

# 2002 ALASKA TRAFFIC COLLISIONS

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# **ABSTRACT**

## **Accidents In General**

- Traffic collisions injured 6370 and killed 89 Alaskans during 2002. There were, on average, 36.5 crashes per day and 1.5 crashes per hour. One person died on Alaska highways every 4.1 days.
- There were 272 traffic collisions per 100 million vehicle miles traveled (per 100 million VMT) and 1.82 fatal crashes per 100 million VMT in 2002.
- Fewer crash reports (12.5% less than the previous year) were processed by Department of Transportation staff in 2002. Of 13325 reported traffic collisions, 67.5% involved only property damage (no person injuries). In 27.8% of crashes, the most serious injuries were non-incapacitating (minor). In 4.1% of crashes, the most serious injuries were coded as incapacitating (major). Fatalities were reported in 0.6% of all crashes.
- Police agencies filed reports for 90.1% of crashes in this publication. Drivers reported 9.9%.

## **Causes**

- Alcohol was involved in 8.5% of all crashes (1129 alcohol related collisions) and in 41% of fatal crashes (32 alcohol-related fatal crashes). Speed contributed to 21.1% of all crashes and 35.9% of fatal crashes. Twenty-nine percent of alcohol-related crashes and 40% of alcohol-related fatal crashes also involved unsafe or excessive speed.
- The alcohol-related fatality rate (number of persons killed in alcohol related crashes as a percent of total collision fatalities) was 38.2%.

## **Vehicle Involvement**

- There were 37,615 persons involved in traffic collisions during 2002. Ninety-eight percent (97.9%) were occupants of automobile, trucks, or buses.
- There were 53 fatalities in automobiles, trucks, or buses (34 drivers and 19 passengers).
- Seventy-eight percent (77.8%) of all auto, truck, or bus occupants in police reported crashes wore seatbelts or used child restraints.
- There were 176 motorcycle riders involved in traffic collisions in 2002. Thirteen motorcycle operators sustained fatal injuries. Fifty-three percent (52.9%) of all motorcycle occupants in police reported collisions wore helmets for head protection.
- Snowmobile and all terrain vehicles and occupants now code without distinction as off-road vehicles and off-road vehicle occupants. There were 111 off-road vehicle occupants involved in traffic collisions in 2002. Six off-road vehicle drivers sustained fatal injuries.

- There were 191 pedestrians and 204 bicyclists (pedalcyclists) involved in collisions with motor vehicles in 2002. Seventeen pedestrians died in traffic collisions but no bicyclists sustained fatal injuries.
- Statewide, 73.1% of traffic collisions involved multiple motor vehicles. Twenty-seven percent (26.9%) were single motor vehicle crashes, including single motor vehicle collisions with non-motorists. Fifteen percent of single vehicle and six percent of multiple vehicle crashes were alcohol-related.

### **Location**

- Three-quarters (76.4%) of all traffic collisions occurred on urban roadways.
- Fatal crashes were more equally distributed between urban and rural locations (43.6% rural, 56.4% urban).
- Half of all collisions occurred at intersections, but most fatal crashes were not intersection-related (only 21.8% of fatal crashes occurred at intersections).
- All boroughs reported fewer collisions in 2002 than in 2001.
- Sixty-four percent (64.4%) of all traffic collisions and 41% of all fatal crashes occurred within the boundaries of the Municipality of Anchorage. The percentage of collisions that resulted in fatalities (0.373%) was lower than statewide. Seventy percent (70.4%) of all motor vehicle collisions with pedestrians, 75.8% of all motor vehicle collisions with bicyclists, and 30.7% of all motor vehicle collisions with moose occurred in Anchorage. Sixty-two percent (62.3%) of all alcohol-related crashes and 64.9% of all speed-related crashes were reported there.
- Eighty-three percent (83.1%) of statewide traffic collisions occurred in Alaska DOT's Central Maintenance Region
- 12.3% were reported from areas within the Northern Maintenance Region
- There were 4.5% accidents from locations within the Southeast Maintenance Region.

### **Data Collection**

- The percentage of reported crashes that resulted in injuries or fatalities appeared to increase in all boroughs.
- Difficulties distributing new driver and police report forms may have lead to reduced reporting of property damage only and minor injury collisions.
- Data collected between 1993 and 2002 suggests a trend of increasing severity of traffic collisions that are reported.

## SUMMARY STATISTICS

<b>COLLISIONS</b>	<b>2002</b>
TOTAL CRASHES	13325
FATAL CRASHES	78
INJURY (MIN+MAJ) CRASHES	4249
PDO CRASHES	8998
SINGLE VEHICLE CRASHES	3578
MULTIPLE MV CRASHES	9747
CRASHES WITH DISABLING OR >\$501 VEHICLE DAMAGE	10937
ALL CRASHES	1427
HIT & RUN INJURY CRASHES	254
HIT & RUN FATAL CRASHES	3
ALCOHOL RELATED CRASHES	1129
ALCOHOL RELATED INJURY CRASHES	490
ALCOHOL RELATED FATAL CRASHES	32
POLICE REPORTED CRASHES	12007
DRIVER REPORTED CRASHES	1318
URBAN CRASH LOCATION	10187
RURAL CRASH LOCATION	3138
COLLISIONS WITH MOOSE	557
<b>ACCIDENT RATES</b>	
CRASHES PER MILLION VMT	2.72
FATALITIES PER 100 MILLION VMT	1.82
% OF CRASHES THAT WERE ALCOHOL RELATED	8.47%
% OF FATAL CRASHES THAT WERE ALCOHOL RELATED	41.0%

<b>VEHICLES</b>	<b>2002</b>
<b>TOTAL VEHICLES</b>	24540
AUTO/TRUCK/BUS VEHICLES	23826
ATB VEH WITH >\$501	16826
ATB VEH WITH DISABLING DMG	5943
MOTORCYCLES	162
OFF-ROAD VEHICLES	82
PEDESTRIANS	191
BICYCLES	201
<b>TOTAL VEHICLES IN ALCOHOL RELATED CRASHES</b>	1851
AUTO/TRUCK/BUS IN ALCOHOL RELATED CRASHES	1744
MOTORCYCLES IN ALCOHOL RELATED CRASHES	20
OFF-ROAD VEHICLES IN ALCOHOL RELATED CRASHES	18
PEDESTRIANS IN ALCOHOL RELATED CRASHES	53
BICYCLES IN ALCOHOL RELATED CRASHES	16

