1998

PENNSYLVANIA CRASH FACTS & STATISTICS

GOVERNOR

Tom Ridge

SECRETARY OF TRANSPORTATION

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Introduction

The ***1998 Pennsylvania Crash Facts and Statistics*** booklet is a report published by the Bureau of Highway Safety and Traffic Engineering, Pennsylvania Department of Transportation. Permission is given to freely copy and distribute this booklet and the information within it.

This publication is a statistical review of reportable motor vehicle crashes in the Commonwealth of Pennsylvania for calendar year 1998. The figures are compiled from the traffic crash reports that are submitted to the Pennsylvania Department of Transportation by state, county, municipal, and other law enforcement agencies, as specified in the Pennsylvania Vehicle Code (75 Pa. C.S., Chapter 37, Subchapter C).

Specific questions regarding data presented in this report should be addressed to:

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How to Use This Booklet

This booklet is divided into sections by topic. In most cases, the topics are presented at a general level and become more specific. This year's booklet is similar to last year's format with only a few minor changes related to the data. Please read the narrative and notes associated with the tables/graphs to make sure the data presented is the data you want.

Look over the ***Table of Contents*** on the next page to see the list of topics and sections. If you are trying to find a particular piece of information, you might be able to locate it more quickly by looking at the ***Index*** on page 70.

Skim through the Definitions on page 4. Some terms can be misleading or confusing, even to experienced readers. For example, an "alcohol-related" crash does not necessarily mean the driver of the vehicle causing the crash was drunk. The driver of the vehicle not at fault might have been drinking, or even a pedestrian involved with the crash might have been drinking.

Black squares containing the section title have been added near the outer margins to make it easier for you to thumb through this booklet to find the section you are looking for.

After you have used this booklet, please complete and return the feedback survey form on the last page.

About the Cover

The vehicle on the front cover was involved in a single vehicle, alcohol-related crash. Fortunately, there were no major injuries in the crash, but many people are not so lucky.

In 1998, 535 people died in alcohol-related crashes in Pennsylvania. On average each day, 38 alcohol-related crashes occur and 1.5 people are killed due to an alcohol-related crash. For more information on alcohol-related crashes, see pages 26-33.

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Definitions

General Terms

Alcohol-Related Crash: Any reportable crash in which one or more of the drivers was reported to have been drinking, or a drinking pedestrian was involved.
DUI: Driving Under the Influence.
Child Passenger Restraint System: A combination of an approved child safety seat and existing vehicle safety belt restraints. Mandatory in Pennsylvania for all passengers under age four.
Harmful Event: An action which occurs within a crash (e.g., hitting a tree, hitting a deer, hitting a pedestrian, hitting another vehicle, etc.) and often results in personal injury or property damage.
Holidays: The holiday weekend begins at 6:00 PM of the last working day before the holiday and ends at midnight on the last day of the holiday. Pre-holiday weekends and post holiday weekends are time periods equivalent to that of the weekend before or the weekend after the holiday, respectively. The same applies to holidays during the middle of the workweek where no weekend is involved. It is significant to look at pre- and post-holiday statistics because, in many instances, the number of crashes and/or deaths/injuries are equal to, or greater than, those occurring on the actual holiday weekend.
Passive Restraint: A safety restraint, i.e., air bag, automatic lap/shoulder harness, that is not actively engaged by a vehicle occupant.
Reportable Crash: A crash resulting in a death within 30 days of the crash; or injury in any degree, to any person involved; or crashes resulting in damage to any vehicle serious enough to require towing.
Speed-Related Crash: Any reportable crash in which speed was listed as a contributing factor, whether or not the driver was noted as going over the posted speed limit.
TCD: Traffic Control Device. Includes traffic signals, stop signs, yield signs, and railroad crossing controls.
Vehicle Defect: A fault in the vehicle, due to improper maintenance or other reasons, that can cause the driver to lose control, possibly resulting in a crash.
Vehicle-Miles of Travel: A measure that indicates the number of miles traveled by vehicles on PA roadways.
Work Zone: An area, usually marked by signs, barricades, or other devices indicating that highway construction or maintenance activities are going on.

Crash Types

A description which characterizes the first harmful event of the crash and is described as one of the following:


Non-Collision: A harmful event that does not involve a collision with a fixed object or a non-fixed object. These events include explosion, fire, overturn, immersion and vehicle struck by flying object.


Angle: A crash in which two vehicles on opposite roadways collide at a point of junction, such as a road intersection, driveway, or entrance ramp.


Rear-End: A crash in which vehicles traveling in the same direction, on the same road, collide (vehicle front into vehicle rear).


Head-On: A crash in which vehicles traveling in opposite directions, on the same road, collide (vehicle front into vehicle front).


Sideswipe: A crash between two vehicles (traveling in same direction or opposite direction) in which the sides of both vehicles engage.


Hit Fixed Object: A collision in which a vehicle collides with stationary object(s) along and adjacent to the roadway, (i.e. bridge piers, trees, utility poles, embankment, guiderail, etc.).


Hit Pedestrian: A collision between a motor vehicle and any person(s) not in or upon the vehicle.

Crash Severity

Fatal Crash: A crash in which one or more of the involved persons died within 30 days of the crash and the death(s) are attributable to the crash.

Crash Severity (continued)

Injury Crash: A crash in which none of the involved persons were killed, but at least one was injured.
Property Damage Only (PDO): A reportable crash where no one was killed or injured, but damage to the vehicle required towing.

Injury Severity

Death: As used in this booklet, any injury which causes death within 30 days of a crash and that death is attributable to the crash.
Major Injury: Any injury, other than fatal, which by its severity requires immediate emergency transport, such as an ambulance, to a hospital or clinic for medical treatment and /or hospitalization. Major injuries would include amputation of limb(s), severe burns, etc.
Moderate Injury: Any injury which may require some form of medical treatment, but is not life-threatening or incapacitating. These injuries should be visible. Moderate injuries would include a cut which requires several stitches, or a broken finger or toe.
Minor Injury: Any injury which can be treated by first aid application, whether at the scene of the crash or in a medical facility. Complaints of injuries which are not visible, and do not appear to be of any major or moderate nature, should be considered as minor injuries.

Person Type

Driver: The occupant of a vehicle who is in actual physical control of a vehicle in transport or, for an out-of-control vehicle, the occupant who was in control before control was lost.
Occupant: Any person who is in or upon a vehicle, including the driver, passenger, and person riding on the outside of the vehicle.
Passenger: Any occupant of a vehicle who is not the driver.
Pedestrian: Any person not in or upon a vehicle.

Road Types

Local Roads: Any roadway that is maintained by an entity other than the state. Includes county, township, town, borough, and private.
State Highway (Interstate): Any state-maintained roadway that carries the interstate designation and is marked with red, white, and blue shield-shaped sign.
State Highway (Other): Any state-maintained roadway that is not designated as an interstate. Many (but not all) such roads are marked with a black and white keystone-shaped sign.
Turnpike: The Pennsylvania Turnpike system, which includes the main Turnpike and other toll facilities maintained by the Pennsylvania Turnpike Commission.

Vehicle Types

Passenger Car: Vehicle designed to transport eight people or less. Includes: convertible, hardtop, sedan, station wagon, limousine, etc.
Light Truck: Single vehicle designed for carrying a load of property on or in the vehicle. Includes: pickup truck, sport utility vehicle, van (excluding moving horse), jeep, tow truck, etc.
Heavy Truck: Single vehicle or tractor-trailer combination designed for carrying a heavy load of property on or in the vehicle. Includes: single unit trucks (e.g., coal truck), tractor-trailers, motor homes, etc.
Bus: Vehicle designed to transport more than eight people. Includes school bus, cross-country bus, urban transit, trackless trolley.
Motorcycle: Includes: motorcycle, mo-ped, mini-bike, motor scooter, trike (motorized tricycle), go-cart, vendor cycle.
Bicycle: As used in this booklet, any non-motorized vehicle propelled by pedaling. Includes: unicycle, bicycle, tricycle, Big Wheel.
Special Motorized Vehicle: Includes ambulance, hearse, snowmobile, farm tractor, motorized farm equipment, self-propelled campers and homes, motorized construction equipment, dune/swamp buggy (ATV).
Track/Non-Motorized Vehicle: Includes: train, trolley, horse and buggy, horse and rider.

Overview

The Commonwealth of Pennsylvania is comprised of 67 counties. Each county is made up of local municipalities, a combination of cities, boroughs, first class townships, and/or second class townships. In total, there are approximately 2,500 municipalities throughout the 67 counties. One of these municipalities, the Town of Bloomsburg in Columbia County, is the only official "town" in Pennsylvania.

Pennsylvania has over 119,000 miles of roads and highways; 34% (40,667 miles) are state highways maintained by the Pennsylvania Department of Transportation (PennDOT), and the remaining 66% (78,612) are maintained by local municipalities.

Motor-vehicle traffic crashes which occur on Pennsylvania roads and highways are investigated and reported on by both the Pennsylvania State Police and the many (approximately 1,300) local municipal police departments. The valuable information originating from these police crash reports is the basis for the statistics that are presented throughout this booklet.

In 1998, there were 140,972 reportable traffic crashes in Pennsylvania. These crashes claimed the lives of 1,486 people and injured another 134,092 people. To add some perspective, the 1998 total traffic deaths is the second highest since 1994.

In 1998, there were approximately 100.4 billion vehicle-miles of travel on Pennsylvania's roads and highways. The 1998 fatality rate of 1.48 deaths per hundred million vehicle-miles of travel was the lowest ever recorded in Pennsylvania.

1998 Briefs

On Average in Pennsylvania:

- Each day 386 reportable traffic crashes occurred (about 16 crashes every hour).
- Each day 4 persons were killed in reportable traffic crashes (one death every 6 hours).
- Each day 367 persons were injured in reportable crashes (about 15 injuries every hour).

Based on Pennsylvania's 1998 population (12,001,451 people):

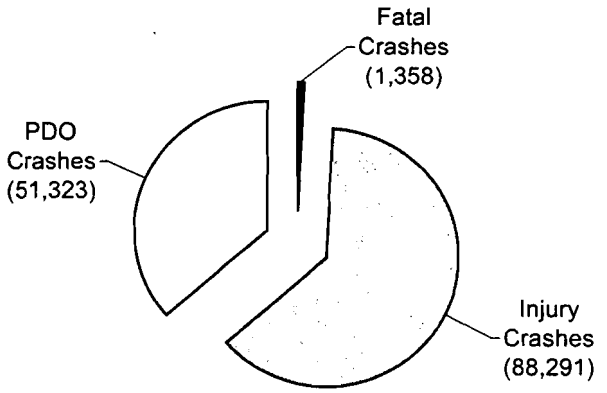
- 1 out of every 33 people was involved in a reportable traffic crash.
- 1 out of every 8,088 people was killed in a reportable traffic crash.
- 1 out of every 90 people was injured in a reportable traffic crash.

All Crashes and Deaths
—WHO WAS INVOLVED—

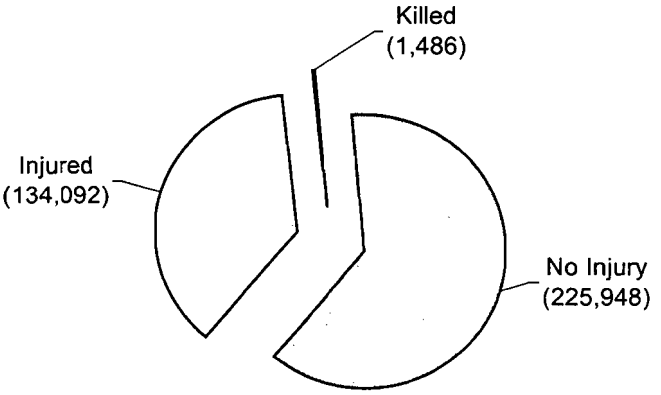
Crashes by Injury Severity

Crashes involving deaths and major injuries are always devastating to the family and friends of the victims. Thankfully, the vast majority of crashes are not fatal. Most crashes, however, do cause varying types of injuries. Of the total people involved in crashes in Pennsylvania in 1998, most were not injured, and the vast majority who were injured suffered only minor injuries.

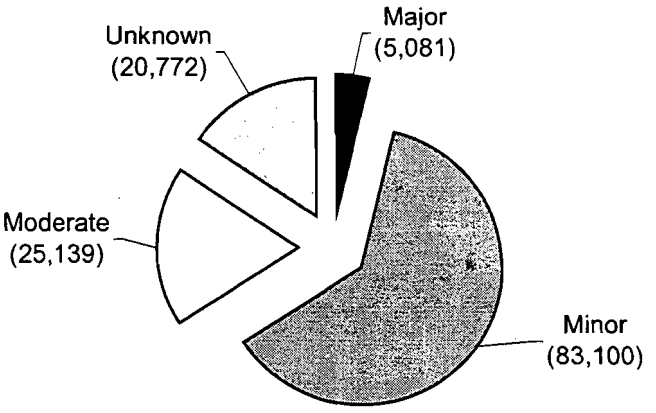
Total Crashes



Total People



Total People--Injured



Deaths and Injuries—Five-Year Trends

Total reported crashes in 1998 decreased 2.1% compared to 1997; total injuries decreased by 3.4% and deaths decreased by 4.9%. Alcohol-related deaths increased by 4.1%.

	1994	1995	1996	1997	1998
Reported Crashes	134,171	136,804	142,867	143,981	140,972
Total Deaths	1,440	1,480	1,470	1,562	1,486
Total Injuries	130,678	133,177	136,949	138,820	134,092
Major Injury	*5,215*	*5,474*	*5,250*	*5,373*	*5,081*
Moderate Injury	*17,914*	*17,073*	*17,493*	*18,837*	*25,139*
Minor Injury	*89,087*	*92,332*	*95,148*	*93,806*	*83,100*
Unknown Injury	*18,462*	*18,298*	*19,058*	*20,804*	*20,772*
Pedestrian Deaths	179	198	218	175	166
Pedestrian Injuries	6,269	6,197	5,863	6,021	5,895
Motorcyclist Deaths	112	85	98	92	111
Motorcyclist Injuries	2,626	2,584	2,320	2,478	2,626
Bicyclist Deaths	19	19	26	17	23
Bicyclist Injuries	2,619	2,742	2,403	2,525	2,768
Heavy-Truck-Related Deaths	222	198	192	203	192
Alcohol-Related Deaths	523	514	503	514	535
Speed-Related Deaths	279	257	268	251	197
Billions of Vehicle-Miles	92.3	94.5	96.4	98.3	100.4
Deaths per 100 Million Vehicle-Miles	1.56	1.57	1.52	1.59	1.48

Note: Speed-Related Deaths only count those crashes where speed was considered the prime contributing factor in the crash.

Economic Loss Due to Reportable Traffic Crashes

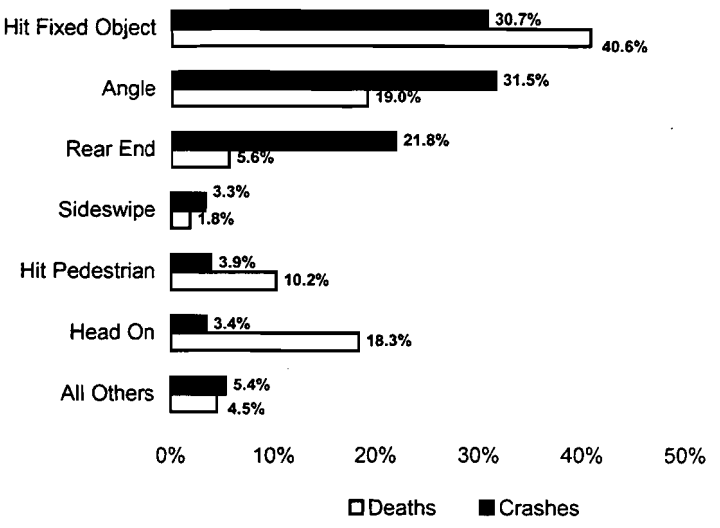
Severity	Number	Average Cost	Estimated Total Costs
Deaths (persons)	1,486	$2,835,456	$4,213,487,616
Major Injuries (persons)	5,081	$1,029,281	$5,229,776,761
Moderate Injuries (persons)	25,139	$68,796	$1,729,462,644
Minor Injuries (persons)	83,100	$5,453	$453,144,300
Property Damage Only (crashes)	51,323	$2,181	$111,935,463
Unknown Injuries (persons)	20,772	$5,453	$113,269,716
		TOTAL	$11,851,076,500

In 1998, the economic loss due to traffic crashes was
$987
to every man, woman, and child in Pennsylvania.

Figures are based on the latest PennDOT estimates (in 1998 dollars). The economic loss per Pennsylvania citizen is based on the ratio of estimated total cost to the estimated total population of Pennsylvania.

Crashes by Crash Type

Many different types of crashes occur on Pennsylvania roads, but certain types of crashes are more prevalent. More crashes involved a single vehicle hitting a fixed object (tree, guide rail, etc.) than any other type. Head-on collisions, though they occur much less frequently, cause the third highest number of deaths.

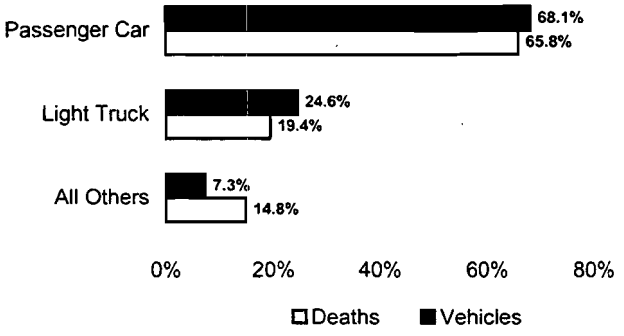


Crash Type	Crashes	Deaths
Angle	44,399	283
Backing Up	444	1
Head On	4,845	272
Hit Fixed Object	43,250	603
Hit Pedestrian	5,533	151
Non-Collision	4,715	61
Rear End	30,734	83
Sideswipe	4,648	27
Other	2,404	5
TOTAL	140,972	1,486

*Note that, by definition, a Hit Pedestrian Crash only involves those crashes where the pedestrian being struck was the first harmful event. Therefore the pedestrian crashes and deaths shown in this section are slightly different than those shown elsewhere in this book, which include all pedestrian harmful events.

Vehicles Involved in Crashes

Passenger cars were involved in more crashes than all other vehicle types combined. Coupled with light trucks, they accounted for the vast majority of crashes and occupant deaths.



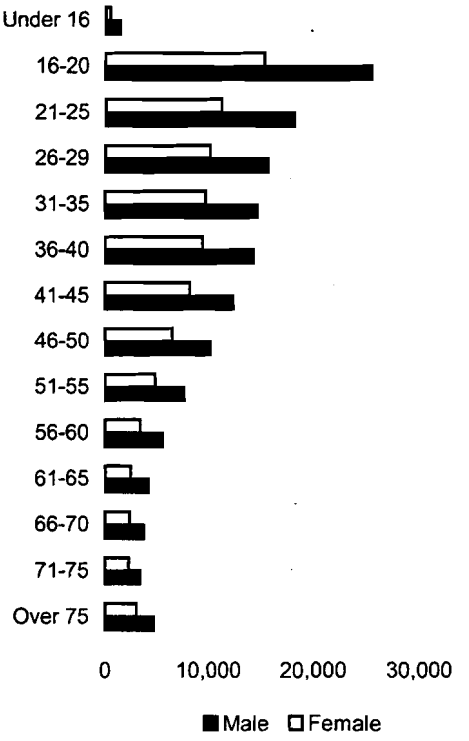
	Vehicles	Occupant Deaths
Passenger Car	164,014	869
Light Truck	59,360	256
Heavy Truck	7,806	38
Bicycle	2,775	23
Motorcycle	2,684	111
Commercial Bus	628	7
School Bus	500	1
Other	3,215	15

Driver Involvement in Crashes by Age and Sex

In every age group, male drivers are involved in more crashes than female drivers. Male drivers ages 16-20 are involved in more crashes than drivers in any other age group (male or female).

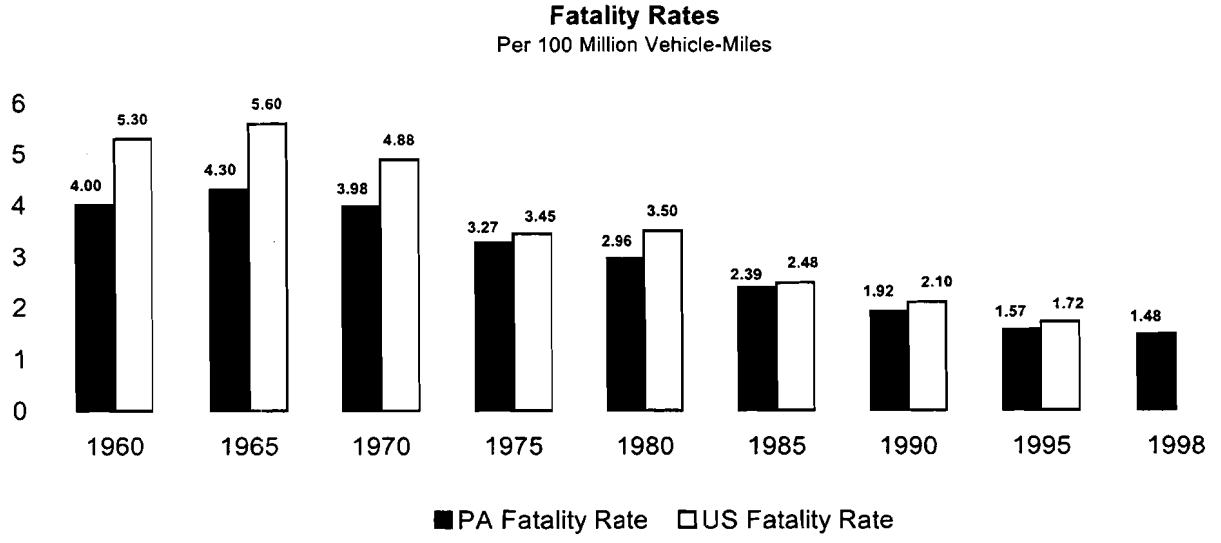
Driver	Male	Female	Total Drivers
Under 16	1,389 (1.0%)	410 (0.5%)	**1,799**
16-20	25,391 (17.5%)	15,287 (16.9%)	**40,678**
21-25	18,156 (12.5%)	11,214 (12.4%)	**29,370**
26-29	15,718 (10.8%)	10,165 (11.2%)	**25,883**
31-35	14,687 (10.1%)	9,680 (10.7%)	**24,367**
36-40	14,297 (9.9%)	9,425 (10.4%)	**23,722**
41-45	12,355 (8.5%)	8,186 (9.0%)	**20,541**
46-50	10,152 (7.0%)	6,513 (7.2%)	**16,665**
51-55	7,683 (5.3%)	4,861 (5.4%)	**12,544**
56-60	5,560 (3.8%)	3,391 (3.7%)	**8,951**
61-65	4,300 (3.0%)	2,510 (2.8%)	**6,810**
66-70	3,798 (2.6%)	2,348 (2.6%)	**6,146**
71-75	3,439 (2.4%)	2,276 (2.5%)	**5,715**
Over 75	4,778 (3.3%)	3,080 (3.4%)	**7,858**
Unknown	3,407 (2.4%)	1,267 (1.4%)	**4,674**
DRIVERS	145,110 (100.0%)	90,613 (100.0%)	235,723

Note: Does not include 4,348 drivers of unknown sex.



Highway Crash Historical Data

Fatality rates have fallen dramatically over the past 60 years as vehicles, roadways, and other factors have improved. Pennsylvania's fatality rate has also been lower than the US average for most years since 1937. The chart below shows periodic fatality rates since 1960.



