figure 2
Traffic Crash Rate, 1996-2005



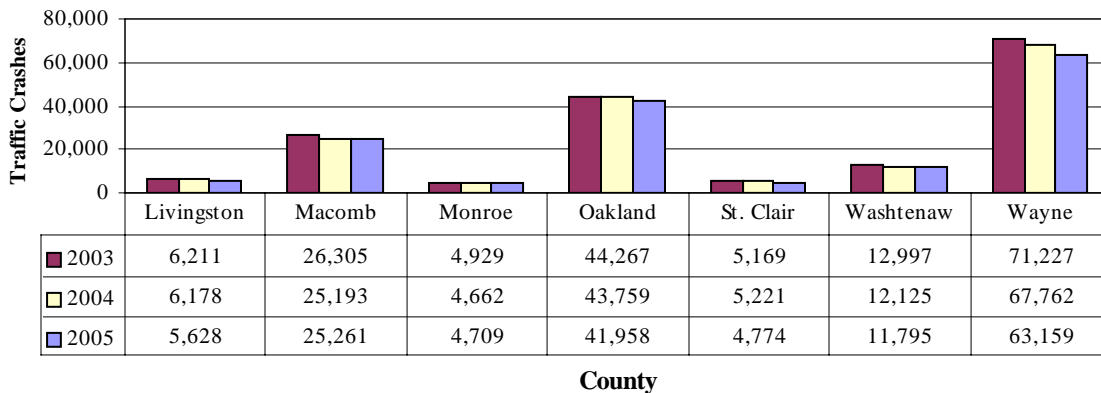
Source: MSPTCD and SEMCOG, 2005.

Traffic Crashes by County

Figure 3 shows the number of traffic crashes in each Southeast Michigan county for 2003, 2004, and 2005. Livingston experienced the largest decrease (8.9 percent) in traffic crashes. All counties saw a decrease in crashes, except for Macomb and Monroe Counties which increased slightly.

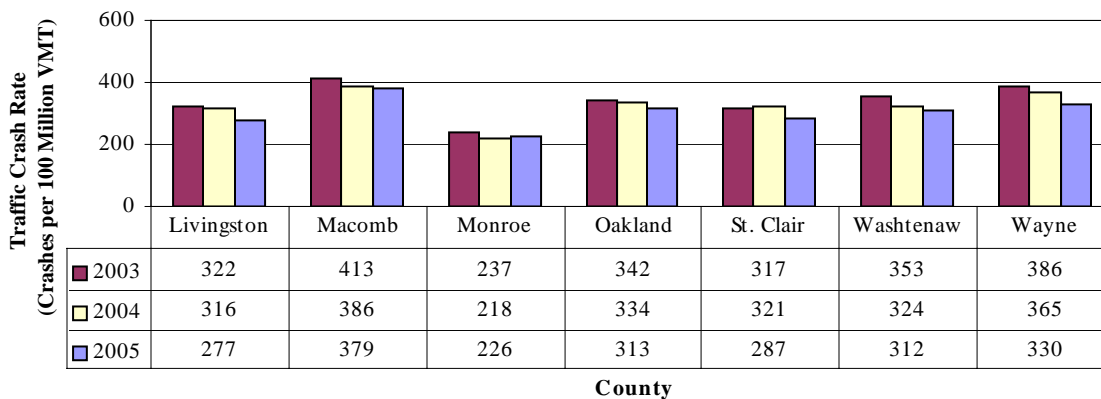
As shown in Figure 4, the traffic crash rate decreased in 2005 in all counties except Monroe although, the crash rate remained lower than in 2003. Even after this slight jump in number, Monroe County continued to enjoy the lowest traffic crash rate in the region, while Macomb County's crash rate was the highest in the region in 2005.

Figure 3
Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 4
Traffic Crash Rate by County, 2003-2005

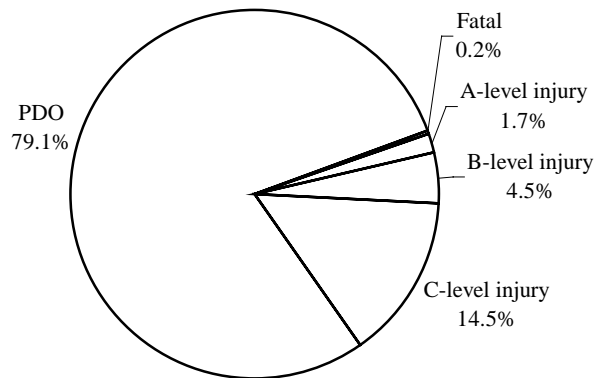


Source: MSPTCD and SEMCOG, 2005.

Traffic Crashes by Severity

Of the 157,284 traffic crashes in Southeast Michigan in 2005, nearly 21 percent resulted in some degree of injury. A total of 360 fatal crashes resulted in the deaths of 391 people, a decrease from the 422 deaths in 2004. Figure 5 shows how traffic crashes in 2005 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, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 1
Traffic Crash Severity, 2005

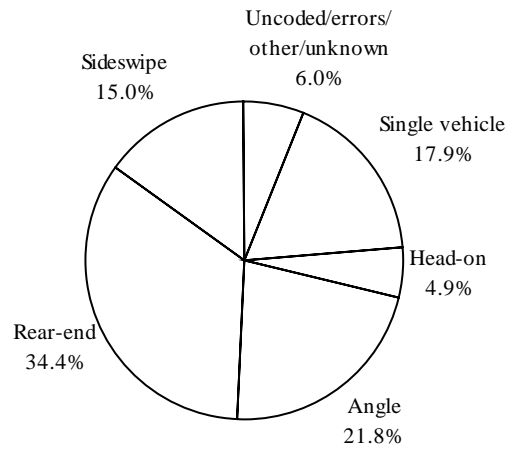
Crash Severity	Number of Traffic Crashes	Number of Injuries
Fatal	360	391
A-level Injury	2,724	3,307
B-level Injury	7,053	8,682
C-level Injury	22,764	31,691
Injury & Fatal Subtotal	32,901	44,071
PDO	124,383	
Total	157,284	

Source: MSPTCD and SEMCOG, 2005.

Traffic Crashes by Crash Type

Figure 6 shows how traffic crashes were distributed among the various crash types in 2005. As in 2004, the most common type of crash was rear-end (34.4 percent). The least common type of crash was head-on (4.9 percent).

Figure 6
Traffic Crashes by Crash Type, 2005

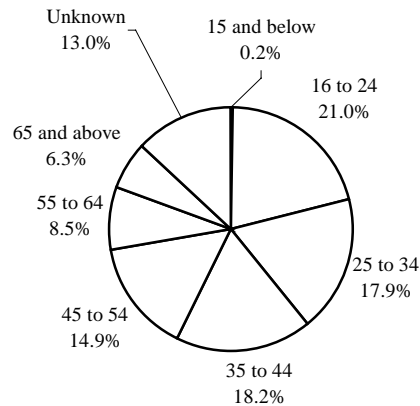


Source: MSPTCD and SEMCOG, 2005.

Age and Gender of Drivers in Traffic Crashes

Figure 7 shows how the 297,937 drivers involved in traffic crashes in 2005 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 (18.2 percent). Just over six percent of all drivers in crashes were age 65 or older.

Figure 7
Drivers in Traffic Crashes by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 2
Drivers in Traffic Crashes by Age Group and Gender, 2005

Age of Driver	Number of Drivers by Gender			Total
	Female	Male	Unknown	
15 and below	251	318	0	569
16 to 24	28,443	33,942	37	62,422
25 to 34	23,955	29,412	56	53,423
35 to 44	23,831	30,387	48	54,266
45 to 54	19,131	25,103	41	44,275
55 to 64	10,574	14,841	31	25,446
65 to 74	4,509	6,163	6	10,678
75 to 84	3,041	3,738	6	6,785
85 to 94	600	758	1	1,359
95 and Above	4	12	0	16
Unknown	2,754	6,023	29,921	38,698
Total	117,093	150,697	30,147	297,937

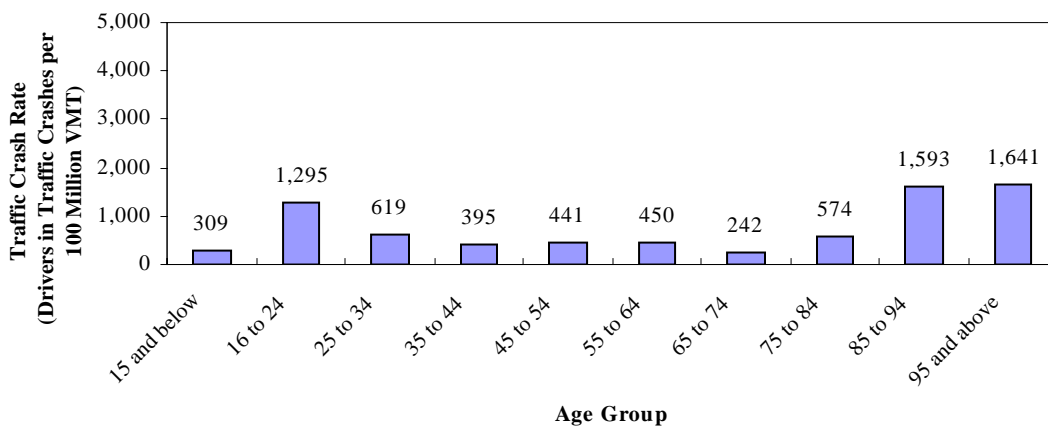
Source: MSPTCD and SEMCOG, 2005.

Rate of Traffic Crash Involvement by Age Group

Figure 8 shows the traffic-crash rate for each age group in 2005. According to 2005 VMT estimates, drivers age 65-74 had the lowest crash rate of any age group, at 242 crashes per 100 million VMT. Drivers age 95 or older had the highest rate followed by the 85-94 and 16-24 age groups (1,641, 1,593, and 1,295 crashes per 100 million VMT, respectively).

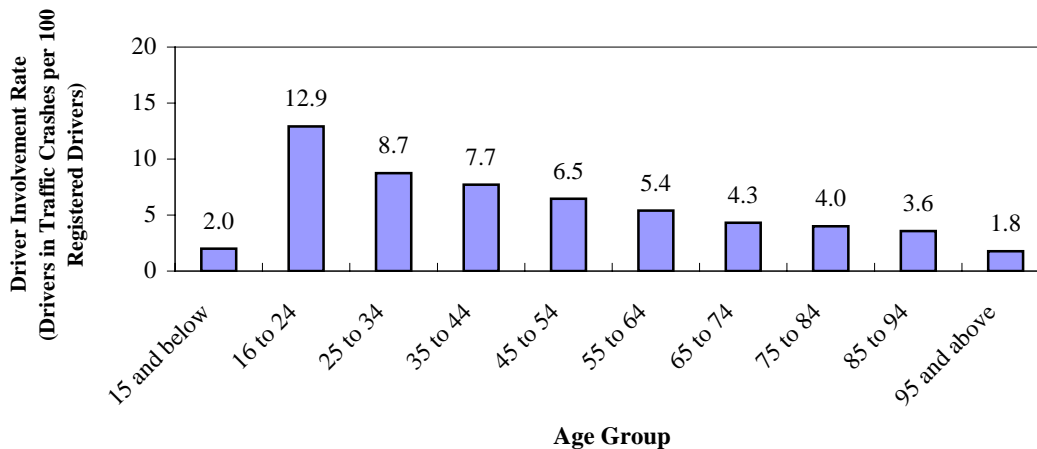
Figure 9 shows how many drivers were in traffic crashes out of every hundred drivers in each age group. There were just fewer than 13 drivers age 16-24 involved in crashes for every hundred registered drivers in that age group, which was the highest rate of any group.

Figure 8
Traffic Crash Rate by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 9
Traffic Crash Driver Involvement Rate by Age Group, 2005



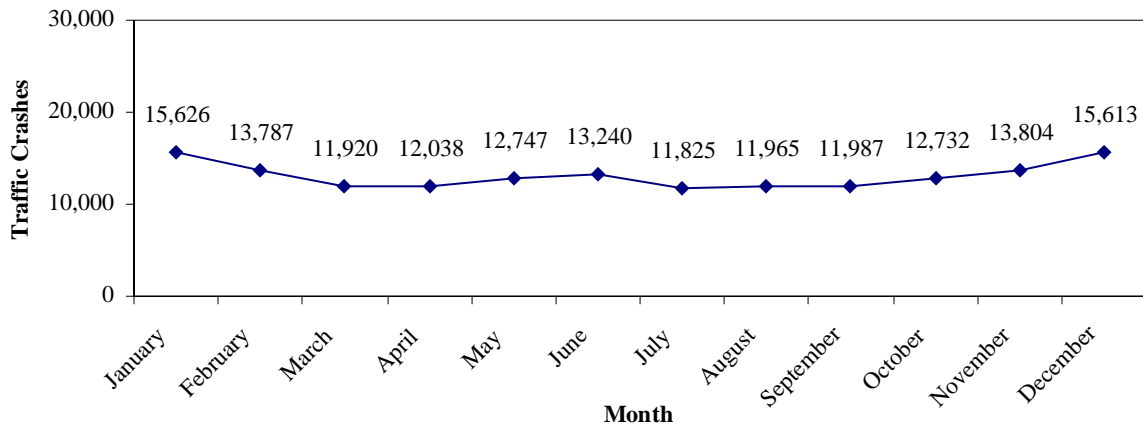
Source: MSPTCD, Michigan Department of State (MDOS), and SEMCOG, 2005.

Traffic Crashes by Month, Day, and Hour

As seen in Figure 10, more traffic crashes (15,626) occurred during January than any other month in 2005. July had the fewest crashes (11,825) in 2005.

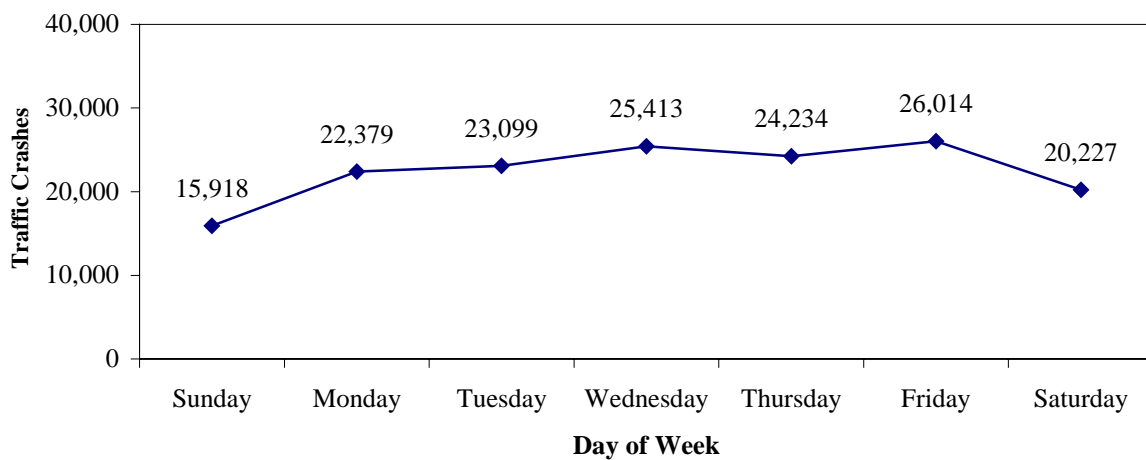
Figure 11 shows that more traffic crashes took place on Fridays than any other day of the week (26,014), and that Sundays had the fewest crashes (15,918).

Figure 10
Traffic Crashes by Month, 2005



Source: MSPTCD and SEMCOG, 2005.

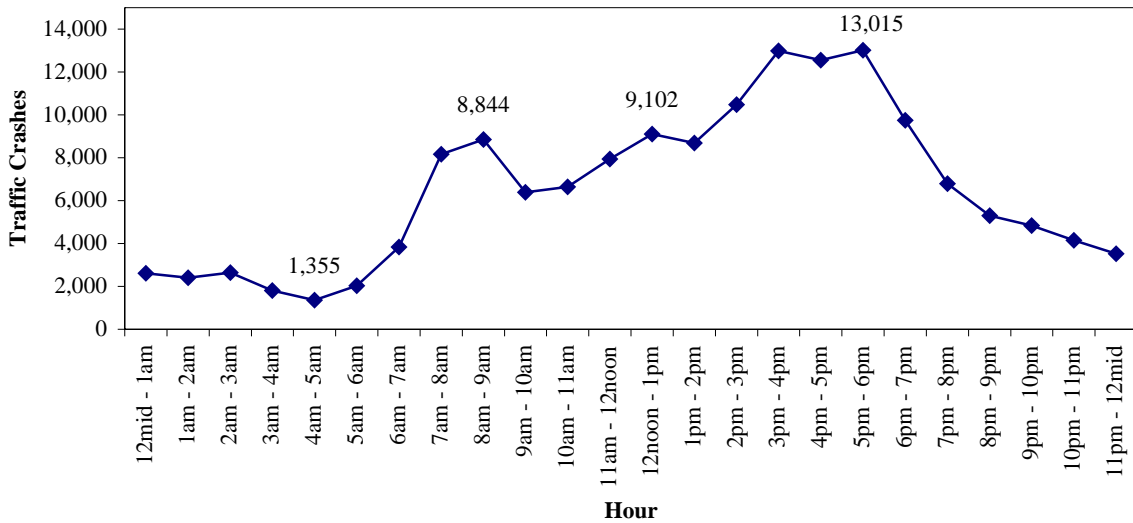
Figure 11
Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 12 shows the total number of traffic crashes that took place during each hour interval in 2005. The fewest crashes — 1,355 — 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 nearly one out of every four traffic crashes taking place during these hours.

Figure 12
Traffic Crashes by Hour of Day, 2005



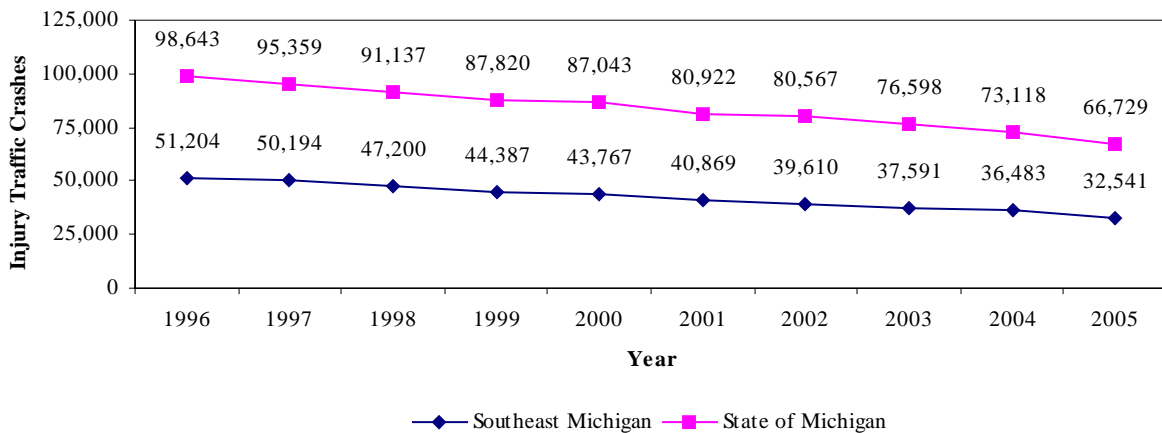
Source: MSPTCD and SEMCOG, 2005.

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.

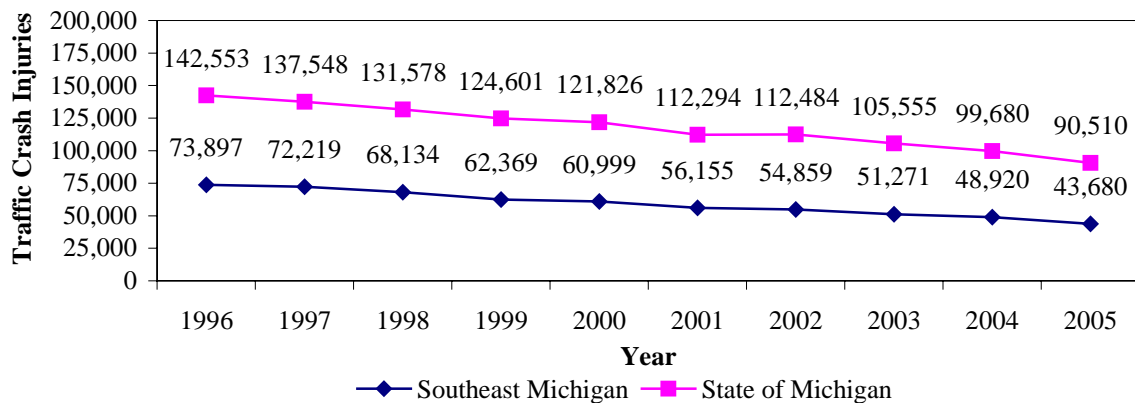
As shown in Figure 13, injury traffic crashes in Southeast Michigan decreased in 2005 — the tenth consecutive year that they have decreased. Injury crashes were down 10.8 percent in Southeast Michigan and 8.7 percent in Michigan compared to 2004. Figure 14 shows the number of injuries caused by traffic crashes for the years 1996-2005. Injuries decreased 10.7 percent in Southeast Michigan and 9.2 percent in Michigan from 2004 to 2005.

Figure 13
Injury Traffic Crashes, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

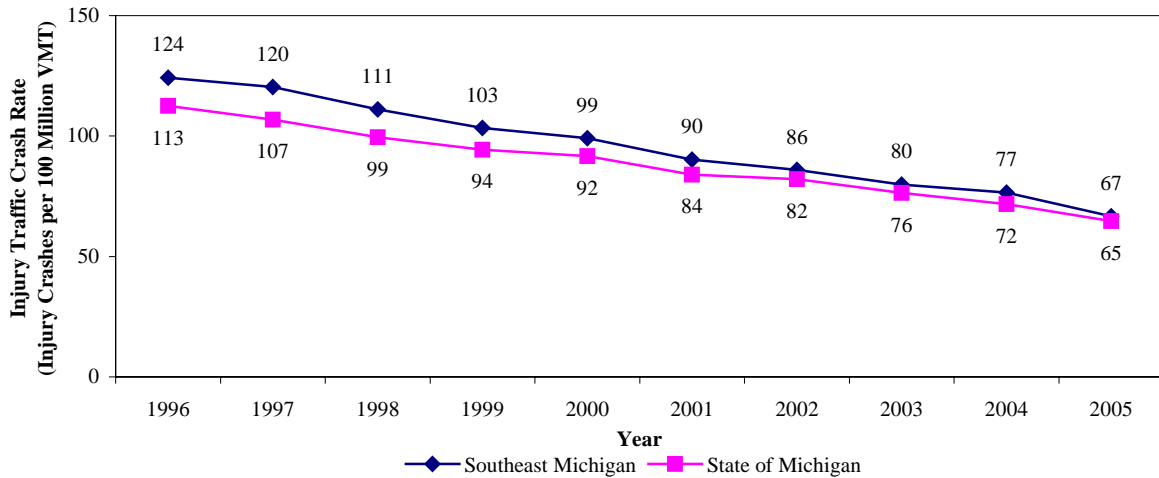
Figure 14
Traffic Crash Injuries, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

A decrease in injury crashes at the same time that VMT increased means that the rate of injury traffic crashes per 100 million VMT continued to decrease in Southeast Michigan as well as in Michigan. Figure 15 shows this decrease in greater detail. Table 3 shows how the number of injury traffic crashes compared to VMT for 1996-2005.