<b>OCCUPANTS</b>	<b>2002</b>
TOTAL PERSONS	37615
FATALITIES	89
INJURIES (MINOR+MAJOR)	6370
TOTAL PERSONS IN ALCOHOL RELATED CRASHES	2665
ALCOHOL RELATED FATALITIES	34
ALCOHOL RELATED INJURIES (MINOR+MAJOR)	803
FATALITIES, % ALCOHOL RELATED	38.2%
<b>AUTO, TRUCKS &amp; BUSES</b>	
ATB OCCUPANTS	36832
ATB PASSENGER FATALITIES	19
ATB DRIVER FATALITIES	34
ATB OCCUPANTS IN ALCOHOL RELATED CRASHES	2546
ATB FATALITIES IN ALCOHOL RELATED CRASHES	22
ATB IMPAIRED DRIVERS	1064

<b>OCCUPANTS</b>	<b>2002</b>
ATB PASSENGER FATALITIES, WITH IMPAIRED DRIVERS	3
ATB IMPAIRED DRIVER FATALITIES	17
ATB % SEATBELT USE (POLICE REPORTED ONLY)	77.8%
ATB %AIRBAG DEPLOYMENT (POLICE REPORTED)	3%
ATB %CHILD RESTRAINT (PROPER, POLICE REPORTED)	81.6%
<b>MOTORCYCLES</b>	
MC OCCUPANTS	176
MC PASSENGER FATALITIES	0
MC DRIVER FATALITIES	13
MC OCCUPANTS IN ALCOHOL RELATED CRASHES	22
MC FATALITIES IN ALCOHOL RELATED CRASHES	4
MC IMPAIRED DRIVERS	17
MC PASSENGER FATALITIES, WITH IMPAIRED DRIVERS	0
MC IMPAIRED DRIVER FATALITIES	4
<b>OFF-ROAD VEHICLES</b>	
OFF RD VEH OCCUPANTS	111
OFF RD VEH PASSENGER FATALITIES	0
OFF RD VEH DRIVER FATALITIES	6
OFF RD VEH OCCUPANTS IN ALCOHOL RELATED CRASHES	21
OFF RD VEH FATALITIES IN ALCOHOL RELATED CRASHES	3
OFF RD VEH IMPAIRED DRIVERS	12
OFF RD VEH PASSENGER FATALITIES, WITH IMPAIRED DRIVERS	0
OFF RD VEH IMPAIRED DRIVER FATALITIES	3
<b>PEDESTRIANS</b>	
PEDESTRIANS	191
PEDESTRIAN FATALITIES	17
PEDESTRIANS IN ALCOHOL RELATED CRASHES	53
PEDESTRIAN FATALITIES IN ALCOHOL RELATED CRASHES	5
IMPAIRED PEDESTRIANS	43
PEDESTRIAN FATALITIES (NO ALCOHOL), STRUCK BY IMPAIRED MV DRIVERS	1
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<b>PEDALCYCLISTS (BICYCLISTS)</b>	204
BICYCLIST FATALITIES	0
BICYCLIST IN ALCOHOL RELATED CRASHES	17
BICYCLIST FATALITIES IN ALCOHOL RELATED CRASHES	0
IMPAIRED BICYCLISTS	14
BICYCLIST FATALITIES (NO ALCOHOL), STRUCK BY IMPAIRED MV DRIVERS	0
IMPAIRED BICYCLIST FATALITIES	0

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## PREFACE

Alaska motor vehicle collision records are stored in the Highway Analysis System (HAS), a database maintained on the State of Alaska Computer Network at the Juneau Data Center. The State of Alaska and the Federal Highway Administration of the U.S. Department of Transportation provide funding for this publication and for the continuing development of the Highway Analysis System, which integrates collision data with road network and other information.

Collision data specific to a particular collision is confidential according to Alaska Statute 28.15.151(f). An Attorney General's opinion of 1988 provides for the public reporting of aggregate collision data such as contained in this publication.

Motor vehicle collision information is first recorded on collision report forms by police or by involved drivers. Police agencies send copies of Form #12-200 to Department of Administration, Division of Motor Vehicles (Driver Services). Drivers submit report Form #12-209 directly to the Division of Motor Vehicles. The Division of Motor Vehicles assigns a security responsibility tracking number to the reports it receives, then forwards copies of all collision reports to the Division of Program Development, Headquarters, Alaska Department of Transportation and Public Facilities (ADOT&PF). The HAS database includes only collision reports received by ADOT&PF from the Division of Motor Vehicles.

At ADOT&PF, collision information is carefully checked for code consistency and a mile point location is determined for routes in the HAS linear reference system. The coded crash record is then loaded to the HAS database for permanent storage and analysis. Collisions data reporting staff, members of the Highway Database Management Unit of the Division of Program Development, determine which collisions meet program criteria and ensure that collision records submitted to the Highway Analysis System are complete and accurate.

As soon as all collision information is stored in the Highway Analysis System database for a calendar year, it is available for analysis by ADOT&PF traffic engineers and statistical staff, as well as other qualified users of the State data network. Most collision records for the calendar year are stored in the database by June of the following year. Yearly summaries, including the statistical tables in this publication, are prepared at that time<sup>1</sup>.

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<sup>1</sup> Previous traffic collision reports, published by Headquarters, Alaska Department of Transportation and Public Facilities, are: **Collision Statistics 1978 - 1982**, DOT&PF Traffic and Safety Section, Juneau, (1983); **1983 Alaska Annual Collision Rate Report**, (1984); **1984 Alaska Traffic Collisions**, (1985); **1985 Alaska Traffic Collisions**, (1986); **1986 Alaska Traffic Collisions**, (1987); **1987 Alaska Traffic Collisions**, (1988); **1988 Alaska Traffic Collisions**, (1989); **1989 Alaska Traffic Collisions**, (1990); **1990 Alaska Traffic Collisions**, (1991); **1991 Alaska Traffic Collisions**, (1992); **1992 Alaska Traffic Collisions**, (1993); **1993 Alaska Traffic Collisions**, (1994); **1994 Alaska Traffic Collisions**, (1995); **1995 Alaska Traffic Collisions**, (1996); **1996 Alaska Traffic Collisions**, (1997); **1997 Alaska Traffic Collisions**, (1998); **1998 Alaska Traffic Collisions**, (1999); **1999 Alaska Traffic Collisions**, (2000); **2000 Alaska Traffic Collisions** (2002); and **2001 Alaska Traffic Collisions** (2003)..