Year	Total Crashes	Total Killed	Total Injured	Registered Vehicles	Motor Vehicle Mileage*	PA Fatality Rate**	US Fatality Rate**
1928	27,082	2,080	20,223	1,713,920	-	-	-
1929	43,776	2,331	35,648	1,829,685	-	-	-
1930	47,917	2,566	99,793	1,843,539	-	-	-
1931	46,588	2,503	40,800	1,826,736	-	-	-
1932	41,004	2,131	41,836	1,750,664	-	-	-
1933	45,374	2,279	47,908	1,716,104	-	-	-
1934	52,157	2,535	51,847	1,791,870	-	-	-
1935	50,436	2,361	48,398	1,851,945	11.1	21.30	15.90
1936	55,727	2,426	50,854	1,989,507	12.6	19.20	15.10
1937	73,534	2,564	61,445	2,124,525	17.6	14.60	14.70
1938	93,153	1,892	50,598	2,101,299	16.3	11.60	12.00
1939	69,950	1,871	55,821	2,237,960	18.5	10.10	11.30
1940	78,625	2,074	58,664	2,307,723	19.8	10.50	11.40
1941	83,507	2,298	60,499	2,432,319	21.3	10.80	12.00
1942	59,280	1,745	41,122	2,267,301	17.6	9.90	10.60
1943	37,419	1,374	27,312	2,084,332	13.9	9.90	11.50
1944	42,699	1,328	29,928	2,010,163	14.4	9.20	11.50
1945	53,304	1,453	35,686	2,145,452	16.0	9.10	11.30
1946	70,065	1,794	45,889	2,387,542	22.1	8.10	9.80
1947	89,190	1,678	49,938	2,604,741	22.4	7.50	8.80
1948	103,478	1,671	52,709	2,804,056	23.9	7.00	8.10
1949	102,098	1,624	54,290	2,993,903	25.8	6.30	7.50
1950	113,748	1,624	62,103	3,262,243	27.1	6.00	7.60
1951	123,088	1,642	65,643	3,413,836	28.8	5.70	7.10
1952	126,820	1,680	67,143	3,510,064	30.5	5.50	7.10
1953	129,791	1,643	70,531	3,684,468	31.6	5.20	6.70
1954	130,326	1,538	68,571	3,903,917	32.0	4.80	6.10
1955	147,837	1,737	76,836	4,045,995	34.5	5.00	6.10
1956	160,371	1,790	84,813	4,175,217	36.5	4.90	6.10
1957	161,080	1,698	84,755	4,250,576	37.7	4.50	5.80
1958	156,825	1,654	86,733	4,355,813	38.5	4.30	5.40
1959	157,191	1,685	90,807	4,507,262	39.2	4.30	5.40
1960	159,051	1,609	92,792	4,707,055	40.2	4.00	5.30
1961	156,559	1,486	73,997	4,842,400	40.2	3.70	5.20
1962	161,557	1,625	81,936	4,849,400	41.7	3.90	5.30
1963	174,527	1,830	86,892	5,117,229	44.6	4.10	5.50
1964	183,910	1,889	93,564	5,351,350	46.1	4.10	5.70
1965	213,769	2,079	111,123	5,436,349	48.3	4.30	5.60
1966	254,450	2,180	116,537	5,497,000	55.1	4.27	5.70
1967	243,798	2,331	126,417	5,673,000	53.4	4.37	5.50
1968	279,663	2,410	138,389	5,791,000	56.1	4.29	5.40
1969	292,192	2,401	141,728	5,879,000	58.6	4.10	5.21
1970	311,981	2,255	136,518	5,947,000	56.7	3.98	4.88
1971	301,374	2,299	127,318	6,079,000	60.9	3.78	4.57
1972†	277,556	2,352	135,938	6,244,000	67.0	3.51	4.43
1973	307,648	2,444	145,452	7,007,192	66.5	3.67	4.24
1974	277,271	2,155	132,689	8,354,063	63.9	3.37	3.59
1975	288,245	2,082	134,969	8,654,333	63.7	3.27	3.45
1976	303,771	2,025	135,308	9,124,915	69.4	2.92	3.33
1977	234,702	2,071	148,725	8,833,745	72.3	2.87	3.35
1978‡	158,361	2,137	146,403	7,254,893	72.7	2.94	3.39
1979	156,622	2,204	144,300	7,451,021	70.3	3.14	3.50
1980	142,489	2,114	133,716	7,307,974	71.3	2.96	3.50
1981	138,764	2,049	131,301	7,252,836	71.5	2.87	3.30
1982	131,579	1,848	126,026	7,417,311	71.3	2.59	2.88
1983	131,081	1,752	126,707	7,562,726	72.3	2.42	2.69
1984	139,914	1,752	134,714	7,724,686	74.1	2.36	2.68
1985	143,244	1,809	140,067	7,860,497	75.6	2.39	2.48
1986	150,683	1,928	148,044	7,793,921	77.2	2.50	2.48
1987	152,631	2,006	151,457	8,313,799	78.9	2.54	2.40
1988	152,906	1,932	154,018	8,452,365	81.3	2.38	2.32
1989	151,461	1,878	152,589	8,605,747	84.5	2.22	2.20
1990	141,340	1,646	142,945	8,675,835	85.7	1.92	2.10
1991	130,404	1,661	130,446	8,757,129	87.3	1.90	1.90
1992	133,913	1,545	133,113	8,915,621	89.0	1.74	1.80
1993	134,315	1,530	131,503	9,044,901	90.8	1.68	1.80
1994	134,171	1,440	130,678	9,255,714	92.3	1.56	1.83
1995	136,804	1,480	133,177	9,271,517	94.5	1.57	1.40
1996	142,867	1,470	136,949	9,411,261	96.4	1.53	1.69
1997	143,981	1,562	138,820	9,692,499	98.3	1.59	1.64
1998	140,972	1,486	134,092	9,842,427	100.4	1.48	---

* In billions

** Per 100 million vehicle-miles

† From 1972 to 1978, reportable crashes defined as over $200 in damage

‡ From 1978 to present, reportable crashes defined as involving any type of injury and/or vehicle(s) requiring towing from the scene

—WHAT CONDITIONS WERE—

Crashes by Weather and Road Surface Conditions

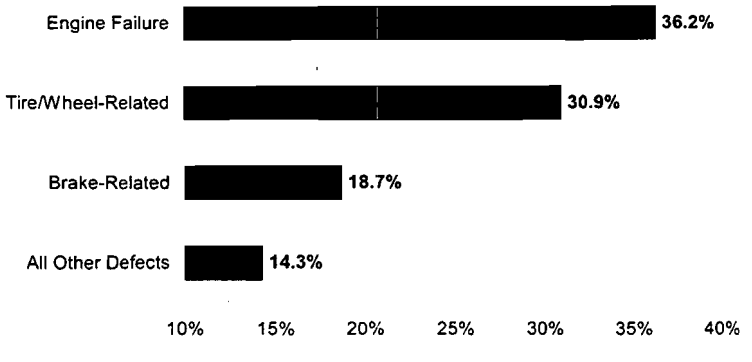
Adverse weather and road surface conditions negatively affect vehicle handling and driver sight. Interestingly, the vast majority of crashes occur under no adverse conditions. This can be attributable to: 1) weather and roads being clear and dry most of the time and 2) drivers failing to use caution under optimal road conditions. The figures shown in both tables are for all highway types.

Weather Condition	Crashes	Deaths
No Adverse Conditions	111,342 (79.0%)	1,259 (84.7%)
Rain/Rain & Fog	22,946 (16.3%)	172 (11.6%)
Snow/Sleet/Freezing Rain	5,057 (3.6%)	39 (2.6%)
Fog/Smoke, Etc.	871 (0.6%)	14 (0.9%)
Other	756 (0.5%)	2 (0.1%)
TOTAL	140,972 (100.0%)	1,486 (100.0%)

Road Surface Condition	Crashes	Deaths
Dry	104,761 (74.3%)	1,185 (79.7%)
Wet	29,575 (21.0%)	252 (17.0%)
Ice/Ice Patches	2,650 (1.9%)	19 (1.3%)
Snow	2,392 (1.7%)	17 (1.1%)
Other	1,594 (1.1%)	13 (0.9%)
TOTAL	140,972 (100.0%)	1,486 (100.0%)

Crashes Involving Vehicle Defects

Improperly-maintained vehicles can lead to crashes. In 1998, engine, tire/wheel, and brake-related failures contributed to the majority of vehicle defect related crashes. The percentages in the graph below refer to the number of crashes involving vehicle defects.

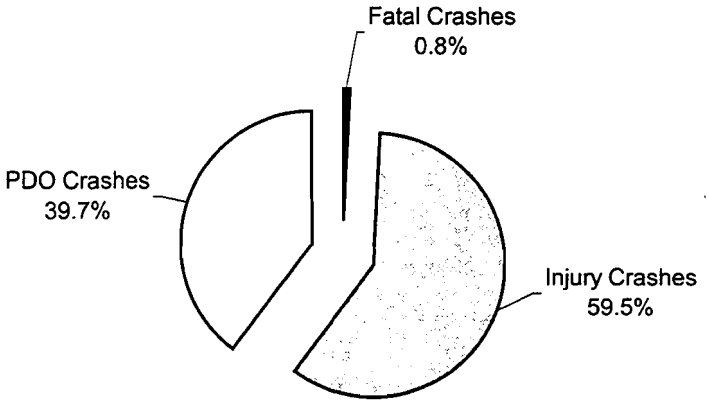


Vehicle Defect	Crashes
Engine Failure	1,036
Tire/Wheel-Related	884
Brake-Related	534
Total Steering System Failure	202
Dirty/Frosty Windshield	59
Transmission Problem	47
Suspension	42
Vehicle Lighting-Related	38
Defective Defrosting	9
Exhaust System Failure	7
Defective Wipers	4

Note the above list only counts crashes where a vehicle defect was the primary contributing factor in the crash.

Work Zone Crashes

Work zones are potentially dangerous areas because conditions are constantly changing, and drivers do not always anticipate these changes and exercise the appropriate level of caution. About sixty percent of work zone crashes in 1998 contained injuries.



Total Crashes: **2,016**

Total Killed: **19** (Workers Killed: **0**)

Total Injured: **1,848** (Workers Injured: **25**)

Work Zone Crashes—Vehicles Involved

Vehicle Type	State Hwy (Interstate)	State Hwy (Other)	Turnpike	Local Road
Passenger Car	276 (47.1%)	1,593 (63.5%)	40 (38.8%)	369 (70.2%)
Light Truck	150 (25.6%)	689 (27.5%)	15 (14.6%)	107 (20.3%)
Heavy Truck/Bus	149 (25.4%)	168 (6.7%)	44 (42.7%)	28 (5.3%)
Motorcycle	4 (0.7%)	24 (1.0%)	3 (2.9%)	2 (0.4%)
Other	7 (1.2%)	35 (1.4%)	1 (1.0%)	20 (3.8%)
TOTAL	586 (100.0%)	2,509 (100.0%)	103 (100.0%)	526 (100.0%)

Note: State highway (other) includes state-maintained roads that are not designated as interstates.

Work Zone Crashes by Road Type—Five-Year Trends

Year	Road Type	Crashes		Deaths	
		Number	*% Total*	*Number*	*% Total*
1994	State Hwy (Interstate)	525	27.1%	8	42.1%
	State Hwy (Other)	1,012	52.3%	7	36.8%
	Turnpike	133	6.9%	2	10.5%
	Local Road	265	13.7%	2	10.5%
	Ramp	-	-	-	-
	TOTAL	**1,935**	**100.0%**	**19**	**100.0%**
1995	State Hwy (Interstate)	477	23.9%	4	20.0%
	State Hwy (Other)	1,118	56.1%	9	45.0%
	Turnpike	87	4.4%	2	10.0%
	Local Road	312	15.6%	5	25.0%
	Ramp	-	-	-	-
	TOTAL	**1,994**	**100.0%**	**20**	**100.0%**
1996	State Hwy (Interstate)	448	22.1%	4	26.7%
	State Hwy (Other)	1,086	53.6%	8	53.3%
	Turnpike	130	6.4%	1	6.7%
	Local Road	273	13.5%	1	6.7%
	Ramp	89	4.4%	1	6.7%
	TOTAL	**2,026**	**100.0%**	**15**	**100.0%**
1997	State Hwy (Interstate)	387	20.1%	3	18.8%
	State Hwy (Other)	1,096	56.8%	11	68.8%
	Turnpike	68	3.5%	0	0.0%
	Local Road	270	14.0%	2	12.5%
	Ramp	109	5.6%	0	0.0%
	TOTAL	**1,930**	**100.0%**	**16**	**100.0%**
1998	State Hwy (Interstate)	313	15.5%	4	21.1%
	State Hwy (Other)	1,312	65.1%	14	73.7%
	Turnpike	58	2.9%	0	0.0%
	Local Road	249	12.4%	0	0.0%
	Ramp	84	4.2%	1	5.3%
	TOTAL	**2,016**	**100.0%**	**19**	**100.0%**

Note: State highway (other) includes state-maintained roads that are not designated as interstates.

1996 was the first year ramps were treated as a separate road type. In previous years, ramps were included within the associated road type.

Crashes with Roadside Objects and Animals

Unfortunately, roadside objects are hit often in Pennsylvania crashes. While there are many different roadside objects, a few are more predominant in crashes than others. The table below lists crashes with various types of roadside objects whether or not they were the first object struck.

Roadside Object	Crashes	% Total	Deaths	% Total
Hit Bridge	1,020	0.7%	35	2.4%
Hit Building	1,664	1.2%	34	2.3%
Hit Culvert	892	0.6%	31	2.1%
Hit Curb	3,753	2.7%	67	4.5%
Hit Ditch	2,716	1.9%	59	4.0%
Hit Embankment	8,791	6.2%	212	14.3%
Hit Fence	2,186	1.6%	37	2.5%
Hit Fire Hydrant	426	0.3%	4	0.3%
Hit Guiderail	5,698	4.0%	166	11.2%
Hit Impact Attenuator	49	0.0%	1	0.1%
Hit Mailbox(es)	1,443	1.0%	36	2.4%
Hit Median Barrier	2,788	2.0%	35	2.4%
Hit Obstacle on Roadway	535	0.4%	3	0.2%
Hit Other Fixed Object	1,964	1.4%	45	3.0%
Hit Overhead Structure	71	0.1%	0	0.0%
Hit Parked Vehicle	6,595	4.7%	52	3.5%
Hit Rock(s)	1,082	0.8%	18	1.2%
Hit Shrubs/Hedges	2,995	2.1%	82	5.5%
Hit Signal/Sign Support	3,046	2.2%	73	4.9%
Hit Snow Bank	30	0.0%	1	0.1%
Hit Temporary Construction Barrier	74	0.1%	1	0.1%
Hit Traffic Island or Channelization	311	0.2%	4	0.3%
Hit Tree(s)	8,749	6.2%	286	19.3%
Hit Utility Pole(s)	9,766	6.9%	186	12.5%
Hit Wall	1,328	0.9%	28	1.9%
Hit Deer	2,121	1.5%	4	0.3%
Hit Other Animal	192	0.1%	1	0.1%

Note: "% Total" lists the percentage compared to *all* crashes or deaths, not only the ones listed in this table.

—WHERE THEY HAPPENED—

Crashes by Road Type

	State Hwy (Interstate)	State Hwy (Other)	Turnpike	Local Road	Ramp
Crashes	6,229	88,473	1,940	42,397	1,933
Person Killed	102	1,098	24	248	14
Persons Injured	5,114	86,399	1,506	39,308	1,765
Miles of Maintained Road	1,278	38,884	505	78,612	781
100 MVM* Traveled	162.7	604.9	53.1	182.9	---
Crashes/MVM*	0.38	1.46	0.37	2.32	---
Persons Killed/100 MVM*	0.63	1.82	0.45	1.36	---
Persons Injured/MVM*	0.31	1.43	0.28	2.15	---

* MVM = million vehicle-miles

Note: State highway (other) includes state-maintained roads that are not designated as interstates. The road mileage and MVM data are from the 1998 Highway Performance Monitoring System (HPMS) package and reflects 1998 length and travel activity data. Ramp miles are not included in any category or total.

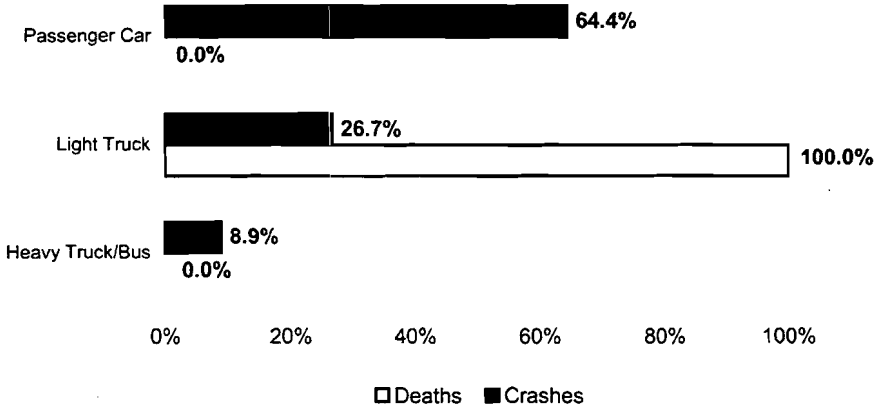
Crashes Between Trains and Other Vehicles—Five-Year Trends

Motor vehicle/train crashes make up a very small percentage of total crashes. In the last three years, only seven deaths have occurred in this type of crash.

Year	Crashes	Deaths
1994	54	7
1995	51	8
1996	41	1
1997	37	5
1998	45	1

Train/Vehicle Crashes by Vehicle Type

Passenger cars and light trucks were the predominant vehicle types involved in crashes with trains in 1998.

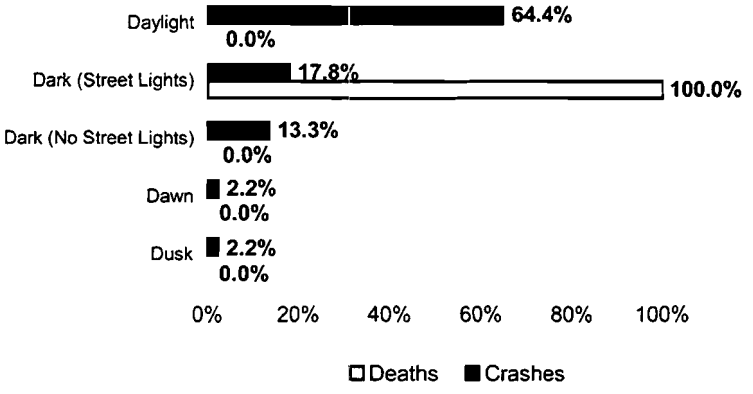


Vehicle Type	Crashes	Deaths
Passenger Car	29	0
Light Truck	12	1
Heavy Truck	3	0
Commercial Bus	1	0
Bicycle	0	0
Motorcycle	0	0
School Bus	0	0
Unknown	0	0
TOTAL	45	1

Train/Vehicle Crashes by Road Type

Road Type	Crashes	Deaths
Local Road	33	1
State Hwy (Other)	12	0
TOTAL	45	1

Train/Vehicle Crashes by Light Level



Light Level	Crashes	Deaths
Daylight	29	0
Dark (Street Lights)	8	1
Dark (No Street Lights)	6	0
Dawn	1	0
Dusk	1	0
TOTAL	45	1

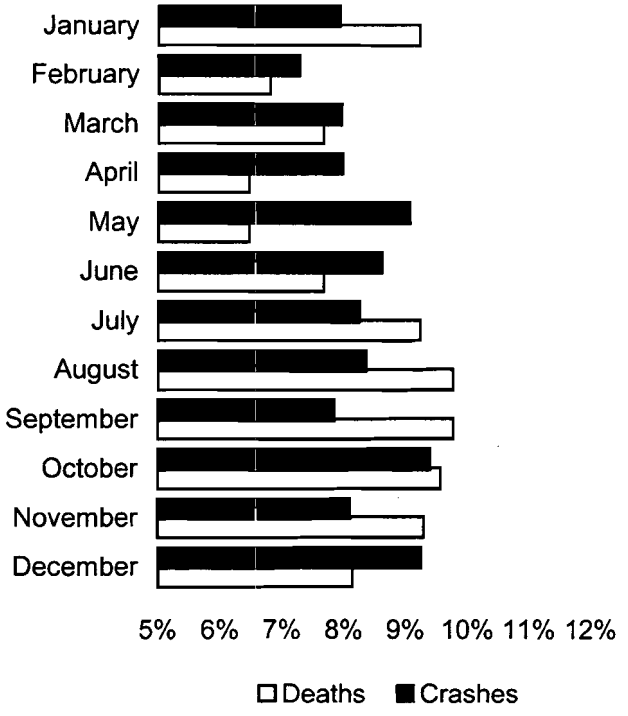
Train/Vehicle Crashes by County

County	Crashes	Deaths
Adams	1	0
Allegheny	2	0
Blair	2	0
Bucks	1	0
Chester	1	0
Clarion	1	0
Clearfield	1	0
Cumberland	1	0
Delaware	1	0
Erie	4	0
Fayette	1	0
Franklin	3	0
Greene	1	0
Lancaster	4	0
Lebanon	1	0

County	Crashes	Deaths
Lehigh	2	0
Mckean	1	0
Montgomery	2	0
Montour	1	0
Northampton	2	0
Northumberland	2	0
Schuylkill	4	0
Somerset	1	0
Washington	1	0
Westmoreland	3	1
York	1	0
TOTAL	45	1

—WHEN THEY HAPPENED—

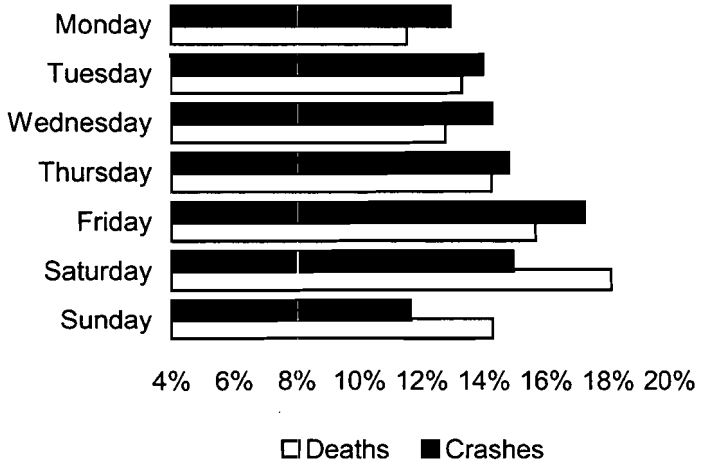
Crashes by Month



Month	Crashes	Deaths
January	11,182 (7.9%)	137 (9.2%)
February	10,258 (7.3%)	101 (6.8%)
March	11,218 (8.0%)	114 (7.7%)
April	11,255 (8.0%)	96 (6.5%)
May	12,793 (9.1%)	96 (6.5%)
June	12,136 (8.6%)	114 (7.7%)
July	11,624 (8.3%)	137 (9.2%)
August	11,790 (8.4%)	145 (9.8%)
September	11,050 (7.8%)	145 (9.8%)
October	13,237 (9.4%)	142 (9.6%)
November	11,404 (8.1%)	138 (9.3%)
December	13,025 (9.2%)	121 (8.1%)
TOTAL	140,972 (100.0%)	1,486 (100.0%)

Crashes by Day of Week

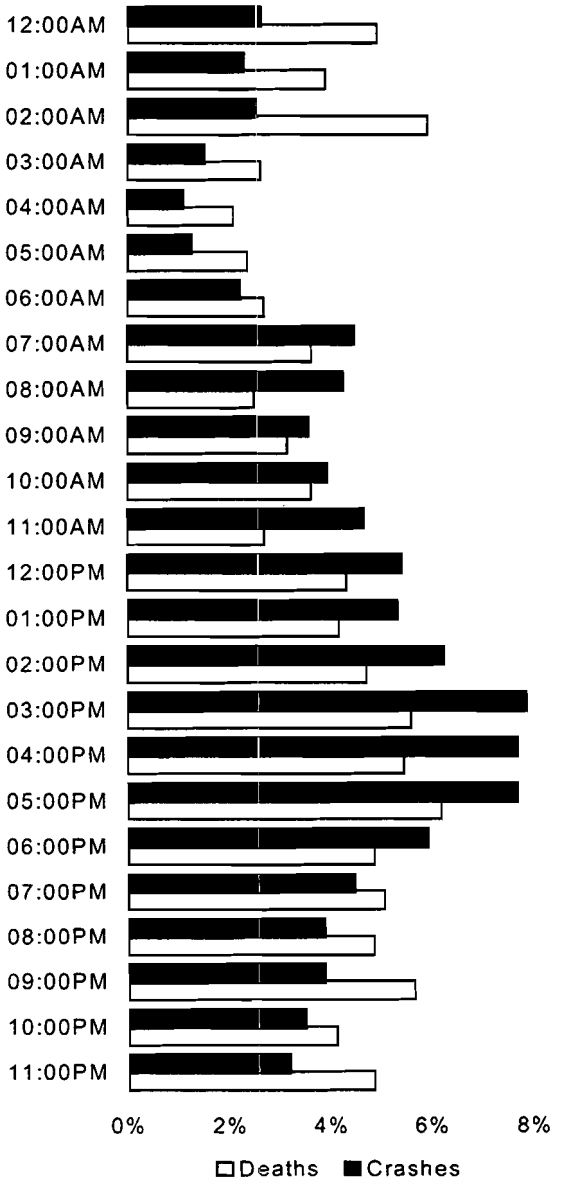
More crashes and deaths tend to occur on Friday and Saturdays. The number of deaths on Saturday and Sunday is proportionally greater than the number of crashes, which could be attributed to alcohol use. (See ***Victims of Fatal Crashes by Day of Week***, page 29).



Day	Crashes	Deaths
Monday	18,279 (13.0%)	172 (11.6%)
Tuesday	19,756 (14.0%)	198 (13.3%)
Wednesday	20,149 (14.3%)	190 (12.8%)
Thursday	20,906 (14.8%)	212 (14.3%)
Friday	24,346 (17.3%)	233 (15.7%)
Saturday	21,095 (15.0%)	269 (18.1%)
Sunday	16,441 (11.7%)	212 (14.3%)
TOTAL	140,972 (100.0%)	1,486 (100.0%)

Crashes by Hour of Day

Some hours of the day are more dangerous than others with regard to crashes and deaths. Not surprisingly, crashes and deaths were higher during peak traffic time. Some hours of the day experience a low percentage of crashes, but they are much more deadly. For example, only 2.5% of all crashes in 1998 occurred in the 2:00 AM hour, but 5.9% of all deaths—the second highest percentage—occurred then. The higher the volume of traffic itself is a factor during peak traffic hours, particularly the rush-hours.

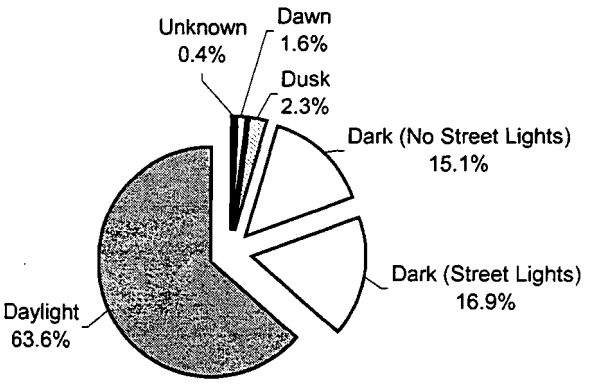


Hour	Crashes	Deaths
12:00AM	3,714	73
01:00AM	3,227	58
02:00AM	3,585	88
03:00AM	2,146	39
04:00AM	1,549	31
05:00AM	1,793	35
06:00AM	3,136	40
07:00AM	6,322	54
08:00AM	5,995	37
09:00AM	5,046	47
10:00AM	5,551	54
11:00AM	6,574	40
12:00PM	7,625	64
01:00PM	7,519	62
02:00PM	8,784	70
03:00PM	11,100	83
04:00PM	10,821	81
05:00PM	10,826	92
06:00PM	8,337	72
07:00PM	6,283	75
08:00PM	5,466	72
09:00PM	5,451	84
10:00PM	4,941	61
11:00PM	4,493	72

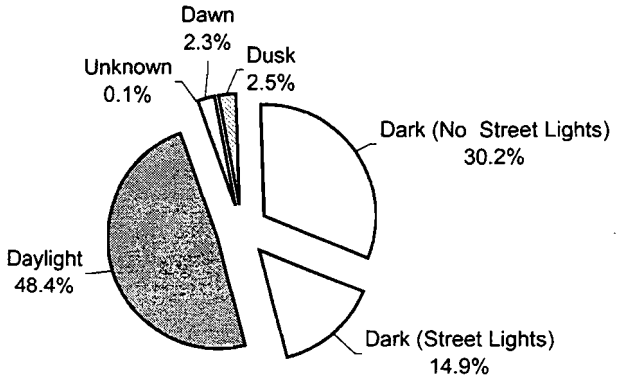
Crashes by Light Level

In 1998, more crashes occurred in daylight than all other light levels combined. This is not surprising, since more vehicles are on the road during daylight. However, deaths in 1998 occurred slightly more often during non-daylight hours (dark and dusk/dawn conditions). If 1998 deaths per 1000 crashes are compared (Daylight—8.0 deaths per 1000 crashes versus Non-Daylight—15.1 deaths per 1000 crashes), it is apparent that non-daylight crashes resulted in deaths more often than daylight crashes.