Figure 15
Injury Traffic Crash Rate, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

Table 3
Injury Traffic Crash Rate, 1996-2005

	Injury Traffic Crashes		VMT (in millions)		Injury Traffic Crash Rate (Crashes per 100 Million VMT)	
	Southeast Michigan	Michigan	Southeast Michigan	Michigan	Southeast Michigan	Michigan
1996	51,204	98,643	41,239	87,664	124	113
1997	50,194	95,359	41,678	89,232	120	107
1998	47,200	91,137	42,513	91,616	111	99
1999	44,387	87,820	42,924	93,060	103	94
2000	43,767	87,043	44,167	94,915	99	92
2001	40,869	80,922	45,304	96,427	90	84
2002	39,610	80,567	46,067	98,173	86	82
2003	37,591	76,598	47,085	100,192	80	76
2004	36,483	73,118	47,681	101,820	77	72
2005	32,541	66,729	48,761	103,159	67	65

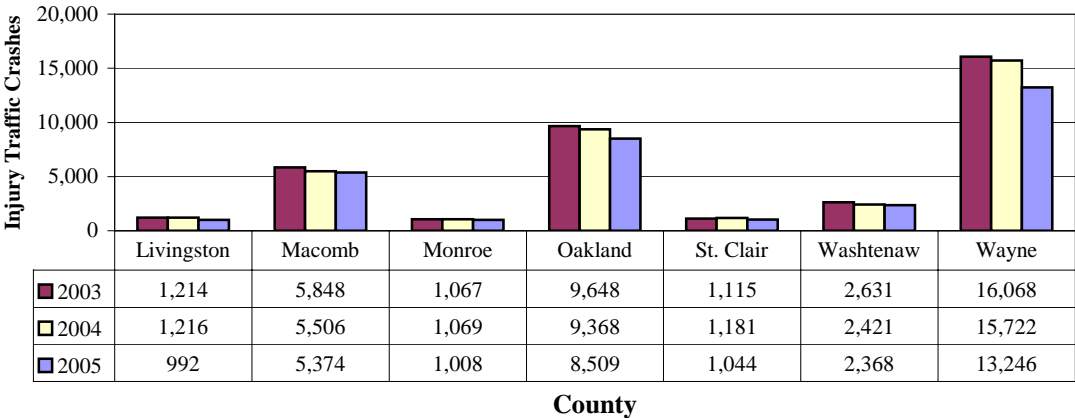
Source: MSPTCD and SEMCOG, 2005.

Injury Traffic Crashes by County

Injury crashes decreased in all Southeast Michigan counties in 2005, with the largest decrease taking place in Livingston County (18.4 percent).

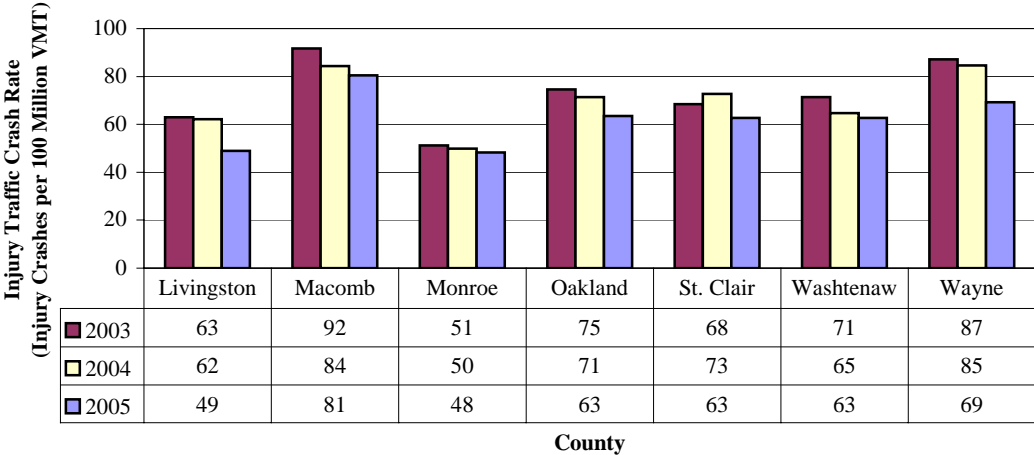
As Figure 17 shows, all counties had injury crash rates lower than those seen in 2004. Although, Macomb and Wayne County’s injury crash rates were slightly higher than the regional rate of 67 injury crashes per 100 million VMT. The crash rate in Macomb for 2005 was 81 injury crashes per 100 million VMT — the highest in the region.

Figure 16
Injury Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 17
Injury Traffic Crash Rate by County, 2003-2005



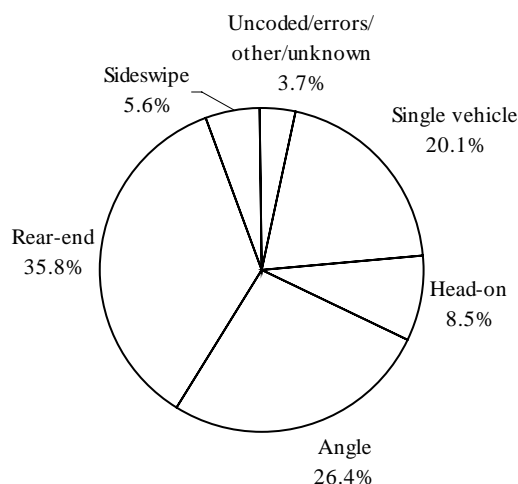
Source: MSPTCD and SEMCOG, 2005.

Injury Traffic Crashes by Crash Type

Rear-end crashes accounted for more injury crashes (35.8 percent) than any other crash type in 2005, and sideswipe crashes made up the smallest portion (5.6 percent). Figure 18 shows the percentages of all crash types.

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 36 percent of all head-on crashes causing injury. Only 7.8 percent of all sideswipe crashes caused injury in 2005.

Figure 18
Injury Traffic Crashes by Crash Type, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 4
Traffic Crash Type by Percent Resulting in Injury, 2005

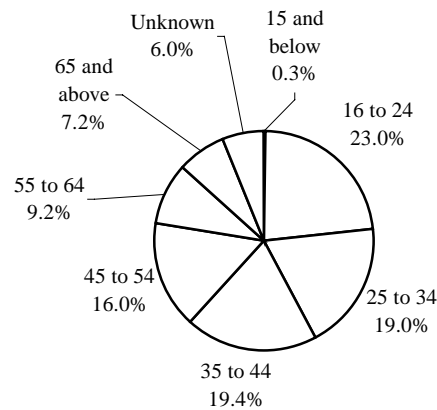
Crash Type	Injury Crashes	All Crashes	Percent resulting in injury
Uncoded/errors/other/unknown	1,205	9,454	12.7%
Single vehicle	6,525	28,144	23.2%
Head-on	2,753	7,734	35.6%
Angle	8,578	34,324	25.0%
Rear-end	11,644	54,096	21.5%
Sideswipe	1,836	23,532	7.8%
Total	32,541	157,284	20.7%

Source: MSPTCD and SEMCOG, 2005.

Age and Gender of Drivers in Injury Traffic Crashes

Figure 19 and Table 5 show that drivers in the 16-24 age group were involved in injury traffic crashes more than any other age group. The number of drivers in injury crashes in each age group decreases as age increases except from the 25-34 and 35-44 age groups. For example, drivers age 65 or older were involved in 4,543 injury crashes in 2005, or 7.2 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, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 5
Drivers in Injury Traffic Crashes by Age Group and Gender, 2005

Age of Driver	Number of Drivers by Gender			Total
	Female	Male	Unknown	
15 and below	63	109	0	172
16 to 24	6,941	7,552	7	14,500
25 to 34	5,652	6,357	11	12,020
35 to 44	5,649	6,566	14	12,229
45 to 54	4,591	5,511	7	10,109
55 to 64	2,529	3,247	8	5,784
65 to 74	1,115	1,425	1	2,541
75 to 84	768	874	2	1,644
85 to 94	161	191	0	352
95 and above	2	4	0	6
Unknown	348	931	2,539	3,818
Total	27,819	32,767	2,589	63,175

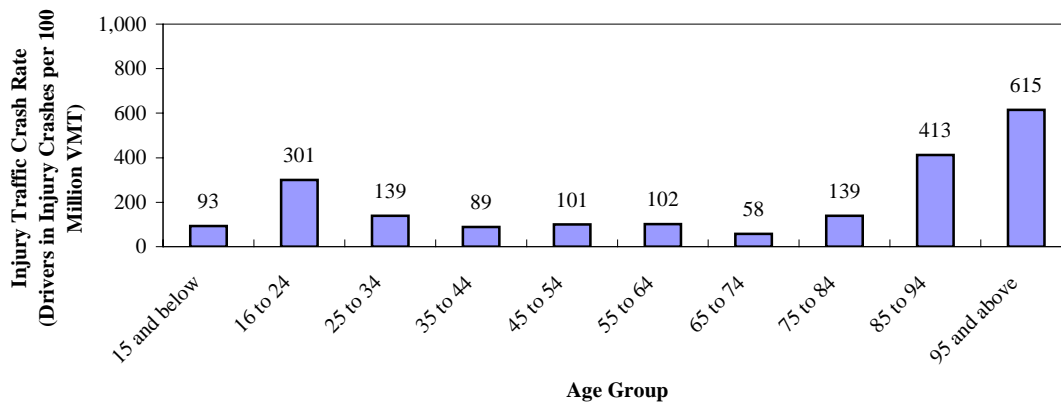
Source: MSPTCD and SEMCOG, 2005.

Rate of Injury Traffic Crash Involvement by Age Group

As shown in Figure 20, the 65-74 age group had the lowest rate of injury crashes per 100 million VMT in 2005 (58 crashes). The 95-and-above age group had the highest rate (615), followed by the 85-94 age group (413) and the 16-24 age group (301).

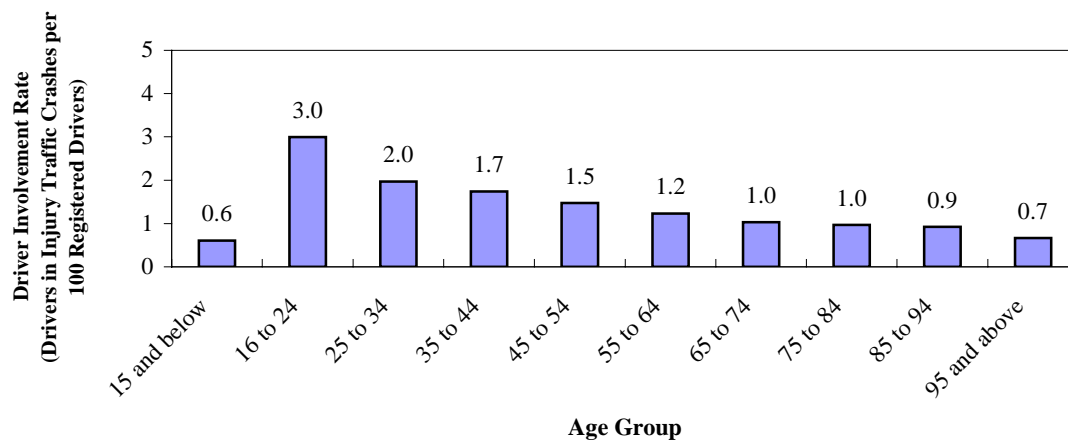
Figure 21 shows the rate of driver involvement in injury crashes for every hundred registered drivers. In 2005, 3.0 drivers age 16-24 were involved in traffic crashes for every hundred registered drivers in that age group. This was the highest rate of involvement of any age group. Drivers age 15 and below had the lowest rate of involvement, at 0.6 drivers for every hundred drivers registered.

Figure 20
Injury Traffic Crash Rate by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 21
Injury Traffic Crash Driver Involvement Rate by Age Group, 2005

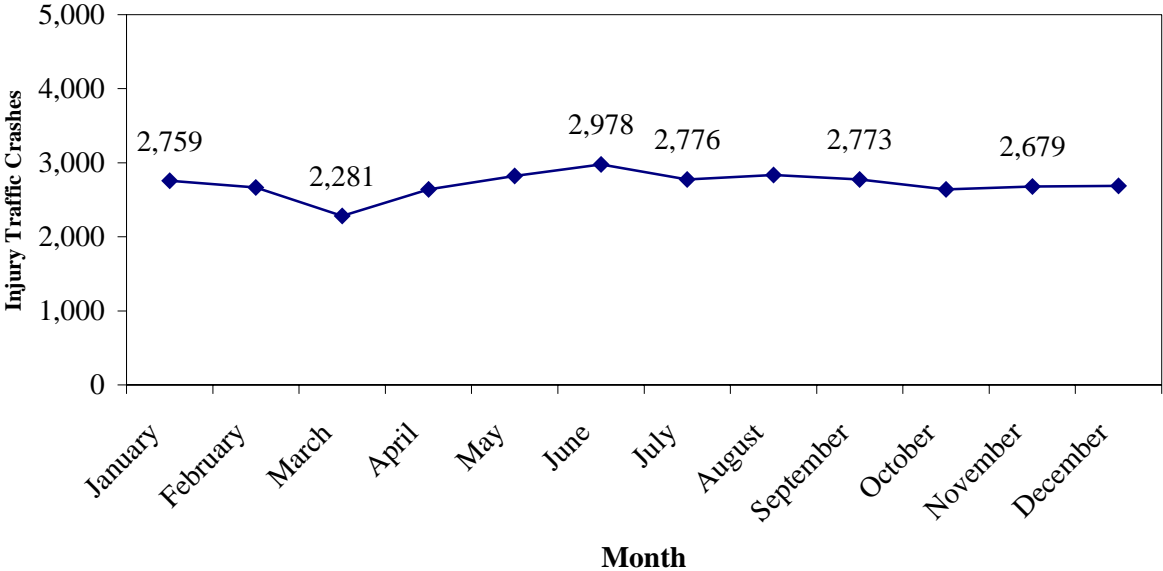


Source: MSPTCD, MDOS, and SEMCOG, 2005.

Injury Traffic Crashes by Month, Day, and Hour

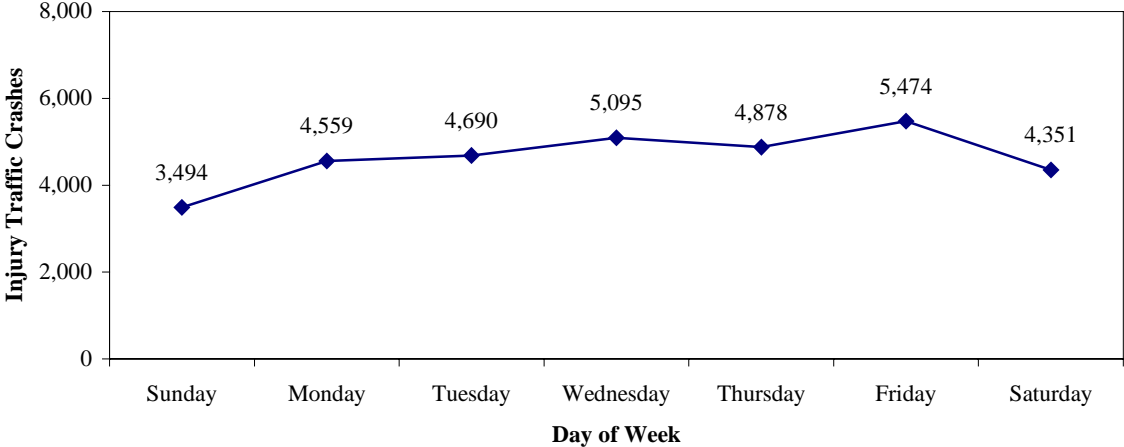
As Figure 22 shows, June was the month in 2005 with the most injury traffic crashes (2,978). January was the month with the most overall crashes (Figure 10) while February, with 2,281 injury crashes, was the month with the fewest. More injury traffic crashes occurred on Fridays (5,474) than any other day. Sundays (3,494) had the fewest injury crashes of any day (Figure 23).

Figure 22
Injury Traffic Crashes by Month, 2005



Source: MSPTCD and SEMCOG, 2005.

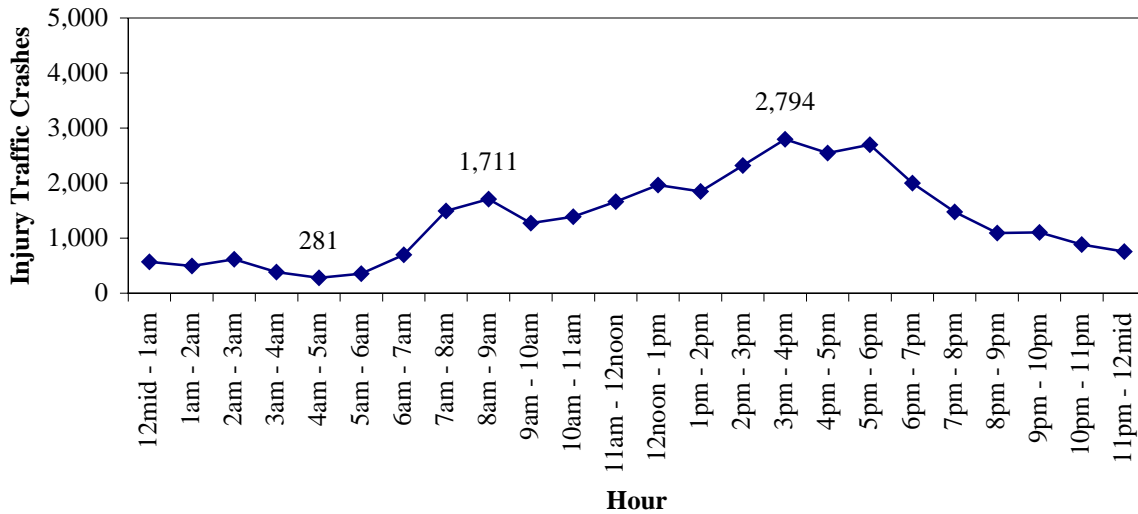
Figure 23
Injury Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 24 shows the total number of injury traffic crashes that took place during each hour interval in 2005. Following the same general pattern as total crashes (Figure 12), injury crashes were least frequent between 4 a.m. and 5 a.m. (281 injury crashes) and most common between 3 p.m. and 6 p.m. Nearly 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, 2005



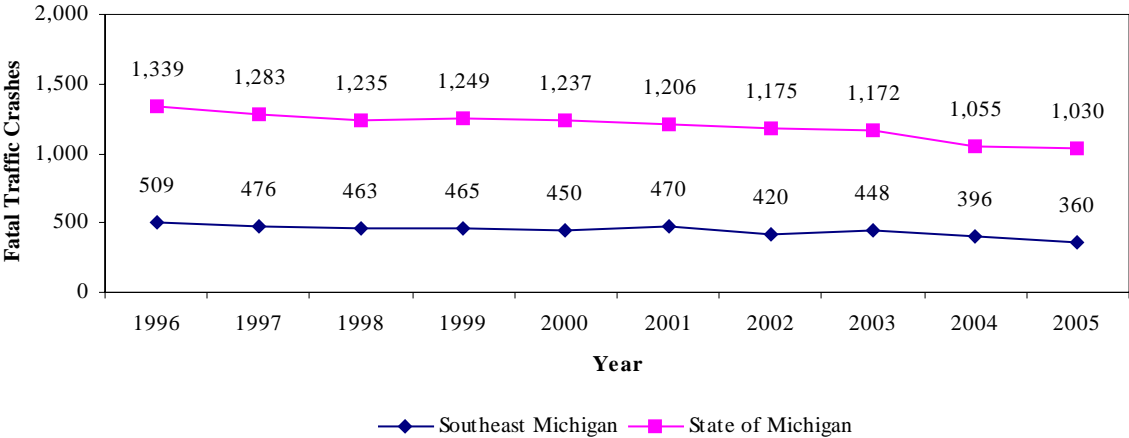
Source: MSPTCD and SEMCOG, 2005.

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 9.1 percent in Southeast Michigan in 2005 at the same time decreasing (2.4 percent) in the state as a whole between 2004 and 2005. Figure 25 shows the number of fatal traffic crashes in Michigan and Southeast Michigan for 1995-2004.

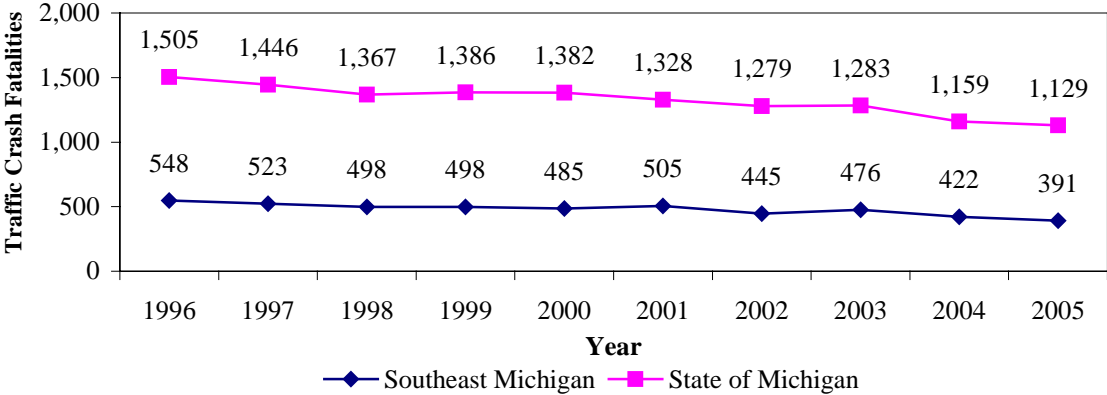
Figure 26 shows that in 2005 traffic crash fatalities decreased 7.3 percent in Southeast Michigan and 2.6 percent in the State of Michigan between 2004 and 2005.

Figure 25
Fatal Traffic Crashes, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

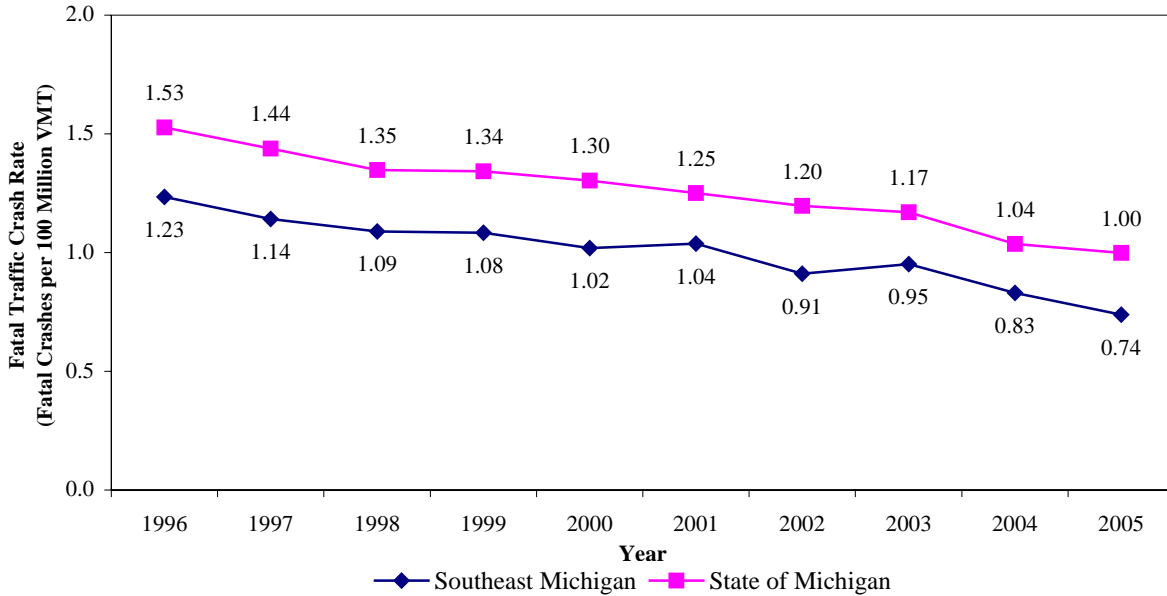
Figure 26
Traffic Crash Fatalities, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

As shown in Figure 27, the rate of fatal traffic crashes per 100 million miles traveled decreased in Southeast Michigan between 2004 and 2005. Table 6 shows how the number of fatal traffic crashes compared to VMT for 1996-2005.