## TRAFFIC COLLISION TERMINOLOGY

**Traffic Collision Definitions:** A traffic collision is a motor vehicle collision that occurs on a trafficway. Motor vehicle collisions in parking lots or on other private property, or collisions where the only vehicle(s) involved are not customarily used for transport on roads, e.g., forklifts or airline baggage carts, are not considered traffic collisions. Also excluded are motor vehicle collisions directly resulting from a natural disaster and collisions caused by an explosion or discharge of a firearm. To maintain consistency with the Fatal Collision Reporting System (FARS) definition, fatalities directly attributed to pre-existing medical conditions are not considered traffic fatalities. These types of collisions have been omitted from this publication.

A glossary with additional definitions is provided following the Appendix Tables of this publication.

**Reporting Requirements:** Alaska State law (AS 28.35.080) requires the reporting of any motor vehicle collision that results in the death or injury of one or more persons or that causes total property damage of \$2,000 or more. Drivers involved in such collisions are required to report crash information to a police agency and submit Form #12-209 to the Department of Administration if police do not investigate. Whenever police investigate a motor vehicle collision, they are required to forward Form #12-200 to the Department of Administration, Division of Motor Vehicles. Drivers are not required to submit a report to the Division of Motor Vehicles if a police agency has investigated and assumed responsibility for reporting.

Alaska State law also requires that drivers or vehicle owners provide proof of motor vehicle liability insurance to the Department of Administration, Division of Motor Vehicles if they are involved in a motor vehicle collision on public property that involves injury, death, or total property damage exceeding \$501 (AS28.22.021). Because of this, many drivers voluntarily file Form #12-209 for collisions with less than \$2000 damage.

**Collision Severity:** Traffic collisions are categorized in this publication based on the most serious injury to motor vehicle occupants and any nonmotorists that are involved (pedestrians and bicyclists struck by motor vehicles). Collisions that involve no injuries or deaths are designated *property-damage-only* (PDO). An *injury collision* has caused one or more injuries, but no deaths. A *fatal collision* has resulted in at least one death within thirty days of the crash. Collisions involving injuries are further subdivided into *major* and *minor* injury collisions. A major injury collision is one in which the most serious injury is incapacitating. The most serious injury in a minor injury collision is not incapacitating (typically pain, minor bleeding, a minor burn, a bruise, a contusion, or an abrasion).

**Injury Severity:** While *collision severity* reflects the most serious injury within a collision and counts crash incidents, *occupant injury severity* is evaluated for each person involved and counts persons. Minor, major, and fatal injury designations are based on the same criteria used for assigning collision severity. Occupant injury severity counts the number of persons receiving fatal, major, or minor injuries. Counts of persons not injured in crashes are accumulated under the *no injuries* category rather than a PDO designation.

Vehicle injury severity, based on the most serious injury within a vehicle, is also calculated for some statistical tables in this publication's Appendix. Numbers of vehicles in which no occupants received injuries are accumulated under a *no injuries* category. Numbers of vehicles in which fatalities occurred accumulate under the fatality category, while those in which the most serious injury was major or minor accumulate under the major injury or minor injury categories, respectively.

**Classification of Vehicles:** In the HAS database structure, pedestrians and nonmotorized vehicles such as bicycles are stored as vehicle records. Appendix tables labeled "all vehicles" include nonmotorized as well as motorized transport vehicle data in their analysis (that is, pedestrians and bicycles are included). Motor vehicles traditionally used on public roadways as transport vehicles, excluding motorcycles, are called "autos, trucks, and buses" in this publication. In the Appendix Sections I through III, Appendices A through C, and G contain collision statistics for all valid trafficway collisions. These collisions can involve any combination of vehicle types. Persons can be riding in any motor vehicle type or they may be nonmotorists, such as pedestrians or bicyclists that are struck by motor vehicles. Also in the Appendix Sections I through III, Appendices D and H contain the detailed collision data for automobiles, trucks, and buses (vehicles such as passenger cars, pick-up trucks and other light trucks, large trucks, panel/van trucks, buses, motor homes, tractor-trailer combinations, and emergency vehicles). At least one vehicle involved in the collision must be an automobile, truck, or bus. Appendices labeled "E" contain the pedestrian and pedalcycle collision details. Appendices labeled "F" contains collision statistics for motorcycles and recreational vehicles (snow machines and all terrain vehicles combined).

**Alcohol-Related:** A collision is designated alcohol related if any driver or involved non-motorist is considered alcohol impaired by police. Passenger (non-driver) data is not considered. Criteria include police suspicion of alcohol use, positive alcohol tests results, and traffic citations. An alcohol test is positive if the blood alcohol concentration (BAC) or equivalent is nonzero. The term impairment is used in this publication to designate alcohol use without respect the amount of alcohol indicated. In Alaska, intoxication is defined as having a BAC of 0.08% or more. In this publication, alcohol related collisions do not necessarily involve drunk drivers and driver impairment does not refer to legal intoxication.

**Speed-Related:** A collision is designated speed related if any involved driver is issued a traffic ticket for speed (basic speed, racing, or speed in school zones) or is coded for the human circumstance "unsafe speed."

**Holiday and Weekend Intervals:** Holiday and weekend intervals comply with NHTSA guidelines. If a holiday occurs on either Saturday or Sunday, the holiday interval extends from 6:00 pm Friday to 5:59 am Monday. Intervals for holidays occurring on Monday or Tuesday extend from 6:00 pm Friday to either 5:59 am Tuesday or 5:59 am Wednesday. If the holiday falls on Wednesday, a 6:00 pm Tuesday to 5:59 am Thursday interval is used. If the holiday falls on Thursday, the holiday period runs from 6:00 pm Wednesday to 5:59 am Monday. The interval for a holiday occurring on Friday extends from 6:00 pm Thursday to 5:59 am Monday. For many holidays, the length of the holiday interval will vary from year to year. The weekend interval extends from 6:00 pm Friday to 5:59 am Monday (60 hours).

## TRENDS IN ALASKA TRAFFIC COLLISIONS

Population estimates, numbers of licensed drivers and registered motor vehicles, and estimates of annual vehicle miles traveled (AVMT) by all motor vehicles in Alaska are given in Table 1. Annual Vehicle Miles Traveled (AVMT) are from estimates developed in the Federal Highway Administration's Highway Performance Monitoring System (HPMS). The data series for licensed drivers and motor vehicles are from the Division of Motor Vehicles, Alaska Department of Administration. Registered motor vehicle counts include snowmobiles and motorcycles. Beginning with 1998 data, drivers with instruction permits are counted as licensed drivers.