Crashes



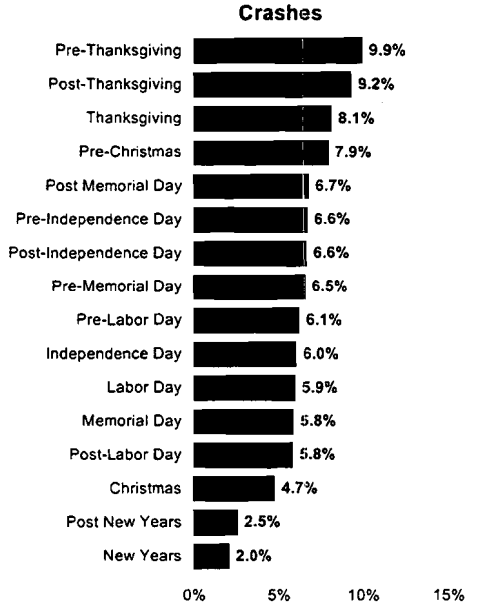
Deaths

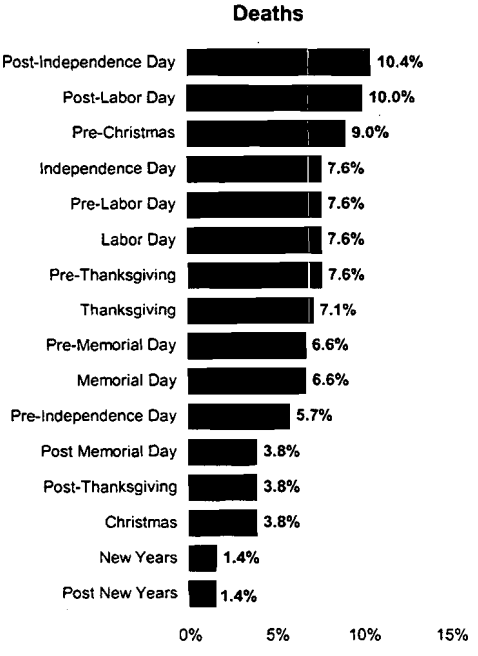


Light Level	Crashes	Deaths
Daylight	89,607	719
Dark (Street Lights)	23,892	222
Dark (No Street Lights)	21,342	472
Dusk	3,294	37
Dawn	2,237	34
Unknown	600	2
TOTAL	140,972	1,486

Crashes by Holiday

With few exceptions, most crashes occurred in the weekends directly before or after a holiday. Most deaths, however, averaged about the same before, during, and after the holiday. The graphs below illustrate the ranking in descending order, of total crashes and deaths, respectively, for each holiday period. The table shows a breakdown of crashes and deaths for each holiday period in 1998.





Period*	Crashes	Deaths
New Years**	374	3
Post New Years**	466	3
Pre-Memorial Day	1,213	14
Memorial Day	1,087	14
Post Memorial Day	1,254	8
Pre-Independence Day	1,240	12
Independence Day	1,119	16
Post-Independence Day	1,233	22
Pre-Labor Day	1,152	16
Labor Day	1,106	16
Post-Labor Day	1,082	21
Pre-Thanksgiving	1,849	16
Thanksgiving	1,510	15
Post-Thanksgiving	1,729	8
Pre-Christmas	1,479	19
Christmas	876	8
TOTAL	18,384	211

* See *Holidays* under **Definitions** for explanation of pre- and post-holiday weekends.

** Not part of a holiday weekend in 1998.

Drivers

Drivers Overview

Every traffic crash involves 3 elements: the driver, highway, and vehicle. It has been stated nationally that 85-90% of all traffic crashes involve some sort of driver error that contributes to the crash. Therefore, as drivers, we can greatly impact traffic safety by Driving Smart and Driving Defensively.

Of all drivers represented in crashes, the young driver and the mature driver are two groups that stand out. Young drivers (ages 16-21) are the least experienced drivers and they are also prone to over zealous driving performance, perhaps due to their youth and peer pressure. Mature drivers (ages 65 & over) on the other hand experience driving difficulties related to deteriorating physical abilities (eyesight, hearing, head movement, etc.).

Crashes Involving Driver Error

Some form of poor/degraded driver performance is present in the majority of crashes. Alcohol use and speeding continue as big contributors to fatal crashes.

Note that in 1998, only primary contributing factors in the crash are considered.

Contributing Factor	Crashes	Fatal Crashes
Speed-Related	16,424	183
Drinking Driver	6,768	163
Proceeded Without Clearance	10,276	73
Improper Turning-Related	12,523	48
Tailgating	12,764	26
Drowsy Drivers	2,409	22
Careless/illegal Passing	1,732	21
Distracted Driver	3,066	8

Single and Multiple Vehicle Crashes of Young and Mature Drivers

As the table below shows, mature drivers are over-represented in multiple vehicle crashes, due in part to the loss of physical and cognitive abilities.

Number of Vehicles	All Drivers	Young Drivers (16-21)	Mature Drivers (65-74)	Mature Drivers (75+)
Single Vehicle Crash	38.6% 54,392 crashes	34.5% 15,020 crashes	14.8% 1,720 crashes	15.4% 1,327 crashes
Multiple Vehicle Crash	61.4% 86,580 crashes	65.5% 28,543 crashes	85.2% 9,888 crashes	84.6% 7,286 crashes

Drivers in Crashes by Age Group

Looking at the 1998 Pennsylvania driver data, as driver age groups increase in age, the percentage of Pennsylvania licensed drivers involved in crashes within each age group decreases considerably. Also note the large population of mature Pennsylvania drivers age 70 and over.

Age Group	PA Drivers Involved in Crashes	PA Total Licensed Drivers	% Involved in Crashes
16	6,505	47,030	13.8%
17	8,932	84,409	10.6%
18	8,506	113,558	7.5%
19	7,349	123,950	5.9%
20	6,458	121,798	5.3%
21	5,974	123,818	4.8%
22-24	15,341	374,782	4.1%
25-29	23,180	712,688	3.3%
30-39	43,302	1,880,245	2.3%
40-54	47,024	2,480,934	1.9%
55-59	8,865	567,983	1.6%
60-64	6,415	465,838	1.4%
65-69	5,756	437,976	1.3%
70-74	5,506	426,364	1.3%
75 and Over	8,466	625,579	1.4%
Unknown	1,758	N/A	N/A

Comparison of Young and Mature Drivers by Crash Type

Young drivers are over-represented in hit fixed object crashes (single vehicle run-off-the-road type crashes), while mature drivers are over-represented in angle and rear-end crashes (multiple vehicle interaction type crashes).

Crash Type	All Drivers	Young Drivers (16-21)	Mature Drivers (65-74)	Mature Drivers (75+)
Non-Collision	3.3% 4,715 crashes	2.5% 1,071 crashes	1.1% 128 crashes	0.7% 56 crashes
Rear-End	21.8% 30,734 crashes	22.9% 9,969 crashes	28.3% 3,289 crashes	22.5% 1,941 crashes
Head-On	3.4% 4,845 crashes	4.0% 1,747 crashes	3.8% 444 crashes	3.8% 326 crashes
Backing Up	0.3% 444 crashes	0.2% 98 crashes	0.4% 45 crashes	0.4% 32 crashes
Angle	31.5% 44,399 crashes	34.4% 15,002 crashes	48.3% 5,602 crashes	54.6% 4,699 crashes
Sideswipe	3.3% 4,648 crashes	3.0% 1,290 crashes	3.5% 402 crashes	2.5% 217 crashes
Hit Fixed Object	30.7% 43,250 crashes	30.8% 13,430 crashes	11.3% 1,310 crashes	12.6% 1,087 crashes
Hit Pedestrian	3.9% 5,533 crashes	1.4% 611 crashes	2.6% 298 crashes	2.5% 216 crashes
Other	1.7% 2,404 crashes	0.8% 345 crashes	0.8% 90 crashes	0.5% 39 crashes

Intersection vs. Non-Intersection Crashes of Young and Mature Drivers

In keeping with the data presented previously on single vehicle versus multiple vehicle crashes, mature drivers are more likely to be involved in crashes at intersections compared to other age groups. Intersections can be confusing and problematic for the mature driver, as numerous and complex movements are present.

	All Drivers	Young Drivers (16-21)	Mature Drivers (65-74)	Mature Drivers (75+)
Intersection	42.6% 60,068 crashes	43.3% 18,874 crashes	55.9% 6,489 crashes	58.9% 5,071 crashes
Non-Intersection	57.4% 80,904 crashes	56.7% 24,689 crashes	44.1% 5,119 crashes	41.1% 3,542 crashes

Alcohol-Related Crashes

Alcohol Overview

- In Pennsylvania, drinking and driving remains a top safety issue. In 1998, alcohol-related crashes (13,835) decreased from 13,996 alcohol-related crashes in 1997 while alcohol-related deaths (535) increased from 514 alcohol-related deaths in 1997.
- Of particular concern is the involvement of drinking drivers under the age of 21. 1998 underage drinking drivers went down 1% since last year (but up 21% from 1996).
- Of equal focus is the 21 to 50 age group, in which over 44% of the driver deaths involved a drinking driver. The 41 to 45 and 46 to 50 age groups increased from 29% and 16% in 1997 to 46% and 44% respectively in 1998.
- In 1998, alcohol-related deaths were 36% of the total traffic deaths, the highest since 1994.
- Pennsylvania's aggressive posture to prevent and deter drinking and driving (particularly through the widespread use of sobriety checkpoints and saturation patrols) has had a significant impact on the DUI problem.

1998 Briefs

- 535 people died in alcohol-related crashes.
- 88% of the alcohol-related occupant deaths (drivers and passengers) were in the vehicle driven by the drinking driver; 78% were the drinking drivers themselves.
- 82% of the drinking drivers in traffic crashes were male.
- 79% of the alcohol-related crashes were during the hours of darkness, usually on weekends.
- On average each day, 38 alcohol-related traffic crashes occurred.
- On average each day, 1.5 persons were killed in alcohol-related traffic crashes.
- On average each day, 36 persons were injured in alcohol-related traffic crashes.

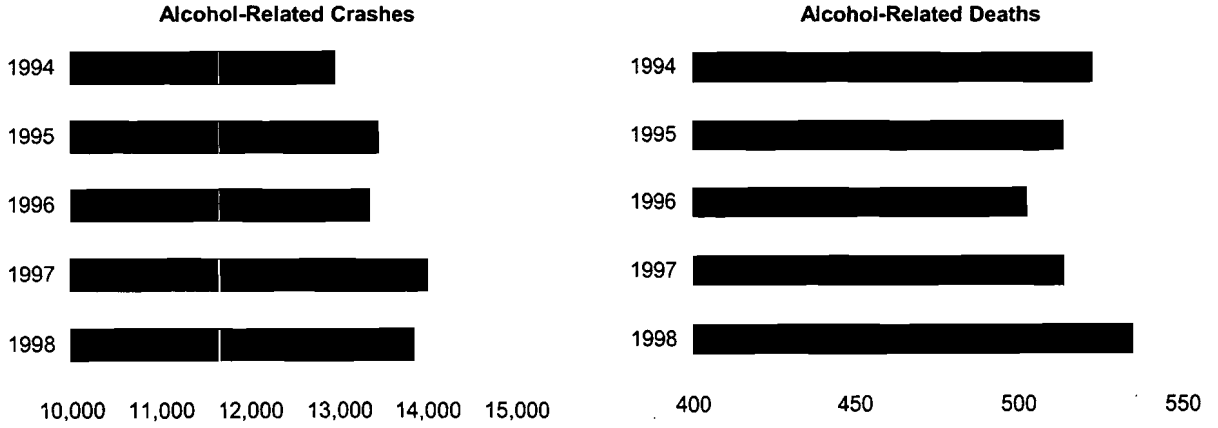
Alcohol Involvement in Crashes

Although alcohol-related crashes accounted for less than 10% of the total crashes in 1998, they resulted in 36% of all persons killed in crashes. Alcohol-related crashes were 5 times more likely to result in death than those not related to alcohol (3.5% of the alcohol-related crashes resulted in death, compared to 0.69% of crashes which were not alcohol-related). "PDO Crashes" in the table below refers to property damage only crashes.

	Fatal Crashes	Deaths	Injury Crashes	Injuries	PDO Crashes
Alcohol-Related	486 (35.8%)	535 (36.0%)	8,853 (10.0%)	13,156 (9.8%)	4,496 (8.8%)
Non-Alcohol-Related	872 (64.2%)	951 (64.0%)	79,438 (90.0%)	120,936 (90.2%)	46,827 (91.2%)
TOTAL	1,358 (100.0%)	1,486 (100.0%)	88,291 (100.0%)	134,092 (100.0%)	51,323 (100.0%)

Alcohol-Related Crashes—Five-Year Trends

Alcohol-related crashes decreased in 1998 while alcohol-related deaths were the highest in five years. Alcohol-related injuries decreased by 3%. "PDO Crashes" in the table below refers to property damage only crashes.



	1994	1995	1996	1997	1998
Crashes	12,944	13,440	13,343	13,996	13,835
Fatal Crashes	484	464	462	460	486
Injury Crashes	8,425	8,740	8,572	9,083	8,853
PDO Crashes	4,035	4,236	4,309	4,453	4,496
Deaths	523	514	503	514	535
Injuries	12,764	13,353	12,760	13,868	13,156
Fatal Crashes per 100,000 Licensed Drivers	6.0	5.7	5.7	5.5	5.8
Deaths per 100,000 Licensed Drivers	6.4	6.3	6.2	6.1	6.4

Victims of Alcohol-Related Fatal Crashes

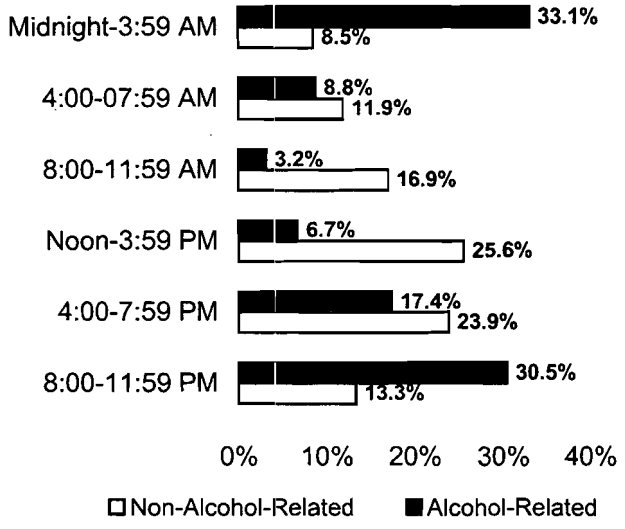
Of the 477 drivers and passenger deaths in alcohol-related crashes, 420 (88%) were drinking drivers or their passengers. The percentage of deaths of non-drinking people in these crashes decreased from 17% in 1997 to 15% in 1998.

Persons Involved	Deaths
Drivers	**372**
Drinking Drivers	*336 (90.3%)*
Non-Drinking Drivers	*36 (9.7%)*
Passengers	**105**
Passengers with Drinking Driver	*84 (80.0%)*
Passengers with Non-Drinking Driver	*21 (20.0%)*
Pedestrians	**44**
Drinking Pedestrian	*22 (50.0%)*
Non-Drinking Pedestrian	*22 (50.0%)*
TOTAL DEATHS*	535

*Includes 14 victims, status unknown

Victims of Fatal Crashes by Time of Day

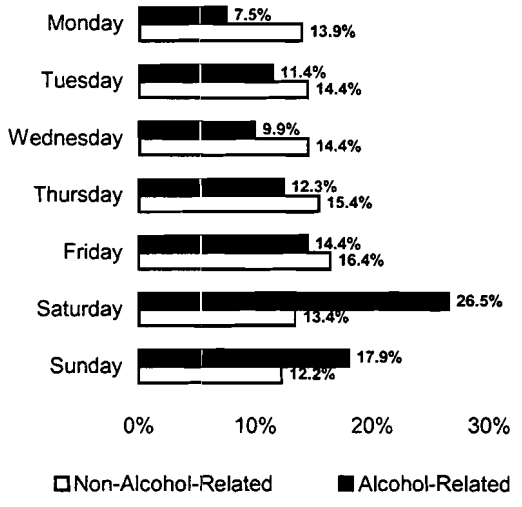
Alcohol-related crashes occurring between 8:00 PM and 4:00 AM produced the vast majority of deaths (64% of alcohol-related deaths). In contrast, half the deaths from non-alcohol-related crashes resulted from crashes occurring between noon and 8:00 PM.



Time of Occurrence	Non-Alcohol-Related	Alcohol-Related
Midnight-3:59 AM	81	177
4:00-07:59 AM	113	47
8:00-11:59 AM	161	17
Noon-3:59 PM	243	36
4:00-7:59 PM	227	93
8:00-11:59 PM	126	163
Time Unknown	0	2
TOTAL DEATHS	951	535

Victims of Fatal Crashes by Day of Week

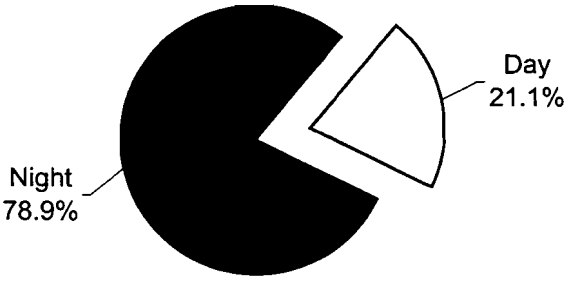
The majority (59%) of alcohol-related fatal crash victims were the result of crashes occurring on Friday, Saturday, and Sunday, while fatal crash victims of non-alcohol-related crashes tended to be distributed fairly evenly throughout the week.



Day of Occurrence	Non-Alcohol-Related	Alcohol-Related
Monday	132	40
Tuesday	137	61
Wednesday	137	53
Thursday	146	66
Friday	156	77
Saturday	127	142
Sunday	116	96
TOTAL DEATHS	951	535

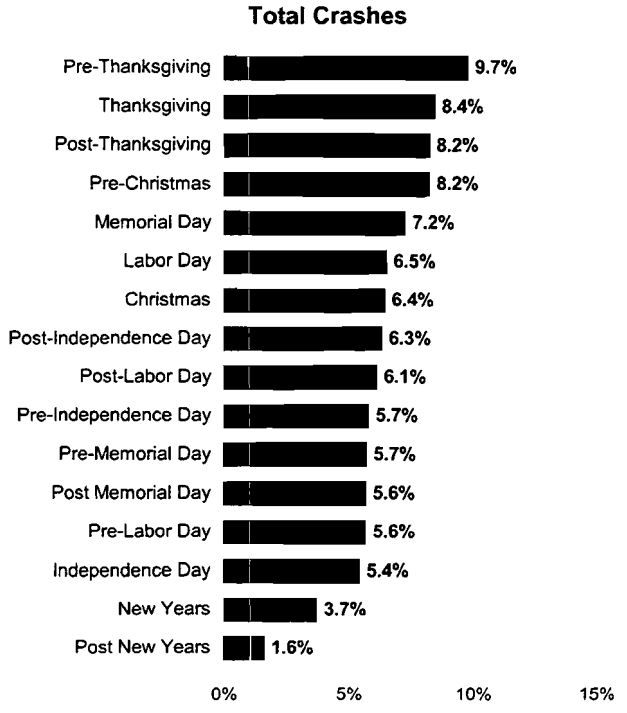
Alcohol-Related Crashes—Day vs. Night

More than three-quarters of alcohol-related crashes occur at night. The graph below shows the breakdown of alcohol-related crashes by day and night.

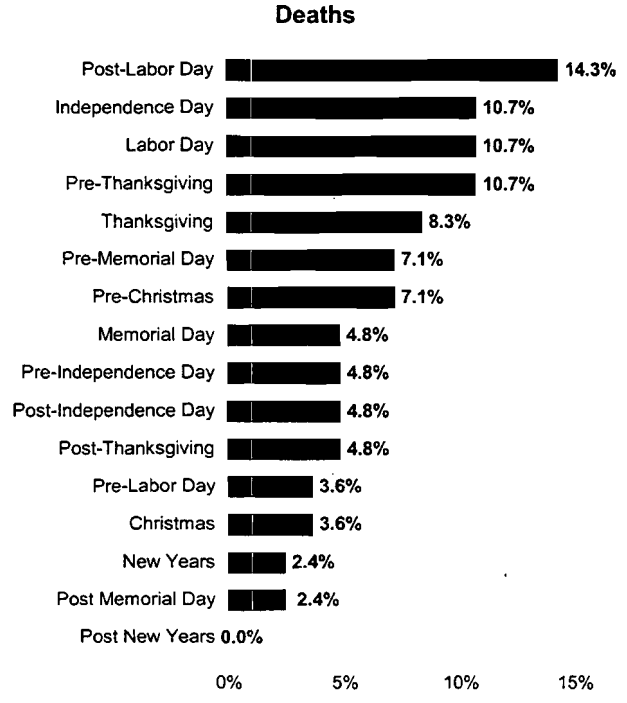


Alcohol-Related Holiday Crashes

In 1998, 14% of all holiday crashes involved alcohol use; however, 40% of deaths which occurred during holiday weekends were related to alcohol use. (See ***Crashes by Holiday***, page 22.)



Period*	Crashes	Deaths
New Years**	92	2
Post New Years**	39	0
Pre-Memorial Day	142	6
Memorial Day	181	4
Post Memorial Day	141	2
Pre-Independence Day	144	4
Independence Day	135	9
Post-Independence Day	157	4
Pre-Labor Day	141	3
Labor Day	162	9
Post-Labor Day	152	12
Pre-Thanksgiving	244	9
Thanksgiving	210	7
Post-Thanksgiving	205	4
Pre-Christmas	205	6
Christmas	160	3
TOTAL	2,510	84



* See *Holidays* under **Definitions** for explanation of pre- and post-holiday weekends.

** Not part of a holiday weekend in 1998.

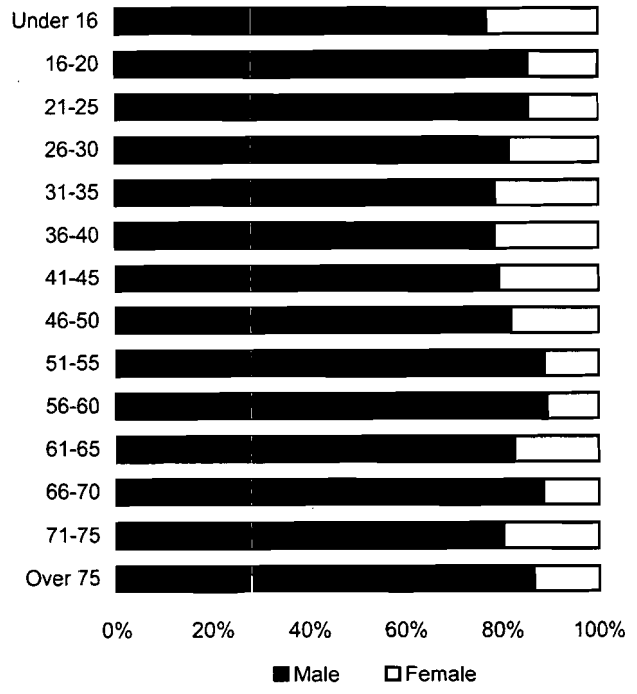
Driver Involvement in Alcohol-Related Crashes by Vehicle Type

Motorcycle crashes involved a large number of drinking drivers-more than twice the average for all vehicles. Drinking drivers of light trucks (which include pickups, vans, sport utility vehicles, etc.) were also above the average for drivers of all vehicle types.

Total Drivers in Crashes 240,071	Passenger Car		163,464
	Light Truck		59,135
	Heavy Truck		7,740
	Motorcycle		2,681
	Bus		1,121
	Other		5,930
Drinking Drivers in Crashes 13,856 (5.8% of total)	Passenger Car	9,267	(5.7% of total)
	Light Truck	4,117	(7.0% of total)
	Heavy Truck	49	(0.6% of total)
	Motorcycle	337	(12.6% of total)
	Bus	2	(0.2% of total)
	Other	84	(1.4% of total)

Drinking Drivers in Crashes by Age and Sex

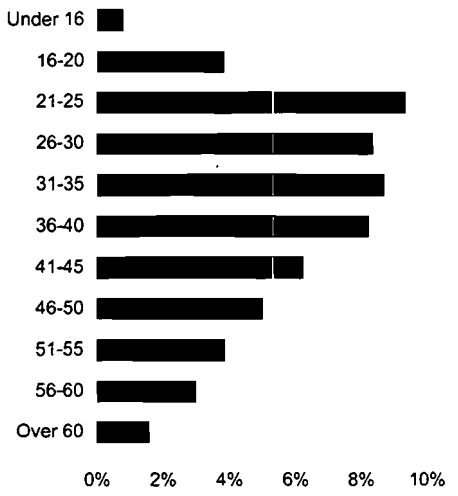
In 1998, roughly four out of five drinking drivers in crashes were male (across most age groups), with only slight variations among the age groups. The table below does not include an additional 158 drivers for whom age and/or sex were not known.



Age Group	Male	Female	Total
Under 16	10	3	13
16-20	1,311	225	1,536
21-25	2,325	398	2,723
26-30	1,747	394	2,141
31-35	1,654	451	2,105
36-40	1,522	418	1,940
41-45	1,008	262	1,270
46-50	671	149	820
51-55	425	54	479
56-60	236	28	264
61-65	132	28	160
66-70	99	13	112
71-75	61	15	76
Over 75	51	8	59
Total	11,252	2,446	13,698

Drinking Drivers vs. Non-Drinking Drivers Involved in Crashes by Age Group

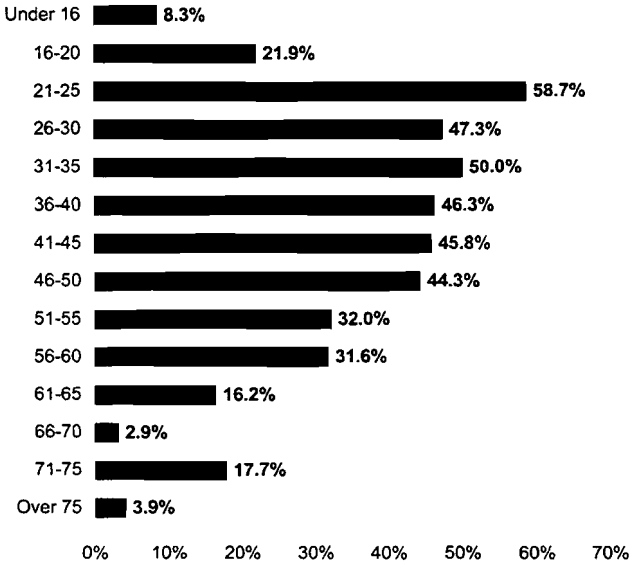
In 1998, as the table and graph below show, the four age groups from 21 to 40 had the highest percentage of drinking drivers within their respective age groups. After age 35, the percentage of drinking drivers within the succeeding age groups steadily declined. The under 21 age groups had smaller percentages, but still involved 1,549 underage drinking drivers.