Figure 27
Fatal Traffic Crash Rate, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

Table 6
Fatal Traffic Crash Rate and VMT, 1996-2005

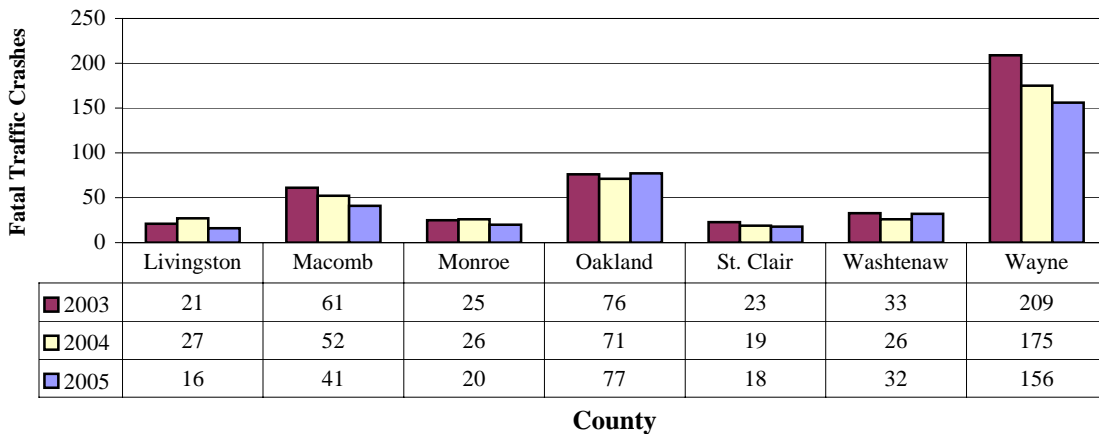
	Fatal Traffic Crashes		VMT (in millions)		Fatal Traffic Crash Rate (crashes per 100 million VMT)	
	Southeast Michigan	Michigan	Southeast Michigan	Michigan	Southeast Michigan	Michigan
1996	509	1,339	41,239	87,664	1.23	1.53
1997	476	1,283	41,678	89,232	1.14	1.44
1998	463	1,235	42,513	91,616	1.09	1.35
1999	465	1,249	42,924	93,060	1.08	1.34
2000	450	1,237	44,167	94,915	1.02	1.30
2001	470	1,206	45,304	96,427	1.04	1.25
2002	420	1,175	46,067	98,173	0.91	1.20
2003	448	1,172	47,085	100,192	0.95	1.17
2004	396	1,055	47,681	101,820	0.83	1.04
2005	360	1,030	48,761	103,159	0.74	1.00

Source: MSPTCD and SEMCOG, 2005.

Fatal Traffic Crashes by County

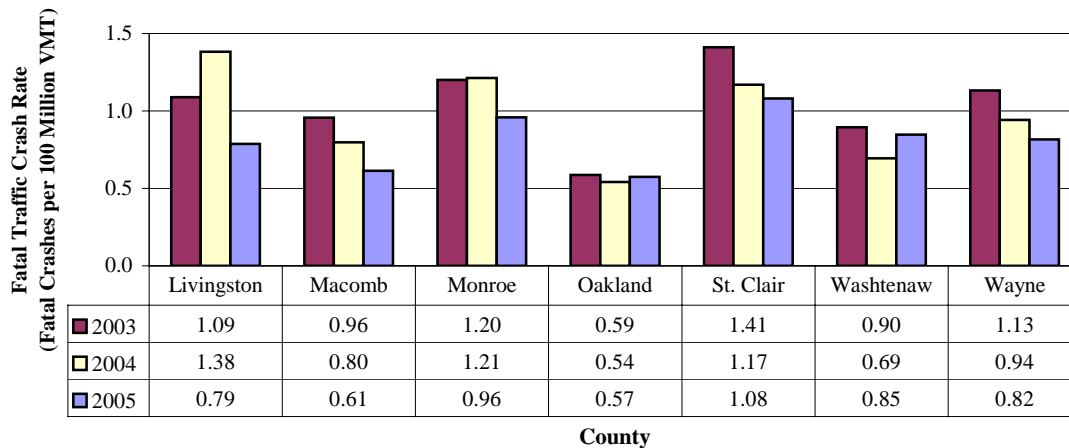
Fatal traffic crashes increased in 2005 in Oakland, and Washtenaw Counties (Figure 28). The same counties also saw increases in their fatal crash rate, which indicates that the increase in fatal crashes is not fully accounted for by an increase in traffic (Figure 29).

Figure 28
Fatal Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 29
Fatal Traffic Crash Rate by County, 2003-2005



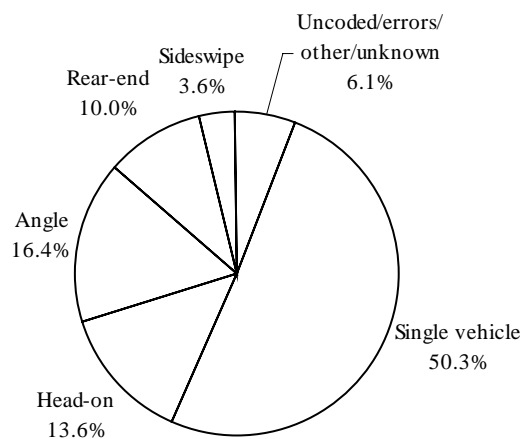
Source: MSPTCD and SEMCOG, 2005.

Fatal Traffic Crashes by Crash Type

As shown in Figure 30, over 50 percent of all fatal crashes in 2005 were single-vehicle crashes. Angle crashes made up the next biggest portion of fatal crashes at just over 16 percent.

Table 7 shows that single-vehicle crashes were the most likely to result in a fatality, with 64 out of every 10,000 single vehicle 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, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 7
Crash Type by Percent Resulting in Fatality, 2005

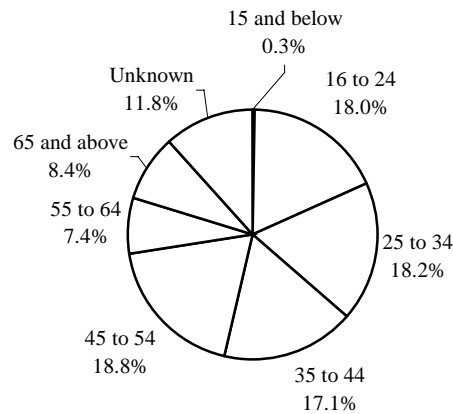
Crash Type	Fatal Traffic Crashes	All Traffic Crashes	Percent Resulting in Fatality
Uncoded/errors/other/unknown	22	9,454	0.23%
Single vehicle	181	28,144	0.64%
Head-on	49	7,734	0.63%
Angle	59	34,324	0.17%
Rear-end	36	54,096	0.07%
Sideswipe	13	23,532	0.06%
Total	360	157,284	0.23%

Source: MSPTCD and SEMCOG, 2005.

Age and Gender of Drivers in Fatal Traffic Crashes

Figure 31 shows the age distribution of drivers involved in fatal traffic crashes in 2005. Over 53 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 two and half times.

Figure 31
Drivers in Fatal Traffic Crashes by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 8
Drivers in Fatal Traffic Crashes by Age Group and Gender, 2005

Age of Driver	Number of Drivers by Gender			Total
	Female	Male	Unknown	
15 and below	1	1	0	2
16 to 24	30	77	0	107
25 to 34	23	85	0	108
35 to 44	35	67	0	102
45 to 54	31	81	0	112
55 to 64	13	31	0	44
65 to 74	3	17	0	20
75 to 84	9	17	0	26
85 to 94	3	1	0	4
95 and above	0	0	0	0
Unknown	2	5	63	70
Total	150	382	63	595

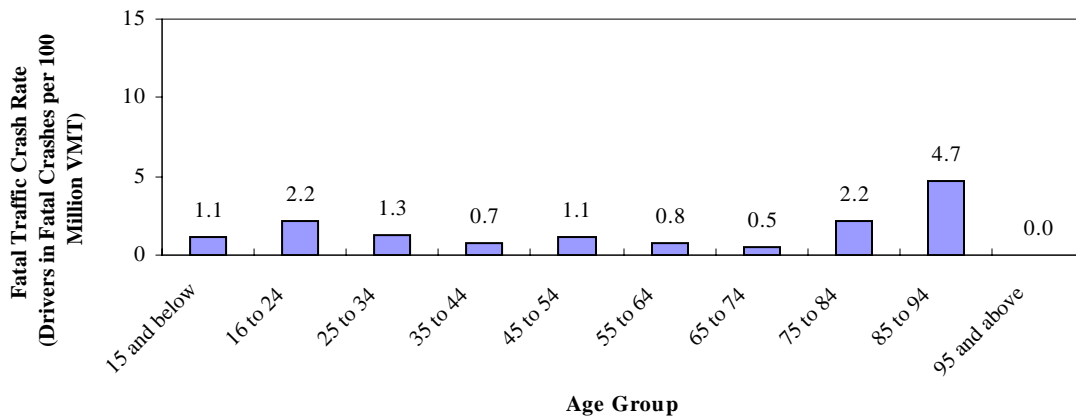
Source: MSPTCD and SEMCOG, 2005.

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 2005. Of all drivers age 16-94, drivers age 65-74 had the lowest fatal crash rate with 0.5 fatal crashes per 100 million VMT. Drivers age 85-94 had the highest fatal crash rate (4.7), followed by drivers age 16-24 (2.2).

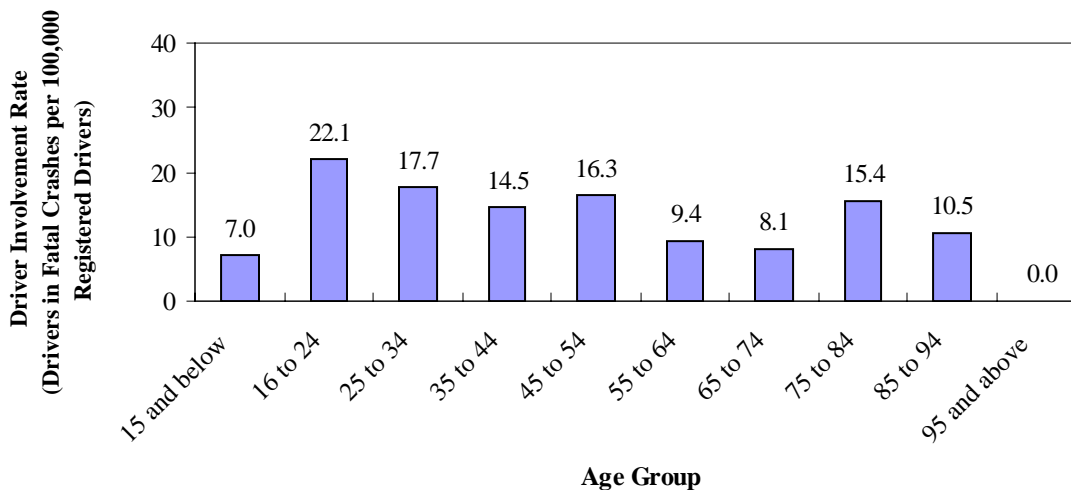
Figure 33 shows the number of drivers involved in fatal crashes compared to the number of registered drivers in that age group. By this measurement, drivers age 15 and below were least likely to be involved in a fatal traffic crash — 7.0 drivers in this age group were in fatal crashes for every hundred thousand registered drivers. Drivers age 16-24 were most likely to be in a fatal crash (22.1), followed by drivers age 25-34 (17.7).

Figure 32
Fatal Traffic Crash Rate by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 33
Fatal Traffic Crash Driver Involvement Rate by Age Group, 2005



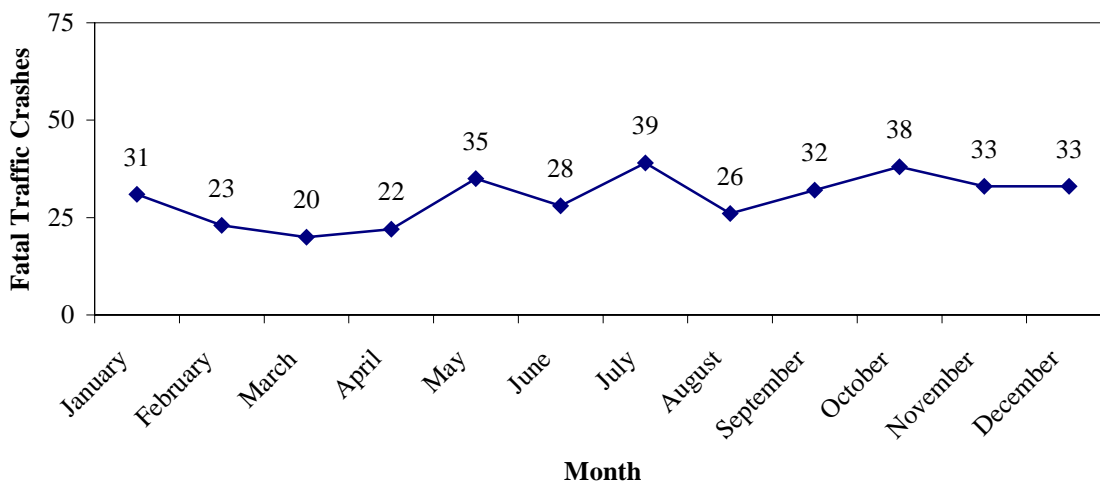
Source: MSPTCD, MDOS, and SEMCOG, 2005.

Fatal Traffic Crashes by Month, Day, and Hour

As shown in Figure 34, more fatal traffic crashes took place in July 2005 than any other month (39), even though January 2005 had the most crashes overall (Figure 10). March 2005 had the fewest fatal crashes (20).

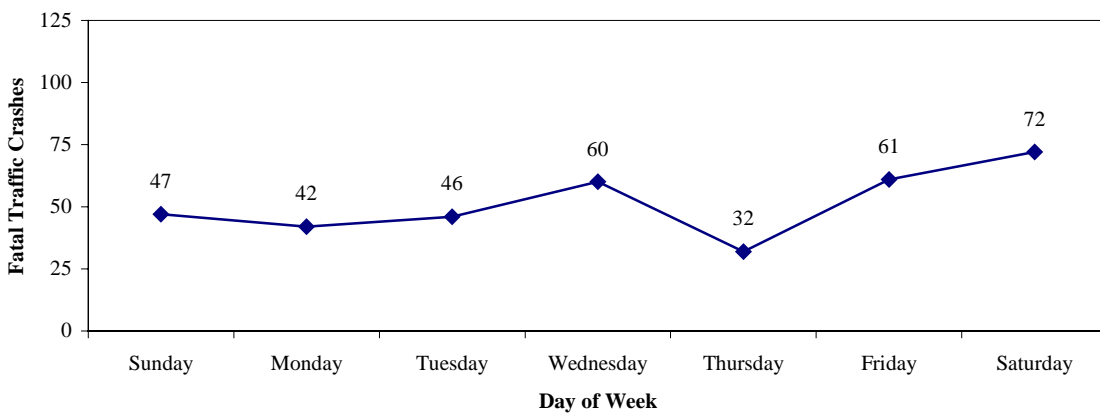
Figure 35 shows the total number of fatal crashes that occurred on each day of the week in 2005. Saturdays in 2005 saw the most fatal crashes (72), even though Fridays had the most overall crashes (Figure 11). Thursday had the fewest fatal crashes (32).

Figure 34
Fatal Traffic Crashes by Month, 2005



Source: MSPTCD and SEMCOG, 2005.

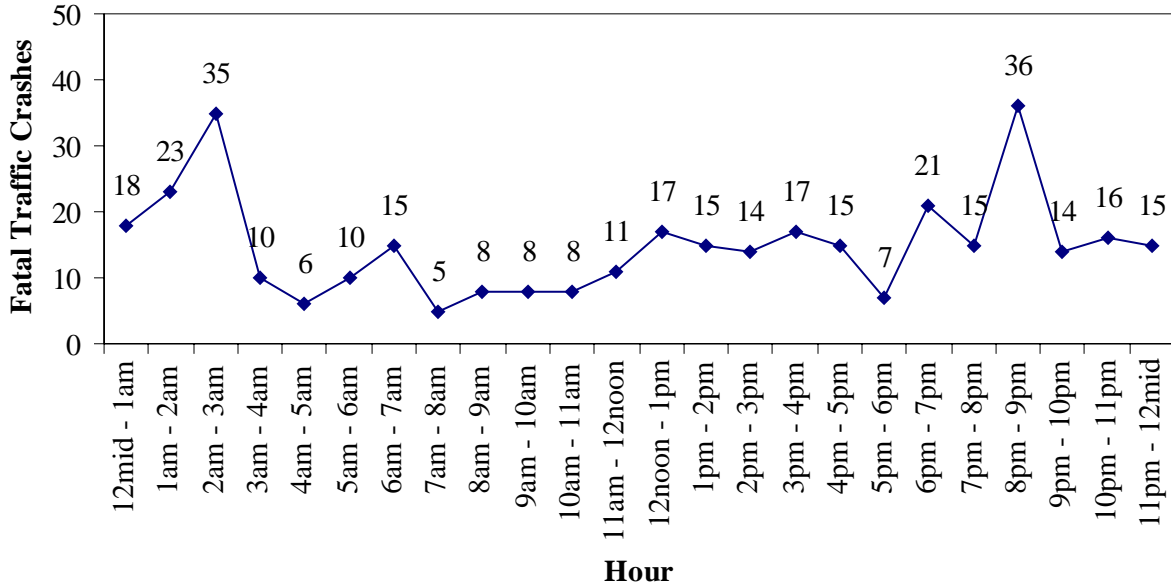
Figure 35
Fatal Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

As shown in Figure 36, the hour from 8 p.m. to 9 p.m. had the most fatal traffic crashes (36), followed by 2 a.m. to 3 a.m. with 35 fatal traffic crashes. The period with the fewest fatal crashes was the 7 a.m. to 8 a.m. period, with five fatal crashes. Comparing this figure to Figure 12 illustrates that times of day with low numbers of overall crashes can have high numbers of fatal crashes.

Figure 36
Fatal Traffic Crashes by Hour of Day, 2005



Source: MSPTCD and SEMCOG, 2005.

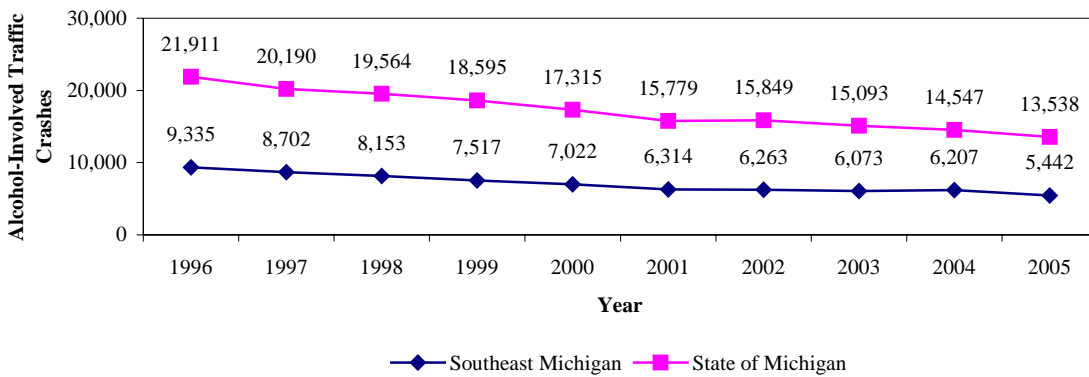
Alcohol-Involved Traffic Crashes

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.*

Figure 37 shows a decrease in alcohol-involved traffic crashes in Southeast Michigan and in Michigan in 2005.

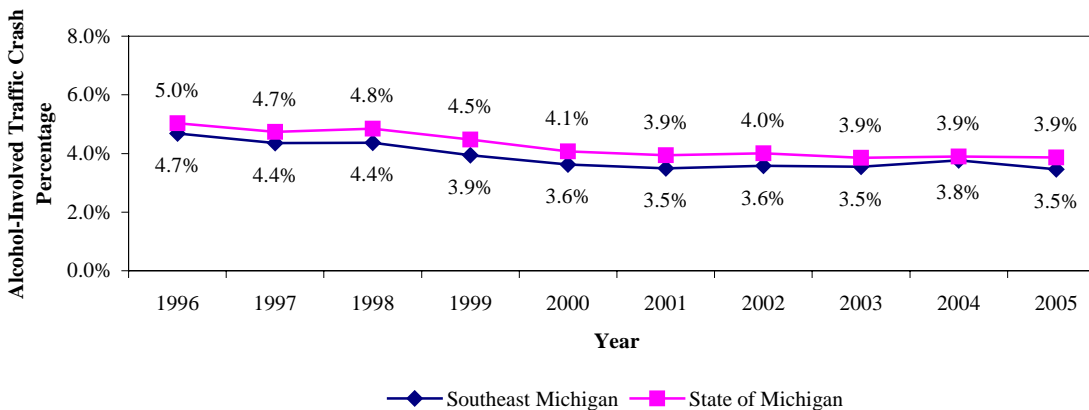
Since the decreases in total crashes in Michigan were accompanied by a proportional decrease in alcohol-involved crashes in Southeast Michigan, the alcohol-involved crash percentage decreased in the state (Figure 38). However this was not the case for Michigan where the percentage stayed the same (3.9).

Figure 37
Alcohol-Involved Traffic Crashes, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 38
Alcohol-Involved Traffic Crash Percentage, 1996-2005



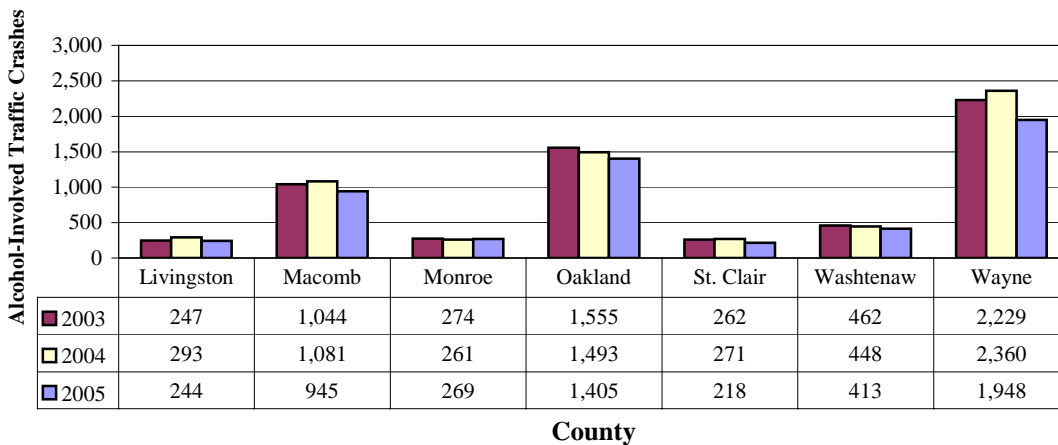
Source: MSPTCD and SEMCOG, 2005.

Alcohol-Involved Traffic Crashes by County

Figure 39 shows that only Monroe County saw an increase in alcohol-involved traffic crashes (3.0 percent).

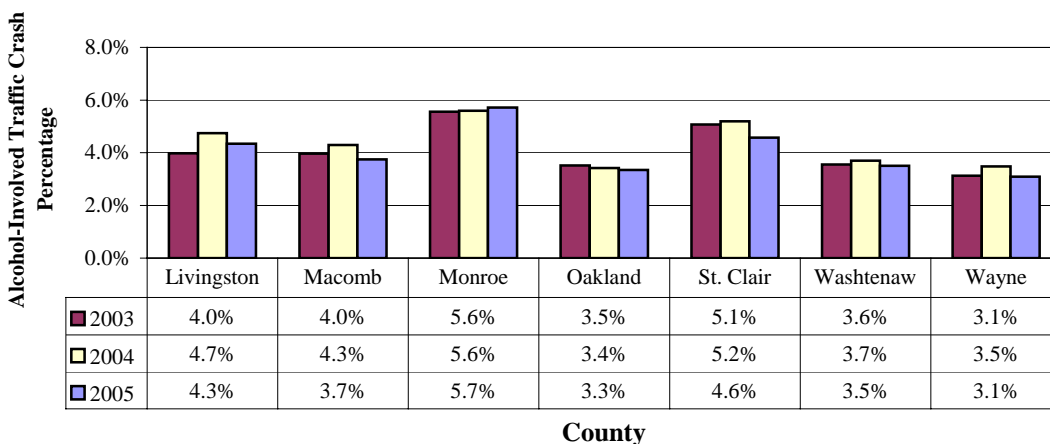
Figure 40 shows that Wayne County now has the lowest percentage of alcohol-involved crashes in the region. Monroe County had the highest percentage of alcohol-related crashes — almost six out of every 100 crashes in Monroe County in 2005 involved alcohol.