**TABLE 1 <sup>2</sup>**  
**Alaska Mid-year Population, Licensed Drivers, Registered Motor Vehicles, and Vehicle Miles Traveled (1993-2002)**

Year	Mid-year Population	Licensed Drivers	Registered Motor Vehicles	Annual Vehicle Miles Traveled (Millions)
2002	641,000	498,000	775,000	4,897
2001	633,000	490,000	748,000	4,801
2000	627,000	483,000	737,000	4,601
1999	622,000	478,000	712,000	4,546
1998	617,000	474,000	676,000	4,515
1997	610,000	464,000	652,000	4,120
1996	605,000	430,000	629,000	4,220
1995	602,000	435,000	630,000	4,403
1994	601,000	436,000	545,000	4,148
1993	600,000	394,000	523,000	3,919

Table 2 and Figure 1 summarize Alaska traffic collision severity for the ten-year period between 1993 and 2002.

There were 1948 (12.8%) fewer traffic collisions processed in 2002 than in 2001. The number of fatal collisions decreased by two (2.5%). Numbers of both nonfatal injury and property damage only (PDO) collisions also decreased (6.1% and 15.7% respectively). See the section entitled **Crash Data Sources** for a brief discussion of possible reporting issues related to these annual declines in accidents.

Police reported hit and run circumstances for 1427 collisions in 2002 (10.7% of all reported collisions and 4% of injury plus fatal collisions). Hit and run circumstances were coded for three fatal collisions.

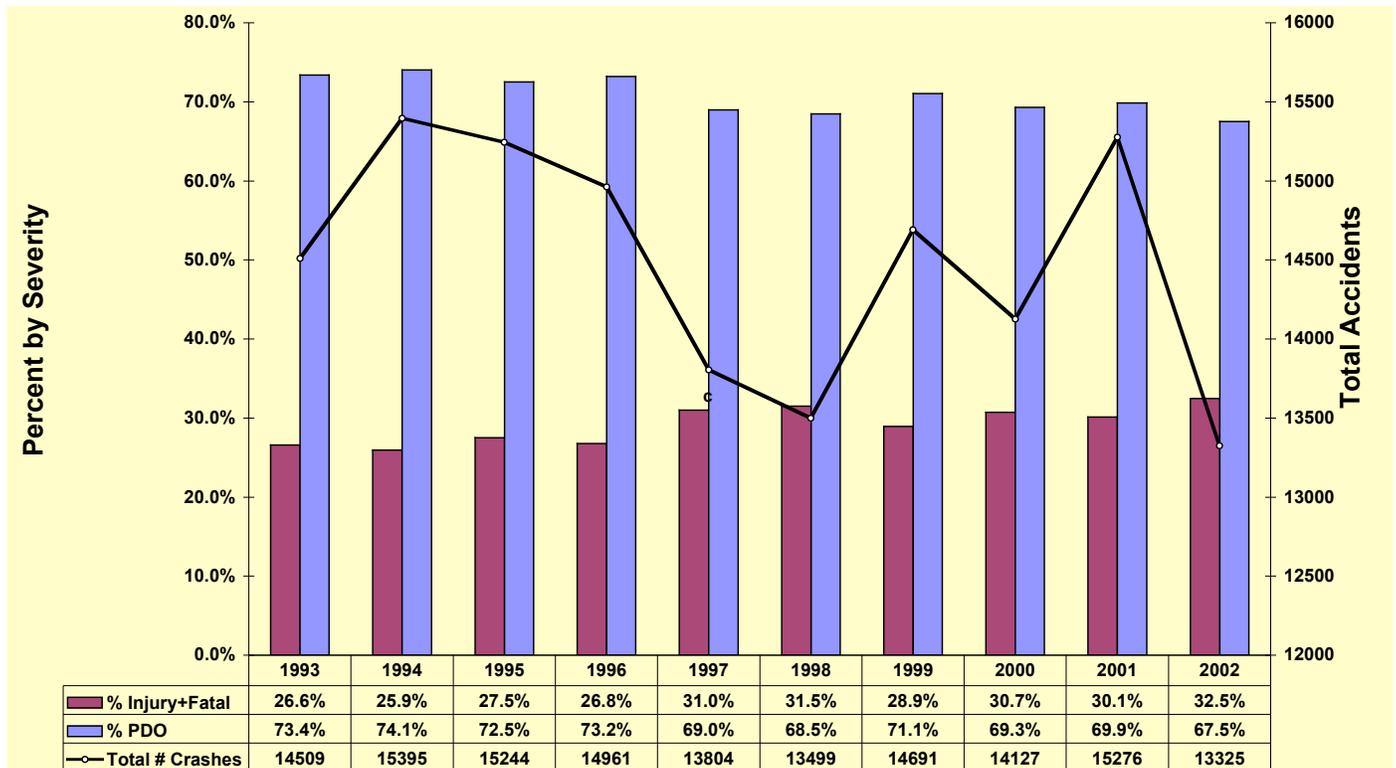
<sup>2</sup> Sources: 1) Alaska mid-year population estimates are from the **Alaska Population Overview**, Alaska Department of Labor, January 2003. 2) Licensed driver estimates are from the Division of Motor Vehicles, Alaska Department of Administration. 3) Registered motor vehicle estimates are from the Division of Motor Vehicles, Alaska Department of Administration. 4) Annual vehicle miles traveled (AVMT) are from the DOT&PF Highway Performance Monitoring System (HPMS) data for 1993 through 2002. The AVMT have been adjusted for axle correction for all functional classes.

Between 1993 and 2001, injury collisions ranged from 25.9% (1994) to 31.5% (1998) of all collisions reported annually, while PDO collisions ranged from 68.5% (1998) to 74.0% (1994). In 2002, 31.9% of all collisions involved nonfatal injuries and 67.5% were classed as property damage only.