Age Group	Drinking Driver	Non-Drinking Driver
Under 16	13 (0.7%)	1,786 (99.3%)
16-20	1,536 (3.8%)	39,142 (96.2%)
21-25	2,723 (9.3%)	26,647 (90.7%)
26-30	2,141 (8.3%)	23,742 (91.7%)
31-35	2,105 (8.6%)	22,262 (91.4%)
36-40	1,940 (8.2%)	21,782 (91.8%)
41-45	1,270 (6.2%)	19,271 (93.8%)
46-50	820 (4.9%)	15,845 (95.1%)
51-55	479 (3.8%)	12,065 (96.2%)
56-60	264 (3.0%)	8,687 (97.1%)
Over 60	407 (1.5%)	26,122 (98.5%)

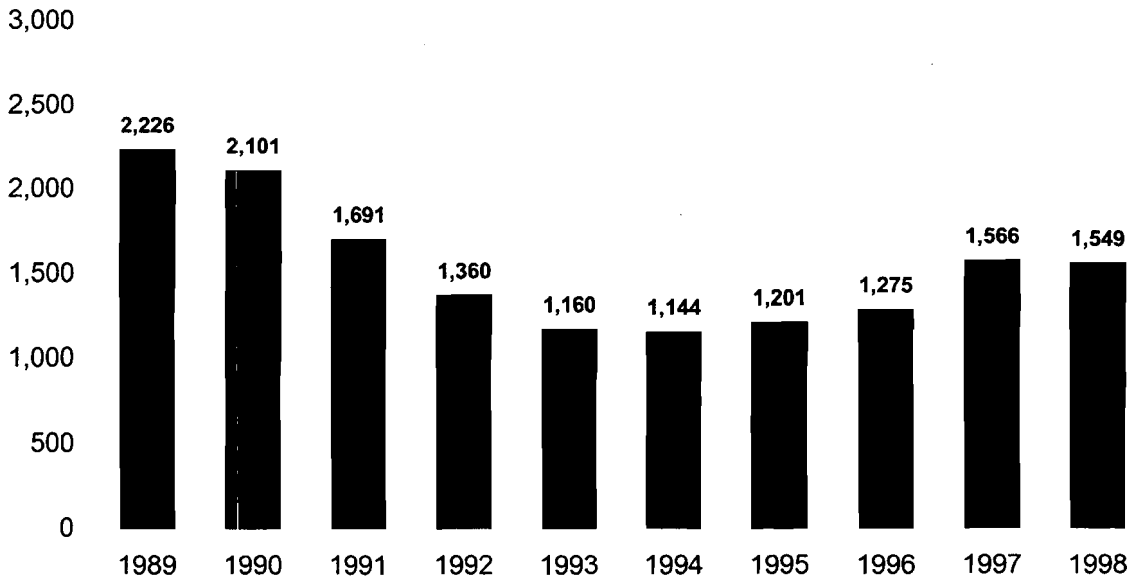
Drinking Driver Deaths as a Percentage of Total Driver Deaths, by Age Group

The graph below shows drinking driver deaths as a percentage of total driver deaths within each respective age group for 1998 crashes. The six age groups from 21 to 50 had the highest percentages, with over 44% of the driver deaths in these age groups involving a drinking driver.



Underage Drinking Drivers in Pennsylvania Crashes—Historical Data

Act 31, commonly known as the "Underage Drinking Law," went into effect on May 24, 1988. From that year, and until 1994, the number of underage drinking drivers involved in Pennsylvania crashes has declined each year. Since then, 1998 is the first time there has been a decrease from the previous year.



Seat Belts, Child Safety Seats, and Air Bags

Restraints Overview

Safety Belts

- Pennsylvania's seat belt law requires drivers and front seat passengers to be properly buckled up when riding in a passenger car, Class 1 and Class 2 truck, or motor home.
- The combination of lap/shoulder seat belts, when used, reduces the risk of fatal injury to front seat passenger car occupants by 45% and the risk of moderate-to-critical injury by 50%. For light truck occupants, safety belts reduce the risk of fatal injury by 60% and moderate-to-critical injury by 65%.
- All passengers should wear a seat belt whenever riding in a motor vehicle—even for short distances. Three out of four crashes occur within 25 miles of home.
- If everyone would wear seat belts when riding in a motor vehicle, hundreds of lives in Pennsylvania alone would be saved (see page 36). Everyone should buckle up, every time!

Child Safety Seats

- Pennsylvania law requires children under the age of four to be properly restrained in a child passenger restraint system whenever riding anywhere in the vehicle.
- Research shows that child safety seats, when used correctly, are 71% effective in preventing fatalities, and 67% effective in preventing serious injury.
- When placing a child safety seat in a vehicle, follow the manufacturer's instructions for the vehicle and the child safety seat instructions exactly. There are different types of child safety seats—infant, convertible, and booster. Children under 1 year of age and 20 pounds should ride in a rear-facing position. Small children should ride in a child safety seat approved for their age and size.
- Children should ride in the rear seat whenever possible, and should always be properly buckled.

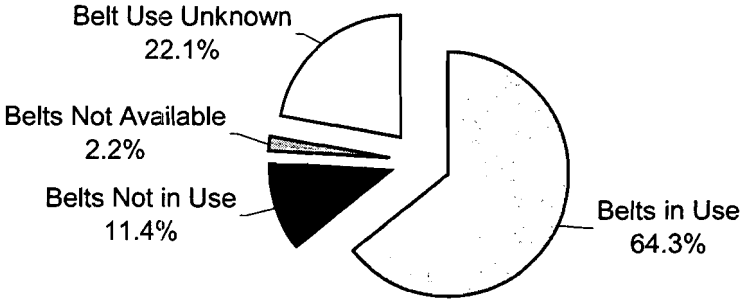
Air Bag Safety

- Air bags are supplemental protection devices. Everyone should still buckle up with both lap and shoulder belts on every trip.
- *Child Safety*
  - Children age 12 and under should ride buckled up in the back seat.
  - Infants in rear-facing child safety seats should *never* ride in the front seat of a vehicle equipped with a passenger-side air bag.
  - If an older child must ride in a front seat equipped with a passenger-side air bag, put the child in a front-facing seat or belt-positioning booster seat for the proper weight of the child, or use a correctly fitting lap/shoulder belt, **and** move the vehicle seat as far back as possible.
- *Adult Safety*
  - Everyone should buckle up with both lap and shoulder belts on every trip.
  - The lap belt should be worn under the abdomen and low across the hips. The shoulder portion should come over the collar bone away from the neck and cross over the breast bone.
  - Driver and front passenger seats should be moved as far back as practical, particularly for shorter people.

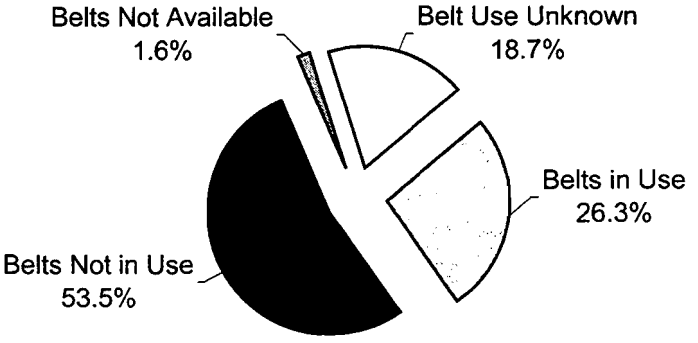
Seat Belt Use in Crashes—Total People Involved

Seat belts have proven to be effective in reducing the severity of injuries sustained in a crash. In 1998, as shown in the two pie graphs below, 64.3% of all people involved in crashes were wearing seat belts. Over twice as many people not wearing seat belts died in crashes as those who did. The table at the bottom shows the total number of people involved in crashes in 1998 by severity of injury and belt use.

Total People Involved in Crashes



Total Deaths



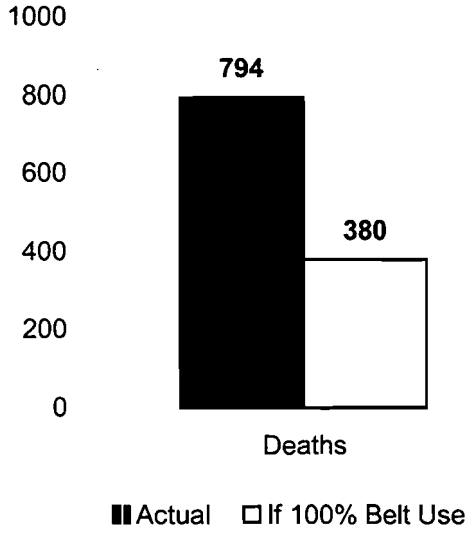
	Belts in Use	Belts Not in Use	Belts Not Available	Belt Use Unknown
Killed	306	622	18	217
Major Injury	1,475	1,541	140	913
Moderate Injury	10,612	5,823	619	4,647
Minor Injury	48,576	12,343	1,676	13,619
No Injury	148,124	16,437	4,502	47,078
Unknown Injury	7,910	1,799	515	8,095
TOTAL	217,003	38,565	7,470	74,569

Note: Vehicles involved include passenger cars, light trucks, and heavy trucks.

Seat Belt Use in Crashes—Impact on Deaths and Injuries

The table and graph below give estimates of the impact that 100% seat belt use would have on traffic deaths and injuries. The numbers in parentheses, in the last row of the table below, are the estimated decreases in 1998 deaths and injuries if 100% seat belt use was achieved. (Note: The data below is for passenger cars only.) The estimated economic savings of 100% belt use in 1998 would have been **$2,576,142,375** or approximately **$215** for every man, woman, and child in Pennsylvania. More importantly, 414 people would have survived if they had worn their belts.

		Injuries			
	Deaths	*Major*	*Moderate*	*Minor*	*None*
No Belts	10	85	426	1,220	2,969
Belts Used	265	1,106	8,003	35,809	94,102
Belts Not Used	417	1,083	4,062	8,606	10,407
Use Unknown	102	433	2,039	5,434	15,023
TOTAL	**794**	**2,707**	**14,530**	**51,069**	**122,501**
If 100% Belt Use	**380**	**1,579**	**11,174**	**49,170**	**129,298**
Net Increase/(Decrease)	**(414)**	**(1,128)**	**(3,356)**	**(1,899)**	**6,797**



Note: PennDOT's cost estimating procedures were revised in 1998 dollars.

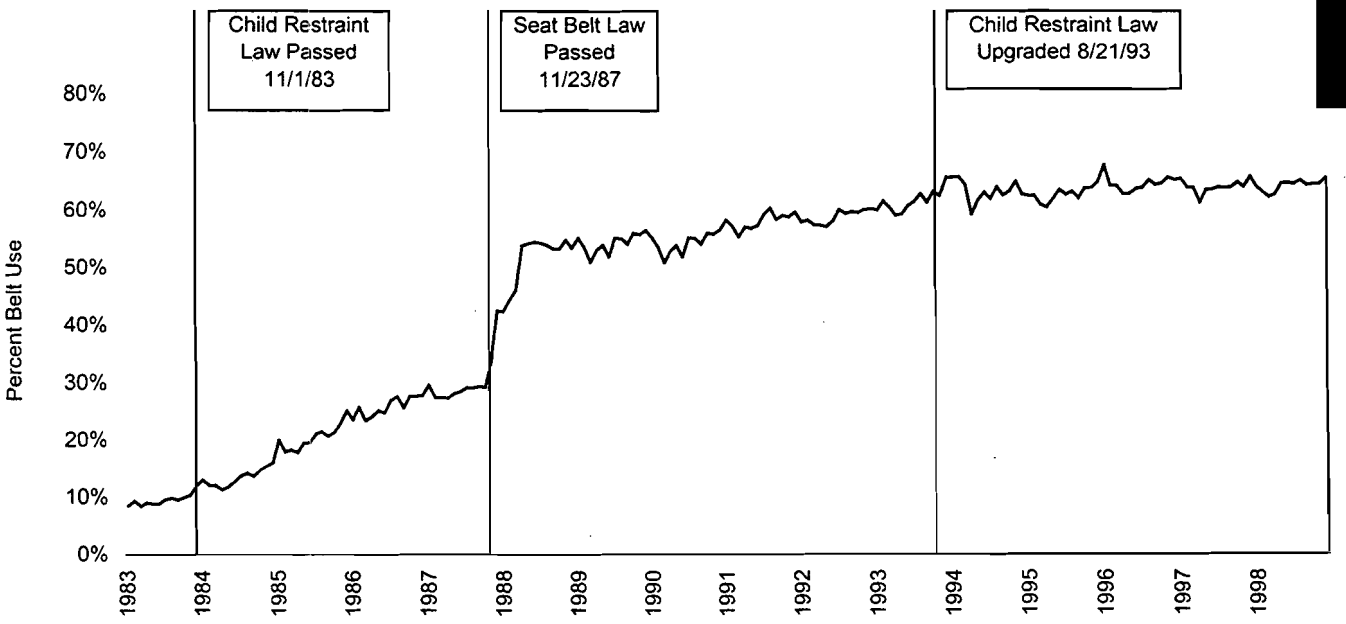
Seat Belt Use in Crashes—Historical Data

On November 1, 1983, Pennsylvania passed a primary law requiring drivers to secure children under age four in an approved child passenger restraint system when riding in a passenger car, Class I truck, Class II truck, classic motor vehicle, antique motor vehicle, or motor home registered in Pennsylvania. Children ages one to four could be in the back seat in a child safety belt in lieu of a child passenger restraint system. Fines took effect January 1, 1985.

On November 23, 1987, Pennsylvania passed a safety belt law. The law requires the driver and front seat passengers of a passenger car, Class I and Class II trucks, or motor home to wear a properly-adjusted and fastened safety belt. The driver is responsible for securing children ages four to eighteen in a safety belt when riding in the front seat. This is a secondary violation. Fines took effect March 23, 1988.

Effective August 21, 1993, the child passenger restraint law was upgraded to require all drivers (not just those with vehicles registered in Pennsylvania) to secure a child up to age four in a child passenger restraint system when sitting anywhere in the vehicle.

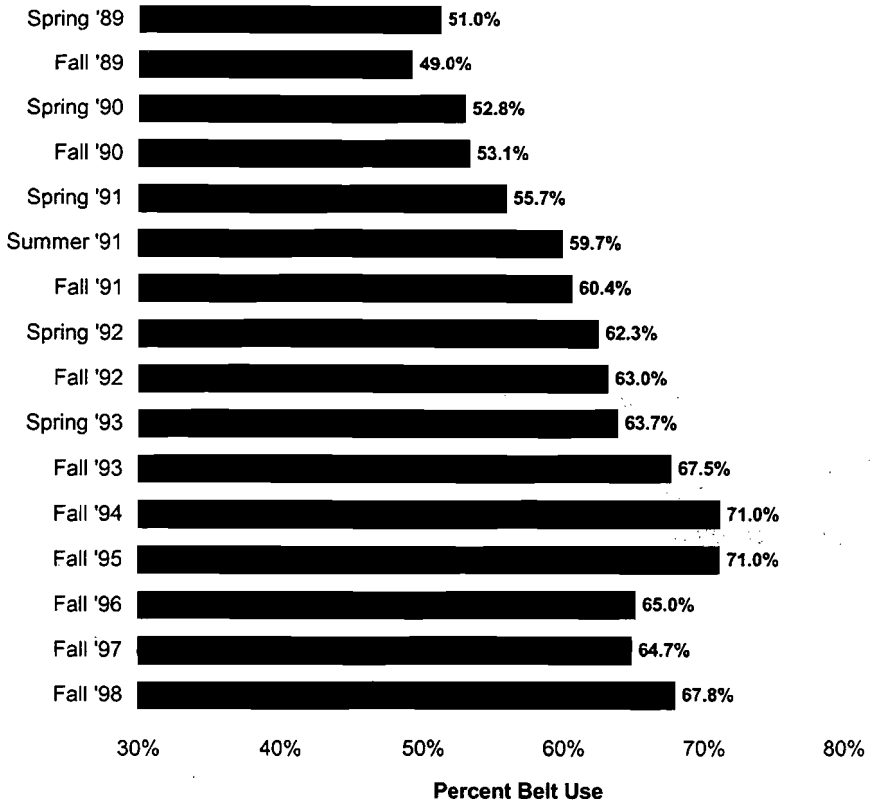
The graph below shows the percentage of seat belt users in Pennsylvania since 1983. A sharp upward trend was experienced in the year following the passage of the seat belt law. The trend slowly increased over the next several years, although it has flattened out over the past four years.



Note: Data shown for passenger cars only.

Seat Belt Observational Surveys—Historical Data

Observed seat belt use (the percent of front seat vehicle occupants wearing seat belts) is based upon a statewide statistical sampling of front seat occupants in passenger cars and light trucks. The observed seat belt use improved annually until 1996, when a 6% drop occurred.



Child Passenger Restraints in Crashes—Five Year Data

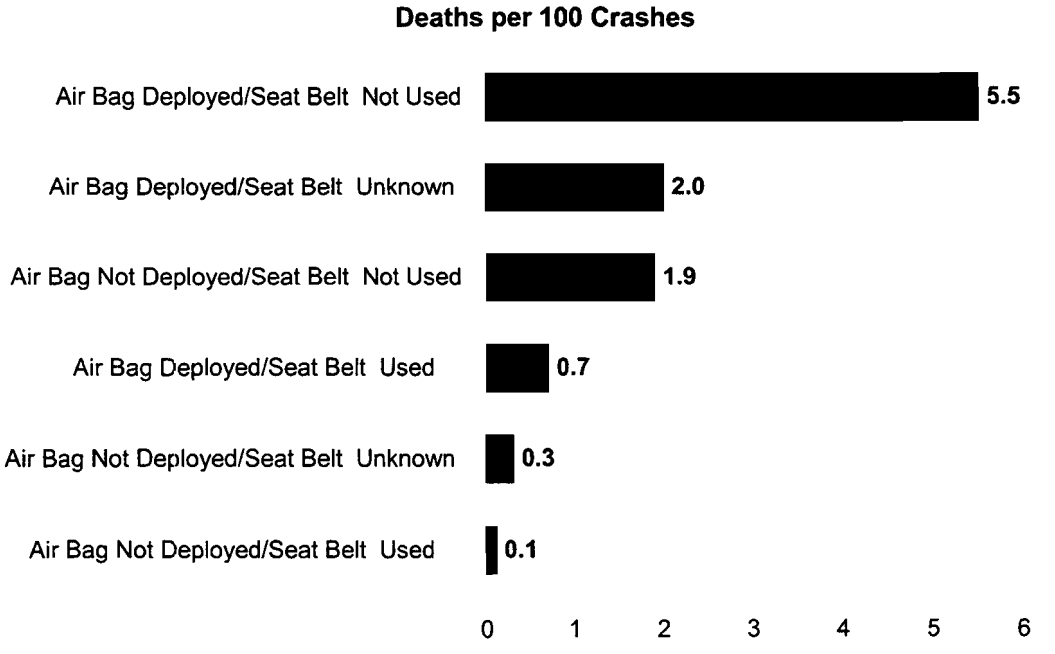
Since August 21, 1993, all drivers traveling in Pennsylvania have been required to secure children up to age four in a child passenger restraint system while sitting anywhere in the vehicle. As shown in the table below (for 1994-1998 crashes involving children up to age four), the percentages of deaths and injuries (within restraint type by row) were lower when restraints were used. In 1994-1998, 83.4% of the children who were involved in crashes and restrained in a child seat sustained no injury.

		Injuries					Total
Child Restraint	Deaths	*Major*	*Moderate*	*Minor*	*Unknown*	*No Injury*	Persons
Child Seat In Use	26 (0.1%)	78 (0.3%)	333 (1.1%)	3,130 (10.0%)	1,630 (5.2%)	26,080 (83.4%)	**31,277**
Child Seat Not In Use	4 (0.3%)	20 (1.4%)	40 (2.8%)	225 (15.9%)	173 (12.2%)	958 (67.5%)	**1,420**
Other Restraint In Use	13 (0.1%)	76 (0.6%)	267 (2.0%)	2,167 (16.1%)	508 (3.8%)	10,473 (77.6%)	**13,504**
Other Restraint Not In Use	37 (0.5%)	83 (1.2%)	276 (4.0%)	1,574 (22.8%)	842 (12.2%)	4,101 (59.3%)	**6,913**

Air Bag Deployment in Crashes—Injuries and Deaths

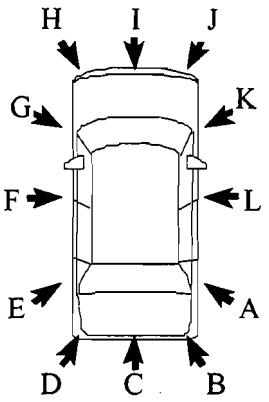
Passive restraints, most notably air bags, are becoming more and more prevalent, but the majority of vehicles on the road still do not have air bags. The table and graph below show the safety benefits of wearing a seat belt, both with and without air bag deployment. (Table percentages are listed within restraint type by row.)

Passive Restraint Status	Seat Belt Status	Injuries						Total Persons
		Deaths	Major	Moderate	Minor	Unknown	No Injury	
None	n/a	957 (0.5%)	3,162 (1.6%)	14,558 (7.5%)	47,083 (24.2%)	7,731 (4.0%)	120,887 (62.2%)	**194,378**
Air Bag Deployed	Used	78 (0.4%)	351 (1.8%)	2,126 (10.6%)	7,624 (38.1%)	946 (4.7%)	8,896 (44.4%)	**20,021**
Air Bag Deployed	Not Used	111 (3.5%)	186 (5.8%)	675 (21.0%)	1,204 (37.5%)	150 (4.7%)	885 (27.6%)	**3,211**
Air Bag Deployed	Unknown	32 (1.3%)	87 (3.5%)	366 (14.8%)	767 (30.9%)	274 (11.0%)	956 (38.5%)	**2,482**
Air Bag Not Deployed	Used	20 (0.1%)	117 (0.3%)	1,255 (3.4%)	7,476 (20.2%)	1,244 (3.4%)	26,871 (72.7%)	**36,983**
Air Bag Not Deployed	Not Used	30 (1.0%)	79 (2.7%)	283 (9.5%)	896 (30.0%)	131 (4.4%)	1,567 (52.5%)	**2,986**
Air Bag Not Deployed	Unknown	4 (0.1%)	24 (0.8%)	193 (6.1%)	628 (20.0%)	224 (7.1%)	2,073 (65.9%)	**3,146**
Other	n/a	48 (0.2%)	232 (0.7%)	1,847 (5.7%)	6,588 (20.2%)	2,262 (7.0%)	21,584 (66.3%)	**32,561**



Air Bag Deployment by Initial Vehicle Impact Point

Air bags are designed to deploy in frontal impacts. The table below shows the initial vehicle impact points for all 1998 crashes. It is probable that a vehicle which is initially impacted in the rear may be pushed into the vehicle in front (secondary impact), thus deploying the air bag (such as the 688 occasions in which air bags deployed in center rear impacts).



Impact Point	Vehicles	Air Bag Not Present	Air Bag Present Deployed	Air Bag Present, Not Deployed	Unknown/ Other
Right Side Rear (A)	3,000	1,653	125 (17.5%)	590 (82.5%)	632
Right Rear (B)	6,297	3,471	164 (11.5%)	1,260 (88.5%)	1,402
Center Rear (C)	34,547	17,585	688 (7.7%)	8,269 (92.3%)	8,005
Left Rear (D)	5,941	3,249	163 (12.2%)	1,179 (87.9%)	1,350
Left Side Rear (E)	3,138	1,731	115 (15.5%)	629 (84.5%)	663
Left Side Center (F)	8,864	5,168	362 (20.2%)	1,431 (79.8%)	1,903
Left Side Forward (G)	7,772	4,095	533 (27.6%)	1,398 (72.4%)	1,746
Left Front (H)	34,481	18,610	4,097 (44.7%)	5,060 (55.3%)	6,714
Center Front (I)	74,216	38,416	11,516 (57.6%)	8,485 (42.4%)	15,799
Right Front (J)	34,782	18,425	3,997 (45.9%)	4,713 (54.1%)	7,647
Right Side Forward (K)	7,611	4,046	527 (29.7%)	1,250 (70.3%)	1,788
Right Side Center (L)	8,655	4,898	427 (23.9%)	1,358 (76.1%)	1,972
Other	9,007	4,409	452 (32.4%)	943 (67.6%)	3,203
None	1,760	1,428	9 (7.3%)	114 (92.7%)	209
TOTAL	240,071	127,184	23,175 (38.7%)	36,679 (61.3%)	53,033

Air Bag Deployment by Age Group

While air bags are an important safety feature, they must be used with a seat belt for maximum effectiveness. Air bag deployment without seat belts can be dangerous. As the table below shows (from a percentage perspective), people using seat belts were less likely to suffer moderate and major injuries, and even death, during crashes involving air bag deployment. (Percentages listed in the table are by age group.)

	Age Group	Deaths	Injuries: Major	Moderate	Minor	Unknown	No Injury	Total Persons
Seat Belts Used	0-4	0 (0.0%)	0 (0.0%)	2 (9.1%)	6 (27.3%)	2 (9.1%)	12 (54.6%)	22
	5-8	2 (2.6%)	1 (1.3%)	9 (11.8%)	28 (36.8%)	2 (2.6%)	34 (44.7%)	76
	9-12	0 (0.0%)	2 (1.2%)	15 (9.2%)	79 (48.5%)	9 (5.5%)	58 (35.6%)	163
	13-64	49 (0.3%)	288 (1.7%)	1,764 (10.1%)	6,610 (37.8%)	797 (4.6%)	7,999 (45.7%)	17,507
	65-74	10 (0.8%)	37 (2.8%)	198 (14.9%)	510 (38.4%)	78 (5.9%)	495 (37.3%)	1,328
	75+	17 (1.8%)	23 (2.5%)	138 (14.9%)	391 (42.3%)	58 (6.3%)	298 (32.2%)	925
	Total	78 (0.4%)	351 (1.8%)	2,126 (10.6%)	7,624 (38.1%)	946 (4.7%)	8,896 (44.4%)	20,021
Not Used	0-4	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	1
	5-8	1 (11.1%)	0 (0.0%)	2 (22.2%)	3 (33.3%)	0 (0.0%)	3 (33.3%)	9
	9-12	1 (6.7%)	1 (6.7%)	0 (0.0%)	7 (46.7%)	0 (0.0%)	6 (40.0%)	15
	13-64	96 (3.3%)	171 (5.8%)	610 (20.7%)	1,108 (37.6%)	137 (4.6%)	829 (28.1%)	2,951
	65-74	5 (3.9%)	7 (5.4%)	34 (26.2%)	49 (37.7%)	8 (6.2%)	27 (20.8%)	130
	75+	8 (7.6%)	7 (6.7%)	29 (27.6%)	37 (35.2%)	5 (4.8%)	19 (18.1%)	105
	Total	111 (3.5%)	186 (5.8%)	675 (21.0%)	1,204 (37.5%)	150 (4.7%)	885 (27.6%)	3,211

Pedestrian and Bicycle Crashes

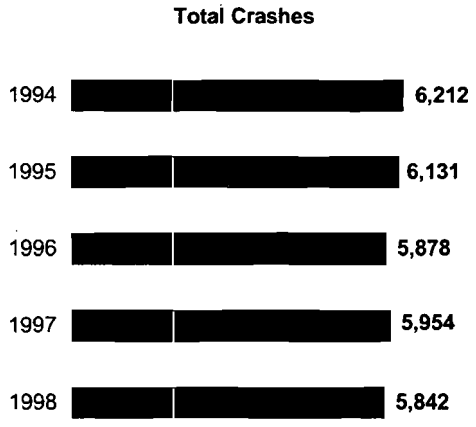
Pedestrian and Bicycles Overview

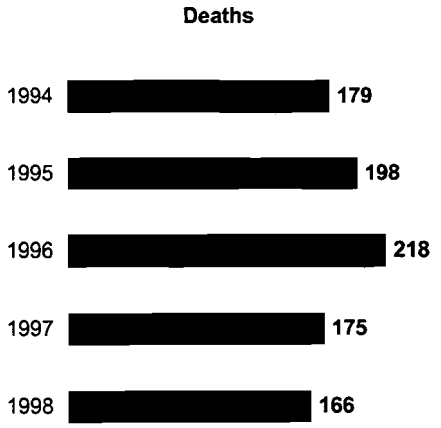
- Pedestrian-related crashes represent 4.1% of the total reported traffic crashes; however, they account for 11.2% of all traffic crash deaths. (See also ***Pennsylvania County Crashes***, pages 62, 63, and 68.)