Figure 39
Alcohol-Involved Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 40
Alcohol-Involved Traffic Crash Percentage by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

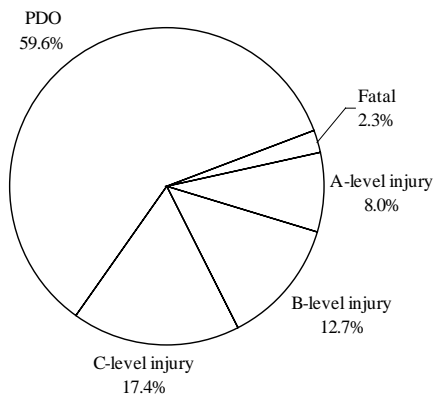
Alcohol-Involved Traffic Crashes by Severity

Over 79 percent of all traffic crashes that did not involve alcohol did not result in any injuries, compared to fewer than 60 percent of alcohol-involved crashes. Alcohol-involved crashes were 10 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 2005.

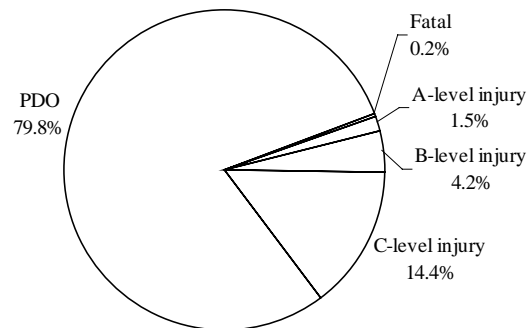
Table 9 shows that nearly 34.2 percent of all fatal crashes in Southeast Michigan in 2005 involved alcohol, and 16 percent of all A-level injury crashes involved alcohol.

Figure 41
Alcohol-Involved Traffic Crash Severity, 2005

Alcohol-Involved Traffic Crashes



All Other Traffic Crashes



Source: MSPTCD and SEMCOG, 2005.

Table 9
Alcohol Involved Traffic Crash Severity, 2005

Crash Severity	Alcohol-Involved Traffic Crashes	All Traffic Crashes	Alcohol-Involved Percentage
Fatal	123	360	34.2%
A-level injury	437	2,724	16.0%
B-level injury	691	7,053	9.8%
C-level injury	945	22,764	4.2%
PDO	3,246	124,383	2.6%
Total	5,442	157,284	3.5%

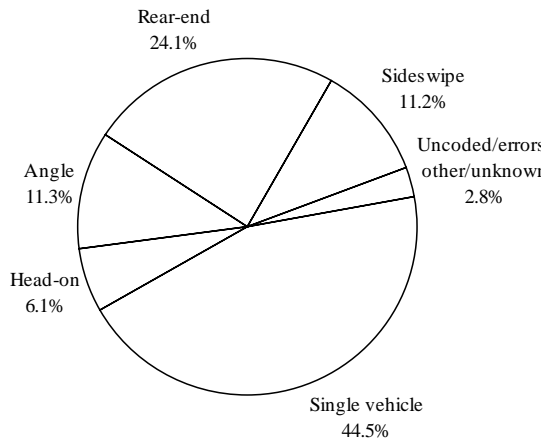
Source: MSPTCD and SEMCOG, 2005.

Alcohol-Involved Traffic Crashes by Crash Type

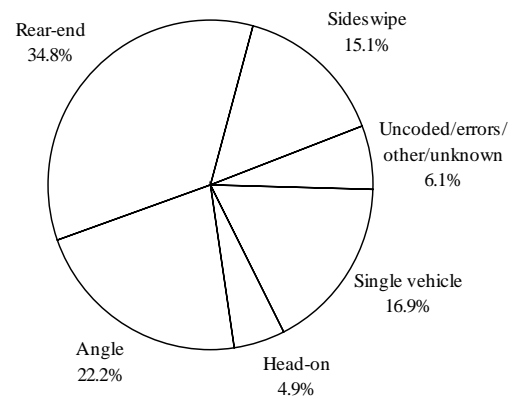
As shown in Figure 42, crashes involving alcohol in 2005 were most often single-vehicle crashes, followed by rear-end crashes. This pattern is different from the one shown by crashes that did not involve alcohol, where rear-end crashes were most common, followed by angle crashes. Nearly one out of every 12 single-vehicle crashes in 2005 involved alcohol (Table 10).

Figure 42
Alcohol-Involved Traffic Crashes by Type, 2005

Alcohol-Involved Traffic Crashes



All Other Traffic Crashes



Source: MSPTCD and SEMCOG, 2005.

Table 10
Traffic Crash Type by Percent Involving Alcohol, 2005

Crash Type	Alcohol-Involved Traffic Crashes	All Traffic Crashes	Alcohol-Involved Percentage
Uncoded/errors/other/unknown	155	9,454	1.6%
Single vehicle	2,421	28,144	8.6%
Head-on	333	7,734	4.3%
Angle	617	34,324	1.8%
Rear-end	1,309	54,096	2.4%
Sideswipe	607	23,532	2.6%
Total	5,442	157,284	3.5%

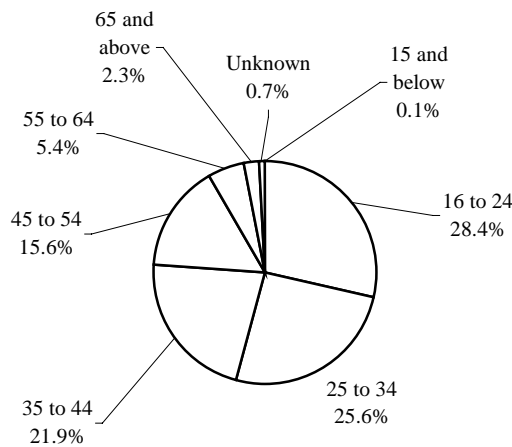
Source: MSPTCD and SEMCOG, 2005.

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

As in 2004, drivers between the ages of 16 and 44 accounted for nearly 76 percent of had-been-drinking (HBD) drivers in 2005. Figure 43 shows the percent of HBD drivers in each age group in 2005.

Table 11 shows the numbers of HBD drivers in each age group by gender. In 2005, there were nearly three male drinking drivers in crashes for every female drinking driver in a crash.

Figure 43
HBD Drivers by Age Group in Alcohol-Involved Traffic Crashes, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 11
HBD Drivers in Alcohol-Involved Traffic Crashes by Age Group and Gender, 2005

Age of Driver	Number of Drivers by Gender			Total
	Female	Male	Unknown	
15 and below	1	4	0	5
16 to 24	384	1,144	2	1,530
25 to 34	318	1,064	0	1,382
35 to 44	346	833	0	1,179
45 to 54	236	603	1	840
55 to 64	48	244	1	293
65 to 74	14	74	0	88
75 to 84	10	21	0	31
85 to 94	1	3	0	4
95 and above	0	0	0	0
Unknown	4	27	8	39
Total	1,362	4,017	12	5,391

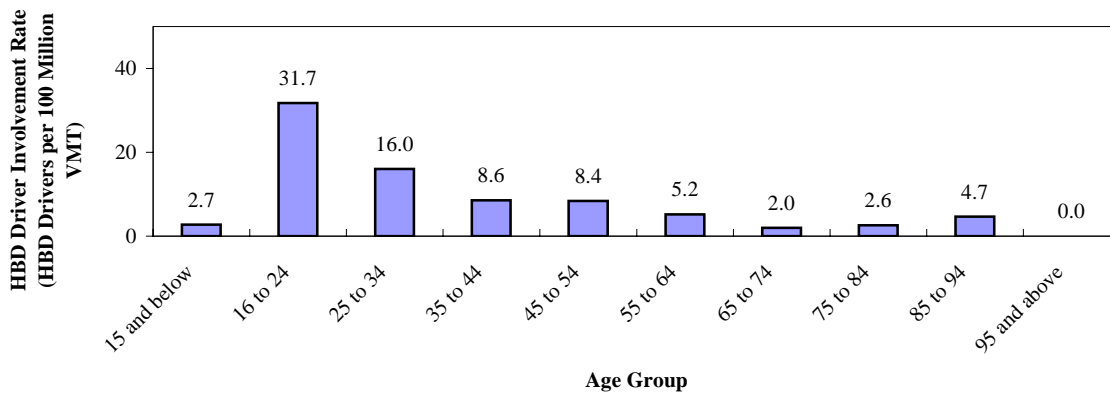
Source: MSPTCD and SEMCOG, 2005.

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 had the lowest number.

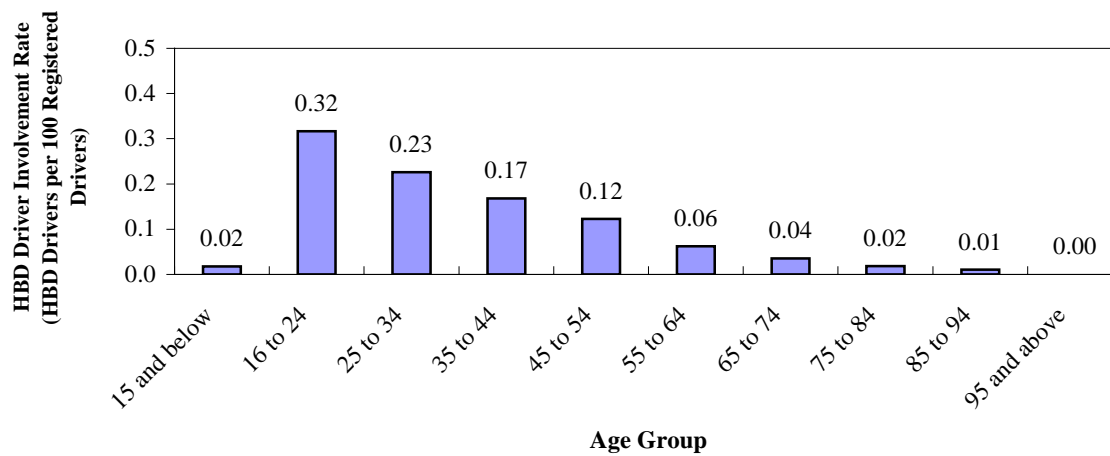
Figure 45 shows the number of HBD drivers compared to the number of registered drivers in each age group, with the 16-24 age group having the highest rate of HBD drivers and the 95 and above age group having the lowest rate.

Figure 44
Alcohol-Involved Traffic Crash HBD Driver Involvement Rate by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 45
Alcohol-Involved Traffic Crash HBD Driver Involvement Rate by Age Group, 2005



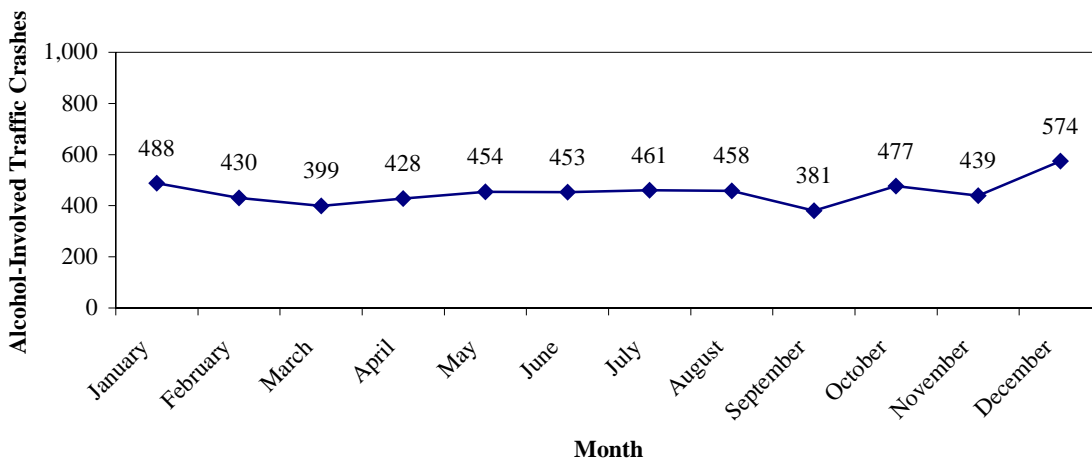
Source: MSPTCD, MDOS, and SEMCOG, 2005.

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 2005. December had the most alcohol-involved crashes (574) even though January had the most crashes overall (Figure 10). September saw the fewest alcohol-involved crashes (381), and April had the fewest overall crashes.

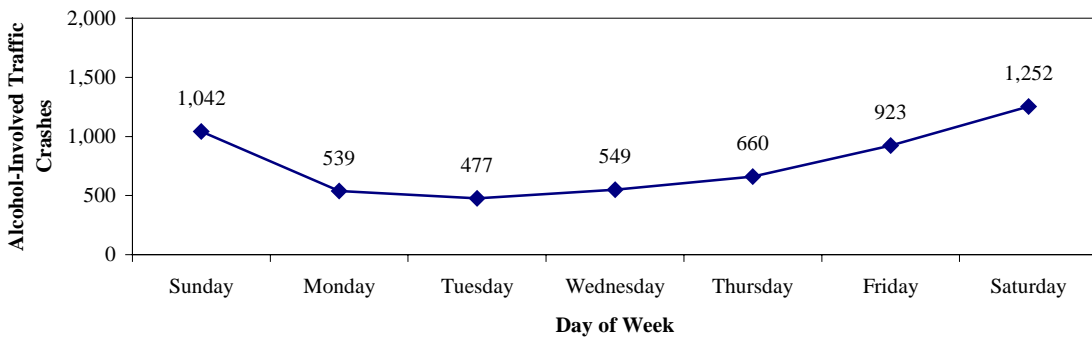
As shown in Figure 47, alcohol-involved traffic crashes increase on the weekends, the opposite of the pattern shown by all crashes (Figure 11). Saturdays had the most alcohol-involved crashes (1,252) and Tuesdays saw the fewest (477).

Figure 46
Alcohol-Involved Traffic Crashes by Month, 2005



Source: MSPTCD and SEMCOG, 2005.

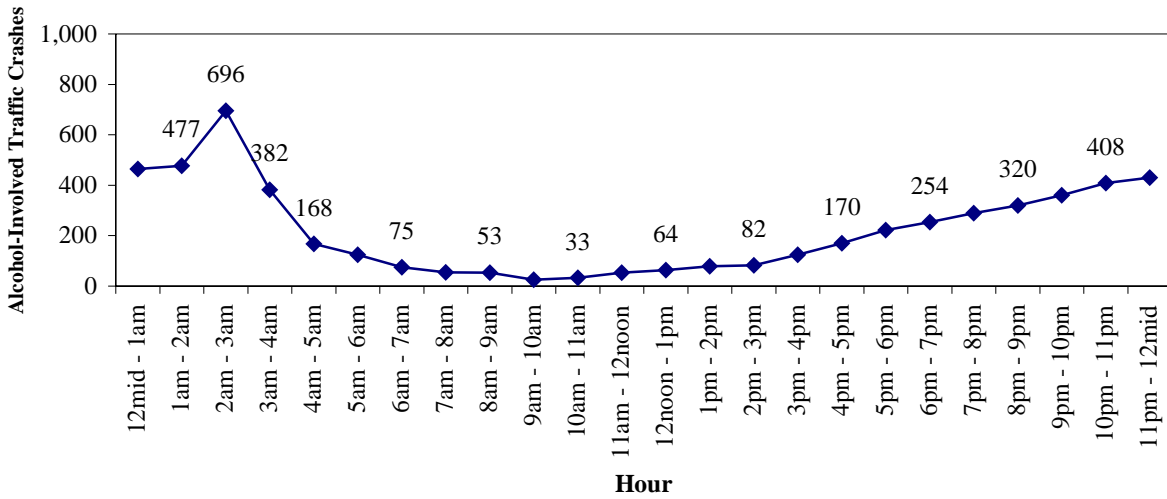
Figure 47
Alcohol-Involved Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

More alcohol-involved crashes (696) took place between 2 a.m. and 3 a.m. than during any other hour interval in 2005, as shown in 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, 2005



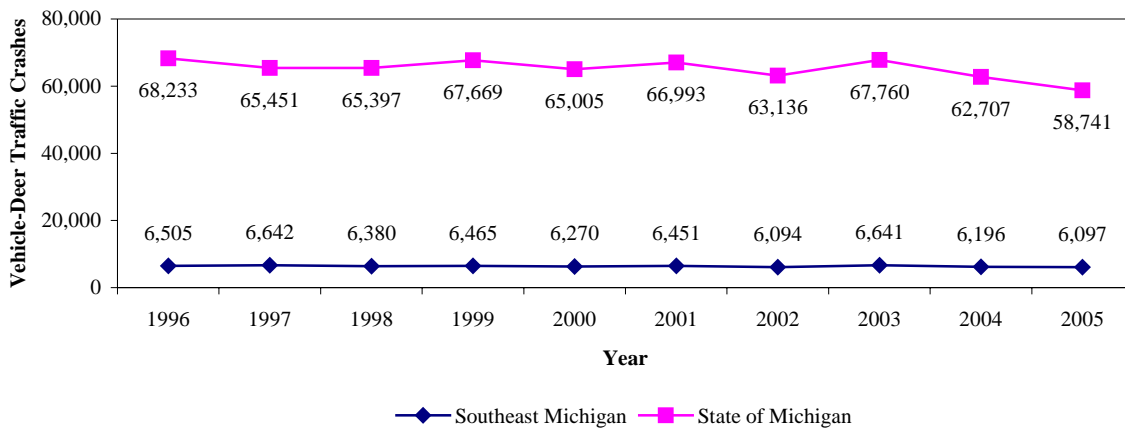
Source: MSPTCD and SEMCOG, 2005.

Vehicle-Deer Traffic Crashes

Collisions between deer and motor vehicles decreased for the second year in a row in 2005. This decrease in vehicle-deer crashes was seen both in Southeast Michigan and in the State of Michigan (Figure 49).

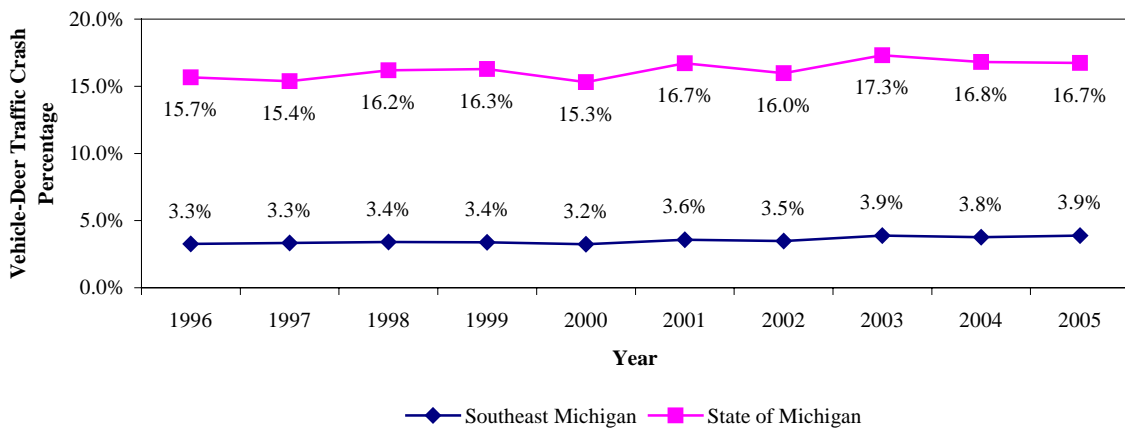
The percentage of all crashes that involved deer increased to 3.9 percent in 2005, the highest rate since SEMCOG began keeping records in 1993. The deer-crash rate also decreased in Michigan, to 16.7 percent (Figure 50).

Figure 49
Vehicle-Deer Traffic Crashes, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 50
Vehicle-Deer Traffic Crash Percentage, 1996-2005



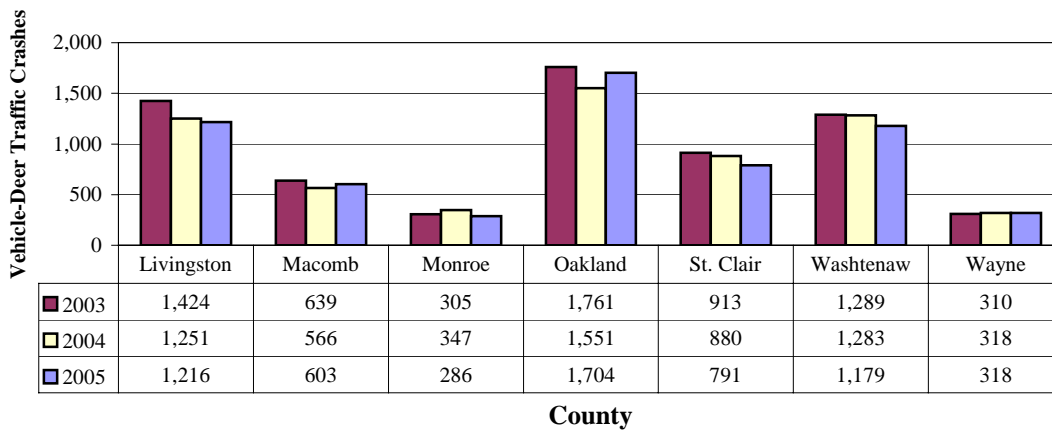
Source: MSPTCD and SEMCOG, 2005

Vehicle-Deer Traffic Crashes by County

Macomb and Oakland were the only two counties in Southeast Michigan that saw an increase in car-deer crashes in 2005. Figure 51 shows the number of vehicle-deer crashes in each county in 2003-2005.

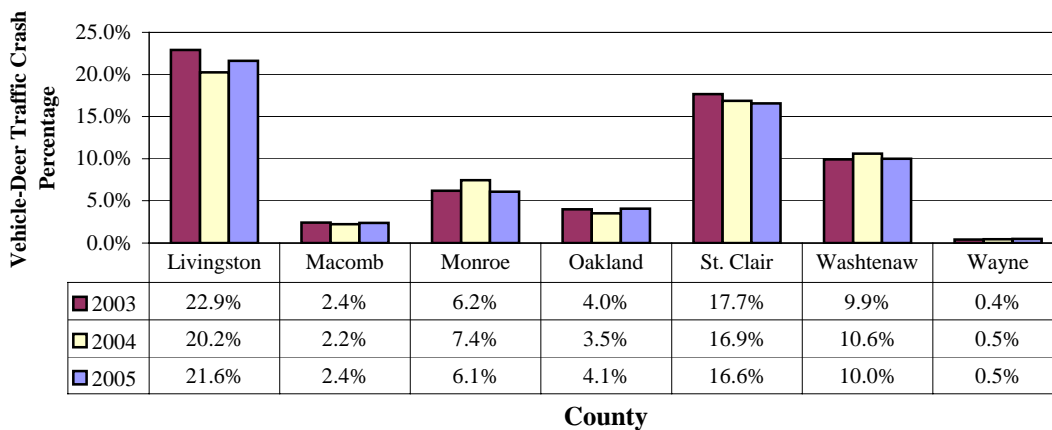
As Figure 52 shows, Livingston County continues to lead the region in vehicle-deer crash percentage. More than one out of every five crashes in Livingston County in 2005 involved a deer. St. Clair and Washtenaw Counties followed, with nearly 17 percent and 10 percent, respectively.

Figure 51
Vehicle-Deer Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 52
Vehicle-Deer Traffic Crash Percentage by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Vehicle-Deer Traffic Crashes by Severity

As shown in Table 12, crashes with deer accounted for nearly five percent of all PDO crashes in Southeast Michigan in 2005. There was one vehicle-deer crashes that was fatal in Southeast Michigan in 2005, and over 96 percent of all crashes with deer resulted only in property damage.