**TABLE 2<sup>3</sup>**  
**Alaska Traffic Collisions by Collision Injury Severity and Year (1993-2002)**

Year	Property-Damage-Only Collisions	Non-fatal Injury Collisions	Fatal Collisions	All Collisions
2002	8,998	4,249	78	13,325
2001	10,670	4,523	80	15,273
2000	9,789	4,245	93	14,127
1999	10,439	4,181	71	14,691
1998	9,246	4,190	63	13,499
1997	9,523	4,213	68	13,804
1996	10,956	3,935	71	14,962
1995	11,052	4,117	75	15,244
1994	11,400	3,925	70	15,395
1993	10,650	3,768	88	14,509

**Figure 1**  
**Alaska Traffic Collisions (1993-2002)**



<sup>3</sup> Sources: **Alaska Traffic Collisions**, annual editions for collision reporting years 1993 through 2001, published by Headquarters, Alaska Department of Transportation and Public Facilities. Fatal collision reporting is consistent with the Fatality Analysis Reporting System (FARS) criteria.

Table 3 summarizes numbers of persons injured or killed in Alaska traffic collisions between 1993 and 2002. Beginning with the 2002 reporting year, a dollar valuation is no longer being assigned for the total cost of damages in each collision or to the cost of damage to individual vehicles. Limited data is available for the number of vehicles with estimated damage greater than \$501, for number of vehicles with disabling versus functional damage, and for the number of collisions in which non-vehicular damage occurred. The cost of damage to vehicles in collisions that occurred prior to 2002 can be obtained from Table 3 in older editions of this publication.

**TABLE 3 <sup>4</sup>**  
**Persons Injured and Killed**  
**In Alaska Traffic Collisions (1993-2002)**

Year	Nonfatal Traffic Injuries	Traffic Deaths	All Traffic Deaths And Injuries
2002	6,370	89	6,459
2001	6,543	89	6,632
2000	6,120	106	6,226
1999	6,081	77	6,158
1998	6,163	70	6,233
1997	6,257	78	6,335
1996	5,851	79	5,930
1995	6,059	87	6,146
1994	5,778	85	5,863
1993	5,686	118	5,804

Alaska traffic collision deaths in 2002 included seventeen pedestrians (only 7 in 2001), thirteen motorcyclists (only 7 in 2001), six off-road vehicle operators, and fifty-three occupants of automobiles or trucks. There was one fatality in 2002 due to a vehicle collision with a moose in the roadway. Thirty-four deaths occurred in alcohol-related traffic collisions during 2002.

Two accepted methods for making collision severity comparisons are based on calculations of the number of fatalities per million vehicle miles traveled (VMT) or the number of fatalities per million licensed drivers. Table 4 summarizes the United States annual VMT, licensed drivers, and fatalities for the last ten years, as provided by the Federal Highway Administration, Office of Highway Information Management. See Table 1 for corresponding Alaska data.

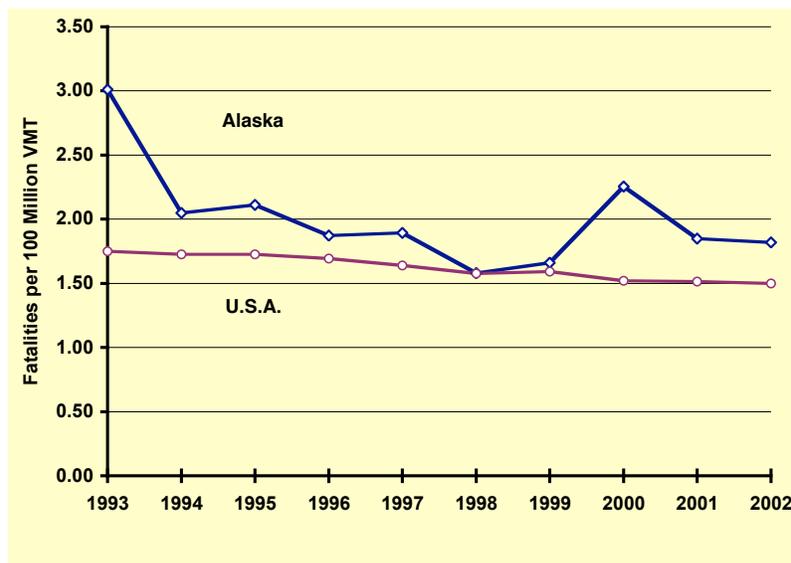
<sup>4</sup> Sources: **Alaska Traffic Collisions**, annual editions for collision reporting years 1993 through 2001, published by Headquarters, Alaska Department of Transportation and Public Facilities. Fatalities (traffic deaths) are consistent with the Fatality Analysis Reporting System (FARS) criteria.

**TABLE 4 <sup>5</sup>**  
**United States Vehicle Miles Traveled,  
 Licensed Drivers, and Fatalities (1993-2002)**

Year	Annual Vehicle Miles Traveled (Millions)	Licensed Drivers	Fatalities
2002	2,856,000	194,296,000	42,815
2001	2,781,000	191,276,000	42,116
2000	2,750,000	190,625,000	41,821
1999	2,691,000	187,170,000	41,717
1998	2,632,000	184,980,000	41,501
1997	2,562,000	182,709,000	42,013
1996	2,486,000	179,539,000	42,065
1995	2,423,000	176,628,000	41,817
1994	2,358,000	175,403,000	40,716
1993	2,296,000	173,149,000	40,150

Figure 2 compares Alaska and U.S. annual fatalities per 100 million annual vehicle miles traveled for the last ten years. The national rate decreased annually between 1993 and 2001, from 1.75 U.S. fatalities /100 million VMT in 1993 to 1.50 U.S. fatalities /100 million VMT in 2002. Alaska's rate also decreased annually, but remained above the national rate until 1998 and 1999. In 2000, Alaska's rate rose for the first time in six years, to 2.30 fatalities per 100 million VMT. It decreased to 1.85 traffic fatalities per 100 million VMT in 2001 and 1.82 fatalities per 100million VMT in 2002 (comparable to fatality rates between 1994 and 1997).