- Bicycle crashes represent 2.0% of the total reported crashes and 1.5% of all traffic deaths. Although these percentages are small, they still represent 23 bicyclist deaths and 2,768 injuries in 1998.

Pedestrian Crashes—Five-Year Trends

The percent of reported crashes involving pedestrians decreased from 4.6% in 1994 to 4.1% in 1998. Pedestrian deaths have decreased this year, and in 1998 represented 11.2% of the total traffic deaths.



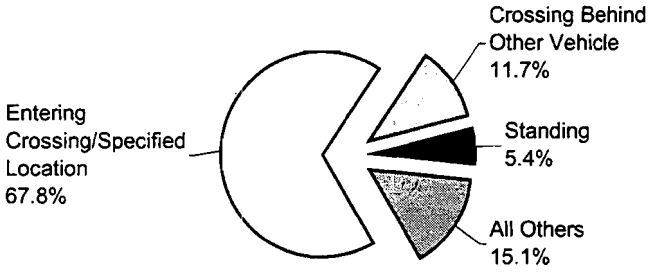


Year	Total Crashes	Deaths
1994	6,212	179
1995	6,131	198
1996	5,878	218
1997	5,954	175
1998	5,842	166

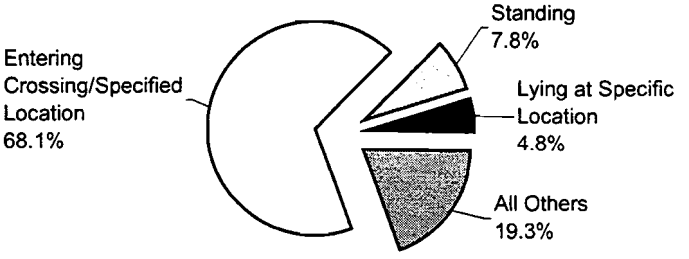
Pedestrian-Related Crashes

Referring to the table and pie charts below, most pedestrian crashes and deaths occur while pedestrians are "entering crossing/specified location." This means that a pedestrian was most likely crossing the street at either an intersection, mid-block crossing, or driveway entrance. "Other Vehicle," as used below under Pedestrian Actions, refers to vehicles other than school buses.

Top Crash-Related Pedestrian Actions



Top Fatal Pedestrian Actions

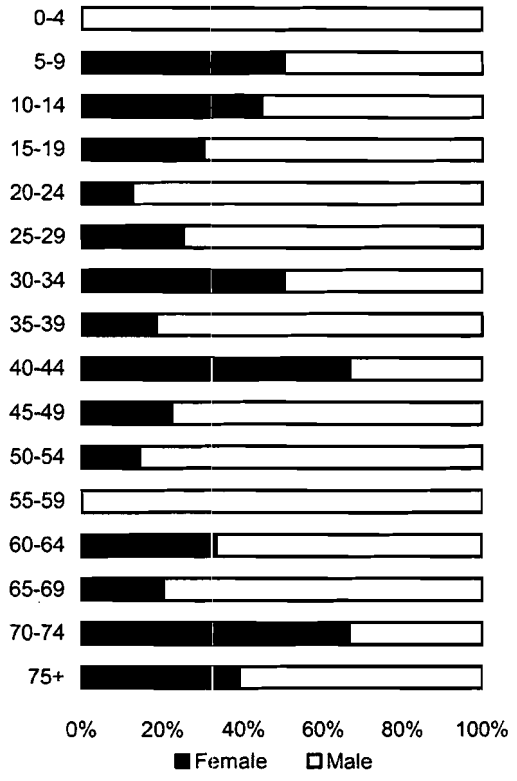


Peds & Bikes

Pedestrian Action	Deaths	Total Pedestrians Involved
Entering Crossing/Specified Location	113	4,153
Crossing Behind School Bus	0	8
Crossing Behind Other Vehicle	7	719
Walking With Traffic	4	138
Walking Against Traffic	4	58
Leaving/Returning to Disabled Vehicle	0	5
Approaching/Leaving School Bus	0	12
Playing/Working on Vehicle	0	56
Other Working	3	85
Standing	13	328
Playing	1	67
Lying at Specific Location	8	18
Approaching/Leaving Other Vehicle	3	157
Other/Unknown	10	321
TOTAL	166	6,125

Pedestrian Deaths by Age and Sex

There is a sharp increase in deaths for pedestrians aged 75 and over. Overall, male pedestrian deaths were 66% of all pedestrian deaths. ***Note:*** Pedestrians of unknown sex are not included in the numbers below.



Age Group	Female	Male	Total
0-4	0	5	5
5-9	3	3	6
10-14	4	5	9
15-19	3	7	10
20-24	1	7	8
25-29	2	6	8
30-34	4	4	8
35-39	2	9	11
40-44	4	2	6
45-49	2	7	9
50-54	2	12	14
55-59	0	4	4
60-64	2	4	6
65-69	1	4	5
70-74	10	5	15
75 and over	16	25	41
Unknown	0	1	1
TOTAL	56	110	166

Pedestrian Injury Severity by Municipality Type

The majority of pedestrians are injured in cities; however, there is a much higher percentage of pedestrian deaths in Townships, perhaps due to higher vehicle speeds on rural roads.

Municipality Type	Deaths	Injuries	Non-Injury	Total
City	48 (28.9%)	3,922 (66.5%)	32 (50.0%)	**4,002 (65.3%)**
Borough/Town	32 (19.3%)	889 (15.1%)	14 (21.9%)	**935 (15.3%)**
Township	86 (51.8%)	1,080 (18.3%)	18 (28.1%)	**1,184 (19.3%)**
Other	0 (0.0%)	4 (0.1%)	0 (0.0%)	**4 (0.1%)**
TOTAL	166 (100.0%)	5,895 (100.0%)	64 (100.0%)	6,125 (100.0%)

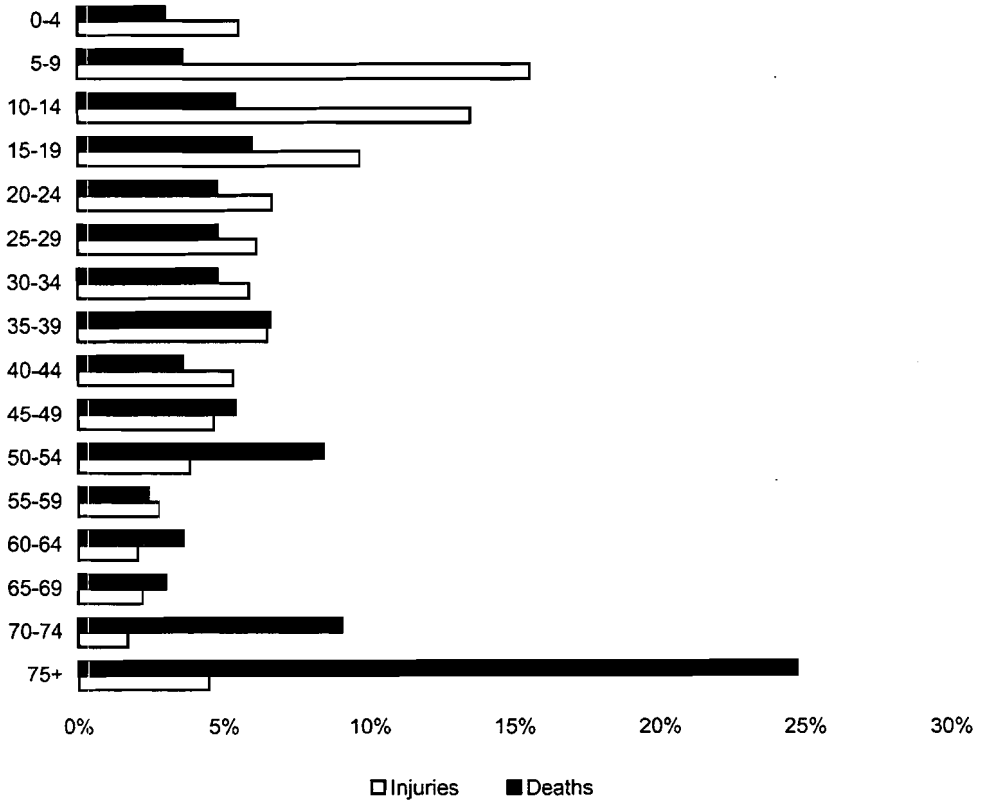
Note: "Other" includes colleges/universities, parks, etc.

Pedestrian Deaths and Injuries by Age

Elderly pedestrians, although involved in fewer pedestrian crashes, are more likely to be killed if struck by a moving vehicle. Younger pedestrians (age 19 and under) account for almost half of the pedestrian injuries.

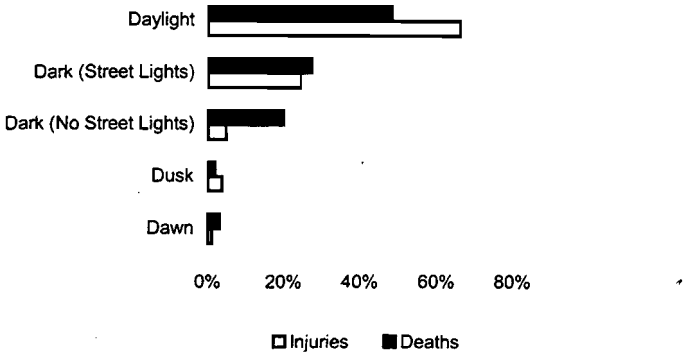
Note: The totals in the table do not include an additional 64 pedestrians who were not killed or injured.

Pedestrian Age	Deaths	Injuries
0-4	5 (3.0%)	327 (5.6%)
5-9	6 (3.6%)	917 (15.6%)
10-14	9 (5.4%)	797 (13.5%)
15-19	10 (6.0%)	571 (9.7%)
20-24	8 (4.8%)	395 (6.7%)
25-29	8 (4.8%)	364 (6.2%)
30-34	8 (4.8%)	347 (5.9%)
35-39	11 (6.6%)	385 (6.5%)
40-44	6 (3.6%)	315 (5.3%)
45-49	9 (5.4%)	276 (4.7%)
50-54	14 (8.4%)	227 (3.9%)
55-59	4 (2.4%)	164 (2.8%)
60-64	6 (3.6%)	121 (2.1%)
65-69	5 (3.0%)	130 (2.2%)
70-74	15 (9.0%)	100 (1.7%)
75 and over	41 (24.7%)	264 (4.5%)
Unknown	1 (0.6%)	195 (3.3%)
TOTAL	166 (100.0%)	5,895 (100.0%)



Pedestrian Deaths and Injuries by Light Level

The majority of pedestrians are injured in the daytime, but most pedestrian deaths occur during non-daylight hours. As shown in the bar chart, pedestrians are more likely to be killed if struck in a non-daylight crash as compared to a day crash.

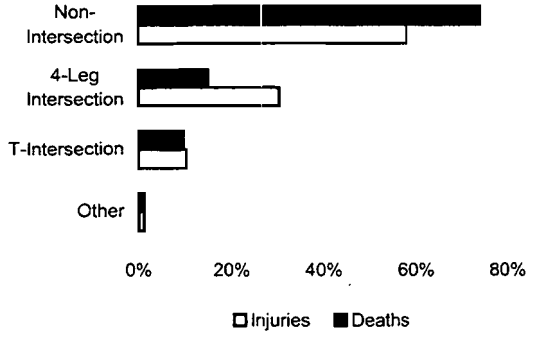


Light Level	Deaths	Injuries
Dawn	5 (3.0%)	58 (1.0%)
Daylight	80 (48.2%)	3,890 (66.0%)
Dark (Street Lights)	45 (27.1%)	1,432 (24.3%)
Dark (No Street Lights)	33 (19.9%)	273 (4.6%)
Dusk	3 (1.8%)	217 (3.7%)
Unknown	0 (0.0%)	25 (0.4%)
TOTAL	166 (100.0%)	5,895 (100.0%)

Note: The totals in the table do not include an additional 64 pedestrians who were not killed or injured.

Pedestrian Deaths and Injuries by Intersection Type

More than two-thirds of pedestrian deaths and over half of pedestrian injuries occurred in areas other than intersections. "Non-intersections" as used below includes mid-block crossings, driveway crossings, etc.

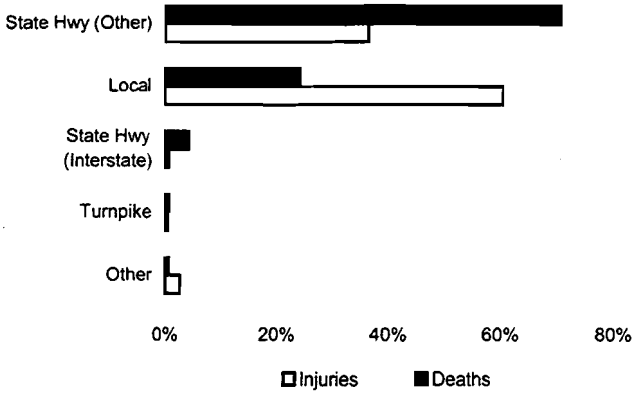


Intersection	Deaths	Injuries
Non-Intersection	123 (74.1%)	3,423 (58.1%)
4-Leg Intersection	25 (15.1%)	1,793 (30.4%)
T-Intersection	16 (9.6%)	608 (10.3%)
Other	2 (1.2%)	71 (1.2%)
TOTAL	166 (100.0%)	5,895 (100.0%)

Note: The totals in the table do not include an additional 64 pedestrians who were not killed or injured.

Pedestrian Deaths and Injuries by Road Type

As the graph shows, the majority of pedestrians are injured on local roads, whereas the majority of pedestrian deaths occur on state highways.



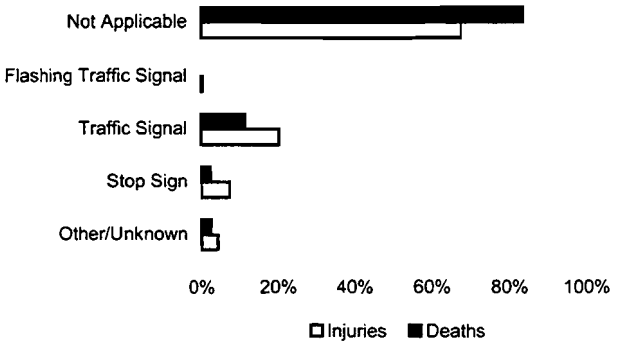
Note: "Road Type" relates to the road on which the motor vehicle was traveling immediately prior to striking the pedestrian. The totals in the table do not include an additional 64 pedestrians who were not killed or injured.

Road Type	Deaths	Injuries
State Hwy (Other)	117 (70.5%)	2,139 (36.3%)
Local	40 (24.1%)	3,548 (60.2%)
State Hwy (Interstate)	7 (4.2%)	34 (0.6%)
Turnpike	1 (0.6%)	20 (0.3%)
Other	1 (0.6%)	154 (2.6%)
TOTAL	166 (100.0%)	5,895 (100.0%)

Pedestrian Deaths and Injuries by Traffic Control Device

Peds & Bikes

As the graph shows, most pedestrian deaths and injuries occurred in areas without traffic control devices (TCDs). However, notice the large number of pedestrians injured at traffic signal intersections.



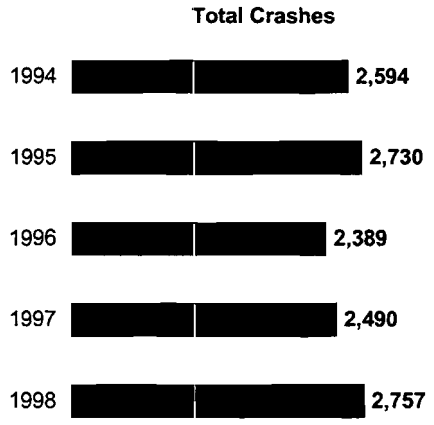
Note: "Traffic Control Device" relates to the TCD which was present for the motor vehicle immediately prior to striking the pedestrian. The totals in the table do not include an additional 64 pedestrians who were not killed or injured.

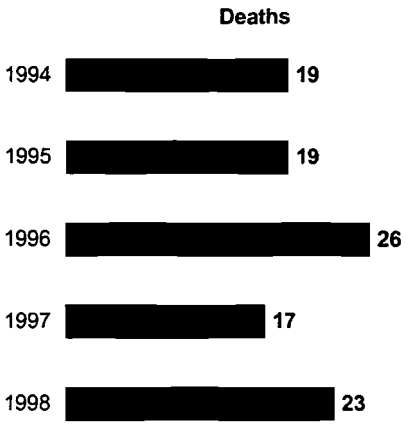
Traffic Control Device	Deaths	Injuries
Not Applicable	139 (83.7%)	3,991 (67.7%)
Flashing Traffic Signal	0 (0.0%)	22 (0.4%)
Traffic Signal	19 (11.5%)	1,193 (20.2%)
Stop Sign	4 (2.4%)	441 (7.5%)
Other/Unknown	4 (2.4%)	248 (4.2%)
TOTAL	166 (100.0%)	5,895 (100.0%)

Bicycle Crashes—Five-Year Trends

The total number of bicycle crashes and deaths in 1998 increased 11% and 35% respectively from 1997.

Year	Total Crashes	Deaths
1994	2,594	19
1995	2,730	19
1996	2,389	26
1997	2,490	17
1998	2,757	23





Bicycle Deaths and Injuries by Age

Children age 5 to 14 are the most vulnerable to death and injury while riding a bicycle. Over a third of the deaths and injuries involving bicycles were suffered by this age group. Another vulnerable, but larger group, was persons age 15 to 44, who also suffered over a third of the total deaths and total injuries.

Victim's Age	Deaths	Injuries
0-4	0 (0.0%)	18 (0.7%)
5-9	1 (4.4%)	486 (17.6%)
10-14	8 (34.8%)	843 (30.5%)
15-19	3 (13.0%)	397 (14.3%)
20-34	5 (21.7%)	536 (19.4%)
35-44	2 (8.7%)	271 (9.8%)
45-54	3 (13.0%)	92 (3.3%)
55-64	1 (4.4%)	32 (1.2%)
65-74	0 (0.0%)	18 (0.7%)
75+	0 (0.0%)	5 (0.2%)
Unknown	0 (0.0%)	70 (2.5%)
TOTAL	23 (100.0%)	2,768 (100.0%)

The totals in the table do not include an additional 47 bicyclists who were not killed or injured.

Bicycle Deaths and Injuries by Light Level

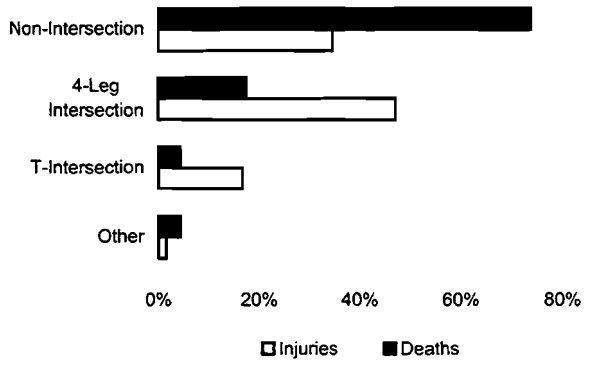
The majority of bicyclists are killed or injured during the day. The after dark deaths increased from 2 in 1997 to 9 in 1998.

Light Level	Deaths	Injuries
Dawn	0 (0.0%)	22 (0.8%)
Daylight	14 (60.9%)	2,129 (76.9%)
Dark (Street Lights)	4 (17.4%)	440 (15.9%)
Dark (No Street Lights)	5 (21.7%)	49 (1.8%)
Dusk	0 (0.0%)	120 (4.3%)
Unknown	0 (0.0%)	8 (0.3%)
TOTAL	23 (100.0%)	2,768 (100.0%)

Note: The totals in the table do not include an additional 47 bicyclists who were not killed or injured.

Bicycle Deaths and Injuries by Intersection

The majority of bicyclists are injured at intersections, while deaths occur more often in non-intersection crashes.



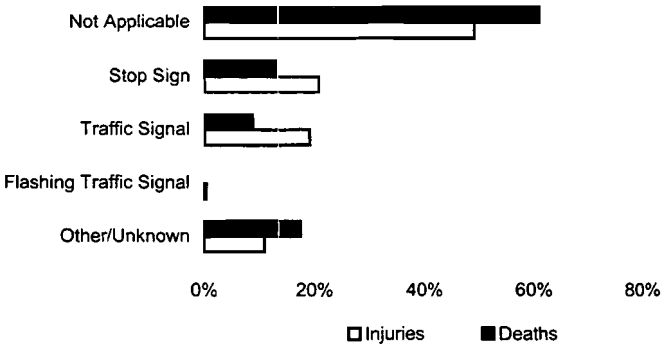
Intersection	Deaths	Injuries
Non-Intersection	17 (73.9%)	958 (34.6%)
4-Leg Intersection	4 (17.4%)	1,303 (47.1%)
T-Intersection	1 (4.4%)	465 (16.8%)
Other	1 (4.4%)	42 (1.5%)
TOTAL	23 (100.0%)	2,768 (100.0%)

Note: The totals in the table do not include an additional 47 bicyclists who were not killed or injured.

Bicycle Deaths and Injuries by Traffic Control Device

Deaths were much more likely to occur where there were no traffic control devices (TCD).

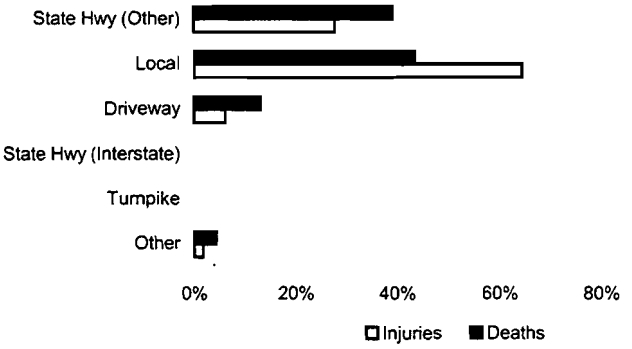
Traffic Control Device	Deaths	Injuries
Not Applicable	14 (60.9%)	1,358 (49.1%)
Stop Sign	3 (13.0%)	575 (20.8%)
Traffic Signal	2 (8.7%)	529 (19.1%)
Flashing Traffic Signal	0 (0.0%)	8 (0.3%)
Other/Unknown	4 (17.4%)	298 (10.8%)
TOTAL	23 (100.0%)	2,768 (100.0%)



Note: "Traffic Control Device" relates to the TCD that was present for the bike immediately prior to the crash. The totals in the table do not include an additional 47 bicyclists who were not killed or injured.

Bicycle Deaths and Injuries by Road Type

Almost half the deaths and well over half the injuries involving bicycles occurred on local roads. Note the deaths and injuries involving driveways.



Note: "Road Type" relates to the road on which the bicyclist was traveling immediately prior to the crash. The totals in the table do not include an additional 47 bicyclists who were not killed or injured.

Road Type	Deaths	Injuries
State Hwy (Other)	9 (39.1%)	768 (27.8%)
Local	10 (43.5%)	1,782 (64.4%)
Driveway	3 (13.0%)	169 (6.1%)
State Hwy (Interstate)	0 (0.0%)	0 (0.0%)
Turnpike	0 (0.0%)	0 (0.0%)
Other	1 (4.4%)	49 (1.8%)
TOTAL	23 (100.0%)	2,768 (100.0%)

Crashes by Motor Vehicle Type

Vehicle Crashes by Vehicle Types

	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes
Passenger Car	70.9% 963 crashes	82.5% 72,876 crashes	80.4% 41,243 crashes	81.6% 115,082 crashes
Light Truck	37.7% 512 crashes	36.1% 31,896 crashes	38.3% 19,653 crashes	36.9% 52,061 crashes
Heavy Truck	12.7% 172 crashes	4.6% 4,067 crashes	6.0% 3,060 crashes	5.2% 7,299 crashes
Bicycle	1.7% 23 crashes	3.1% 2,727 crashes	0.0% 7 crashes	2.0% 2,757 crashes
Motorcycle	7.9% 107 crashes	2.7% 2,380 crashes	0.3% 141 crashes	1.9% 2,628 crashes
School Bus	0.5% 7 crashes	0.4% 330 crashes	0.3% 158 crashes	0.4% 495 crashes
Commercial Bus	0.4% 6 crashes	0.6% 510 crashes	0.2% 103 crashes	0.4% 619 crashes
Other	1.7% 23 crashes	2.8% 2,510 crashes	1.2% 605 crashes	2.2% 3,138 crashes

Percentages compare the number of crashes with the total number of crashes in the crash severity category (for example, passenger cars were involved in 70.9% of all fatal crashes). Percentage totals exceed 100% due to multiple vehicle crashes.