Table 12
Vehicle-Deer Traffic Crash Severity, 2005

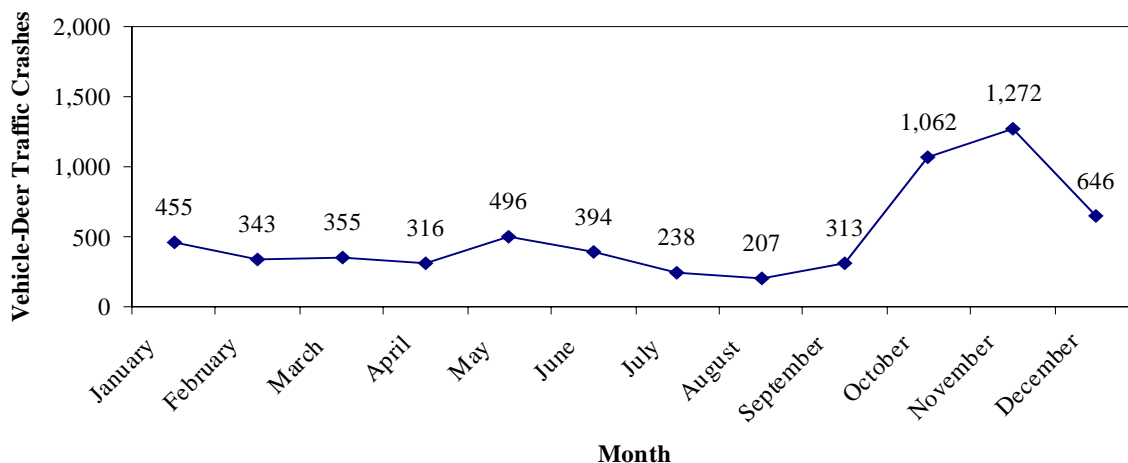
Crash Severity	Vehicle-Deer Traffic Crashes	All Traffic Crashes	Vehicle-Deer Percentage
Fatal	1	360	0.3%
A-level Injury	11	2,724	0.4%
B-level Injury	56	7,053	0.8%
C-level Injury	119	22,764	0.5%
PDO	5,910	124,383	4.8%
Total	6,097	157,284	3.9%

Source: MSPTCD and SEMCOG, 2005.

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 2005. Deer crashes peaked in November at 1,272. Over 38 percent of all deer crashes took place in October or November. August had the fewest vehicle-deer crashes at 207.

Figure 53
Vehicle-Deer Traffic Crashes by Month, 2005

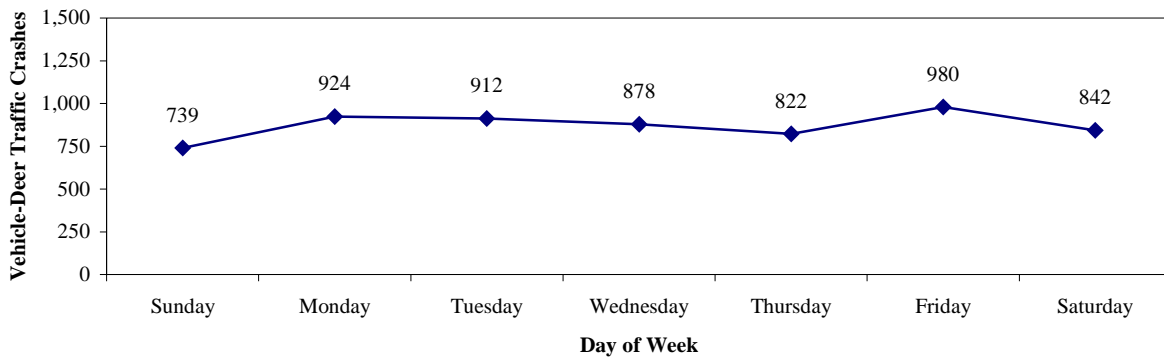


Source: MSPTCD and SEMCOG, 2005.

Figure 54 shows the number of vehicle-deer crashes in 2005 grouped by the day on which they happened. The most crashes with deer occurred on Fridays (980) and the fewest occurred on Sundays (739). Sunday was also the day of the week with the fewest overall crashes (Figure 11).

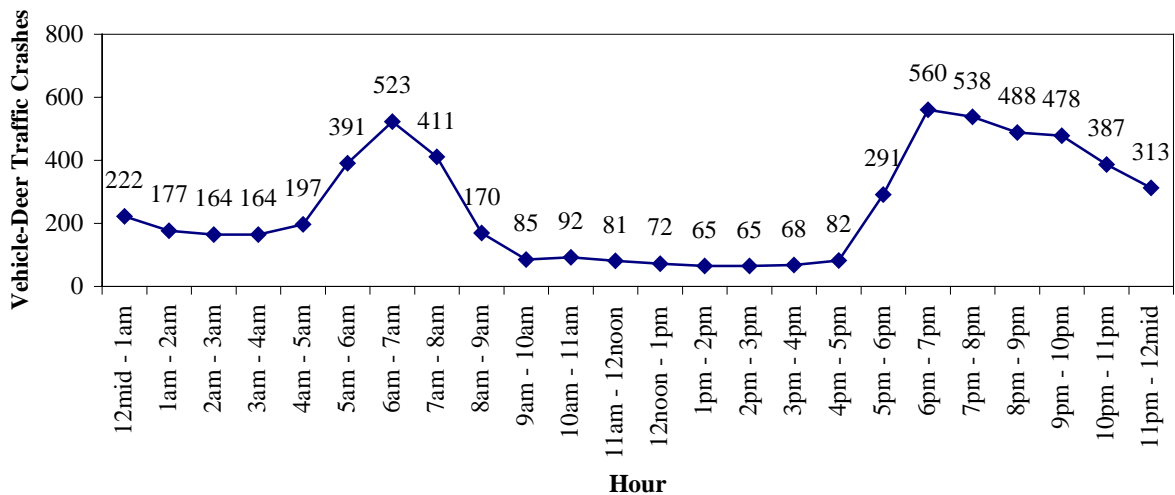
Deer crashes were most likely to occur during evenings or early mornings (Figure 55). The pattern of deer crashes by time of day is quite different from the pattern of all traffic crashes (Figure 12). The morning peak in deer crashes is almost equal to the evening peak, and crashes decrease sharply during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

Figure 54
Vehicle-Deer Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 55
Vehicle-Deer Traffic Crashes by Hour of Day, 2005

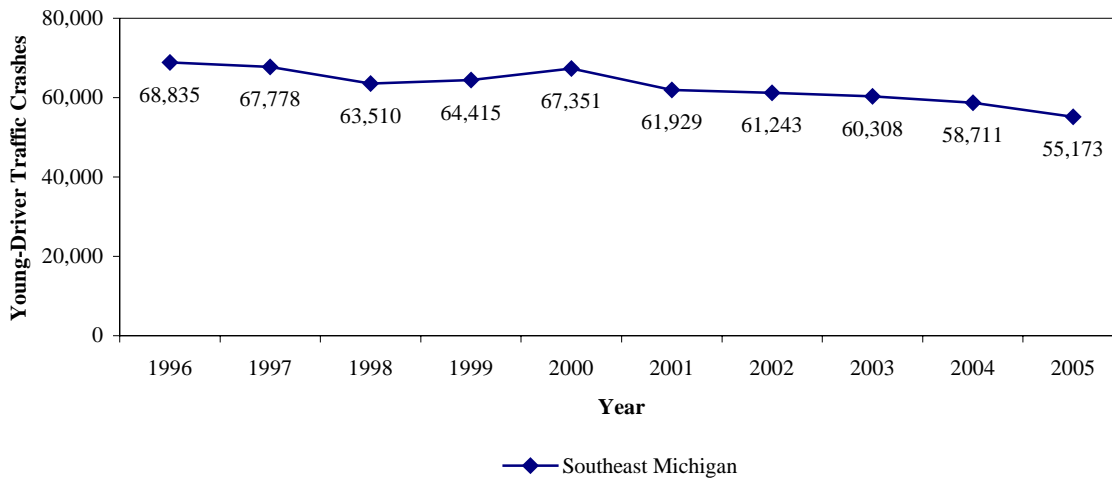


Source: MSPTCD and SEMCOG, 2005.

Young-Driver Traffic Crashes

A young driver is commonly defined as a driver between the age of 16 and 24. As Figure 56 shows, young-driver crashes decreased 6.0 percent in Southeast Michigan between 2004 and 2005. Data for Michigan was not available. Table 13 shows young-driver crash percentages for 1996-2005.

Figure 56
Young-Driver Traffic Crashes, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

Table 13
Young-Driver Traffic Crash Percentage, 1996-2005

Year	Young-Driver Traffic Crashes	All Traffic Crashes	Young-Driver Percentage
1996	68,835	199,420	34.5%
1997	67,778	199,638	34.0%
1998	63,510	186,693	34.0%
1999	64,415	191,006	33.7%
2000	67,351	193,955	34.7%
2001	61,929	180,739	34.3%
2002	61,243	174,770	35.0%
2003	60,308	171,105	35.2%
2004	58,711	164,900	35.6%
2005	55,173	157,284	35.1%

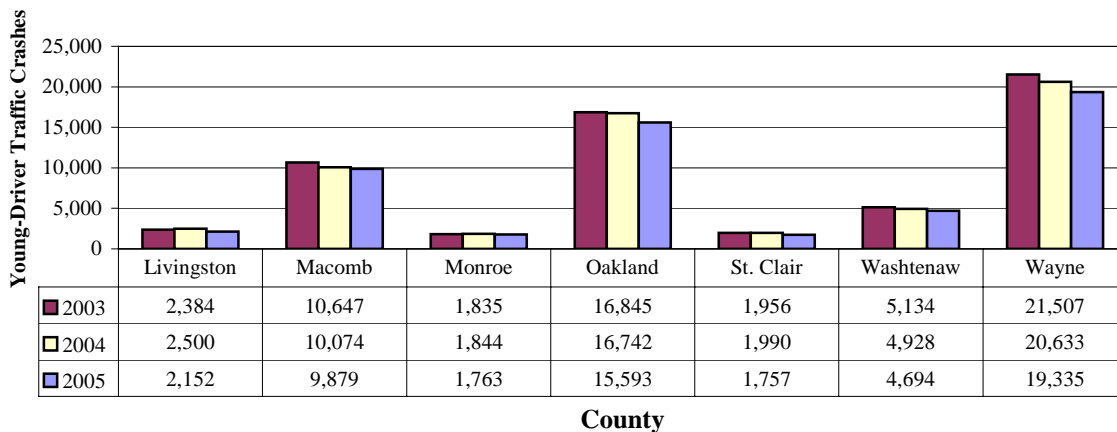
Source: MSPTCD and SEMCOG, 2005.

Young-Driver Traffic Crashes by County

Figure 57 shows the number of young-driver crashes in each county in 2003-2005. All Southeast Michigan counties experienced a decrease in young-driver crashes with Livingston County seeing the largest decrease at 14.0 percent.

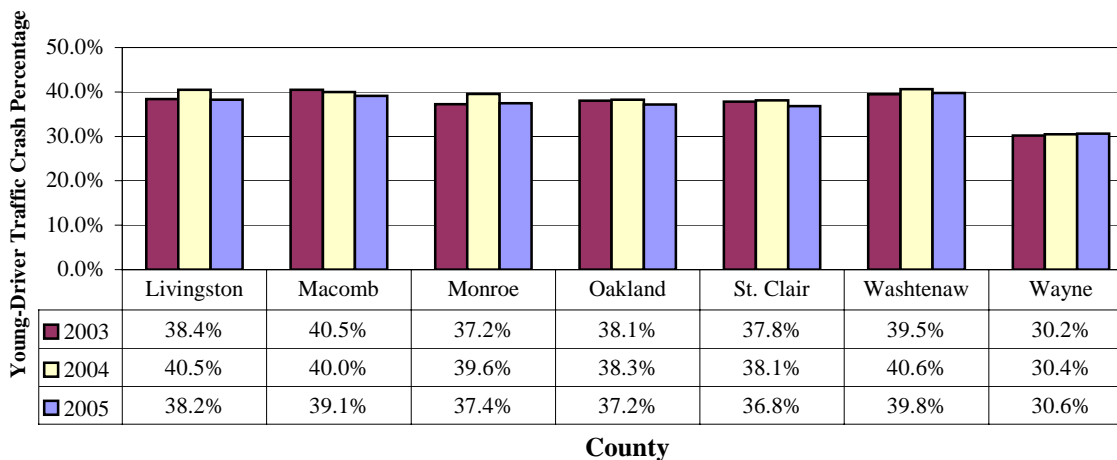
Wayne County continued to have the lowest young-driver traffic crash percentage in the region at just above 30 percent (Figure 58). All counties except for Wayne have young-driver crash rates above the regional traffic crash percentage of 35.1 percent.

Figure 57
Young-Driver Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 58
Young-Driver Traffic Crash Percentage by County, 2003-2005

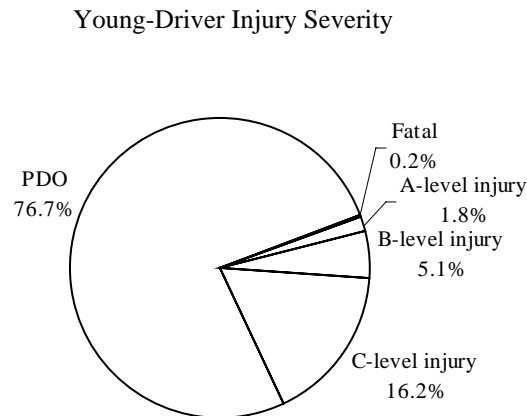


Source: MSPTCD and SEMCOG, 2005.

Young-Driver Traffic Crashes by Severity and Crash Type

Just over 76 percent of traffic crashes involving young drivers resulted in property damage only. Figure 59 shows the severity of crashes involving young drivers in 2005. When compared to all other drivers, young drivers were more likely to have rear-end, head-on, or angle crashes and less likely to have sideswipe or single vehicle traffic crashes (Figure 60).

Figure 59
Young-Driver Traffic Crash Severity, 2005

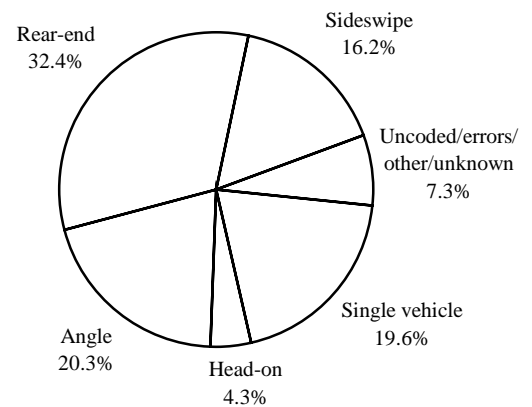
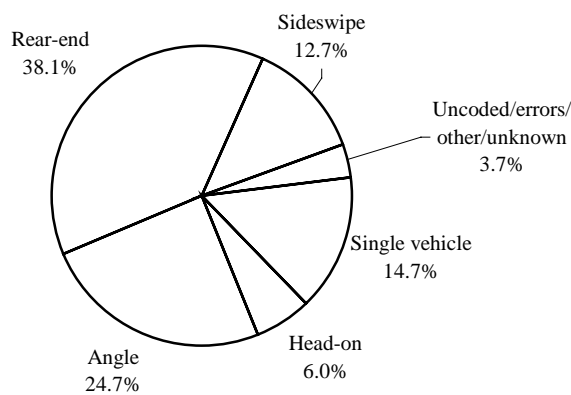


Source: MSPTCD and SEMCOG, 2005.

Figure 60
Young-Driver Traffic Crashes by Crash Type, 2005

Young-Driver Traffic Crashes

All Other Traffic Crashes

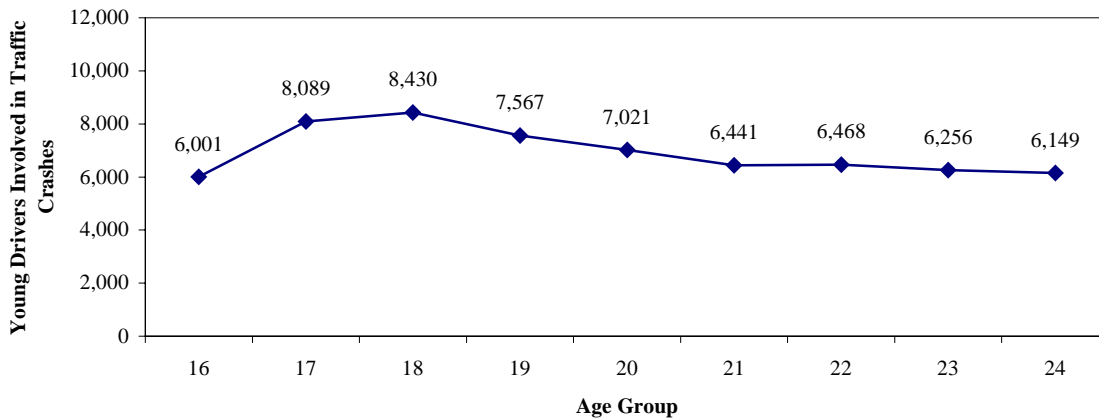


Source: MSPTCD and SEMCOG, 2005.

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 2005. Crashes among young drivers peaked at age 17 and 18 as a group with over 16,500 crashes, although crashes peaked at age 17 for female drivers and age 18 for male drivers. Table 14 breaks down each age by gender.

Figure 61
Young Driver Traffic Crash Involvement by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 14
Young Driver Traffic Crash Involvement by Age Group and Gender, 2005

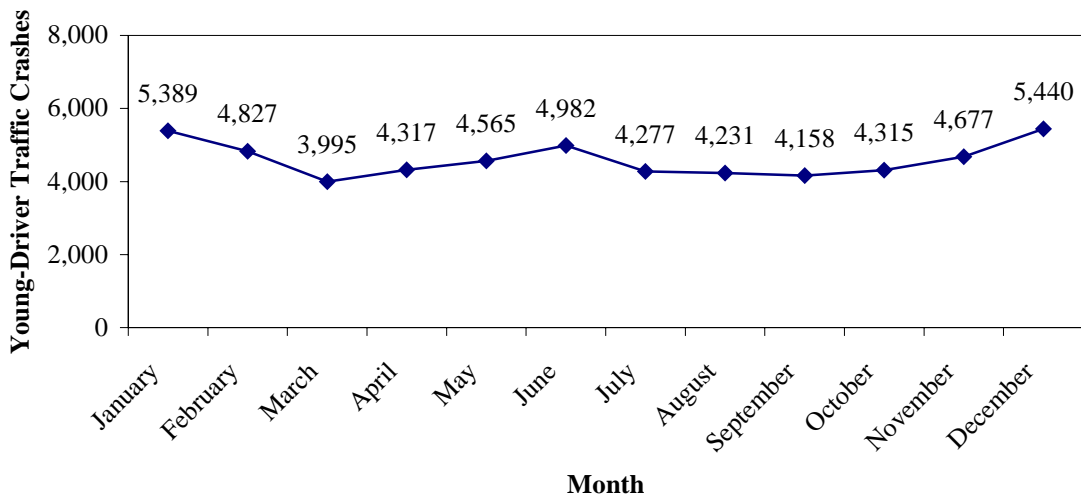
Age Group	Number of Driver by Gender			Total
	Female	Male	Unknown	
16	2,849	3,149	3	6,001
17	3,756	4,331	2	8,089
18	3,733	4,695	2	8,430
19	3,408	4,156	3	7,567
20	3,141	3,873	7	7,021
21	2,920	3,516	5	6,441
22	2,925	3,539	4	6,468
23	2,897	3,350	9	6,256
24	2,814	3,333	2	6,149
Total	28,443	33,942	37	62,422

Source: MSPTCD and SEMCOG, 2005.

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

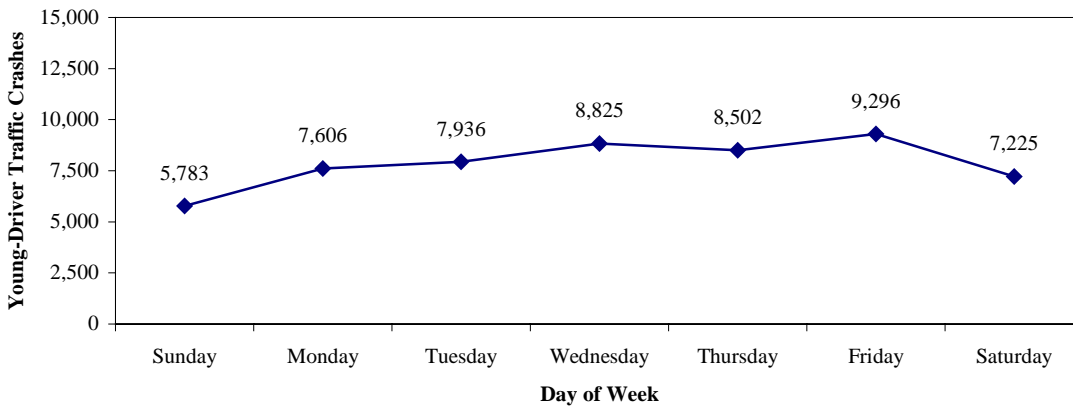
Crashes involving young drivers were most frequent in December (5,440) and least frequent in March. When grouped by day of week, young-driver crashes followed the same pattern as all crashes (Figure 11), with most crashes taking place on Fridays (9,296) and the fewest taking place on Sundays (5,783). Figures 62 and 63 show these numbers in greater detail.

Figure 62
Young-Driver Traffic Crashes by Month, 2005



Source: MSPTCD and SEMCOG, 2005.

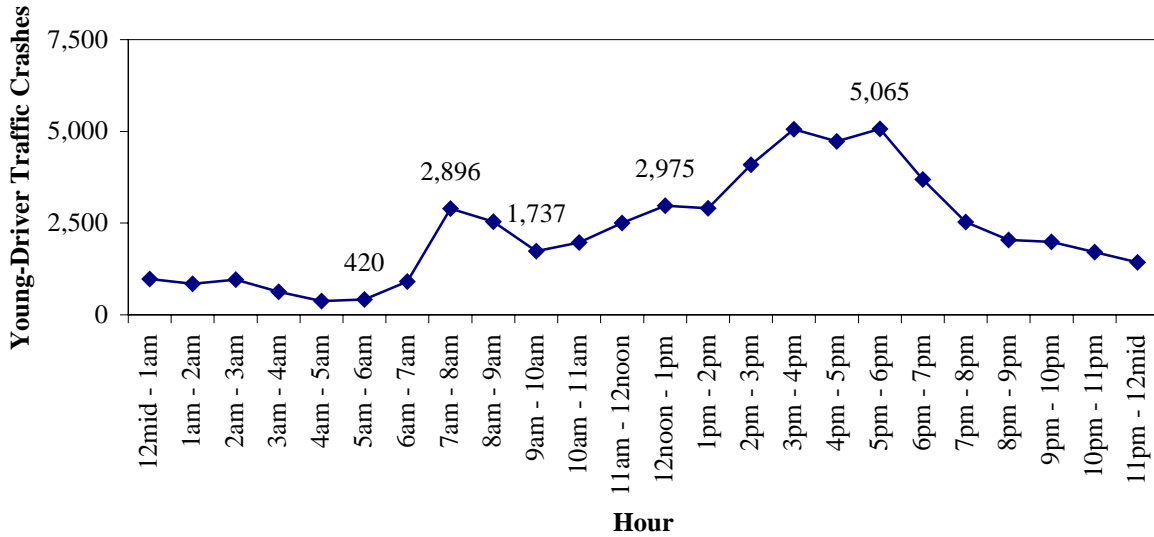
Figure 63
Young-Driver Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 64 shows the number of young-driver traffic crashes grouped by the hour they occurred. As with all traffic crashes in 2005 (Figure 12), traffic crashes involving young drivers were most frequent between 3 p.m. and 7 p.m. and least frequent between 4 a.m. and 6 a.m.