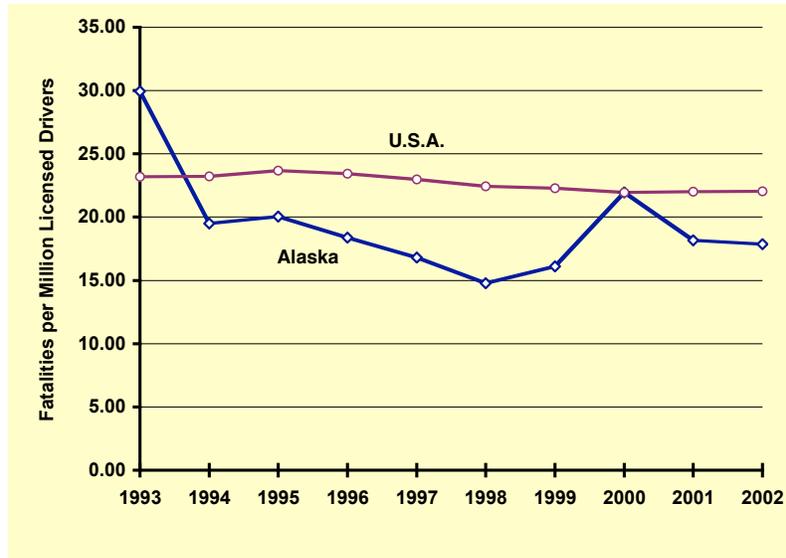
**Figure 2**  
**Alaska and U.S. Traffic Fatalities (1993-2002)**  
**Per 100 Million Vehicle Miles Traveled**



<sup>5</sup> Source: **Traffic Safety Facts 2002**, National Center for Statistics & Analysis. This fact sheet was provided by the National Highway Traffic Safety Administration internet site at [www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/Availinf.html](http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/Availinf.html).  
 2002 Alaska Traffic Collisions

Figure 3 compares the U.S. and Alaska trends for fatalities per million licensed drivers. While Alaska traffic fatality rates based on traffic volumes (by VMT) are typically greater than the corresponding national rate, Alaska traffic fatality rates based on population, number of licensed drivers, or number of registered vehicles tend to be less.

**Figure 3**  
**Alaska and U.S. Traffic Fatalities (1993-2002)**  
**Per Million Licensed Drivers**



## **CRASH EVENTS**

Event type, or type of collision, describes the crash events of the traffic collision. Law enforcement personnel indicate a first collision event for the entire collision and a possible second collision event for each vehicle, following procedures described in the State of Alaska Police Collision Report Manual. Drivers are asked only to describe a first collision event for traffic collisions that they report.

No attempt is made to assign a most harmful event in a sequence of crash events. The first collision event is not always the crash event responsible for the most serious injuries to vehicle occupants or for the most damage to vehicles.

The first collision event is used to classify the type of collision, or crash type, referenced in this publication. For a single vehicle, this may be a collision with an animal, pedestrian, or fixed object such as a light pole or ditch, or it may be a non-collision event such as an overturn. For multiple vehicle collisions, the first event is typically a collision with another motor vehicle. Collisions between motor vehicles in transport (motor vehicles in the process of transporting people or goods on a public roadway) are classified as rear end, head on, angle, or sideswipe motor vehicle collisions. Collisions between vehicles in transport and parked vehicles (vehicles parked outside of the travel lanes of public roadways) are classified as collisions with parked vehicles.

Figure 4A, adapted from Appendix Table I.F.1.1 compares first collision event types for all collisions with those for collisions that resulted in fatal injuries. Figure 4B presents first collision event data for alcohol-related crashes. Sideswipe collision data is combined with motor vehicle angle collision events for this figure. Event types that were very infrequently coded and events coded as “other” are not shown

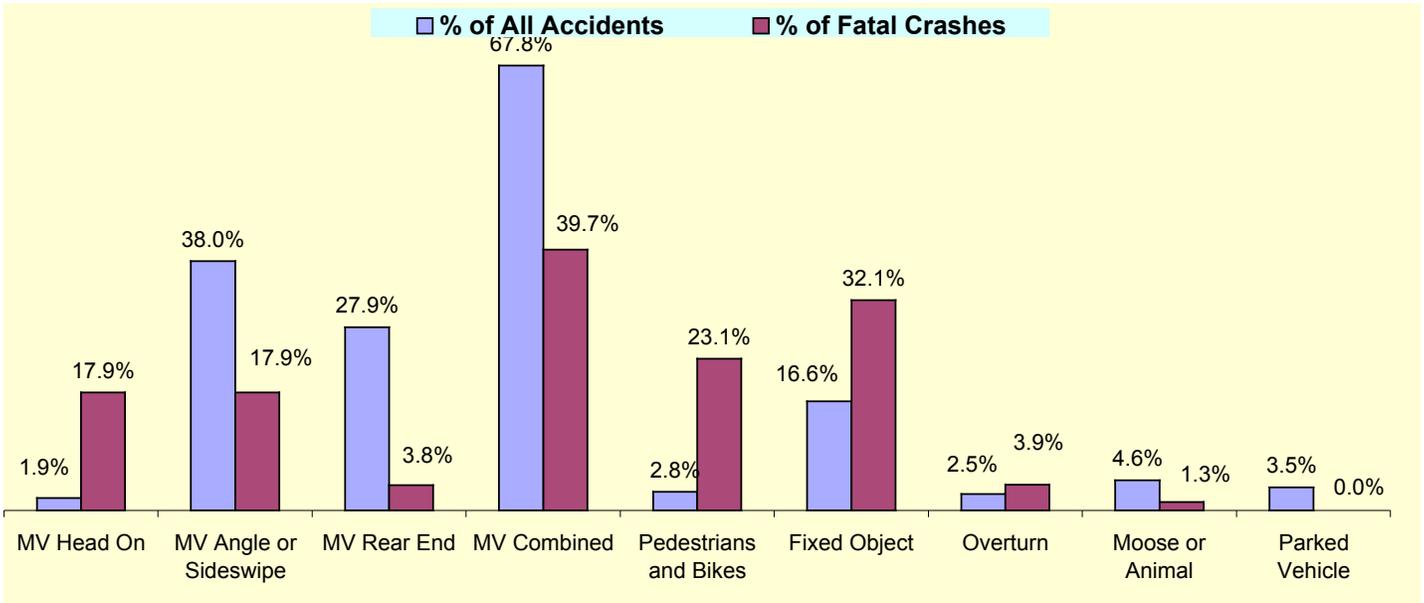
### **All Collisions**

Collisions between motor vehicles (head-on, rear-end, angle, and sideswipes combined) occurred as first harmful events in sixty-eight percent of all collisions in 2002 (69% in 2001) and in forty percent of fatal crashes (a decrease from 48% of fatal collisions in 2001). Thirty-eight percent of all Alaska traffic collisions in 2002 involved motor vehicle (MV) angle collisions, a crash type associated typically with turning movements, passing, and failure to yield situations. Twenty-eight percent of all first collision events were MV rear end collisions, a crash type typical of situations involving unsafe speed and driver inattention at intersections or in slowing traffic. Less than 2% of all crashes involved head-on first event collisions. Collisions with fixed objects were coded as the crash type for 17% of all traffic collisions in 2002.