Vehicle Crashes—Single Vehicle Hitting Fixed Objects

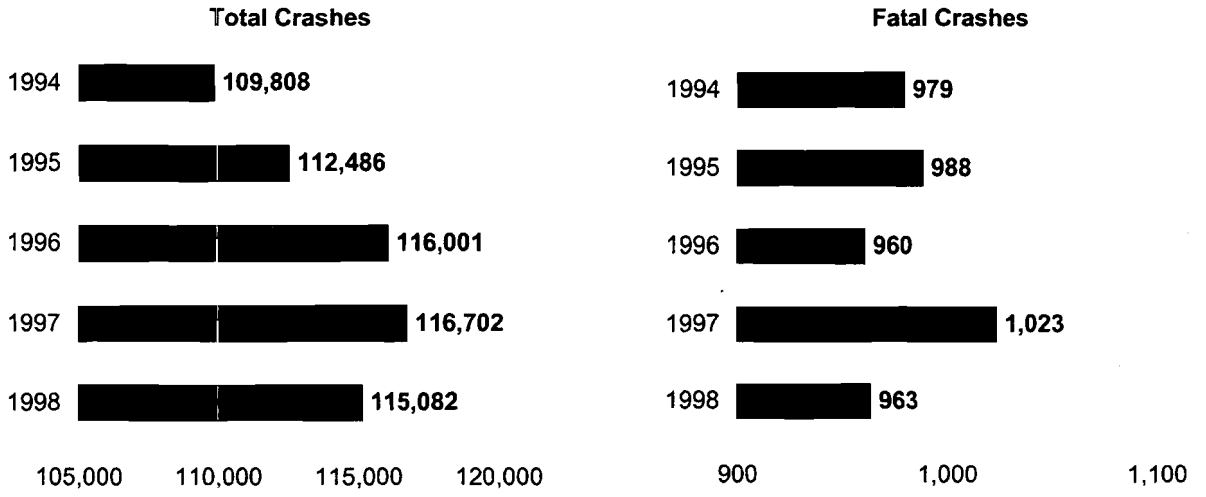
Crashes in Which a Single Vehicle Hit a Fixed Object:	**42,220**	Passenger Car	29,873	70.8%
		Light Truck	10,564	25.0%
		Heavy Truck	950	2.3%
		Motorcycle	532	1.3%
		School Bus	17	0.0%
		Commercial Bus	23	0.1%
		Other	261	0.6%

Vehicle Crashes—Two-Vehicle Collisions

	Vehicle Struck								
Striking Vehicle	Passenger Car	Light Truck	Heavy Truck	Motor-cycle	Bicycle	School Bus	Commer-cial Bus	Other/ Unknown	Total
Passenger Car	34,976	1,591	12,975	286	1,181	166	142	357	**51,674**
Light Truck	11,712	618	4,527	99	315	76	69	90	**17,506**
Heavy Truck	1,601	299	533	7	12	10	6	13	**2,481**
Motorcycle	528	24	199	38	12	2	2	8	**813**
Bicycle	714	11	230	3	0	0	11	20	**989**
School Bus	94	7	31	0	3	3	0	1	**139**
Commercial Bus	139	4	28	1	14	2	5	4	**197**
Other/Unknown	927	13	155	19	187	0	13	31	**1,345**

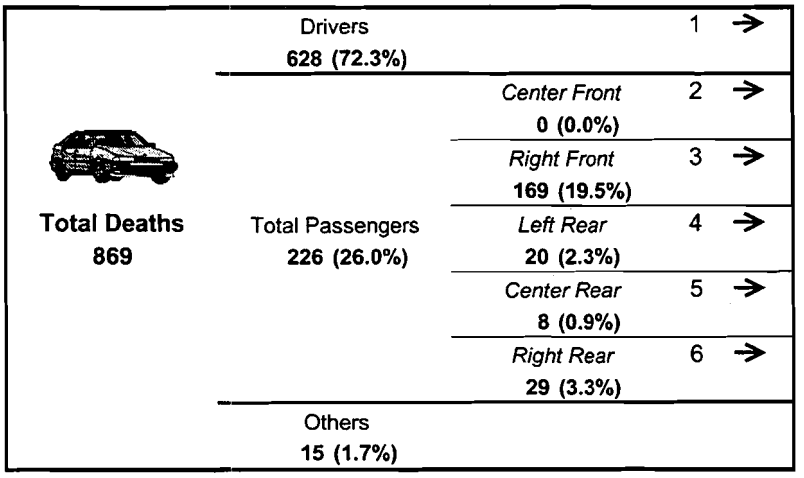
Passenger Car Crashes—Five-Year Trends

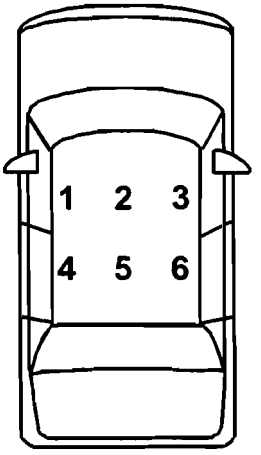
Total passenger car crashes have decreased in 1998, and fatal crashes in 1998 were the second lowest in five years.



Passenger Car Deaths by Seating Position

In 1998, 58% of crash deaths involved passenger car occupants. The table below depicts the passenger car deaths in 1998, by seating position, excluding any pedestrians involved.

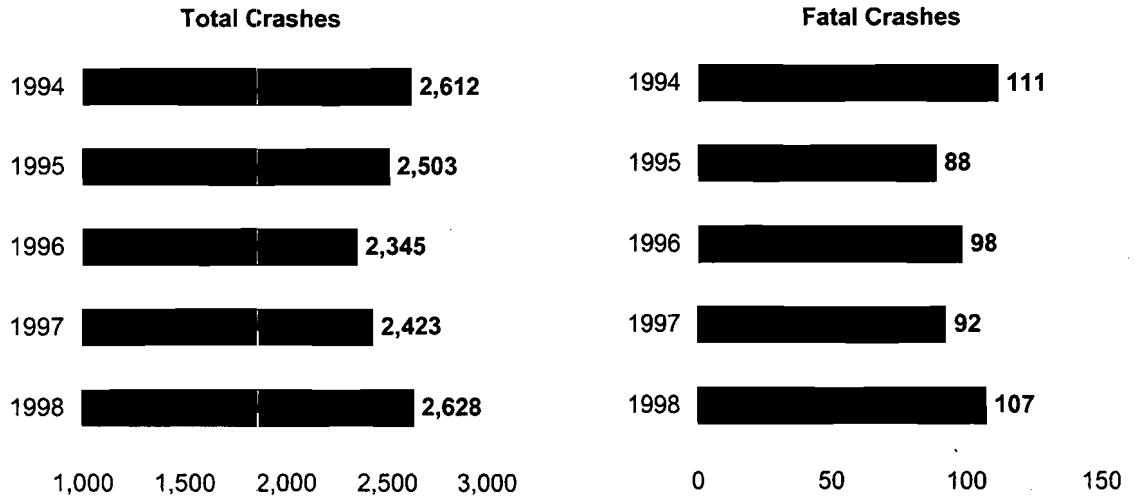




"Others" might be passengers in the rearmost seat of a station wagon; persons in a towed unit; or any person on or attached to the outside of the car.

Motorcycle Crashes—Five-Year Trends

In 1998, total motorcycle crashes were the highest in five years, and fatal crashes increased 16% from 1997.



Year	Deaths
1994	112
1995	85
1996	98
1997	92
1998	111
TOTAL	498

Motorcycle Deaths—Five-Year Trends

Of the 111 deaths in 1998 involving motorcycle drivers or passengers:

- 100 (90.1%) were drivers
- 11 (9.9%) were passengers

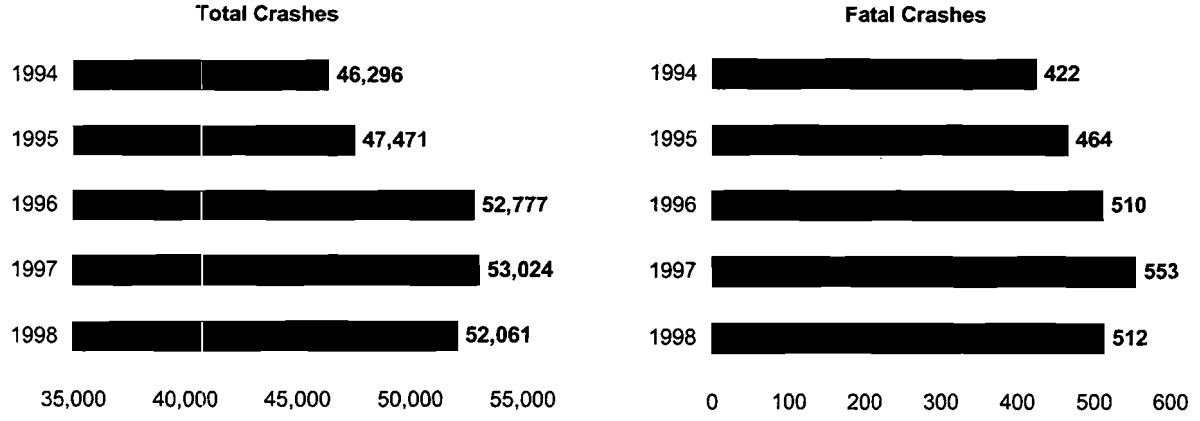
Motorcycle Helmet Use in Crashes

The table below shows injury severities of motorcycle riders (driver or passenger) by helmet usage.

	Deaths	Injuries	Not Injured	Total Motorcyclists
Helmets	84 (75.7%)	1,720 (65.5%)	171 (58.8%)	1,975 (65.2%)
No Helmets	19 (17.1%)	474 (18.1%)	48 (16.5%)	541 (17.9%)
Unknown	8 (7.2%)	432 (16.5%)	72 (24.7%)	512 (16.9%)
TOTAL	111 (100.0%)	2,626 (100.0%)	291 (100.0%)	3,028 (100.0%)

Light Truck Crashes—Five-Year Trends

As pickups, minivans, and sport utility vehicles have become more popular over the last several years, crashes involving these types of vehicles have also risen. Total crashes in 1998 were 12% higher than in 1994; fatal crashes were 21% higher than in 1994.



Light Truck Rollovers Compared to Passenger Cars

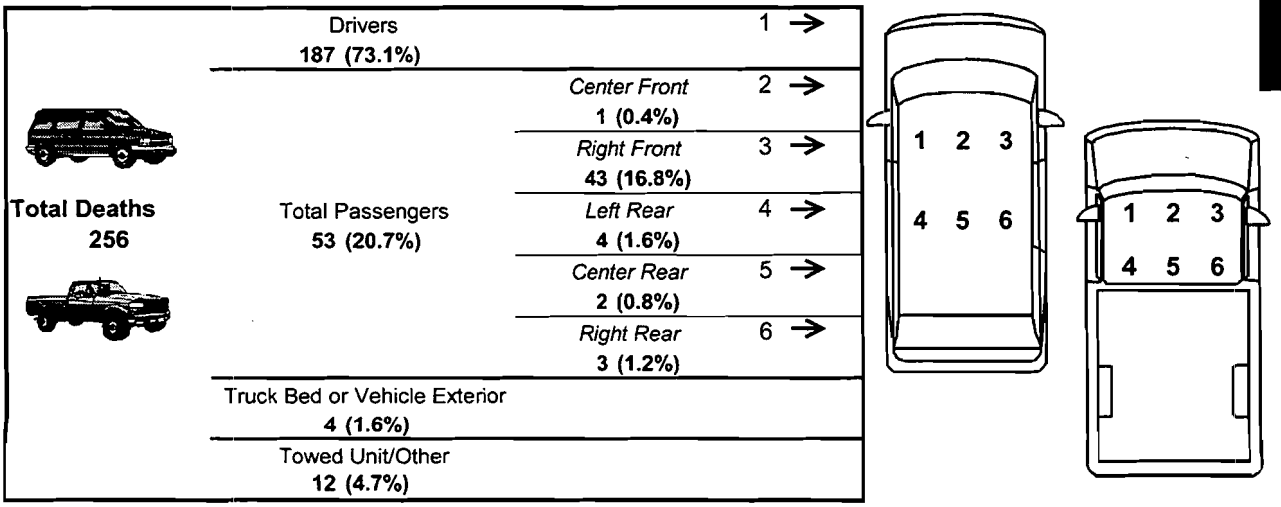
- The percentage of 1998 light truck crashes was much higher than passenger cars in crashes involving rollovers (7.6% of all light truck crashes compared to 4.9% of all passenger car crashes).

	Rollover Crashes	Rollover Deaths
Light Trucks	3,973 (7.6%)	111 (43.4%)
Passenger Cars	5,660 (4.9%)	167 (19.2%)

- In 1998 rollover crashes, the percentage of light truck deaths was more than twice as high as passenger car deaths (43.4% of deaths compared to 19.2%, excluding any pedestrians).

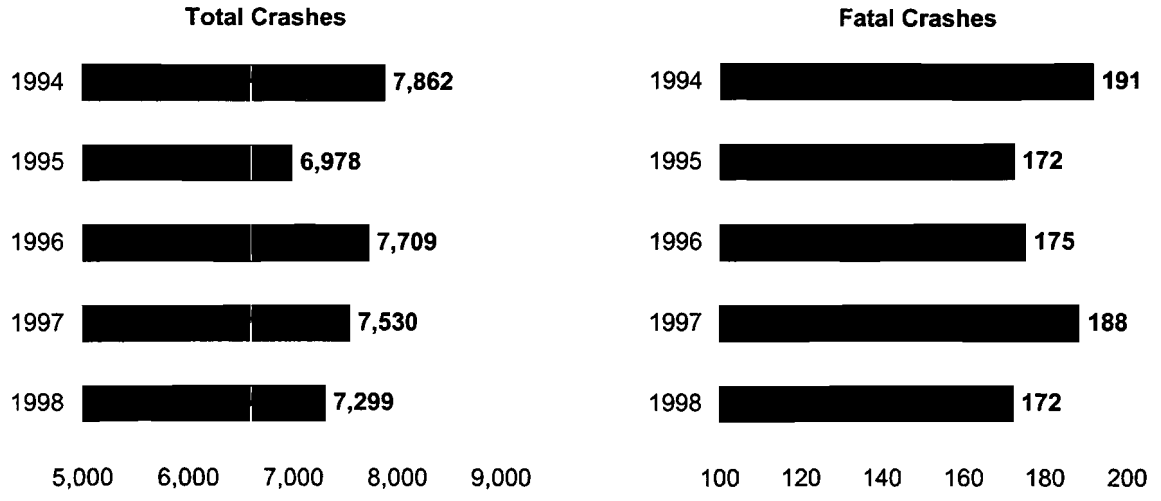
Light Truck Deaths by Seating Position

In 1998, 17% of crash deaths involved occupants in light trucks (jeeps, pickups, vans, sport utility vehicles, etc.). The table below depicts light truck deaths in 1998 by seating position, excluding any pedestrians involved, but including others who were riding on the vehicles in unusual positions.



Heavy Truck Crashes—Five Year Trends

Fatal crashes involving heavy trucks in 1998 were the lowest in the last five years.



Heavy Truck Crashes Involving Vehicle Defects

The vast majority of heavy truck crashes involving vehicle defects as primary contributing factors were related to tires and wheels, brakes, and engine failures. *Note:* 1998 data uses primary contributing factors.

Vehicle Defect	Crashes
Tire/Wheel-Related	124
Brake-Related	59
Engine Failure	59
Total Steering System Failure	13
Suspension	9
Transmission Problem	6
Vehicle Lighting-Related	3
Dirty/Frosty Windshield	1
Exhaust System Failure	1
Defective Defrosting	0
Defective Wipers	0

Heavy Truck Crashes by Road Type

Road Type	Crashes	Occupant Deaths
State Hwy (Interstate)	1,411 (19.3%)	13 (34.2%)
State Hwy (Other)	4,296 (58.9%)	15 (39.5%)
Turnpike	402 (5.5%)	4 (10.5%)
Local Road	984 (13.5%)	3 (7.9%)
Ramp	206 (2.8%)	3 (7.9%)
TOTAL	7,299 (100.0%)	38 (100.0%)

Note: State highway (other) includes state-maintained roads that are not designated as interstates.

Hazardous Material Crashes by Road Type

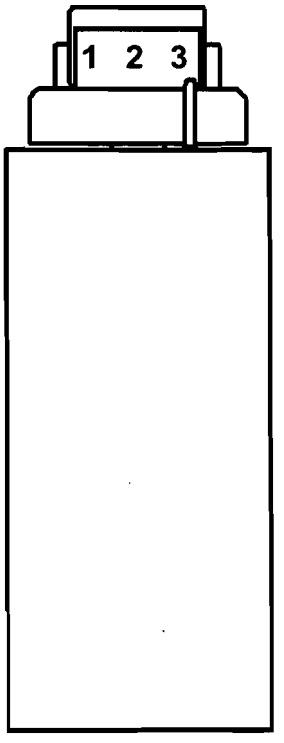
Road Type	Crashes	HazMat Released
State Hwy (Interstate)	48 (20.7%)	11 (18.6%)
State Hwy (Other)	149 (64.2%)	42 (71.2%)
Turnpike	6 (2.6%)	1 (1.7%)
Local Road	20 (8.6%)	2 (3.4%)
Ramp	9 (3.9%)	3 (5.1%)
TOTAL	232 (100.0%)	59 (100.0%)

Note: State highway (other) includes state-maintained roads that are not designated as interstates.

Heavy Truck Deaths by Seating Position

In 1998, 3% of crash deaths involved heavy truck occupants. The table below depicts the heavy truck deaths in 1998 by seating position, excluding any pedestrians involved.

Total Deaths **38** 	Drivers **30 (79.0%)**		1 →
	Total Passengers **1 (2.6%)**	*Center Front* **0 (0.0%)**	2 →
		Right Front **1 (2.6%)**	3 →
	Others **7 (18.4%)**		



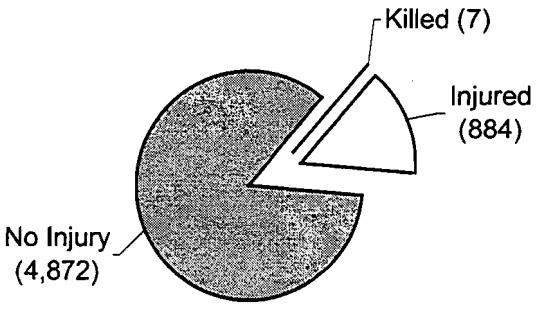
"Others" might be persons in the sleeping compartment; persons in the cargo trailer; or someone on, or attached to, the outside of the truck.

School Bus Crashes

Of the more than 5,000 persons involved in school bus crashes in 1998, only 7 were killed. Over 80% suffered no injury at all. See the tables at the bottom of page 57 for a breakdown of the persons involved. As shown, most are not the school bus passengers.

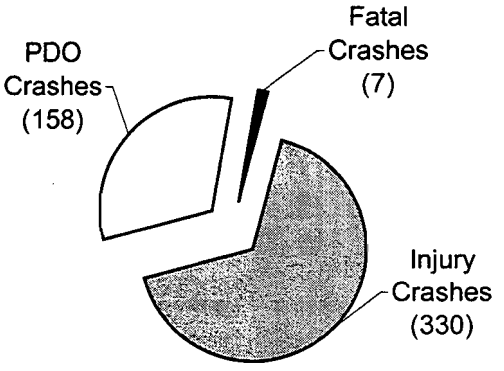
Total persons involved: **5,756**

Persons Involved



The majority (67%) of school bus crashes in 1998 were injury crashes. However, as the pie chart above shows, most persons involved in school bus crashes suffer no injuries at all.

Total Crashes



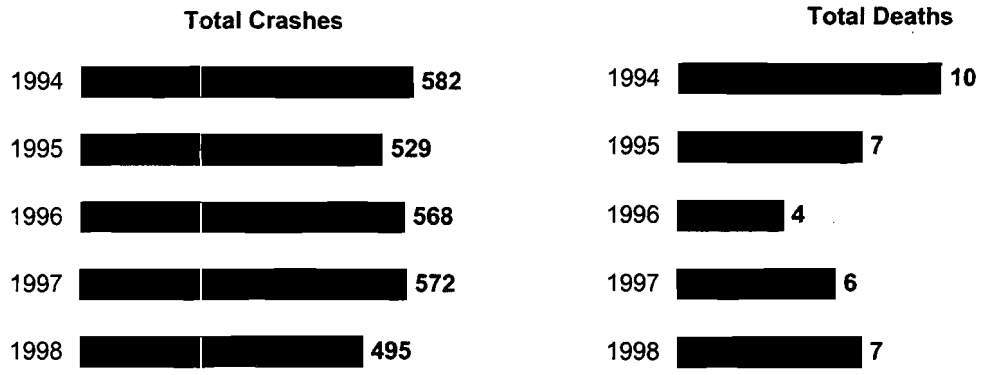
School Bus Crashes by Road Type

Road Type	Crashes	
State Hwy (Interstate)	1	0.2%
State Hwy (Other)	317	64.0%
Turnpike	1	0.2%
Local Road	176	35.6%
Ramp	0	0.0%
TOTAL	495	100.0%

Note: State highway (other) includes state-maintained roads that are not designated as interstates.

School Bus Crashes—Five-Year Trends

The total number of school bus crashes has fluctuated over the past five years, as have injury and property damage only (PDO) crashes. School bus related deaths are 0.5% of total fatalities in 1998. Most of the persons killed were not school bus passengers at the time of the crash.



Year	Crash Severity Fatal	Injury	PDO	Total	Deaths	Injuries
1994	7	383	192	582	10	1,113
1995	7	344	178	529	7	992
1996	4	374	190	568	4	1,212
1997	5	363	204	572	6	1,020
1998	7	330	158	495	7	884
TOTAL	30	1,794	922	2,746	34	5,221

School Bus Deaths/Injuries by Persons Involved—Five-Year Trends

The tables below show the breakdown of persons killed and injured in school bus crashes. Most of the persons who were killed or injured in these crashes were not school bus passengers.

DEATHS Year	School Bus Drivers	School Bus Passengers	School-Age Pedestrians	Other Pedestrians	Driver/ Passenger of Other Vehicle	Other/ Unknown	Total Deaths
1994	0	0	0	1	8	1	**10**
1995	0	0	1	1	5	0	**7**
1996	0	0	3	0	1	0	**4**
1997	0	0	0	1	5	0	**6**
1998	1	0	0	0	5	1	**7**
TOTAL	1	0	4	3	24	2	34

INJURIES Year	School Bus Drivers	School Bus Passengers	School-Age Pedestrians	Other Pedestrians	Driver/ Passenger of Other Vehicle	Other/ Unknown	Total Injuries
1994	86	650	12	4	354	10	**1,116**
1995	58	624	8	7	289	5	**991**
1996	72	782	12	7	322	17	**1,212**
1997	80	635	4	9	287	5	**1,020**
1998	73	493	8	9	295	6	**884**
TOTAL	369	3,184	44	36	1,547	43	5,223

Pennsylvania County Crashes

County Overview

The Commonwealth of Pennsylvania is comprised of 67 counties. Each county is made up of local municipalities, a combination of cities, boroughs, first class townships, and/or second class townships. In total, there are approximately 2,500 municipalities throughout the 67 counties. In 1998, Pennsylvania's total population was 12,001,451 people.

The ten most populated counties were:

Philadelphia (12.0%)	Allegheny (10.6%)	Montgomery (6.0%)
Bucks (4.9%)	Delaware (4.5%)	Lancaster (3.8%)
Chester (3.5%)	Westmoreland (3.1%)	York (3.1%)
Berks (3.0%)	*See page 59.*	

The ten least populated counties were:

Forest (0.04%)	Cameron (0.05%)	Sullivan (0.05%)
Fulton (0.12%)	Potter (0.14%)	Montour (0.15%)
Juniata (0.18%)	Wyoming (0.24%)	Elk (0.29%)
Clinton (0.31%)	*See page 59.*	

The ten counties with the most miles of state highways (maintained by PennDOT) were:*

Westmoreland (2.99%)	Allegheny (2.94%)	York (2.86%)
Lancaster (2.77%)	Washington (2.73%)	Chester (2.61%)
Bucks (2.40%)	Crawford (2.27%)	Bradford (2.25%)
Berks (2.21%)		

The ten counties with the most miles of local roads and streets (maintained by local municipalities) were:*

Allegheny (5.97%)	Lancaster (3.54%)	Montgomery (3.47%)
York (3.32%)	Westmoreland (3.11%)	Berks (3.04%)
Bucks (3.04%)	Chester (2.97%)	Philadelphia (2.75%)
Erie (2.31%)		

The ten counties with the most reported traffic crashes were:

Philadelphia (10.1%)	Allegheny (9.5%)	Montgomery (7.0%)
Bucks (5.2%)	Lancaster (4.1%)	Delaware (3.9%)
Chester (3.7%)	Berks (3.5%)	Lehigh (3.4%)
York (3.4%)	*See page 59.*	

The ten counties with the most traffic-related deaths were:

Philadelphia (7.0%)	Allegheny (5.3%)	Montgomery (4.6%)
Lancaster (3.7%)	Berks (3.6%)	Bucks (3.6%)
Chester (3.3%)	York (3.1%)	Westmoreland (3.0%)
Lehigh (2.8%)	*See page 61.*	

*Information provided by PennDOT's Bureau of Planning and Research, Performance Monitoring Division.

Pennsylvania Crashes by County

Percentages compare the number to the statewide total at the bottom of the columns.