Figure 64
Young-Driver Traffic Crashes by Hour of Day, 2005



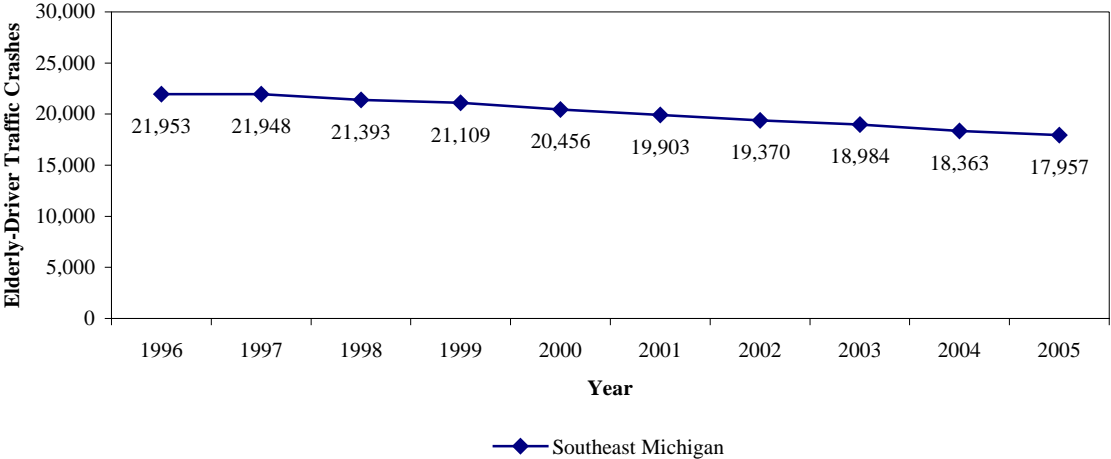
Source: MSPTCD and SEMCOG, 2005.

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 2005, regardless of the cause of the crash. Crashes involving elderly drivers in Southeast Michigan declined in 2005 for the ninth consecutive year, to 17,957 crashes.

Table 15 shows that 11.4 percent of all traffic crashes in Southeast Michigan in 2005 involved an elderly driver.

Figure 65
Elderly Driver Traffic Crashes, 1996-2005



Source: MSPTCD and SEMCOG, 2005. * Michigan data were not available.

Table 15
Elderly Driver Traffic Crash Percentage, 1996-2005

Year	Elderly Driver Traffic Crashes	All Traffic Crashes	Elderly Driver Percentage
1996	21,953	199,420	11.0%
1997	21,948	199,638	11.0%
1998	21,393	186,693	11.5%
1999	21,109	191,006	11.1%
2000	20,456	193,955	10.5%
2001	19,903	180,739	11.0%
2002	19,370	174,770	11.1%
2003	18,984	171,105	11.1%
2004	18,363	164,900	11.1%
2005	17,957	157,284	11.4%

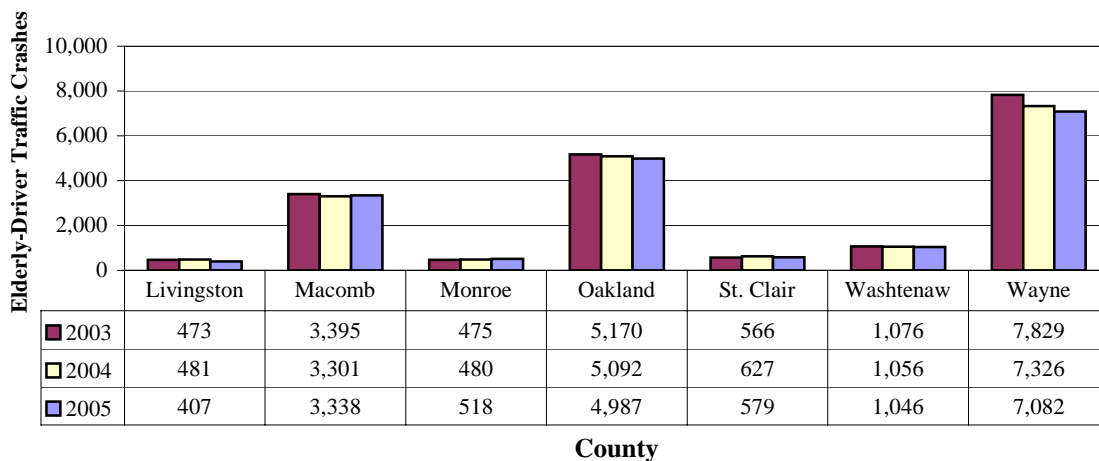
Source: MSPTCD and SEMCOG, 2005.

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 a decrease in elderly driver crashes.

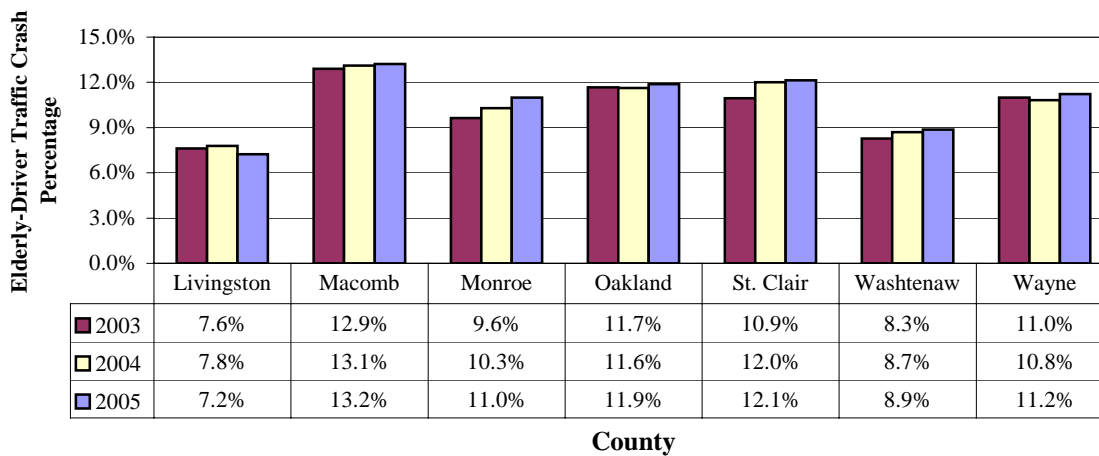
Macomb County continued to have the highest percentage of elderly driver crashes in the region at 13.2 percent. Livingston County had the lowest percentage in the region at 7.2 percent.

Figure 66
Elderly Driver Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 67
Elderly Driver Traffic Crash Percentage by County, 2003-2005



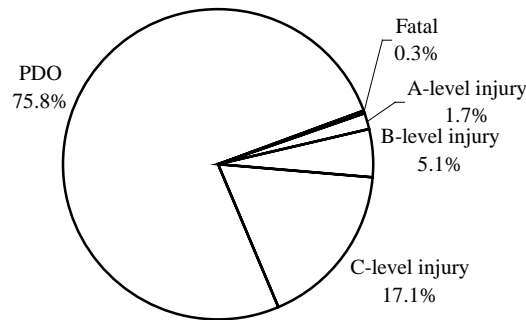
Source: MSPTCD and SEMCOG, 2005.

Elderly Driver Traffic Crashes by Severity and Crash Type

As shown in Figure 68, nearly 76 percent of all traffic crashes involving elderly drivers resulted in property damage only, compared to 79 percent of all traffic crashes (Figure 5).

Figure 69 shows that elderly drivers were more likely to be involved in angle, head-on and sideswipe crashes and less likely to be involved in single vehicle, or rear-end crashes than non-elderly drivers.

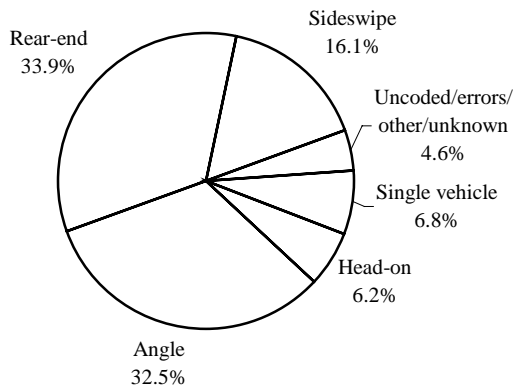
Figure 68
Elderly Driver Traffic Crash Severity, 2005



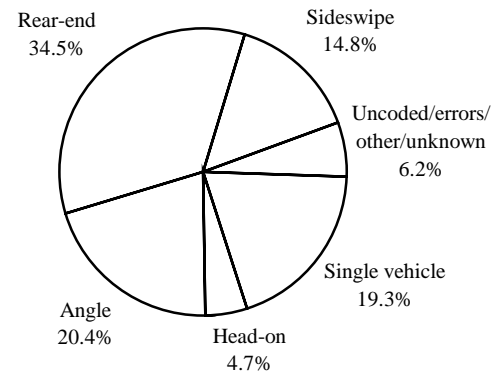
Source: MSPTCD and SEMCOG, 2005.

Figure 69
Elderly Driver Traffic Crashes by Crash Type, 2005

Elderly Driver Traffic Crashes



All Other Traffic Crashes



Source: MSPTCD and SEMCOG, 2005.

Age and Gender of Elderly Drivers in Traffic Crashes

In 2005, 18,838 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 Traffic Crash Involvement by Age Group and Gender, 2005

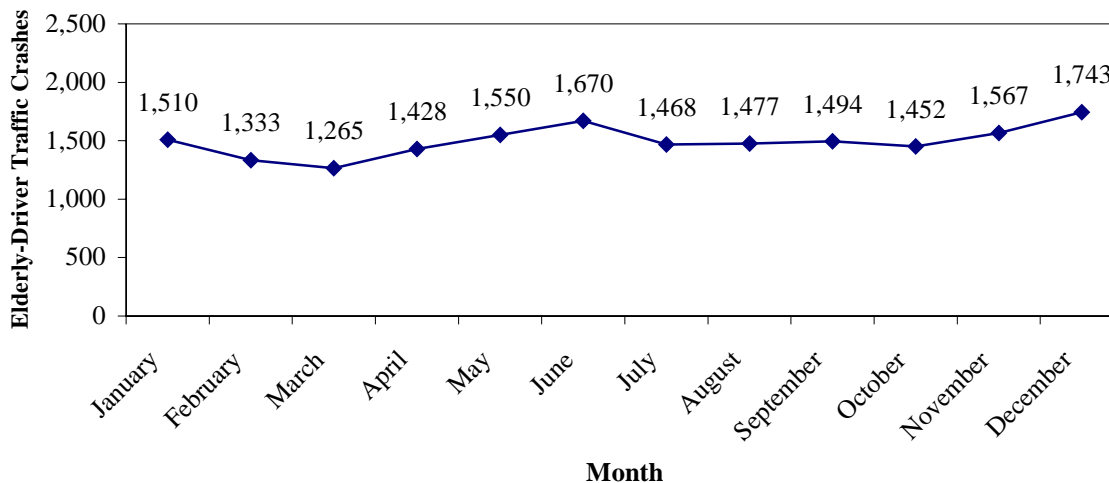
Age Group	Number of Drivers by Gender			Total
	Female	Male	Unknown	
65 to 74	4,509	6,163	6	10,678
75 to 84	3,041	3,738	6	6,785
85 to 94	600	758	1	1,359
95 and above	4	12	0	16
Total	8,154	10,671	13	18,838

Source: MSPTCD and SEMCOG, 2005.

Elderly Driver Traffic Crashes by Month, Day, and Hour

As shown in Figure 70, elderly driver crashes were most common in December (1,743) and least common in February and March.

Figure 70
Elderly Driver Traffic Crashes by Month, 2005

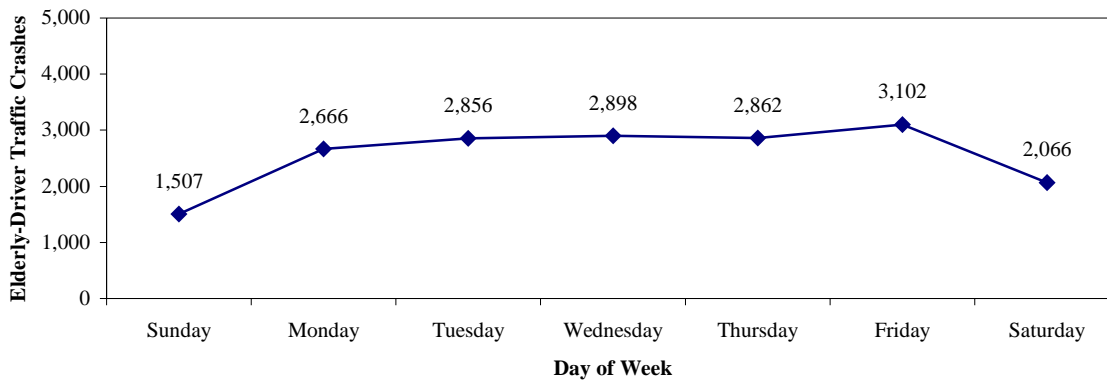


Source: MSPTCD and SEMCOG, 2005.

As with all traffic crashes in 2005, crashes involving elderly drivers occurred more often on Fridays than any other day and least often on Sundays (Figure 71).

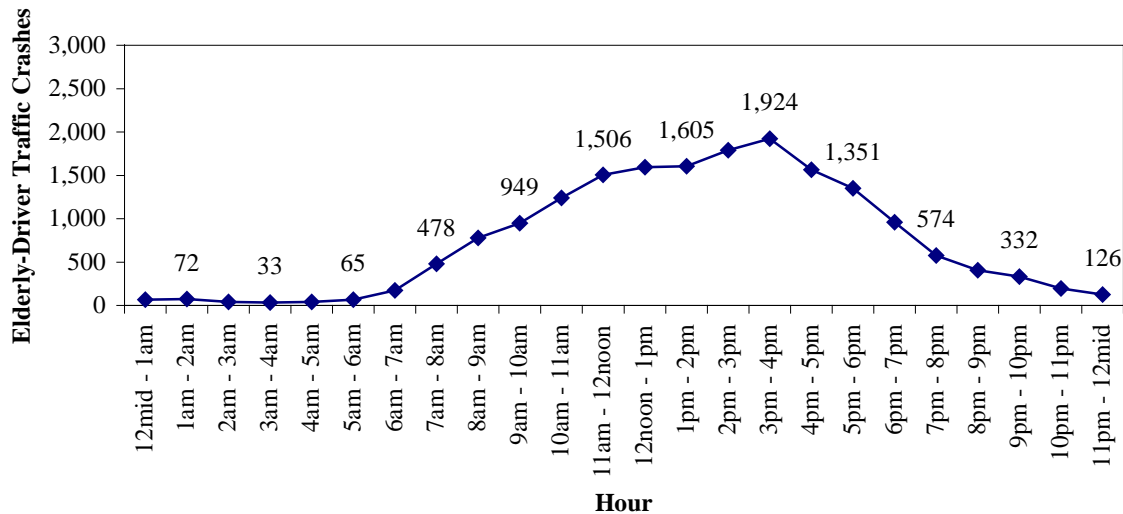
Figure 72 shows the number of elderly driver traffic crashes grouped by the hour during which they occurred. The peak time for elderly driver crashes was between 3 p.m. and 4 p.m., with a noticeable drop after this hour. This is different from the pattern of all traffic crashes (Figure 12), where the 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, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 72
Elderly Driver Traffic Crashes by Hour of Day, 2005

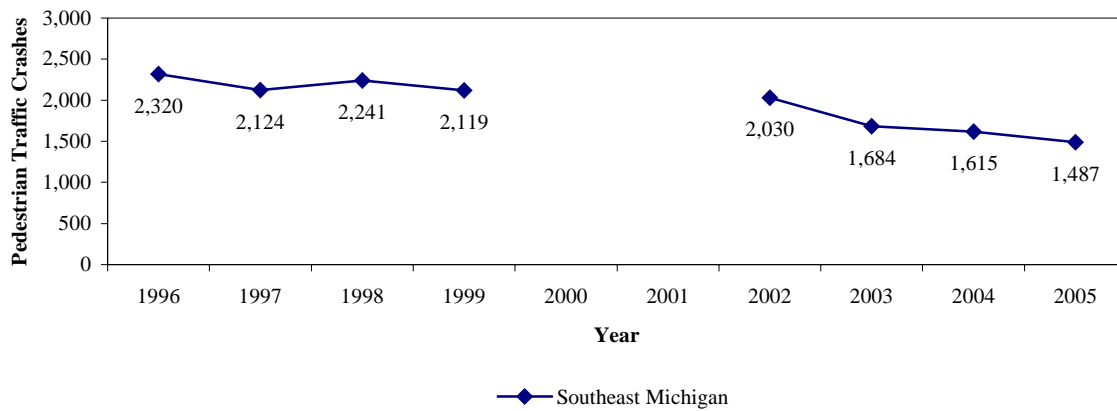


Source: MSPTCD and SEMCOG, 2005

Pedestrian Traffic Crashes

A pedestrian is typically defined as a person traveling on foot. Crashes in Southeast Michigan involving pedestrians totaled 1,487 in 2005 as shown in Figure 73. This represents a 7.9 percent decrease from 2004.

Figure 73
Pedestrian Traffic Crashes, 1995-1999 and 2002-2005

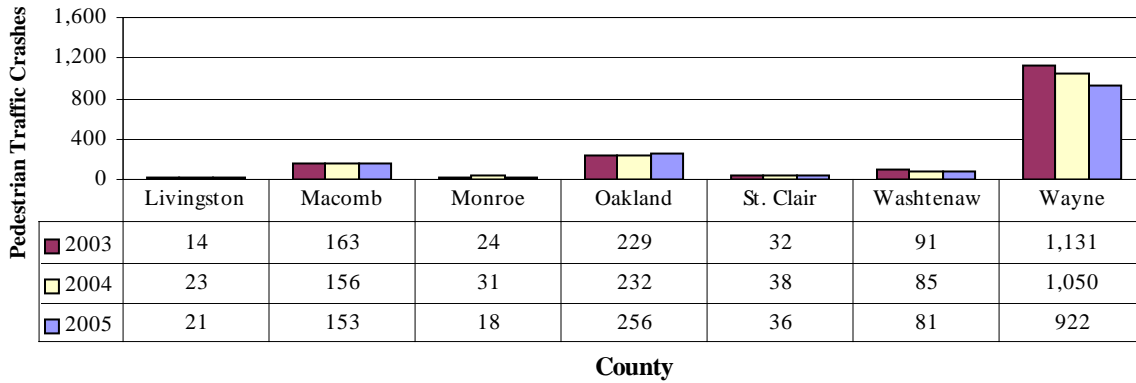


Source: MSPTCD and SEMCOG, 2005. * Page 1 explains why 2000 and 2001 data are not available.

Pedestrian Traffic Crashes by County

Figure 74 shows how many pedestrian crashes occurred in each Southeast Michigan county in 2005. Wayne County had the highest number of pedestrian crashes, followed by Oakland and Macomb Counties.

Figure 74
Pedestrian Traffic Crashes by County, 2003-2005

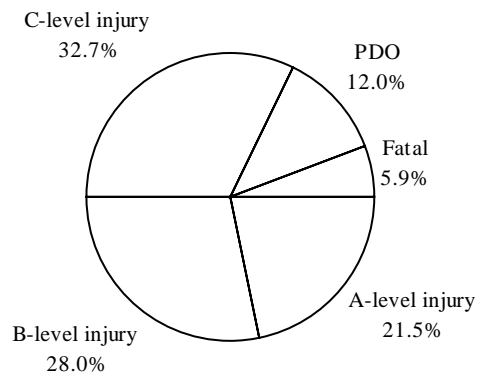


Source: MSPTCD and SEMCOG, 2005.

Pedestrian Traffic Crashes by Severity

Figure 75 shows that 6.0 percent of the traffic crashes involving pedestrians in 2005 were fatal, compared to only 0.2 percent of all crashes; only 12.0 percent of pedestrian crashes resulted in no injury, compared to 77.6 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, 2005

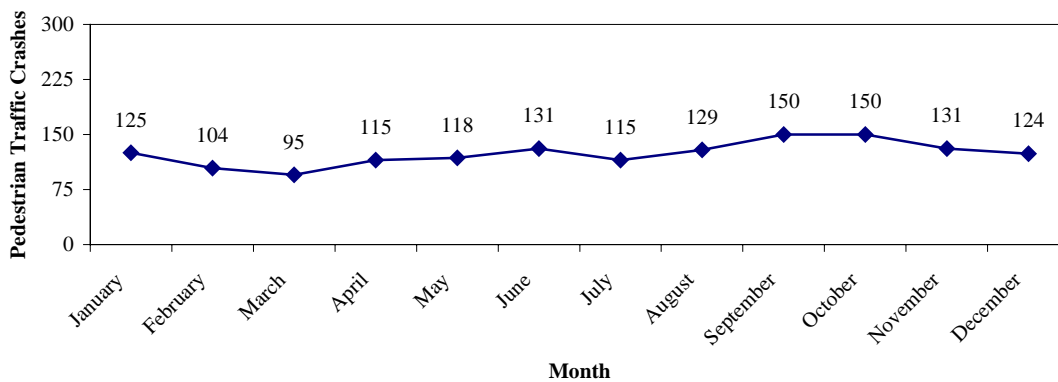


Source: MSPTCD and SEMCOG, 2005.

Pedestrian Traffic Crashes by Month, Day, and Hour

As shown in Figure 76, traffic crashes involving pedestrians peaked in the months of September and October (each totaling 150). March had the fewest pedestrian crashes with 95.

Figure 76
Pedestrian Traffic Crashes by Month, 2005

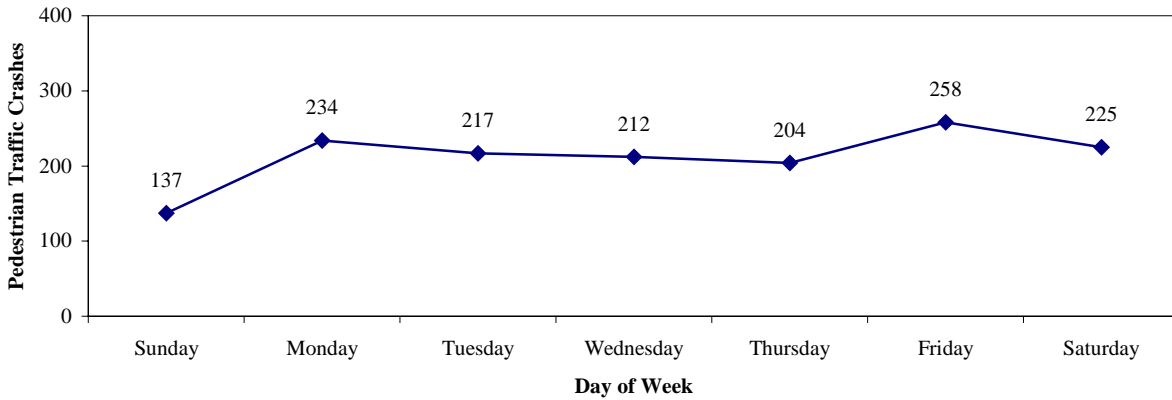


Source: MSPTCD and SEMCOG, 2005.

Pedestrian crashes were slightly less likely to take place on weekends than on weekdays. The lowest pedestrian crash total was 137 on Sundays, and the highest number was 258 on Fridays (Figure 77).