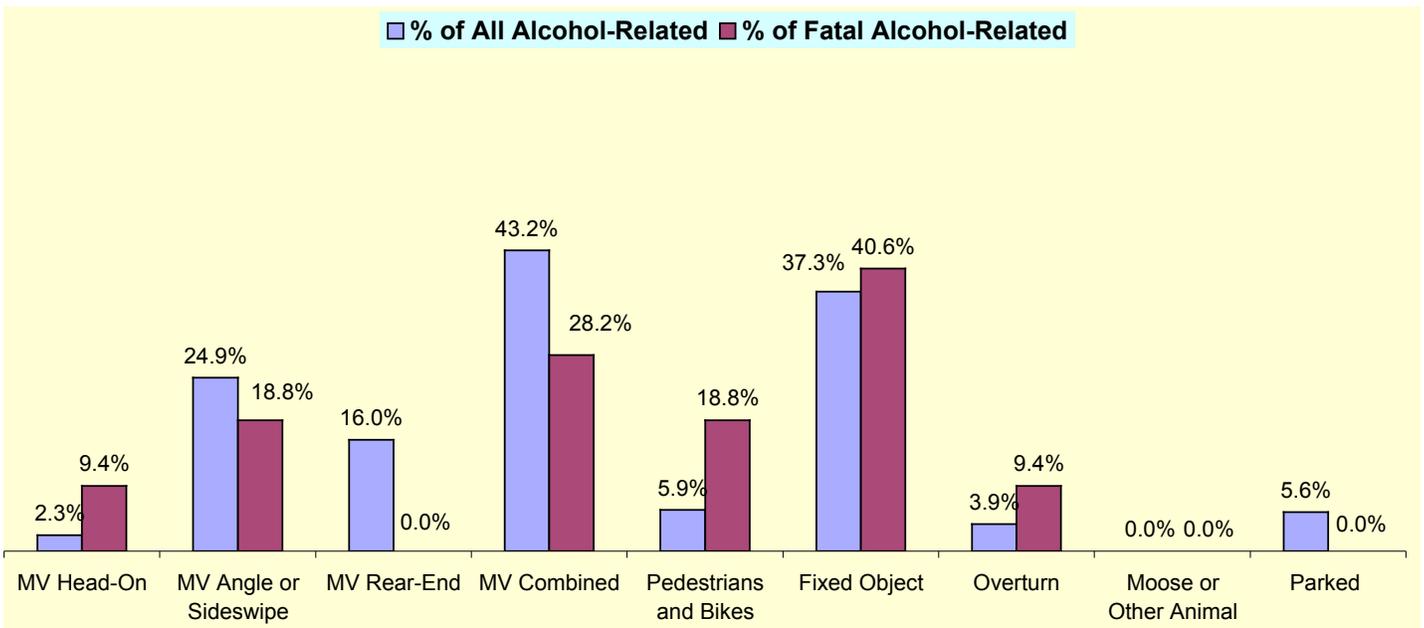
### **Fatal Collisions**

Fatal collisions included a higher percentage of collisions with fixed objects, head-on collisions with other motor vehicles, vehicle rollovers, and collisions with pedestrians and bicyclists than traffic collisions overall. Collisions with other motor vehicles comprised 43% of fatal crash types (40% combined: 18% head-on, 18% angle, and 4% rear-end collisions coded as first crash events). Thirty-two percent of fatal crashes involved collisions with fixed objects. In 23% of fatal crashes, collisions with pedestrians were coded as first collision events.