County	Population	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes
Adams	86,537 (0.7%)	14 (1.0%)	526 (0.6%)	392 (0.8%)	**932 (0.7%)**
Allegheny	1,268,446 (10.6%)	72 (5.3%)	8,273 (9.4%)	5,080 (9.9%)	**13,425 (9.5%)**
Armstrong	73,181 (0.6%)	12 (0.9%)	445 (0.5%)	257 (0.5%)	**714 (0.5%)**
Beaver	184,406 (1.5%)	16 (1.2%)	1,122 (1.3%)	683 (1.3%)	**1,821 (1.3%)**
Bedford	49,373 (0.4%)	8 (0.6%)	438 (0.5%)	325 (0.6%)	**771 (0.6%)**
Berks	355,956 (3.0%)	51 (3.8%)	2,778 (3.2%)	2,061 (4.0%)	**4,890 (3.5%)**
Blair	130,615 (1.1%)	16 (1.2%)	1,168 (1.3%)	705 (1.4%)	**1,889 (1.3%)**
Bradford	62,459 (0.5%)	5 (0.4%)	398 (0.5%)	268 (0.5%)	**671 (0.5%)**
Bucks	587,942 (4.9%)	52 (3.8%)	4,444 (5.0%)	2,777 (5.4%)	**7,273 (5.2%)**
Butler	170,785 (1.4%)	25 (1.8%)	1,139 (1.3%)	798 (1.6%)	**1,962 (1.4%)**
Cambria	156,080 (1.3%)	18 (1.3%)	904 (1.0%)	514 (1.0%)	**1,436 (1.0%)**
Cameron	5,620 (0.1%)	2 (0.2%)	33 (0.0%)	23 (0.0%)	**58 (0.0%)**
Carbon	58,857 (0.5%)	15 (1.1%)	431 (0.5%)	334 (0.7%)	**780 (0.6%)**
Centre	132,700 (1.1%)	14 (1.0%)	845 (1.0%)	622 (1.2%)	**1,481 (1.1%)**
Chester	421,686 (3.5%)	46 (3.4%)	2,915 (3.3%)	2,233 (4.4%)	**5,194 (3.7%)**
Clarion	41,841 (0.4%)	11 (0.8%)	349 (0.4%)	186 (0.4%)	**546 (0.4%)**
Clearfield	80,752 (0.7%)	13 (1.0%)	641 (0.7%)	384 (0.8%)	**1,038 (0.7%)**
Clinton	37,000 (0.3%)	9 (0.7%)	280 (0.3%)	177 (0.3%)	**466 (0.3%)**
Columbia	64,120 (0.5%)	4 (0.3%)	465 (0.5%)	308 (0.6%)	**777 (0.6%)**
Crawford	89,415 (0.8%)	15 (1.1%)	642 (0.7%)	399 (0.8%)	**1,056 (0.8%)**
Cumberland	208,634 (1.7%)	18 (1.3%)	1,420 (1.6%)	1,089 (2.1%)	**2,527 (1.8%)**
Dauphin	245,579 (2.1%)	26 (1.9%)	1,791 (2.0%)	1,394 (2.7%)	**3,211 (2.3%)**
Delaware	542,593 (4.5%)	37 (2.7%)	3,483 (3.9%)	1,948 (3.8%)	**5,468 (3.9%)**
Elk	34,540 (0.3%)	10 (0.7%)	251 (0.3%)	127 (0.3%)	**388 (0.3%)**
Erie	276,401 (2.3%)	34 (2.5%)	2,190 (2.5%)	1,119 (2.2%)	**3,343 (2.4%)**
Fayette	144,847 (1.2%)	34 (2.5%)	1,060 (1.2%)	565 (1.1%)	**1,659 (1.2%)**
Forest	5,002 (0.0%)	2 (0.2%)	62 (0.1%)	35 (0.1%)	**99 (0.1%)**
Franklin	128,002 (1.1%)	22 (1.6%)	899 (1.0%)	686 (1.3%)	**1,607 (1.1%)**
Fulton	14,498 (0.1%)	10 (0.7%)	172 (0.2%)	136 (0.3%)	**318 (0.2%)**
Greene	40,742 (0.3%)	3 (0.2%)	298 (0.3%)	195 (0.4%)	**496 (0.4%)**
Huntingdon	44,599 (0.4%)	16 (1.2%)	293 (0.3%)	203 (0.4%)	**512 (0.4%)**
Indiana	88,567 (0.7%)	21 (1.6%)	637 (0.7%)	359 (0.7%)	**1,017 (0.7%)**
Jefferson	46,250 (0.4%)	6 (0.4%)	318 (0.4%)	224 (0.4%)	**548 (0.4%)**
Juniata	22,101 (0.2%)	2 (0.2%)	163 (0.2%)	81 (0.2%)	**246 (0.2%)**
Lackawanna	208,455 (1.7%)	30 (2.2%)	1,499 (1.7%)	982 (1.9%)	**2,511 (1.8%)**
Lancaster	456,414 (3.8%)	49 (3.6%)	3,435 (3.9%)	2,230 (4.4%)	**5,714 (4.1%)**
Lawrence	94,887 (0.8%)	18 (1.3%)	743 (0.8%)	373 (0.7%)	**1,134 (0.8%)**
Lebanon	117,434 (1.0%)	19 (1.4%)	908 (1.0%)	596 (1.2%)	**1,523 (1.1%)**
Lehigh	299,341 (2.5%)	37 (2.7%)	2,898 (3.3%)	1,881 (3.7%)	**4,816 (3.4%)**
Luzerne	313,767 (2.6%)	29 (2.1%)	2,333 (2.6%)	1,188 (2.3%)	**3,550 (2.5%)**
Lycoming	117,308 (1.0%)	13 (1.0%)	760 (0.9%)	466 (0.9%)	**1,239 (0.9%)**
McKean	46,500 (0.4%)	11 (0.8%)	265 (0.3%)	210 (0.4%)	**486 (0.3%)**
Mercer	121,938 (1.0%)	18 (1.3%)	989 (1.1%)	640 (1.3%)	**1,647 (1.2%)**
Mifflin	46,961 (0.4%)	3 (0.2%)	254 (0.3%)	177 (0.3%)	**434 (0.3%)**
Monroe	125,583 (1.1%)	27 (2.0%)	1,277 (1.5%)	894 (1.7%)	**2,198 (1.6%)**
Montgomery	719,718 (6.0%)	62 (4.6%)	6,048 (6.9%)	3,667 (7.1%)	**9,777 (6.9%)**
Montour	17,730 (0.2%)	4 (0.3%)	123 (0.1%)	69 (0.1%)	**196 (0.1%)**
Northampton	258,679 (2.2%)	25 (1.8%)	1,912 (2.2%)	1,149 (2.2%)	**3,086 (2.2%)**
Northumberland	94,017 (0.8%)	20 (1.5%)	499 (0.6%)	276 (0.5%)	**795 (0.6%)**
Perry	44,384 (0.4%)	7 (0.5%)	357 (0.4%)	257 (0.5%)	**621 (0.4%)**
Philadelphia	1,436,287 (12.0%)	96 (7.1%)	11,761 (13.3%)	2,374 (4.6%)	**14,231 (10.1%)**
Pike	40,172 (0.3%)	14 (1.0%)	250 (0.3%)	239 (0.5%)	**503 (0.4%)**
Potter	17,184 (0.1%)	3 (0.2%)	105 (0.1%)	48 (0.1%)	**156 (0.1%)**
Schuylkill	148,266 (1.2%)	28 (2.1%)	1,020 (1.2%)	705 (1.4%)	**1,753 (1.2%)**
Snyder	38,226 (0.3%)	6 (0.4%)	242 (0.3%)	173 (0.3%)	**421 (0.3%)**
Somerset	80,267 (0.7%)	24 (1.8%)	499 (0.6%)	363 (0.7%)	**886 (0.6%)**
Sullivan	6,107 (0.1%)	0 (0.0%)	53 (0.1%)	23 (0.0%)	**76 (0.1%)**
Susquehanna	42,144 (0.4%)	10 (0.7%)	264 (0.3%)	231 (0.5%)	**505 (0.4%)**
Tioga	41,606 (0.4%)	5 (0.4%)	261 (0.3%)	171 (0.3%)	**437 (0.3%)**
Union	40,897 (0.3%)	3 (0.2%)	199 (0.2%)	158 (0.3%)	**360 (0.3%)**
Venango	57,844 (0.5%)	10 (0.7%)	432 (0.5%)	290 (0.6%)	**732 (0.5%)**
Warren	43,910 (0.4%)	8 (0.6%)	271 (0.3%)	199 (0.4%)	**478 (0.3%)**
Washington	205,566 (1.7%)	16 (1.2%)	1,311 (1.5%)	949 (1.9%)	**2,276 (1.6%)**
Wayne	45,226 (0.4%)	14 (1.0%)	358 (0.4%)	229 (0.5%)	**601 (0.4%)**
Westmoreland	372,103 (3.1%)	42 (3.1%)	2,504 (2.8%)	1,465 (2.9%)	**4,011 (2.9%)**
Wyoming	29,149 (0.2%)	8 (0.6%)	239 (0.3%)	135 (0.3%)	**382 (0.3%)**
York	373,255 (3.1%)	40 (3.0%)	2,949 (3.3%)	1,829 (3.6%)	**4,818 (3.4%)**
TOTAL	12,001,451 (100.0%)	1,358 (100.0%)	88,291 (100.0%)	51,323 (100.0%)	**140,972 (100.0%)**

Crashes by County—Five-Year Trends

Percentages compare the number to the statewide total at the bottom of the columns.

County	1994 Crashes	1995 Crashes	1996 Crashes	1997 Crashes	1998 Crashes
Adams	974 (0.7%)	997 (0.7%)	908 (0.6%)	977 (0.7%)	**932 (0.7%)**
Allegheny	12,803 (9.5%)	12,969 (9.5%)	13,818 (9.7%)	13,903 (9.7%)	**13,425 (9.5%)**
Armstrong	685 (0.5%)	731 (0.5%)	769 (0.5%)	764 (0.5%)	**714 (0.5%)**
Beaver	1,853 (1.4%)	1,948 (1.4%)	1,816 (1.3%)	1,952 (1.4%)	**1,821 (1.3%)**
Bedford	682 (0.5%)	712 (0.5%)	709 (0.5%)	747 (0.5%)	**771 (0.6%)**
Berks	4,782 (3.6%)	4,784 (3.5%)	5,051 (3.5%)	5,195 (3.6%)	**4,890 (3.5%)**
Blair	1,733 (1.3%)	1,612 (1.2%)	1,764 (1.2%)	1,861 (1.3%)	**1,889 (1.3%)**
Bradford	619 (0.5%)	651 (0.5%)	713 (0.5%)	681 (0.5%)	**671 (0.5%)**
Bucks	7,034 (5.2%)	7,041 (5.1%)	7,515 (5.3%)	7,446 (5.2%)	**7,273 (5.2%)**
Butler	2,009 (1.5%)	2,078 (1.5%)	1,923 (1.3%)	2,171 (1.5%)	**1,962 (1.4%)**
Cambria	1,464 (1.1%)	1,545 (1.1%)	1,481 (1.0%)	1,591 (1.1%)	**1,436 (1.0%)**
Cameron	66 (0.0%)	76 (0.1%)	75 (0.1%)	65 (0.0%)	**58 (0.0%)**
Carbon	720 (0.5%)	787 (0.6%)	772 (0.5%)	802 (0.6%)	**780 (0.6%)**
Centre	1,333 (1.0%)	1,393 (1.0%)	1,508 (1.1%)	1,444 (1.0%)	**1,481 (1.1%)**
Chester	5,072 (3.8%)	4,788 (3.5%)	5,109 (3.6%)	5,212 (3.6%)	**5,194 (3.7%)**
Clarion	536 (0.4%)	535 (0.4%)	598 (0.4%)	632 (0.4%)	**546 (0.4%)**
Clearfield	1,023 (0.8%)	1,041 (0.8%)	1,041 (0.7%)	1,089 (0.8%)	**1,038 (0.7%)**
Clinton	470 (0.4%)	437 (0.3%)	475 (0.3%)	497 (0.3%)	**466 (0.3%)**
Columbia	720 (0.5%)	711 (0.5%)	756 (0.5%)	769 (0.5%)	**777 (0.6%)**
Crawford	1,073 (0.8%)	1,180 (0.9%)	1,118 (0.8%)	1,123 (0.8%)	**1,056 (0.8%)**
Cumberland	2,546 (1.9%)	2,415 (1.8%)	2,605 (1.8%)	2,528 (1.8%)	**2,527 (1.8%)**
Dauphin	3,051 (2.3%)	3,118 (2.3%)	3,197 (2.2%)	3,204 (2.2%)	**3,211 (2.3%)**
Delaware	5,249 (3.9%)	5,267 (3.9%)	5,419 (3.8%)	5,562 (3.9%)	**5,468 (3.9%)**
Elk	405 (0.3%)	468 (0.3%)	380 (0.3%)	423 (0.3%)	**388 (0.3%)**
Erie	3,403 (2.5%)	3,414 (2.5%)	3,635 (2.5%)	3,474 (2.4%)	**3,343 (2.4%)**
Fayette	1,510 (1.1%)	1,496 (1.1%)	1,593 (1.1%)	1,598 (1.1%)	**1,659 (1.2%)**
Forest	86 (0.1%)	75 (0.1%)	83 (0.1%)	97 (0.1%)	**99 (0.1%)**
Franklin	1,685 (1.3%)	1,626 (1.2%)	1,654 (1.2%)	1,666 (1.2%)	**1,607 (1.1%)**
Fulton	273 (0.2%)	283 (0.2%)	303 (0.2%)	316 (0.2%)	**318 (0.2%)**
Greene	470 (0.4%)	444 (0.3%)	425 (0.3%)	480 (0.3%)	**496 (0.4%)**
Huntingdon	439 (0.3%)	463 (0.3%)	487 (0.3%)	520 (0.4%)	**512 (0.4%)**
Indiana	954 (0.7%)	953 (0.7%)	1,034 (0.7%)	1,072 (0.7%)	**1,017 (0.7%)**
Jefferson	507 (0.4%)	515 (0.4%)	600 (0.4%)	572 (0.4%)	**548 (0.4%)**
Juniata	222 (0.2%)	229 (0.2%)	267 (0.2%)	266 (0.2%)	**246 (0.2%)**
Lackawanna	1,814 (1.4%)	2,271 (1.7%)	2,642 (1.8%)	2,672 (1.9%)	**2,511 (1.8%)**
Lancaster	5,360 (4.0%)	5,242 (3.8%)	5,662 (4.0%)	5,654 (3.9%)	**5,714 (4.1%)**
Lawrence	985 (0.7%)	1,033 (0.8%)	1,113 (0.8%)	1,134 (0.8%)	**1,134 (0.8%)**
Lebanon	1,398 (1.0%)	1,401 (1.0%)	1,419 (1.0%)	1,541 (1.1%)	**1,523 (1.1%)**
Lehigh	4,217 (3.1%)	4,264 (3.1%)	4,495 (3.1%)	4,509 (3.1%)	**4,816 (3.4%)**
Luzerne	3,678 (2.7%)	3,832 (2.8%)	3,862 (2.7%)	3,953 (2.7%)	**3,550 (2.5%)**
Lycoming	1,314 (1.0%)	1,312 (1.0%)	1,398 (1.0%)	1,364 (0.9%)	**1,239 (0.9%)**
McKean	481 (0.4%)	531 (0.4%)	459 (0.3%)	468 (0.3%)	**486 (0.3%)**
Mercer	1,557 (1.2%)	1,653 (1.2%)	1,655 (1.2%)	1,670 (1.2%)	**1,647 (1.2%)**
Mifflin	439 (0.3%)	427 (0.3%)	452 (0.3%)	429 (0.3%)	**434 (0.3%)**
Monroe	1,927 (1.4%)	1,910 (1.4%)	2,161 (1.5%)	2,234 (1.6%)	**2,198 (1.6%)**
Montgomery	9,330 (7.0%)	9,413 (6.9%)	9,873 (6.9%)	9,751 (6.8%)	**9,777 (6.9%)**
Montour	209 (0.2%)	213 (0.2%)	214 (0.1%)	226 (0.2%)	**196 (0.1%)**
Northampton	2,975 (2.2%)	2,943 (2.2%)	3,220 (2.3%)	3,243 (2.3%)	**3,086 (2.2%)**
Northumberland	861 (0.6%)	839 (0.6%)	826 (0.6%)	878 (0.6%)	**795 (0.6%)**
Perry	521 (0.4%)	560 (0.4%)	581 (0.4%)	621 (0.4%)	**621 (0.4%)**
Philadelphia	12,771 (9.5%)	14,126 (10.3%)	14,120 (9.9%)	13,928 (9.7%)	**14,231 (10.1%)**
Pike	529 (0.4%)	445 (0.3%)	469 (0.3%)	535 (0.4%)	**503 (0.4%)**
Potter	148 (0.1%)	184 (0.1%)	151 (0.1%)	165 (0.1%)	**156 (0.1%)**
Schuylkill	1,684 (1.3%)	1,571 (1.1%)	1,783 (1.2%)	1,799 (1.2%)	**1,753 (1.2%)**
Snyder	392 (0.3%)	394 (0.3%)	398 (0.3%)	432 (0.3%)	**421 (0.3%)**
Somerset	815 (0.6%)	885 (0.6%)	940 (0.7%)	991 (0.7%)	**886 (0.6%)**
Sullivan	83 (0.1%)	82 (0.1%)	90 (0.1%)	91 (0.1%)	**76 (0.1%)**
Susquehanna	445 (0.3%)	459 (0.3%)	537 (0.4%)	602 (0.4%)	**505 (0.4%)**
Tioga	435 (0.3%)	438 (0.3%)	481 (0.3%)	474 (0.3%)	**437 (0.3%)**
Union	422 (0.3%)	384 (0.3%)	422 (0.3%)	381 (0.3%)	**360 (0.3%)**
Venango	763 (0.6%)	841 (0.6%)	815 (0.6%)	755 (0.5%)	**732 (0.5%)**
Warren	509 (0.4%)	560 (0.4%)	602 (0.4%)	524 (0.4%)	**478 (0.3%)**
Washington	2,079 (1.5%)	2,104 (1.5%)	2,168 (1.5%)	2,342 (1.6%)	**2,276 (1.6%)**
Wayne	551 (0.4%)	577 (0.4%)	581 (0.4%)	655 (0.5%)	**601 (0.4%)**
Westmoreland	4,135 (3.1%)	4,259 (3.1%)	4,505 (3.2%)	4,249 (3.0%)	**4,011 (2.9%)**
Wyoming	357 (0.3%)	345 (0.3%)	429 (0.3%)	365 (0.3%)	**382 (0.3%)**
York	4,536 (3.4%)	4,524 (3.3%)	4,743 (3.3%)	4,647 (3.2%)	**4,818 (3.4%)**
TOTAL	134,171 (100.0%)	136,804 (100.0%)	142,867 (100.0%)	143,981 (100.0%)	**140,972 (100.0%)**

Traffic Deaths by County—Five-Year Trends

Percentages compare the number to the statewide totals at the bottom of the columns.

County	1994 Deaths	1995 Deaths	1996 Deaths	1997 Deaths	1998 Deaths
Adams	22 (1.5%)	12 (0.8%)	20 (1.4%)	16 (1.0%)	**17 (1.1%)**
Allegheny	84 (5.8%)	82 (5.5%)	73 (5.0%)	85 (5.4%)	**78 (5.3%)**
Armstrong	15 (1.0%)	11 (0.7%)	10 (0.7%)	15 (1.0%)	**12 (0.8%)**
Beaver	19 (1.3%)	11 (0.7%)	14 (1.0%)	16 (1.0%)	**16 (1.1%)**
Bedford	11 (0.8%)	17 (1.1%)	15 (1.0%)	11 (0.7%)	**10 (0.7%)**
Berks	47 (3.3%)	45 (3.0%)	49 (3.3%)	59 (3.8%)	**54 (3.6%)**
Blair	15 (1.0%)	19 (1.3%)	15 (1.0%)	17 (1.1%)	**18 (1.2%)**
Bradford	15 (1.0%)	9 (0.6%)	12 (0.8%)	11 (0.7%)	**5 (0.3%)**
Bucks	51 (3.5%)	79 (5.3%)	77 (5.2%)	64 (4.1%)	**54 (3.6%)**
Butler	20 (1.4%)	37 (2.5%)	28 (1.9%)	27 (1.7%)	**25 (1.7%)**
Cambria	23 (1.6%)	15 (1.0%)	16 (1.1%)	13 (0.8%)	**18 (1.2%)**
Cameron	1 (0.1%)	0 (0.0%)	3 (0.2%)	2 (0.1%)	**2 (0.1%)**
Carbon	10 (0.7%)	9 (0.6%)	17 (1.2%)	17 (1.1%)	**17 (1.1%)**
Centre	14 (1.0%)	16 (1.1%)	12 (0.8%)	25 (1.6%)	**18 (1.2%)**
Chester	54 (3.8%)	54 (3.6%)	34 (2.3%)	51 (3.3%)	**49 (3.3%)**
Clarion	7 (0.5%)	8 (0.5%)	14 (1.0%)	10 (0.6%)	**12 (0.8%)**
Clearfield	8 (0.6%)	24 (1.6%)	18 (1.2%)	28 (1.8%)	**16 (1.1%)**
Clinton	9 (0.6%)	9 (0.6%)	9 (0.6%)	11 (0.7%)	**10 (0.7%)**
Columbia	8 (0.6%)	6 (0.4%)	18 (1.2%)	4 (0.3%)	**6 (0.4%)**
Crawford	23 (1.6%)	20 (1.4%)	17 (1.2%)	15 (1.0%)	**16 (1.1%)**
Cumberland	17 (1.2%)	19 (1.3%)	28 (1.9%)	21 (1.3%)	**18 (1.2%)**
Dauphin	26 (1.8%)	32 (2.2%)	25 (1.7%)	27 (1.7%)	**26 (1.8%)**
Delaware	44 (3.1%)	48 (3.2%)	32 (2.2%)	41 (2.6%)	**40 (2.7%)**
Elk	7 (0.5%)	5 (0.3%)	13 (0.9%)	10 (0.6%)	**10 (0.7%)**
Erie	53 (3.7%)	33 (2.2%)	34 (2.3%)	39 (2.5%)	**40 (2.7%)**
Fayette	24 (1.7%)	23 (1.6%)	25 (1.7%)	28 (1.8%)	**40 (2.7%)**
Forest	1 (0.1%)	3 (0.2%)	0 (0.0%)	2 (0.1%)	**2 (0.1%)**
Franklin	39 (2.7%)	24 (1.6%)	20 (1.4%)	22 (1.4%)	**28 (1.9%)**
Fulton	4 (0.3%)	10 (0.7%)	7 (0.5%)	10 (0.6%)	**10 (0.7%)**
Greene	5 (0.3%)	7 (0.5%)	6 (0.4%)	5 (0.3%)	**5 (0.3%)**
Huntingdon	14 (1.0%)	17 (1.1%)	8 (0.5%)	8 (0.5%)	**23 (1.6%)**
Indiana	17 (1.2%)	21 (1.4%)	16 (1.1%)	21 (1.3%)	**21 (1.4%)**
Jefferson	13 (0.9%)	5 (0.3%)	11 (0.7%)	6 (0.4%)	**6 (0.4%)**
Juniata	4 (0.3%)	3 (0.2%)	4 (0.3%)	7 (0.4%)	**3 (0.2%)**
Lackawanna	17 (1.2%)	24 (1.6%)	13 (0.9%)	18 (1.2%)	**32 (2.2%)**
Lancaster	51 (3.5%)	60 (4.1%)	49 (3.3%)	66 (4.2%)	**55 (3.7%)**
Lawrence	9 (0.6%)	9 (0.6%)	11 (0.7%)	15 (1.0%)	**22 (1.5%)**
Lebanon	22 (1.5%)	19 (1.3%)	19 (1.3%)	17 (1.1%)	**22 (1.5%)**
Lehigh	39 (2.7%)	41 (2.8%)	28 (1.9%)	37 (2.4%)	**42 (2.8%)**
Luzerne	37 (2.6%)	35 (2.4%)	42 (2.9%)	46 (2.9%)	**30 (2.0%)**
Lycoming	23 (1.6%)	15 (1.0%)	26 (1.8%)	17 (1.1%)	**14 (0.9%)**
McKean	14 (1.0%)	6 (0.4%)	9 (0.6%)	7 (0.4%)	**11 (0.7%)**
Mercer	18 (1.3%)	32 (2.2%)	23 (1.6%)	24 (1.5%)	**19 (1.3%)**
Mifflin	6 (0.4%)	4 (0.3%)	8 (0.5%)	8 (0.5%)	**3 (0.2%)**
Monroe	13 (0.9%)	26 (1.8%)	14 (1.0%)	28 (1.8%)	**28 (1.9%)**
Montgomery	48 (3.3%)	56 (3.8%)	72 (4.9%)	65 (4.2%)	**69 (4.6%)**
Montour	3 (0.2%)	3 (0.2%)	3 (0.2%)	2 (0.1%)	**4 (0.3%)**
Northampton	22 (1.5%)	20 (1.4%)	28 (1.9%)	28 (1.8%)	**26 (1.8%)**
Northumberland	7 (0.5%)	18 (1.2%)	15 (1.0%)	16 (1.0%)	**21 (1.4%)**
Perry	10 (0.7%)	9 (0.6%)	12 (0.8%)	10 (0.6%)	**7 (0.5%)**
Philadelphia	135 (9.4%)	147 (9.9%)	140 (9.5%)	150 (9.6%)	**104 (7.0%)**
Pike	8 (0.6%)	10 (0.7%)	6 (0.4%)	8 (0.5%)	**14 (0.9%)**
Potter	6 (0.4%)	3 (0.2%)	2 (0.1%)	5 (0.3%)	**3 (0.2%)**
Schuylkill	24 (1.7%)	23 (1.6%)	21 (1.4%)	37 (2.4%)	**32 (2.2%)**
Snyder	11 (0.8%)	5 (0.3%)	13 (0.9%)	7 (0.4%)	**6 (0.4%)**
Somerset	18 (1.3%)	14 (0.9%)	12 (0.8%)	13 (0.8%)	**27 (1.8%)**
Sullivan	4 (0.3%)	0 (0.0%)	4 (0.3%)	2 (0.1%)	**0 (0.0%)**
Susquehanna	11 (0.8%)	8 (0.5%)	10 (0.7%)	11 (0.7%)	**11 (0.7%)**
Tioga	13 (0.9%)	9 (0.6%)	5 (0.3%)	10 (0.6%)	**5 (0.3%)**
Union	6 (0.4%)	3 (0.2%)	5 (0.3%)	9 (0.6%)	**5 (0.3%)**
Venango	12 (0.8%)	12 (0.8%)	16 (1.1%)	15 (1.0%)	**10 (0.7%)**
Warren	10 (0.7%)	13 (0.9%)	19 (1.3%)	7 (0.4%)	**9 (0.6%)**
Washington	18 (1.3%)	25 (1.7%)	28 (1.9%)	30 (1.9%)	**16 (1.1%)**
Wayne	6 (0.4%)	15 (1.0%)	12 (0.8%)	10 (0.6%)	**14 (0.9%)**
Westmoreland	50 (3.5%)	48 (3.2%)	58 (3.9%)	51 (3.3%)	**45 (3.0%)**
Wyoming	11 (0.8%)	7 (0.5%)	8 (0.5%)	6 (0.4%)	**9 (0.6%)**
York	34 (2.4%)	28 (1.9%)	39 (2.7%)	43 (2.8%)	**46 (3.1%)**
TOTAL	1,440 (100.0%)	1,480 (100.0%)	1,470 (100.0%)	1,562 (100.0%)	**1,486 (100.0%)**

Pedestrian Deaths by County—Five-Year Trends

County	1994	1995	1996	1997	1998
Adams	0	1	0	2	3
Allegheny	15	11	15	21	13
Armstrong	2	1	0	0	0
Beaver	0	1	2	0	2
Bedford	0	2	1	2	1
Berks	7	7	4	4	7
Blair	1	3	3	5	1
Bradford	1	0	1	0	0
Bucks	6	10	13	6	9
Butler	4	5	2	4	3
Cambria	1	1	1	1	2
Cameron	0	0	0	0	0
Carbon	0	2	2	1	0
Centre	0	1	2	4	0
Chester	5	3	6	4	5
Clarion	2	1	3	0	1
Clearfield	0	3	0	2	1
Clinton	0	0	0	2	1
Columbia	0	1	1	2	1
Crawford	3	4	3	0	1
Cumberland	2	0	1	3	0
Dauphin	3	5	3	5	4
Delaware	9	12	7	5	12
Elk	0	0	0	1	0
Erie	7	8	8	4	4
Fayette	1	2	7	1	2
Forest	0	0	0	0	0
Franklin	1	2	3	3	1
Fulton	1	1	0	0	0
Greene	1	2	0	1	0
Huntingdon	2	1	0	0	1
Indiana	2	0	1	2	1
Jefferson	2	0	0	0	2
Juniata	0	0	0	1	0
Lackawanna	2	3	0	0	5
Lancaster	8	6	5	5	5
Lawrence	1	1	4	1	3
Lebanon	0	3	4	1	2
Lehigh	6	5	2	4	5
Luzerne	7	2	9	5	5
Lycoming	1	2	4	1	3
McKean	2	1	1	0	1
Mercer	2	4	0	3	1
Mifflin	0	0	0	0	0
Monroe	5	2	2	2	3
Montgomery	11	10	15	7	5
Montour	0	0	0	0	0
Northampton	3	0	4	4	5
Northumberland	1	1	1	3	2
Perry	1	0	1	0	0
Philadelphia	33	49	56	36	27
Pike	2	1	0	0	1
Potter	0	0	0	0	0
Schuylkill	1	2	4	5	2
Snyder	0	1	1	0	0
Somerset	3	0	0	0	1
Sullivan	0	0	0	0	0
Susquehanna	0	0	0	1	1
Tioga	0	0	0	0	1
Union	0	0	1	0	0
Venango	2	0	0	0	0
Warren	2	2	1	0	1
Washington	1	5	2	1	1
Wayne	0	2	1	1	0
Westmoreland	3	4	4	5	4
Wyoming	0	0	2	3	0
York	4	2	5	1	4
TOTAL	179	198	218	175	166