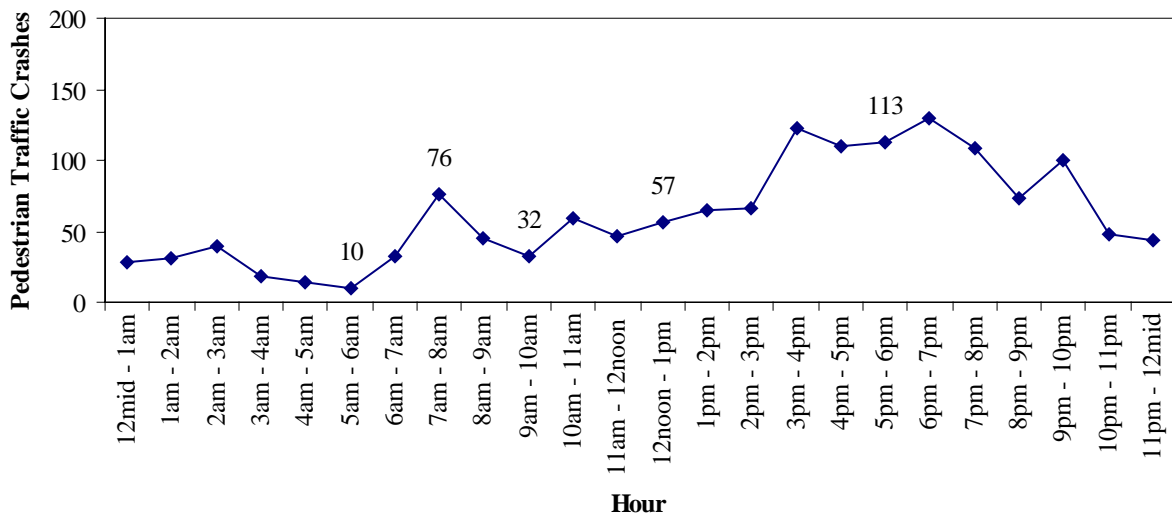
Pedestrian crashes, like all crashes, were more frequent during daylight hours, with most pedestrian crashes taking place in the late afternoon and evening hours (Figure 78).

Figure 77
Pedestrian Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 78
Pedestrian Traffic Crashes by Hour of Day, 2005



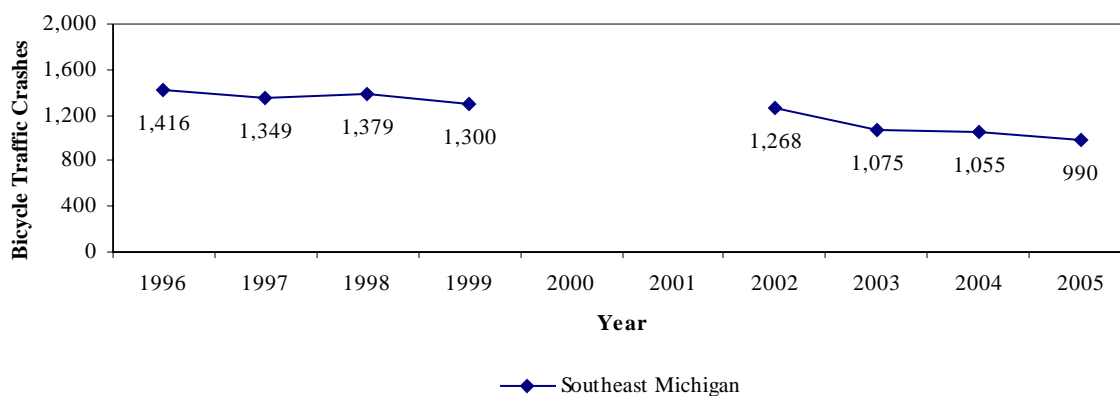
Source: MSPTCD and SEMCOG, 2005.

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. A bicycle under this definition may have two or three wheels. As shown in Figure 79, traffic crashes in Southeast Michigan involving bicycles decreased 6.2 percent between 2004 and 2005.

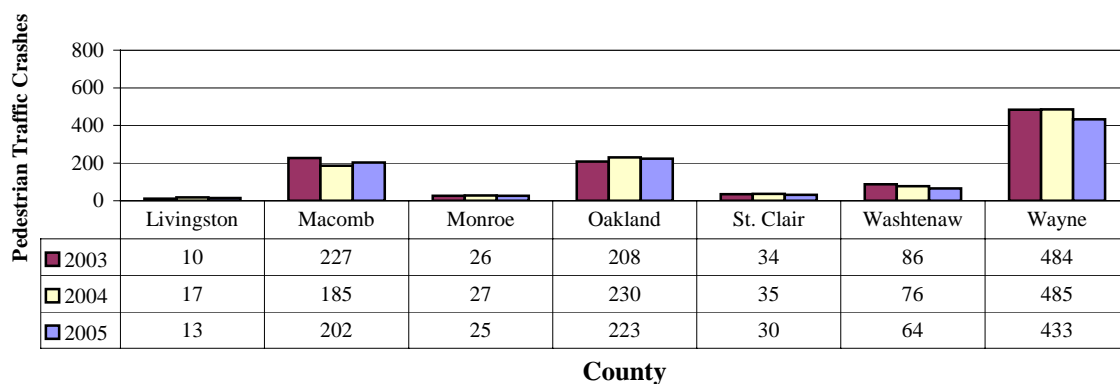
As with pedestrian crashes, Wayne County led the region in bicycle crashes, followed by Oakland County and Macomb County. Macomb County was the only county to experience an increase in traffic crashes involving bicycles (Figure 80).

Figure 79
Bicycle Traffic Crashes, 1995-1999 and 2002-2005



Source: MSPTCD and SEMCOG, 2005. *Michigan data was not available and Page 1 explains the missing data for 2000 and 2001.

Figure 80
Bicycle Traffic Crashes by County, 2003-2005

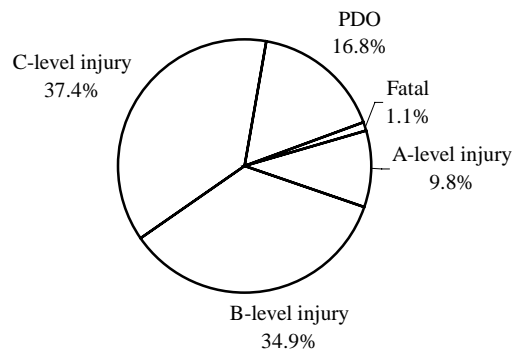


Source: MSPTCD and SEMCOG, 2005.

Bicycle Traffic Crashes by Severity

Figure 81 shows that traffic crashes involving bicycles are more severe than overall crashes (Figure 5), but less severe than crashes involving pedestrians (Figure 75). Nearly 17 percent of crashes involving bicycles resulted in no injuries, compared to 79.0 percent of all crashes and 12.0 percent of pedestrian crashes.

Figure 81
Bicycle Traffic Crash Severity, 2005

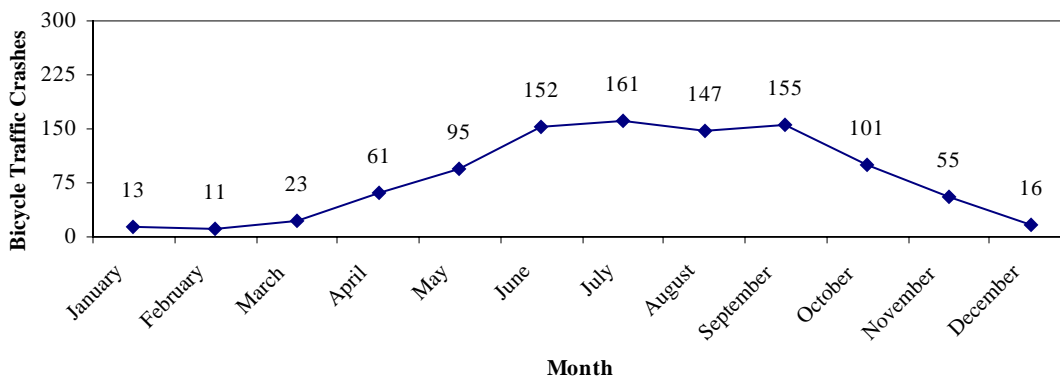


Source: MSPTCD and SEMCOG, 2005.

Bicycle Traffic Crashes by Month, Day, and Hour

Bicycle crashes were more common in warmer months, unlike pedestrian crashes. This is probably due to the difficulties of bicycling in snowy or icy conditions. Bicycle crashes peaked in the month of July at 161 crashes and hit a low point in February with 11 crashes (Figure 82).

Figure 82
Bicycle Traffic Crashes by Month, 2005

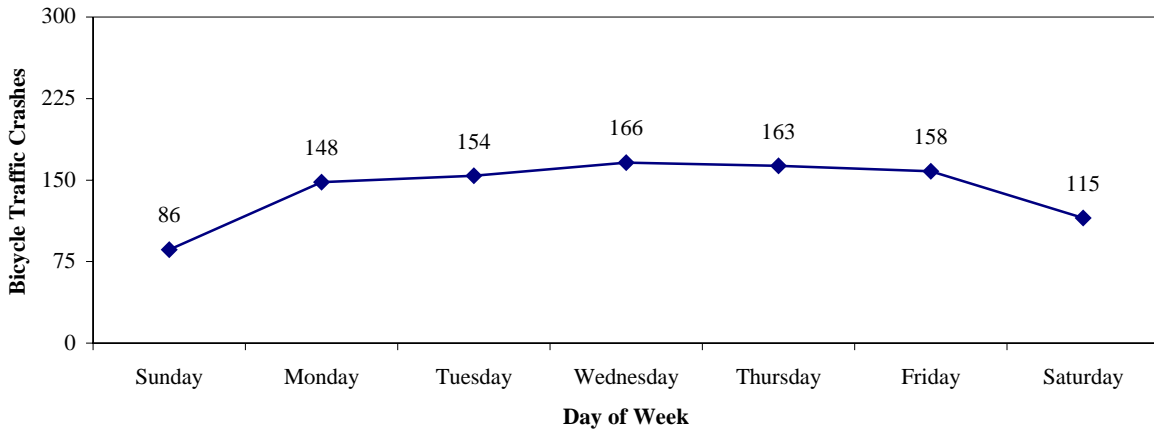


Source: MSPTCD and SEMCOG, 2005.

As with pedestrian crashes and all crashes, bicycle crashes were more common on weekdays (Figure 83). Wednesdays had the most bicycle crashes (166) and Sundays had the fewest (86).

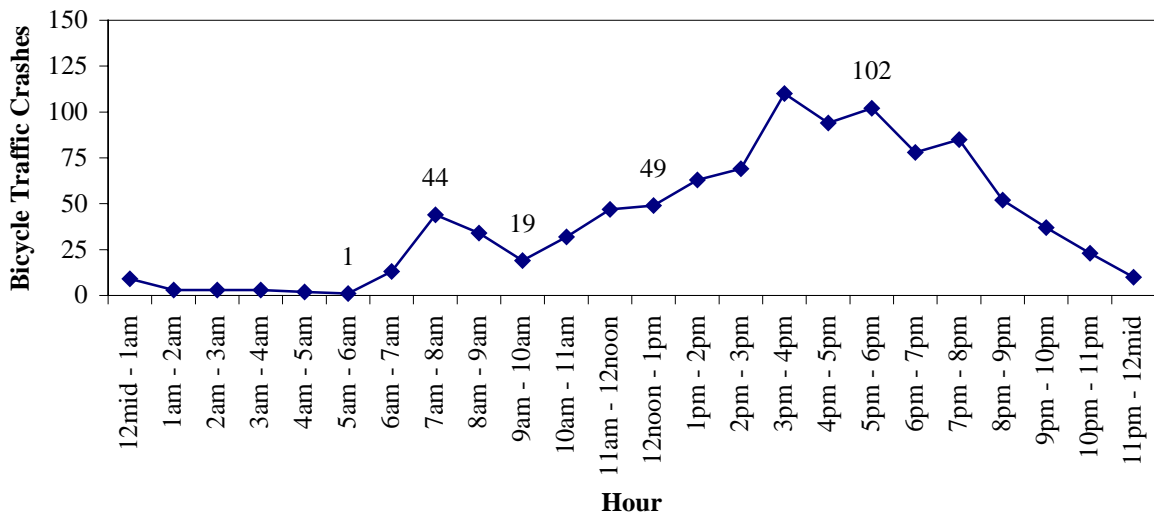
Bicycle crashes follow a time-of-day pattern that is similar to pedestrian crashes, with most crashes occurring in the late afternoon and early evening hours (Figure 84).

Figure 83
Bicycle Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

Figure 84
Bicycle Traffic Crashes by Hour of Day, 2005



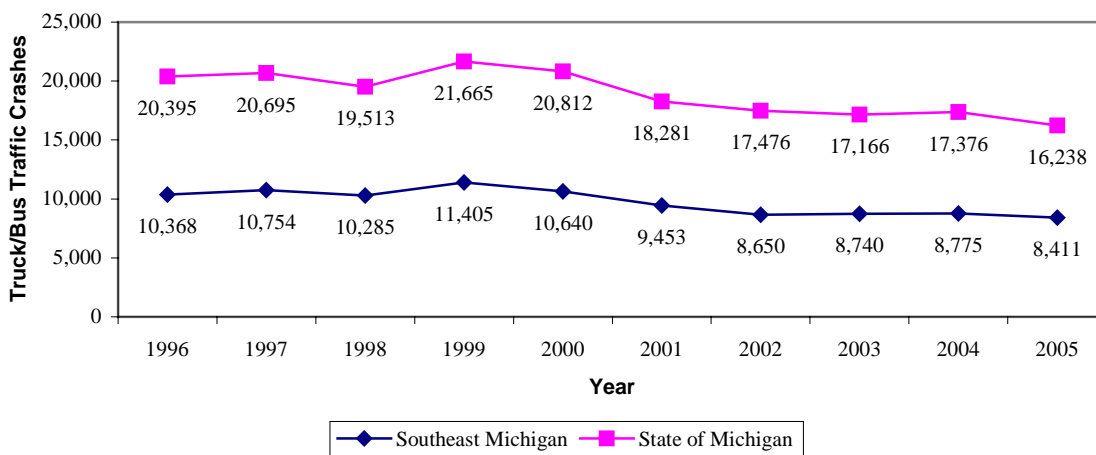
Source: MSPTCD and SEMCOG, 2005.

Truck/Bus Traffic Crashes

Truck/bus traffic crashes are crashes that involve a commercial truck or bus. Truck/bus crashes decreased in 2005 in both Southeast Michigan and Michigan (4.1 and 6.5 percent respectively) (Figure 85).

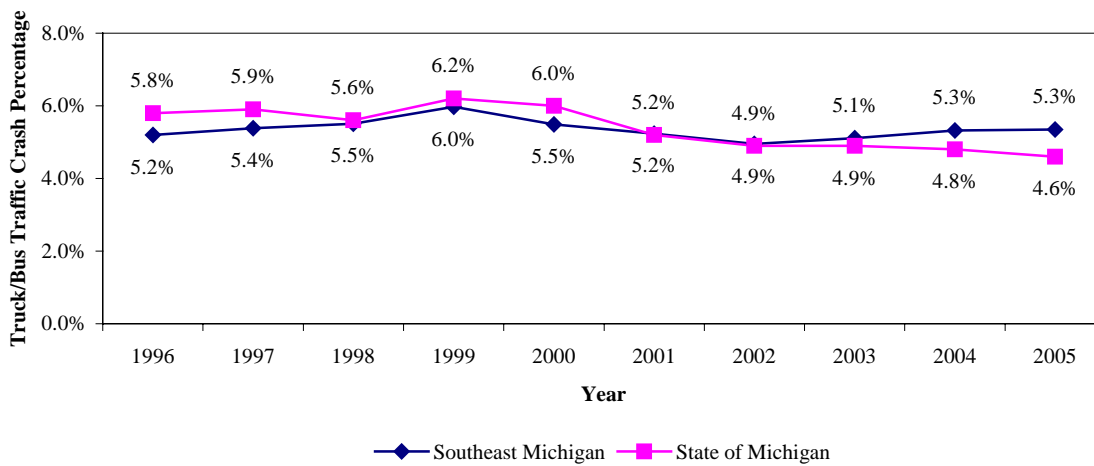
As Figure 86 shows, Southeast Michigan continues to have a higher percentage of truck/bus crashes than the State of Michigan. Nearly one out of every 20 traffic crashes (5.3 percent) in Southeast Michigan in 2005 involved a commercial truck or bus.

Figure 85
Truck/Bus Traffic Crashes, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 86
Truck/Bus Traffic Crash Percentage, 1996-2005



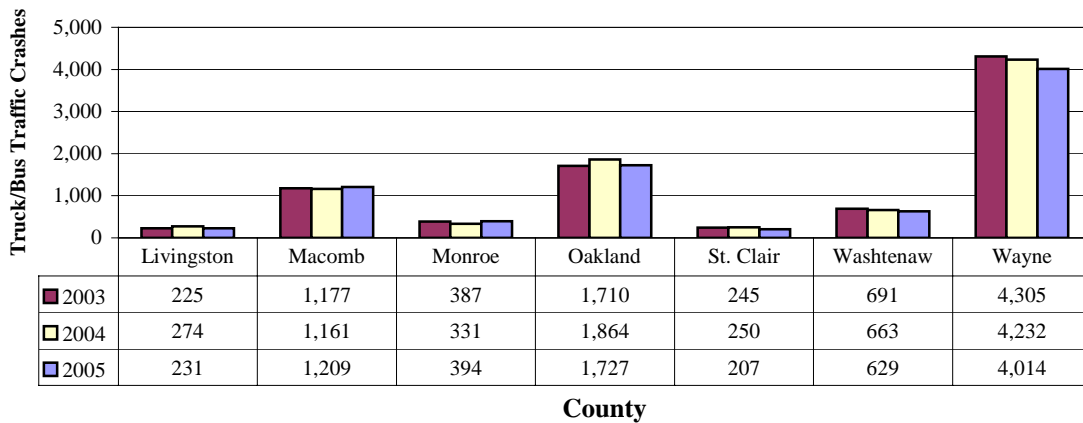
Source: MSPTCD and SEMCOG, 2005.

Truck/Bus Traffic Crashes by County

Figure 87 shows the number of truck/bus traffic crashes that took place in each Southeast Michigan county in 2003-2005. All counties experienced a drop in truck/bus crashes in 2005 except Macomb and Monroe Counties, which saw increases.

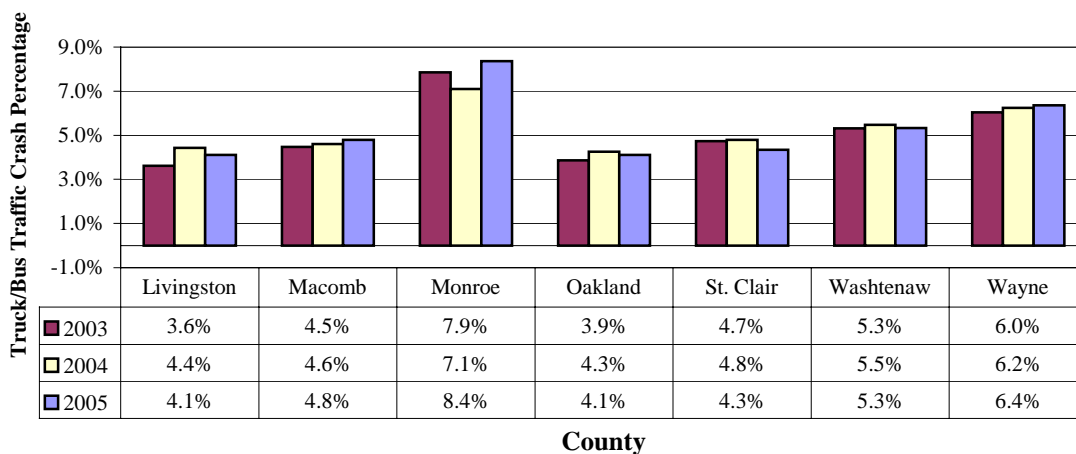
Monroe County continued to lead the region in truck/bus traffic crash percentage at just over eight percent. The counties with the lowest truck/bus crash percentages were Livingston and Oakland at just over four percent each (Figure 88).

Figure 87
Truck/Bus Traffic Crashes by County, 2003-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 88
Truck/Bus Traffic Crash Percentage by County, 2003-2005

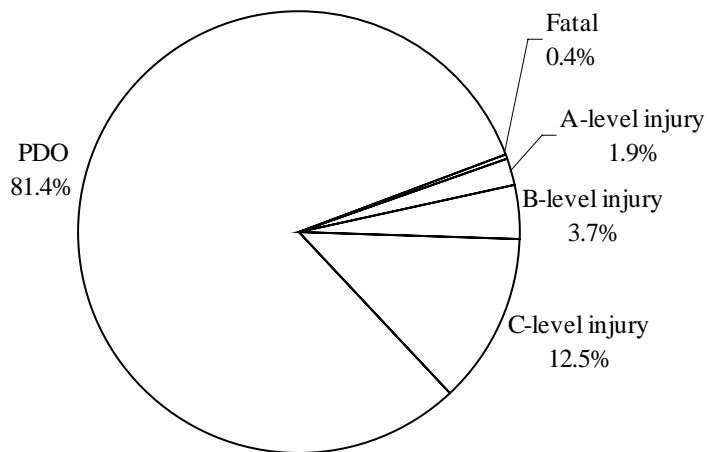


Source: MSPTCD and SEMCOG, 2005.

Truck/Bus Traffic Crashes by Severity

As shown in Figure 89, over 80 percent of truck/bus crashes resulted in property damage only, compared to 79 percent of all traffic crashes. Thirty-three truck/bus crashes were fatal, which is 0.4 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, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 17
Truck/Bus Traffic Crash by Severity, 2005

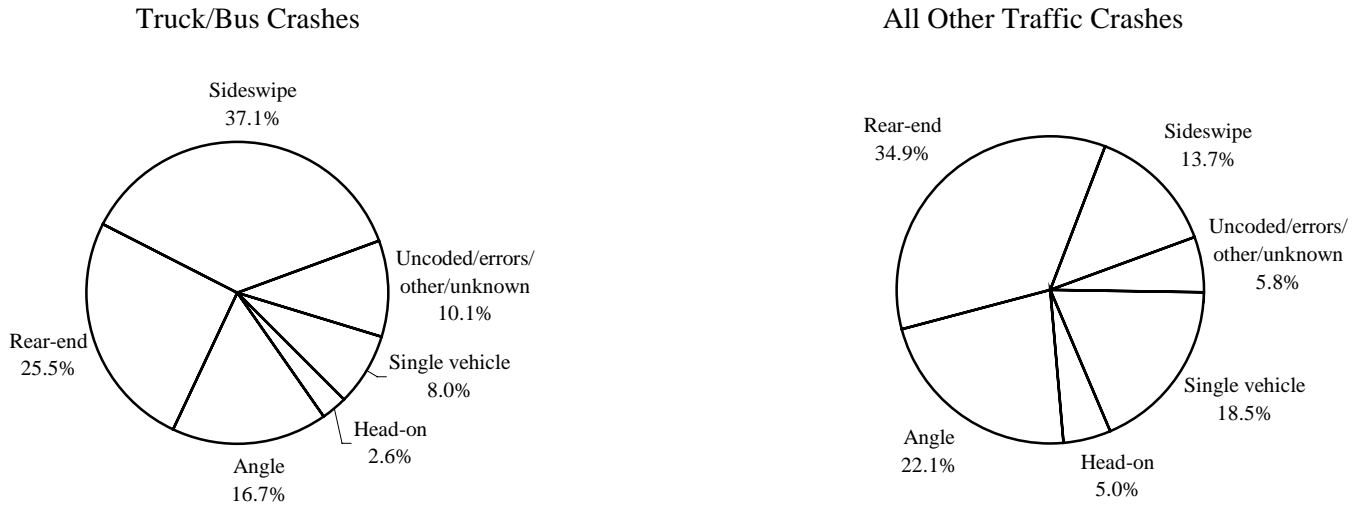
Crash Severity	Truck/Bus Traffic Crashes	All Traffic Crashes	Truck/Bus Percentage
Fatal	33	360	9.2%
A-level Injury	158	2,724	5.8%
B-level Injury	315	7,053	4.5%
C-level Injury	1,055	22,764	4.6%
PDO	6,850	124,383	5.5%
Total	8,411	157,284	5.3%

Source: MSPTCD and SEMCOG, 2005.

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 crashes, rear-end, or head-on crashes. Table 18 shows that just over 13.3 percent of all sideswipe crashes involved a commercial truck or bus.