Pedestrian Deaths and Injuries by Age Group by County

	Age 0-4		Age 5-9		Age 10-14		Age 15-59		Age 60+		Total	
County	Death	Injury	Death	Injury	Death	Injury	Death	Injury	Death	Injury	Death	Injury
Adams	0	4	0	0	0	7	1	4	2	3	3	18
Allegheny	0	27	1	68	0	68	5	314	7	73	13	550
Armstrong	0	0	0	1	0	3	0	2	0	2	0	8
Beaver	0	1	0	4	0	3	2	15	0	4	2	27
Bedford	0	0	0	1	1	2	0	6	0	1	1	10
Berks	1	20	0	35	0	25	3	74	3	13	7	167
Blair	0	3	0	6	0	4	0	30	1	4	1	47
Bradford	0	1	0	2	0	0	0	7	0	1	0	11
Bucks	0	3	0	9	1	14	4	86	4	13	9	125
Butler	0	0	0	3	0	4	1	22	2	1	3	30
Cambria	0	2	0	4	0	5	0	15	2	3	2	29
Cameron	0	0	0	0	0	0	0	0	0	0	0	0
Carbon	0	0	0	1	0	4	0	6	0	1	0	12
Centre	0	0	0	3	0	3	0	31	0	4	0	41
Chester	0	3	0	10	1	16	4	60	0	9	5	98
Clarion	0	0	0	0	0	1	1	6	0	2	1	9
Clearfield	0	1	0	3	0	4	0	6	1	0	1	14
Clinton	0	0	0	1	0	1	0	2	1	4	1	8
Columbia	0	1	0	5	0	1	0	9	1	2	1	18
Crawford	0	1	0	2	0	2	0	13	1	4	1	22
Cumberland	0	1	0	4	0	9	0	33	0	7	0	54
Dauphin	0	8	0	30	0	12	3	67	1	12	4	129
Delaware	0	13	0	42	1	56	6	104	5	37	12	252
Elk	0	0	0	1	0	1	0	5	0	0	0	7
Erie	0	5	0	24	0	18	3	61	1	11	4	119
Fayette	0	0	1	3	0	5	1	15	0	7	2	30
Forest	0	0	0	0	0	0	0	0	0	0	0	0
Franklin	0	1	0	3	0	5	0	16	1	2	1	27
Fulton	0	0	0	0	0	0	0	0	0	1	0	1
Greene	0	0	0	1	0	2	0	2	0	1	0	6
Huntingdon	0	1	0	2	0	4	1	1	0	0	1	8
Indiana	0	0	0	4	0	1	0	8	1	2	1	15
Jefferson	1	0	1	1	0	3	0	4	0	0	2	8
Juniata	0	0	0	0	0	0	0	2	0	1	0	3
Lackawanna	0	2	0	10	0	13	4	38	1	18	5	81
Lancaster	1	18	0	32	0	22	2	64	2	16	5	152
Lawrence	0	0	0	2	0	4	2	9	1	4	3	19
Lebanon	0	1	0	8	0	5	0	20	2	7	2	41
Lehigh	0	11	0	28	1	34	4	74	0	16	5	163
Luzerne	0	7	1	8	1	11	1	55	2	20	5	101
Lycoming	1	2	0	11	1	7	1	26	0	6	3	52
McKean	0	0	0	2	0	1	1	4	0	0	1	7
Mercer	0	2	0	1	0	3	0	12	1	4	1	22
Mifflin	0	0	0	0	0	3	0	6	0	0	0	9
Monroe	0	0	0	3	0	6	3	11	0	3	3	23
Montgomery	0	8	1	37	0	35	1	156	3	28	5	264
Montour	0	0	0	2	0	1	0	4	0	1	0	8
Northampton	0	6	0	8	1	14	0	44	4	12	5	84
Northumberland	0	2	0	6	0	3	1	7	1	3	2	21
Perry	0	0	0	2	0	0	0	5	0	0	0	7
Philadelphia	0	159	1	428	1	307	12	1,286	12	206	26	2,386
Pike	0	0	0	0	0	0	1	1	0	1	1	2
Potter	0	0	0	2	0	0	0	0	0	1	0	3
Schuylkill	0	2	0	9	0	7	2	27	0	9	2	54
Snyder	0	0	0	2	0	1	0	2	0	0	0	5
Somerset	0	1	0	0	0	0	0	4	1	2	1	7
Sullivan	0	0	0	0	0	0	0	0	0	0	0	0
Susquehanna	0	0	0	2	0	1	1	3	0	1	1	7
Tioga	0	1	0	0	0	0	1	6	0	2	1	9
Union	0	0	0	1	0	2	0	2	0	0	0	5
Venango	0	0	0	3	0	1	0	7	0	2	0	13
Warren	0	0	0	1	0	0	1	4	0	3	1	8
Washington	0	1	0	3	0	1	1	26	0	7	1	38
Wayne	0	0	0	0	0	1	0	4	0	2	0	7
Westmoreland	0	1	0	13	0	5	3	46	1	8	4	73
Wyoming	0	0	0	1	0	0	0	2	0	0	0	3
York	1	7	0	19	0	26	1	63	2	8	4	123
TOTAL	5	327	6	917	9	797	78	3,044	67	615	165	5,700

Note: The above totals do not include any additional pedestrians of unknown age.

Percent Seat Belt Use in Crashes by County—Five-Year Trends

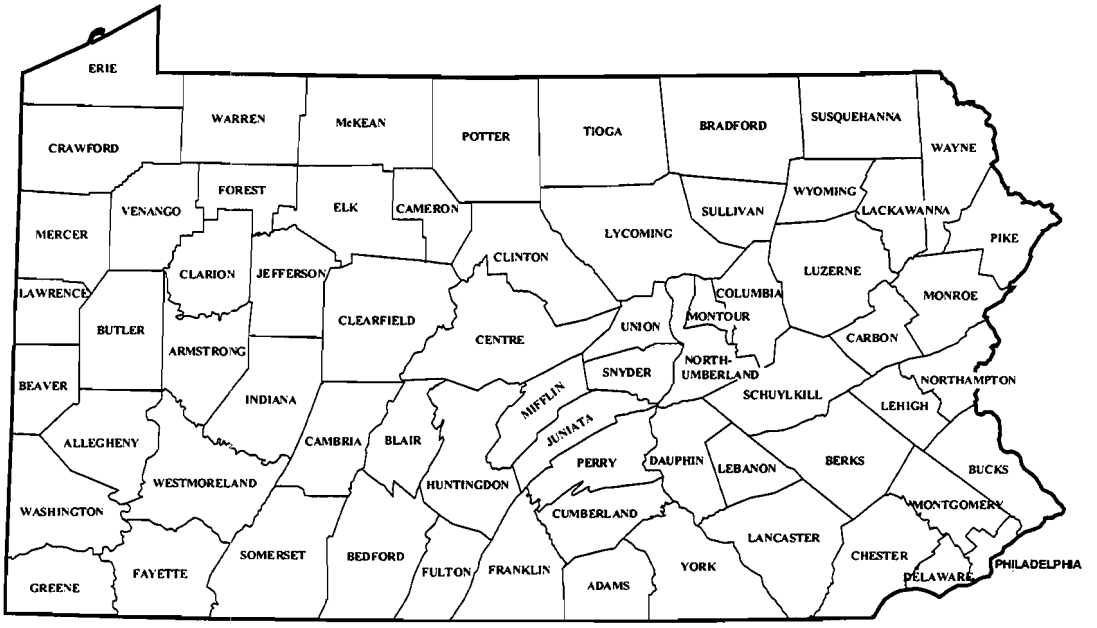
County	1994 Belt Use	1995 Belt Use	1996 Belt Use	1997 Belt Use	1998 Belt Use
Adams	71	73	70	72	71
Allegheny	58	59	60	60	61
Armstrong	72	73	71	69	67
Beaver	49	49	52	49	50
Bedford	75	79	78	80	81
Berks	63	65	64	63	64
Blair	75	76	74	75	78
Bradford	72	71	72	75	74
Bucks	65	66	69	67	68
Butler	70	69	71	69	72
Cambria	63	67	66	67	64
Cameron	67	71	60	72	70
Carbon	64	65	68	61	62
Centre	73	73	74	78	77
Chester	73	72	74	74	73
Clarion	77	73	76	74	70
Clearfield	73	73	73	74	75
Clinton	74	74	74	72	73
Columbia	69	72	67	67	65
Crawford	72	75	71	70	74
Cumberland	75	76	77	76	74
Dauphin	72	70	70	70	72
Delaware	54	54	57	55	57
Elk	70	66	69	69	73
Erie	71	70	69	68	69
Fayette	68	71	72	69	69
Forest	67	69	68	78	70
Franklin	72	70	73	72	72
Fulton	75	76	73	74	75
Greene	80	82	79	79	77
Huntingdon	73	73	74	73	70
Indiana	78	78	79	79	79
Jefferson	71	73	71	70	65
Juniata	70	69	69	73	74
Lackawanna	58	56	59	55	57
Lancaster	75	75	74	74	76
Lawrence	57	60	60	60	60
Lebanon	71	71	67	71	71
Lehigh	78	77	78	75	75
Luzerne	66	65	66	67	66
Lycoming	69	72	69	72	70
McKean	63	65	62	63	63
Mercer	63	63	65	64	65
Mifflin	70	71	69	69	69
Monroe	75	75	78	77	75
Montgomery	71	70	73	73	73
Montour	74	81	82	82	81
Northampton	69	71	68	69	72
Northumberland	65	66	62	64	65
Perry	71	73	75	79	79
Philadelphia	20	22	21	20	19
Pike	71	74	80	77	78
Potter	66	71	74	74	77
Schuylkill	71	69	70	69	65
Snyder	76	77	72	76	81
Somerset	71	70	72	75	72
Sullivan	68	71	67	79	70
Susquehanna	73	74	74	74	73
Tioga	79	77	74	76	76
Union	80	76	75	74	78
Venango	73	75	72	71	73
Warren	73	75	75	76	78
Washington	69	68	69	69	64
Wayne	75	78	76	75	77
Westmoreland	72	71	73	72	73
Wyoming	71	71	70	77	77
York	72	72	73	72	71
STATEWIDE	64	64	65	64	64

Alcohol-Related Deaths by County—Five-Year Trends

County	1994 Deaths	1995 Deaths	1996 Deaths	1997 Deaths	1998 Deaths
Adams	11	2	12	5	4
Allegheny	37	29	34	40	28
Armstrong	6	4	4	4	4
Beaver	8	3	7	9	11
Bedford	3	5	7	4	7
Berks	17	14	11	13	17
Blair	5	4	6	6	7
Bradford	6	2	3	3	2
Bucks	20	24	27	19	20
Butler	9	15	10	8	7
Cambria	11	3	4	4	6
Cameron	0	0	1	1	1
Carbon	6	3	8	5	10
Centre	6	1	2	5	4
Chester	20	19	14	11	12
Clarion	2	3	6	3	5
Clearfield	2	8	9	13	7
Clinton	1	3	3	2	2
Columbia	1	2	8	1	1
Crawford	11	9	7	7	8
Cumberland	8	5	8	3	3
Dauphin	11	11	12	5	7
Delaware	7	22	8	16	14
Elk	2	1	5	6	8
Erie	15	15	13	10	16
Fayette	17	8	8	16	22
Forest	0	0	0	0	0
Franklin	14	10	3	10	10
Fulton	2	3	2	5	7
Greene	4	5	4	2	1
Huntingdon	7	4	2	2	16
Indiana	5	9	12	7	14
Jefferson	3	1	3	1	0
Juniata	1	1	0	3	2
Lackawanna	6	11	3	8	13
Lancaster	11	19	18	20	11
Lawrence	4	3	1	3	10
Lebanon	3	5	4	3	8
Lehigh	11	13	5	9	13
Luzerne	18	13	16	12	10
Lycoming	5	8	8	5	5
McKean	3	2	5	2	4
Mercer	8	11	6	11	11
Mifflin	2	2	4	3	0
Monroe	7	21	5	13	13
Montgomery	15	22	27	25	23
Montour	2	0	1	0	1
Northampton	8	7	10	11	9
Northumberland	3	5	3	6	4
Perry	3	4	3	2	3
Philadelphia	47	37	20	22	15
Pike	2	3	5	1	1
Potter	1	2	2	3	1
Schuylkill	7	9	7	12	14
Snyder	3	1	2	2	4
Somerset	6	6	2	8	15
Sullivan	0	0	2	1	0
Susquehanna	5	3	8	4	4
Tioga	6	4	3	5	4
Union	2	0	1	2	0
Venango	2	2	3	8	3
Warren	4	9	8	4	1
Washington	7	11	9	9	7
Wayne	3	4	5	3	5
Westmoreland	21	13	26	18	23
Wyoming	3	1	3	2	3
York	17	15	15	28	14
TOTAL	523	514	503	514	535

Pennsylvania Counties

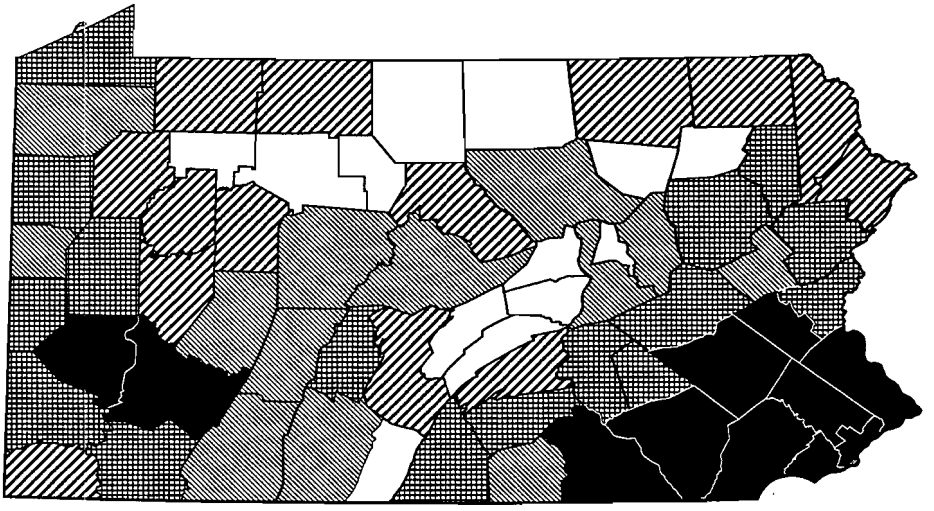
Use the map below as a key to county names for other maps.



The following county-by-county maps have their data broken into five groups, with roughly the same number of counties in each group.

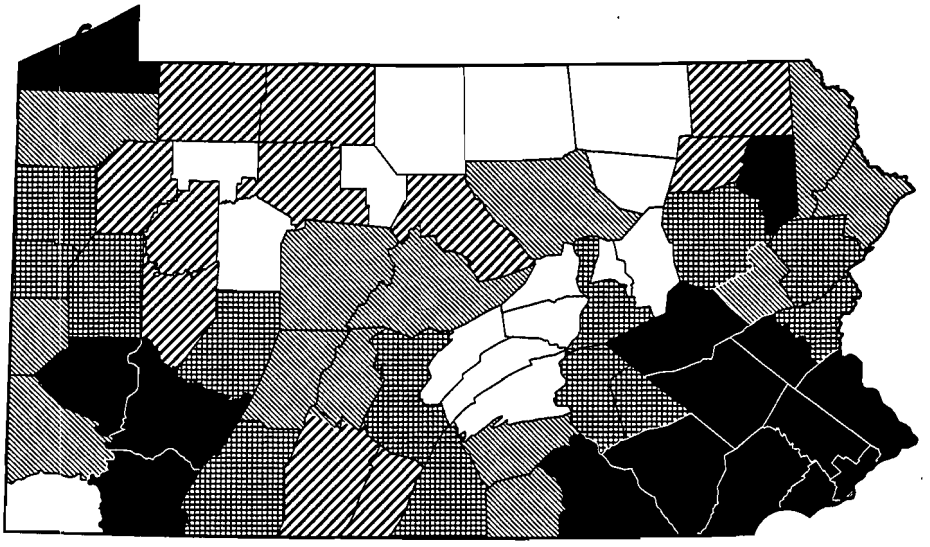
Total Crashes by County

Urban counties, with their higher populations, number of vehicles, and vehicle-miles of travel, lend themselves to a higher number of crashes. Referring to the map below, 56% of the total traffic crashes occurred in only 11 of Pennsylvania's 67 counties. These 11 counties appear in black on the map.



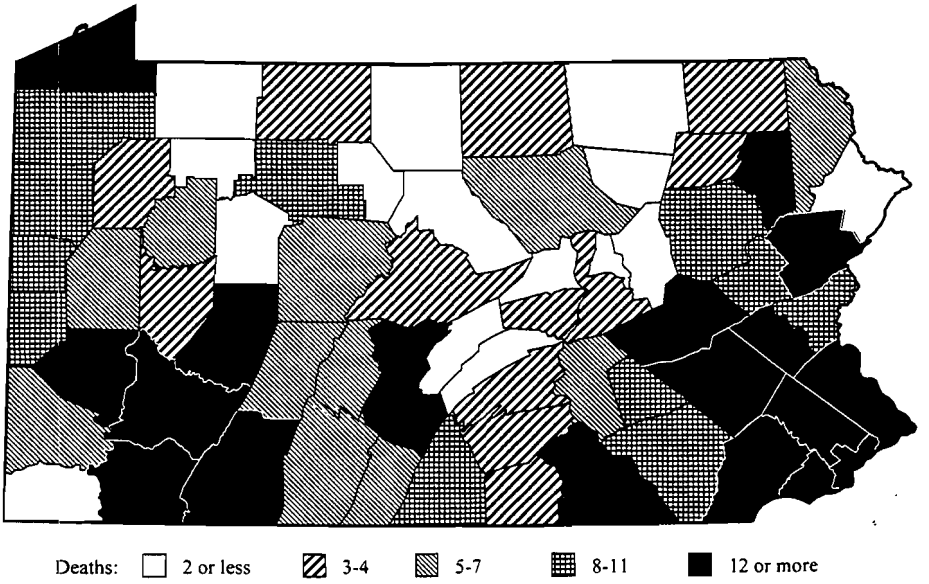
Traffic Deaths by County

Referring to the map below, 53% of the total traffic deaths occurred in only 15 of Pennsylvania's 67 counties. These 15 counties appear in black on the map.



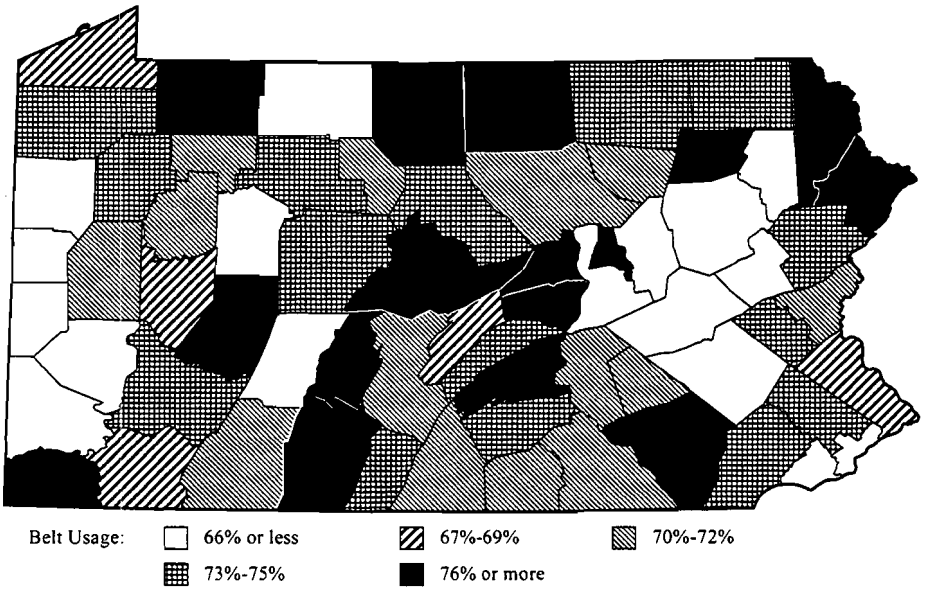
Alcohol-Related Deaths by County

Referring to the map below, 56% of the total alcohol-related deaths occurred in only 18 of Pennsylvania's 67 counties. These 18 counties appear in black on the map.



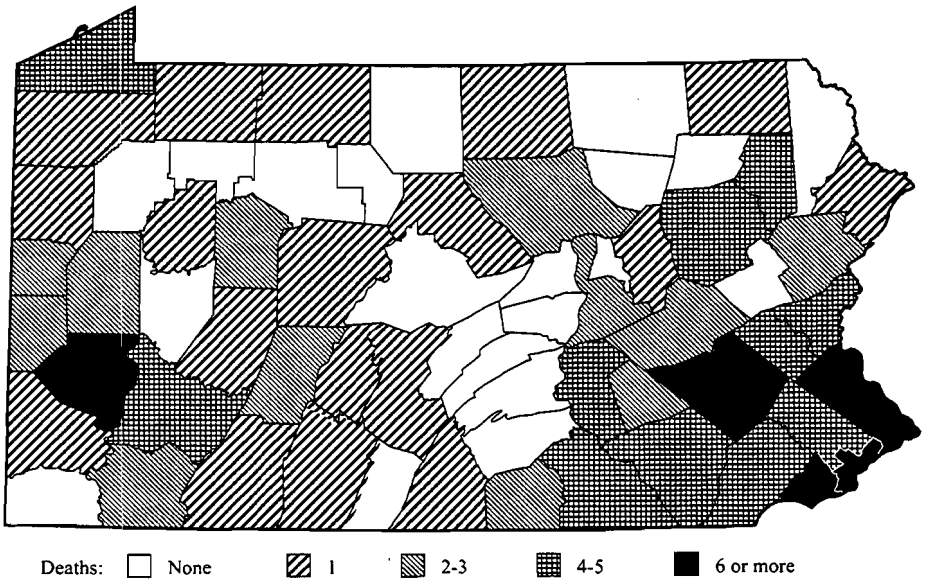
Percent Seat Belt Use in Crashes by County

The percent seat belt use in crashes tended to be lower in counties with major urban areas.



Pedestrian Deaths by County

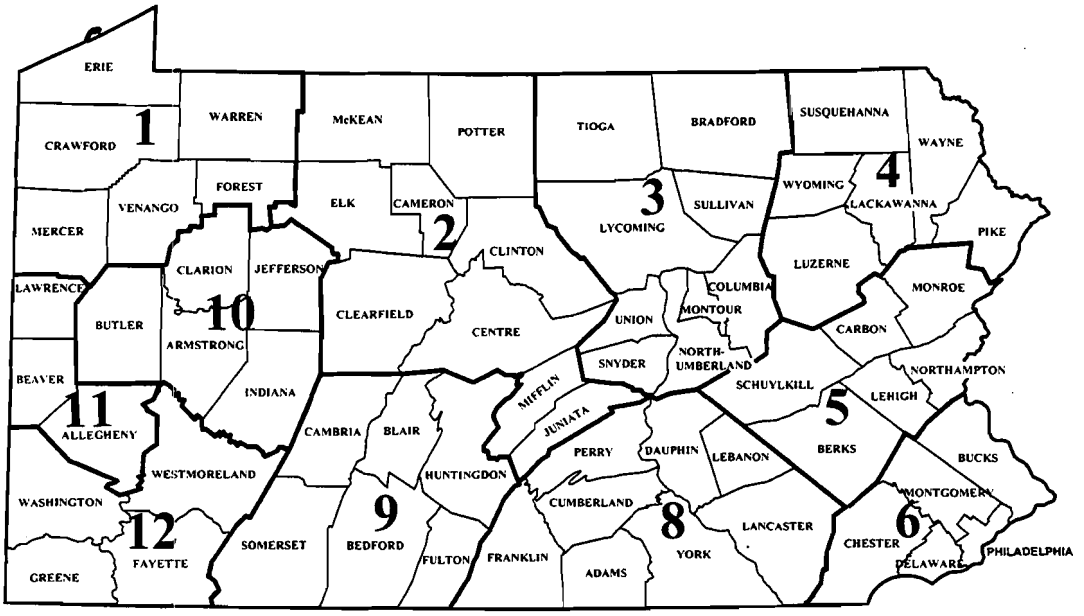
Referring to the map below, 41% of the total pedestrian deaths occurred in only 5 of Pennsylvania's 67 counties. These 5 counties appear in black on the map.



Crashes by Engineering District

The map below illustrates the eleven PennDOT engineering districts in Pennsylvania. The table below lists a breakdown of the number of crashes, deaths, and injuries in 1998 by engineering district.

District	Crashes	Deaths	Injuries
01	7,355	96	6,933
02	4,753	76	4,216
03	4,972	66	4,452
04	8,052	110	7,601
05	17,523	199	15,586
06	41,943	316	44,389
08	20,953	219	18,247
09	5,812	106	5,257
10	4,787	76	4,382
11	16,380	116	15,232
12	8,442	106	7,797
Total	140,972	1,486	134,092



Index

1998 Pennsylvania Crash Facts & Statistics Feedback Survey

The 1998 edition of the *Pennsylvania Crash Facts and Statistics* booklet has a new format and new information. In our continuing effort to make this booklet as useful for as many people as possible, we would appreciate your taking the time to fill out this survey and return it to us. Your opinions will shape future editions.

Does this booklet provide information which is useful to you? (check one) ❑ Yes ❑ No

If not, what information would you like to see included? _____

_____

_____

Is the format easy to follow? (check one) ❑ Yes ❑ No If not, what changes would make the format better and easier for you?

_____

_____

_____

Please rate the following sections of the booklet as to whether you find them Useful, Somewhat Useful, or Not Useful.

	Useful	Somewhat	Not Useful
How to Use This Booklet	❑	❑	❑
Definitions	❑	❑	❑
Overview	❑	❑	❑
All Crashes and Deaths	❑	❑	❑
Drivers	❑	❑	❑
Alcohol-Related Crashes	❑	❑	❑
Seat Belt, Child Safety Seats, etc.	❑	❑	❑
Pedestrians and Bicycle Crashes	❑	❑	❑
Crashes by Motor Vehicle Type	❑	❑	❑
Pennsylvania County Crashes	❑	❑	❑
Index	❑	❑	❑

What section(s) of the booklet do you use *most* often? _____

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Your name and organization (optional): _____

_____

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1. Cut this page out of the booklet.
2. Fold along the dotted lines and tape shut.
3. Place a stamp where indicated.
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Pennsylvania Department and Transportation
Bureau of Highway Safety and Traffic Engineering
P.O. Box 2047
Harrisburg, PA 17105-2047

1998 Pennsylvania Crash Facts & Statistics Survey Form

Dedication

The Commonwealth of Pennsylvania would like to extend its deepest sympathy to the families and friends of the victims of fatal motor vehicle crashes here in Pennsylvania.

We look to the day when publications such as this will no longer be necessary. Until that time, however, the Commonwealth of Pennsylvania will continue to strive to make our roads safer.

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