Figure 90
Truck/Bus Traffic Crashes by Crash Type, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 18
Traffic Crash Type by Truck/Bus Percentage, 2005

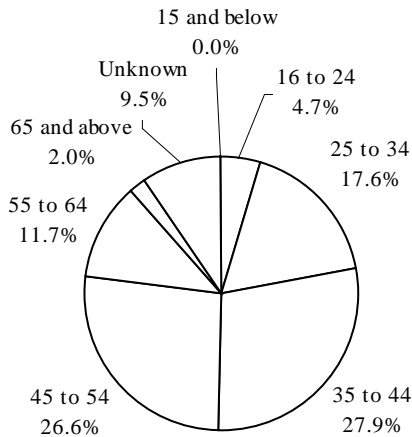
Crash Type	Truck/Bus Traffic Crashes	All Traffic Crashes	Truck/Bus Percentage
Uncoded/errors/other/unknown	853	9,454	9.0%
Single vehicle	669	28,144	2.4%
Head-on	222	7,734	2.9%
Angle	1,402	34,324	4.1%
Rear-end	2,147	54,096	4.0%
Sideswipe	3,118	23,532	13.3%
Total	8,411	157,284	5.3%

Source: MSPTCD and SEMCOG, 2005.

Age and Gender of Truck/Bus Drivers in Traffic Crashes

Of the truck or bus drivers whose ages were recorded, 27.9 percent were in the 35-44 age group (Figure 91). Table 19 shows the age and gender of truck or bus drivers in crashes in 2005. Most of those drivers were male.

Figure 91
Truck/Bus Drivers in Traffic Crashes by Age Group, 2005



Source: MSPTCD and SEMCOG, 2005.

Table 19
Truck/Bus Drivers in Traffic Crashes by Age Group and Gender, 2005

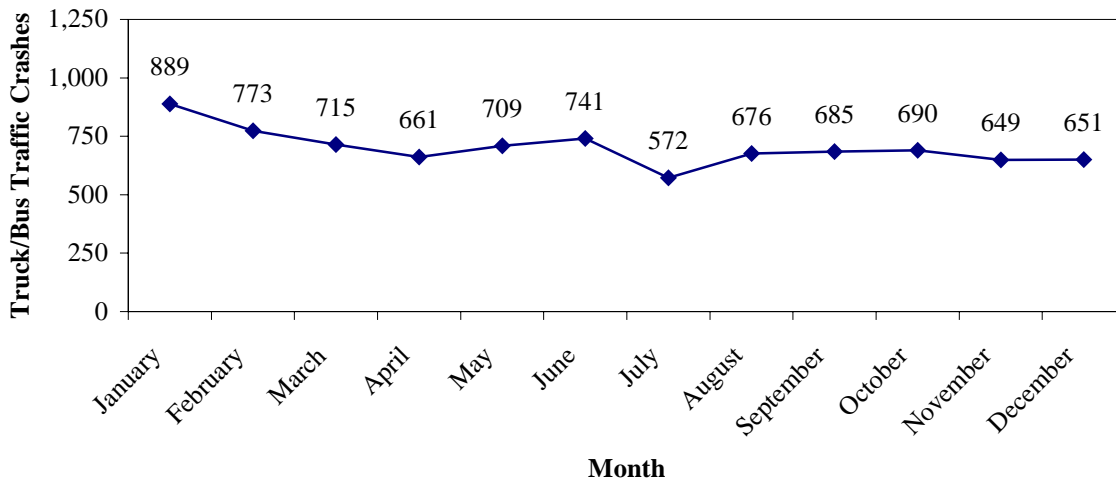
Age Group	Number of Driver by Gender			Total
	Female	Male	Unknown	
15 and below	0	3	0	3
16 to 24	20	391	1	412
25 to 34	122	1,409	4	1,535
35 to 44	281	2,153	8	2,442
45 to 54	320	2,001	4	2,325
55 to 64	114	900	5	1,019
65 to 74	6	153	1	160
75 to 84	0	17	0	17
85 to 94	0	1	1	2
95 and above	0	0	0	0
Unknown	18	205	605	828
Total	881	7,233	629	8,743

Source: MSPTCD and SEMCOG, 2005.

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

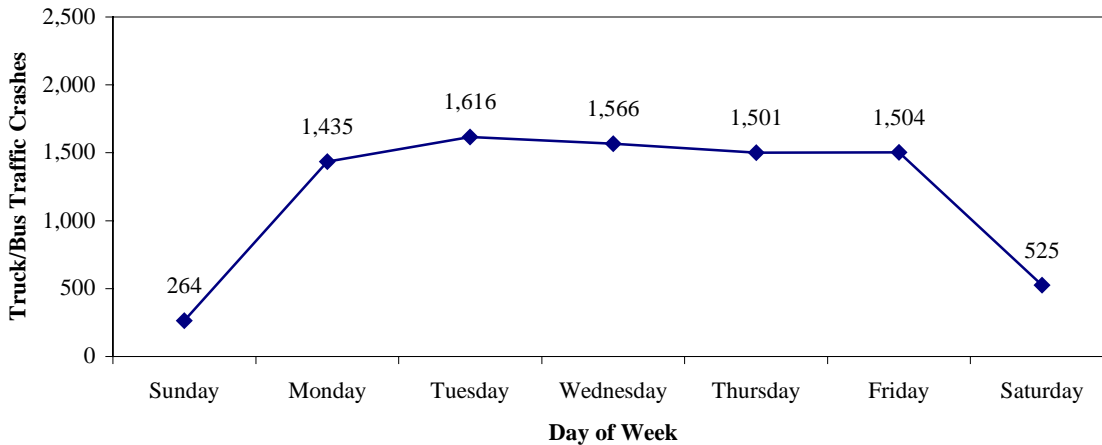
Traffic crashes involving trucks and buses were more frequent during January and February than any other month (Figure 92). Truck/bus crashes were least frequent in July. As Figure 93 shows, truck/bus crashes were much more common on weekdays, with nearly 91 percent of truck/bus crashes taking place during the Monday-Friday period.

Figure 92
Truck/Bus Traffic Crashes by Month, 2005



Source: MSPTCD and SEMCOG, 2005.

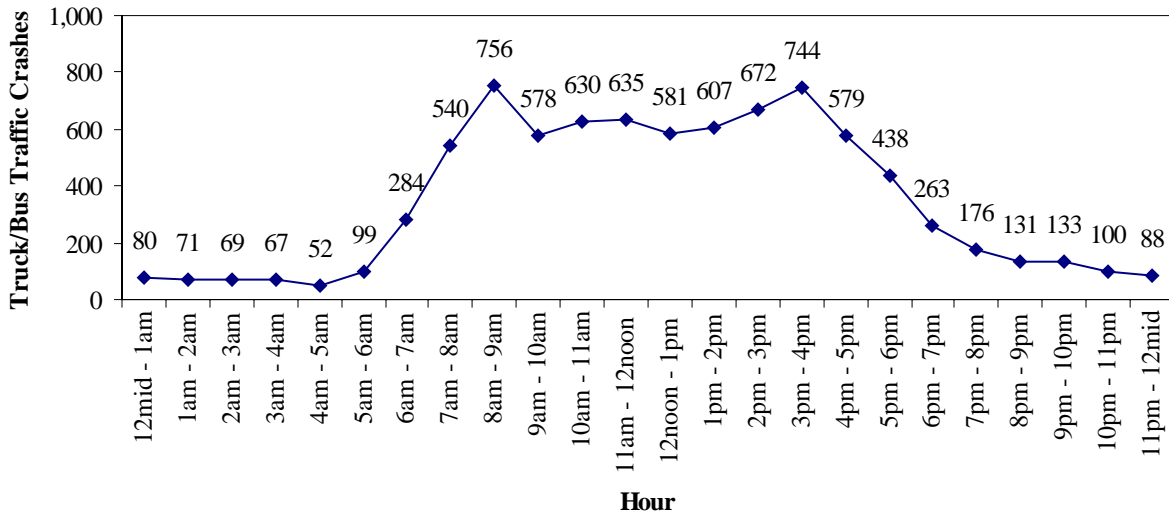
Figure 93
Truck/Bus Traffic Crashes by Day of Week, 2005



Source: MSPTCD and SEMCOG, 2005.

When grouped by hour of day as in Figure 94, truck/bus crashes were more common during daylight hours. Unlike all traffic crashes (Figure 12), truck/bus crashes were almost as common in the morning as in the evening, with a sharper evening peak.

Figure 94
Truck/Bus Traffic Crashes by Hour of Day, 2005

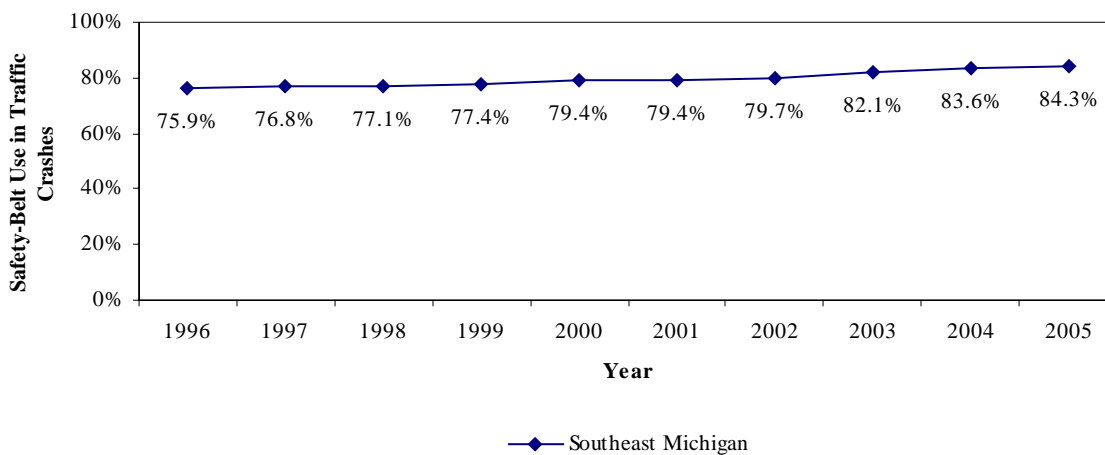


Source: MSPTCD and SEMCOG, 2005.

Safety-Belt Use

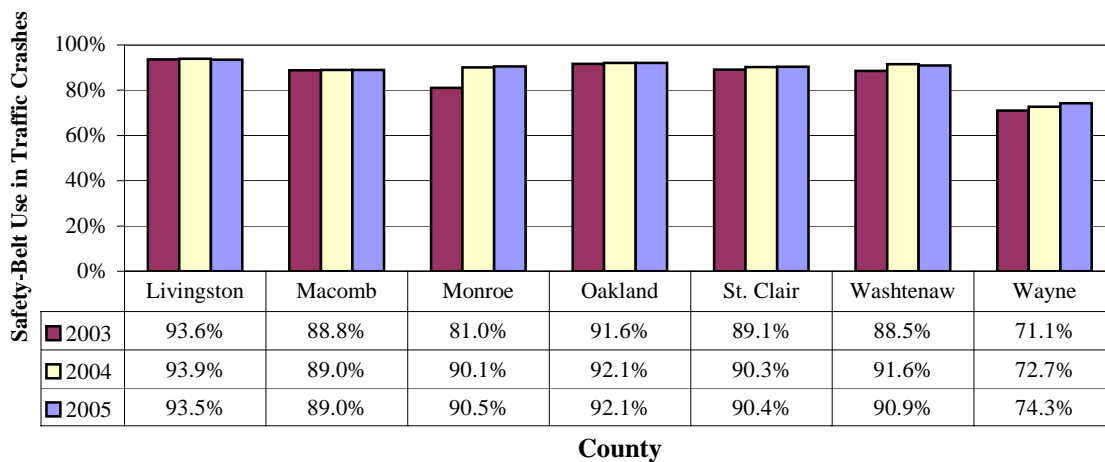
Use of safety belts by drivers in traffic crashes increased slightly in 2005 in Southeast Michigan (Figure 95). 84.3 percent of drivers in crashes reported that they were wearing their safety belts at the time of the crash. Figure 96 shows safety-belt use in each county. Macomb and Wayne were the only counties with safety-belt use below 90 percent. Wayne County continued to have the lowest rate of belt use at 74.3 percent. Monroe, St. Clair, and Wayne were the only counties that showed an increase in safety belt use over 2004.

Figure 95
Driver Safety-Belt Use, 1996-2005



Source: MSPTCD and SEMCOG, 2005.

Figure 96
Driver Safety-Belt Use by County, 2003-2005

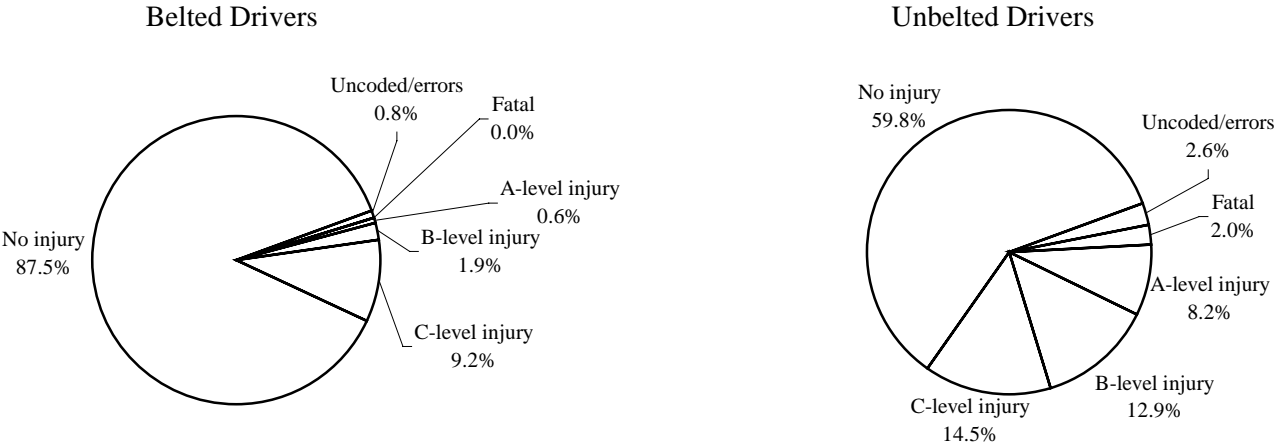


Source: MSPTCD and SEMCOG, 2005.

Injury Severity of Belted vs. Unbelted Drivers

As shown in Figure 97, nearly 88 percent of belted drivers escaped injury altogether, but only 60 percent of unbelted drivers were not injured at all. 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, 2005

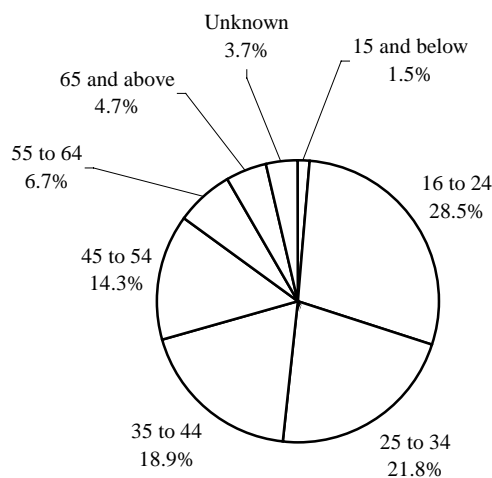


Source: MSPTCD and SEMCOG, 2005.

Unbelted Drivers by Age, Gender, and Alcohol Use

Figure 98 shows how unbelted drivers in 2005 were distributed among the age groups. Over 50 percent of drivers who were not wearing their safety belts during a crash were between the ages of 16 and 34. 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, 2005



Source: MSPTCD and SEMCOG, 2005.

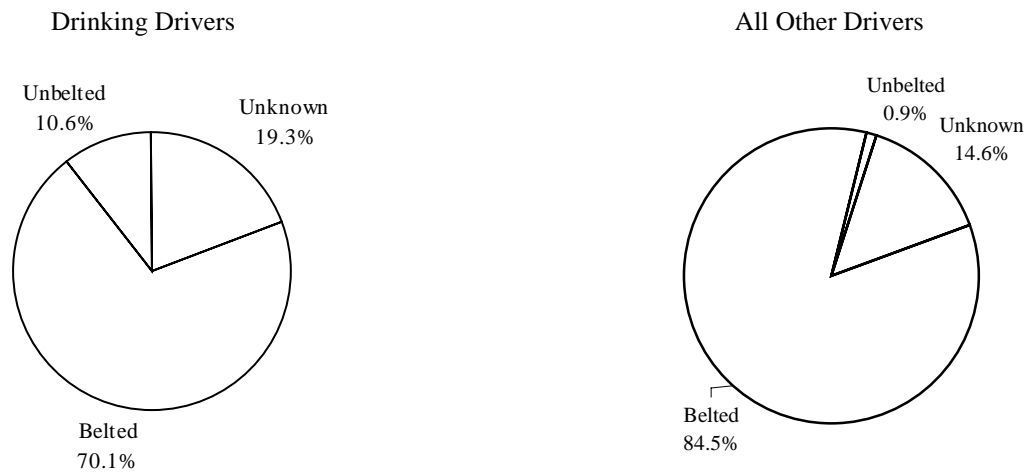
Table 20
Unbelted Drivers by Age Group and Gender, 2005

Age Group	Number of Drivers by Gender			Total
	Female	Male	Unknown	
15 and below	8	37	0	45
16 to 24	285	586	1	872
25 to 34	195	469	1	665
35 to 44	184	394	0	578
45 to 54	133	304	0	437
55 to 64	73	130	1	204
65 to 74	23	51	0	74
75 to 84	28	29	0	57
85 to 94	4	7	0	11
95 and above	0	1	0	1
Unknown	22	65	25	112
Total	955	2,073	28	3,056

Source: MSPTCD and SEMCOG, 2005.

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

Figure 99
Safety-Belt Use Among HBD Drivers, 2005



Source: MSPTCD and SEMCOG, 2005.

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. Time periods for holidays are defined in Table 21.

Table 21
Holiday Time Periods

Holiday day of week	Holiday period begins	Holiday period ends	Number of Days
Sunday	6:00 p.m. Friday	11:59 p.m. Monday	$3\frac{1}{4}$
Monday	6:00 p.m. Friday	11:59 p.m. Monday	$3\frac{1}{4}$
Tuesday	6:00 p.m. Friday	11:59 p.m. Tuesday	$4\frac{1}{4}$
Wednesday	6:00 p.m. Tuesday	11:59 p.m. Wednesday	$1\frac{1}{4}$
Thursday	6:00 p.m. Wednesday	11:59 p.m. Sunday	$4\frac{1}{4}$
Friday	6:00 p.m. Thursday	11:59 p.m. Sunday	$3\frac{1}{4}$
Saturday	6:00 p.m. Thursday	11:59 p.m. Sunday	$3\frac{1}{4}$

Source: 2000 Michigan Traffic Crash Facts Book.

Table 22 shows the number of fatal crashes and fatalities that took place in Southeast Michigan during selected holidays in 2002-2005. 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, 2003-2005

Holiday Period [number of whole days]	Fatal Crashes (alcohol-involved fatal crashes)	Persons Killed (persons killed in alcohol- involved crashes)
Memorial Day		
2005 [3]	3 (1)	3 (1)
2004 [3]	3 (3)	3 (3)
2003 [3]	4 (1)	4 (1)
Fourth of July		
2005 [3]	5 (2)	6 (3)
2004 [3]	6 (2)	6 (2)
2003 [3]	7 (1)	7 (1)
Labor Day		
2005 [3]	2 (2)	2 (2)
2004 [3]	5 (1)	7 (2)
2003 [3]	4 (0)	5 (0)
Thanksgiving		
2005 [4]	7 (4)	7 (4)
2004 [4]	3 (1)	3 (1)
2003 [4]	10 (3)	10 (3)
Christmas		
2005 [3]	3 (2)	3 (2)
2004 [3]	4 (1)	4 (1)
2003 [4]	2 (2)	2 (2)
New Year Holiday		
2005/06 [3]	3* (1)*	4* (1)*
2004/05 [3]	4 (4)	4 (4)
2003/04 [4]	3 (3)	3 (3)
2002/03 [1]	3 (0)	3 (0)

Source: MSPTCD and SEMCOG, 2005.

* Data is incomplete for 2005/2006 New Year holiday. The count does not include crashes that took place in 2006.

Appendix A-Vehicle Miles Traveled (VMT)

Data about VMT in each county in 2005 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, 2005

County	VMT (in millions)
Livingston	2,030
Macomb	6,674
Monroe	2,086
Oakland	13,404
St. Clair	1,666
Washtenaw	3,775
Wayne	19,127
Total	48,761

Source: MDOT, 2005.

The results of a 1994 SEMCOG survey were used to estimate VMT for each age group in 2005. 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 2005 VMT for Southeast Michigan among the age groups. Table 24 shows the percent of all VMT driven by each age group in the 1994 survey.

Table 24
Percent VMT Driven by Age Group, 1994

Age Group	Percent VMT
15 and below	0.378%
16 to 24	9.883%
25 to 34	17.706%
35 to 44	28.200%
45 to 54	20.597%
55 to 64	11.587%
65 to 74	9.048%
75 to 84	2.424%
85 to 94	0.175%
95 and above	0.002%
Total	100%

Source: SEMCOG, 1994.

The percentages for each age group were then multiplied by the total VMT driven in Southeast Michigan in 2005 to obtain an estimate for the number of miles driven by each age group in 2004. The results are shown in Table 25.

Table 25
Estimated Million VMT by Age Group, 2005

Age Group	Estimated 2004 VMT (in millions)
15 and below	184
16 to 24	4,819
25 to 34	8,634
35 to 44	13,751
45 to 54	10,043
55 to 64	5,650
65 to 74	4,412
75 to 84	1,182
85 to 94	85
95 and above	1
Total	48,761

Source: MDOT and SEMCOG, 2005.

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 October 2005, as shown in Table 26.

As of October 2005, there were 3,438,550 drivers registered in Southeast Michigan counties, a 0.03 percent increase over January 2005. Wayne County remained the only county with more than one million registered drivers. Monroe County had the fewest registered drivers in the region at over 118,300. Wayne County had a decrease in registered drivers with a 0.83 percent loss over January 2005.

The 35-44 age group continued to have more registered drivers than any other age group, though nearly 5,200 fewer than January 2005. This was the largest age group in all counties except Washtenaw, in which drivers age 25-34 made up the largest age group and also Monroe and St. Clair in which drivers age 45 to 54 made up the largest age group.

Table 27 shows the number of male and female drivers in each age group. There are slightly more female registered drivers (2.2 percent) than male registered drivers in Southeast Michigan.

Table 26
Southeast Michigan Registered Drivers by Age Group and County, October 2005

Age Group	County							Total
	Livingston	Macomb	Monroe	Oakland	St. Clair	Washtenaw	Wayne	
15 and below	1,722	5,768	1,092	9,325	1,191	1,972	7,366	28,436
16 to 24	20,479	89,046	18,099	131,258	18,264	40,028	166,528	483,702
25 to 34	19,306	111,870	18,604	163,018	18,589	52,885	226,805	611,077
35 to 44	31,035	128,787	23,600	197,492	25,191	50,549	246,536	703,190
45 to 54	30,171	122,974	24,549	195,569	25,339	46,647	241,180	686,429
55 to 64	19,955	85,294	16,769	132,685	18,149	31,845	165,679	470,376
65 to 74	9,226	49,378	9,017	64,200	10,256	14,147	90,935	247,159
75 to 84	4,738	34,331	5,487	44,024	6,411	8,645	65,605	169,241
85 to 94	954	7,669	1,148	10,312	1,517	2,060	14,379	38,039
95 and above	23	157	26	276	30	59	330	901
Total	137,609	635,274	118,391	948,159	124,937	248,837	1,225,343	3,438,550

Source: MDOS, 2005.

Table 27

Southeast Michigan Registered Drivers by Age Group and Gender, October 2005

Age Group	Gender		
	Female	Male	Total
15 and below	14368	14068	28436
16 to 24	235,037	248,665	483,702
25 to 34	302,695	308,382	611,077
35 to 44	351,886	351,304	703,190
45 to 54	349,638	336,791	686,429
55 to 64	240,013	230,363	470,376
65 to 74	130,584	116,575	247,159
75 to 84	92,351	76,890	169,241
85 to 94	21,296	16,743	38,039
95 and above	482	419	901
Total	1,738,350	1,700,200	3,438,550

Source: MDOS, 2005.

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2006-2007**

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