**Figure 4A**  
**2002 Collision Collisions by Type**



**Figure 4B**  
**2002 Alcohol-Related Collision Collisions by Type**



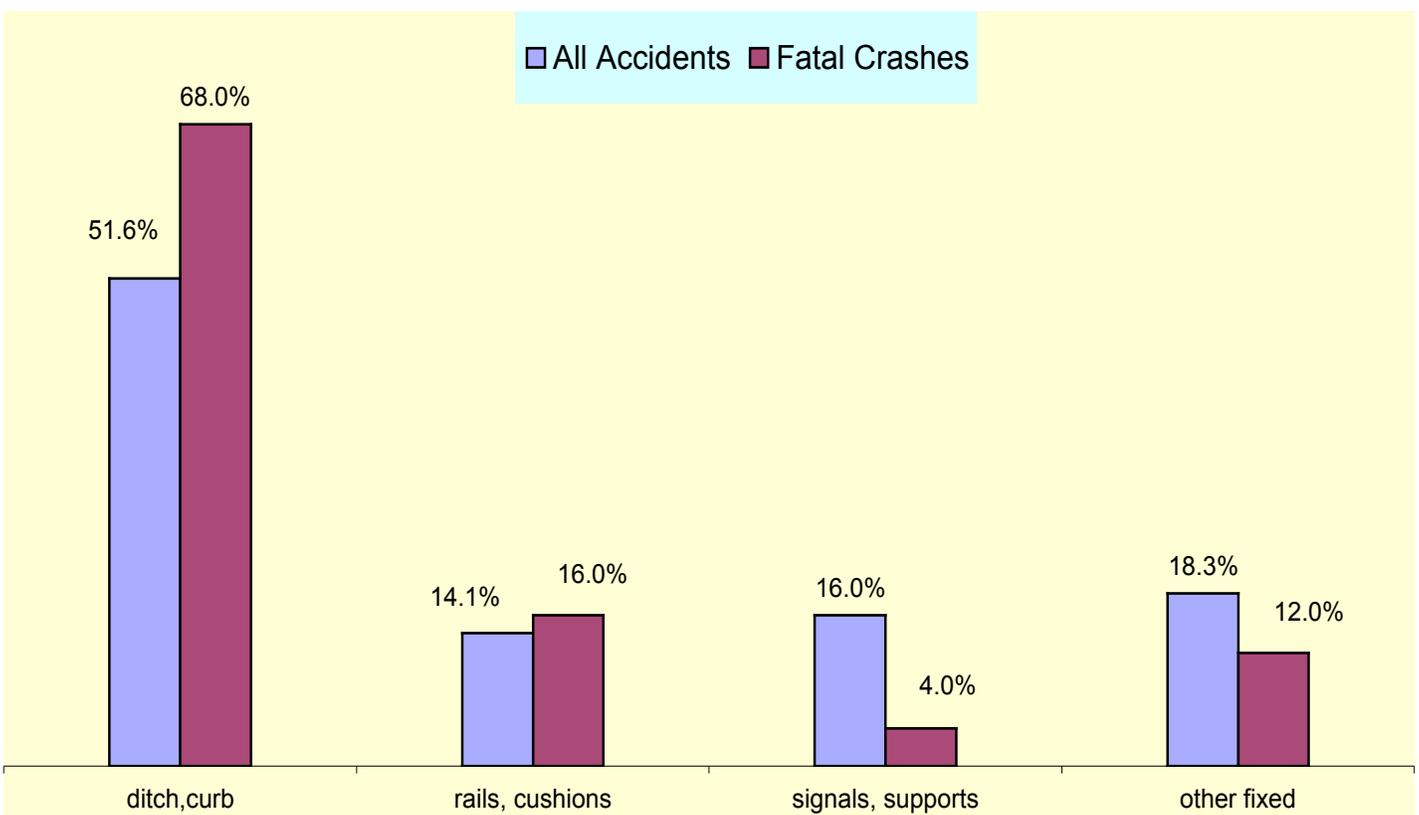
## Alcohol-Related Collisions

Alcohol-related collisions were less likely to involve collisions with motor vehicles than collisions overall. Collisions between motor vehicles dropped to 43% of first event coding for all collisions when alcohol was involved and 28% of first event coding for fatal collisions when alcohol was involved (from 68% and 40% respectively of crash event coding in all collisions and in all fatal crashes). Thirty-seven percent of all alcohol-related crashes and almost 41% of fatal alcohol-related crashes had first event coding indicating collisions with fixed objects (17% in all collisions and 32% in all fatal crashes). Alcohol-related crashes were also more likely to involve vehicle overturns and collisions with pedestrians and bicyclists.

## Collisions With Fixed Objects

Seventeen percent of all collisions and 32% of fatal crashes occurred when vehicles first struck fixed objects. Most often, fixed object crashes were coded for collisions with ditches or embankments. In some of these crashes, secondary events such as vehicle overturns or collisions with trees and culverts may have been more harmful to vehicle occupants. Figure 5 summarizes the kinds of objects struck in fixed object collisions.

**Figure 5**  
**Fixed Objects Struck In 2002 Traffic Collisions and In Fatal Crashes<sup>6</sup>**



<sup>6</sup> Embankments, walls, culverts, and snow berms are included with ditches and curbs. Bridge rails, bridge abutments and overpasses, and median barriers are grouped with guardrails and crash cushions. Signs and utility posts are included with traffic signals and light supports.

## **Multiple Motor Vehicle Collisions**

- Multiple motor vehicles were involved in 73% of traffic collisions in 2002.
- Most multiple vehicle crashes occurred on urban roadways.
- The first crash event was usually (over 97% of the time) a collision with another motor vehicle, though 2.6% of crashes involving multiple motor vehicles had other first event coding (collisions between motor vehicles were coded as secondary crash events in these collisions).
- Six percent of multiple vehicle crashes involved alcohol.

## **Single Motor Vehicle Collisions**

- Twenty-seven percent of traffic collisions in 2002 were single vehicle crashes (24% of all crashes involved only one motor vehicle).
- An additional 2.8% were single motor vehicle collisions with non-motorists).
- Most single vehicle collisions with pedestrians and bicyclists occurred in urban settings (88.7%)
- Crashes that involved only a single motor vehicle were almost as likely to occur in rural locations as in urban locations (46% rural, 54% urban).
- Collisions with fixed objects, collisions with moose, collisions with non-motorists, and vehicle rollovers (in that order) predominated as first crash events in single vehicle collisions.
- Fifteen percent of single vehicle crashes were alcohol-related.

## **Fatal Vehicle Collisions**

- Forty percent of fatal crashes involved multiple motor vehicles.
- Thirty-six percent of fatal crashes (35.9%) involved single motor vehicles.
- Twenty-three percent of fatal crashes (23.1%) were single vehicle collisions with pedestrians.

## **Alcohol-Related Crashes**

- Fifty-two percent (51.6%) of alcohol-related crashes involved multiple vehicles.
- Forty-three percent of fatal alcohol-related crashes (42.8%) involved single vehicles.
- Four percent of fatal alcohol-related crashes (4.4%) were single vehicle collisions with non-motorists.

## **Vehicle Overturns**

- Only fifteen percent of vehicles were coded for secondary crash events.
- Vehicle overturns were coded more often as secondary events on vehicle records than as first collision events.
- There were 331 collisions with first event overturn coding and 882 vehicles were coded for overturns as second events.
- At least 1213 vehicles overturned during traffic collisions in 2002 (about 5% of vehicles).

## **FACTORS CONTRIBUTING TO ALASKA TRAFFIC COLLISIONS**

Given the opportunity to select up to two factors for each driver, police coded at least one human circumstance for 37.5% of drivers (excluding coding for “no improper driving”).<sup>7</sup> Twenty-four percent of vehicles were coded for roadway circumstances such as debris in roadway, pavement faults, and missing, obscured, or inoperative traffic control. Fourteen percent were coded for environmental circumstances, including weather conditions, glare, and obstructed (or limited) view. Seven percent of vehicles were reported as having vehicle defects that contributed to the collision.

Vehicle circumstances cited most frequently<sup>8</sup> were tire failure or inadequate tires (6.1% of vehicle defects coded), brake problems, oversized vehicles, and steering failure (1.3% of vehicle defects coded), in that order. Weather (50.4%) dominated environmental circumstances and road surface condition (62.4%) dominated roadway circumstances coding.

In the past, this publication has reported the relative frequencies of human, road, environment, and vehicle factors. This was possible because the data was collected for a single data element and officers had equal opportunity to select up to four values among the factor types (officers could select zero to four human factors; or zero to four road, environment, or vehicle factors; or any combination). On the new form, two human factors can be coded, but only one selection is possible for each of the other circumstance fields and for alcohol/drug suspicion. Human, roadway, environmental, and vehicle circumstances are coded independently. Alcohol and drug suspicion is coded independently.

To facilitate comparison with previous publications, circumstances have been combined (all occurrences of alcohol/drug suspicion, human, roadway, vehicle, and environmental factors coding, excluding “no improper driving” and “no factor” coding) for Figure 5. A table accompanying that figure provides a comparison of 2001 and 2002 data.

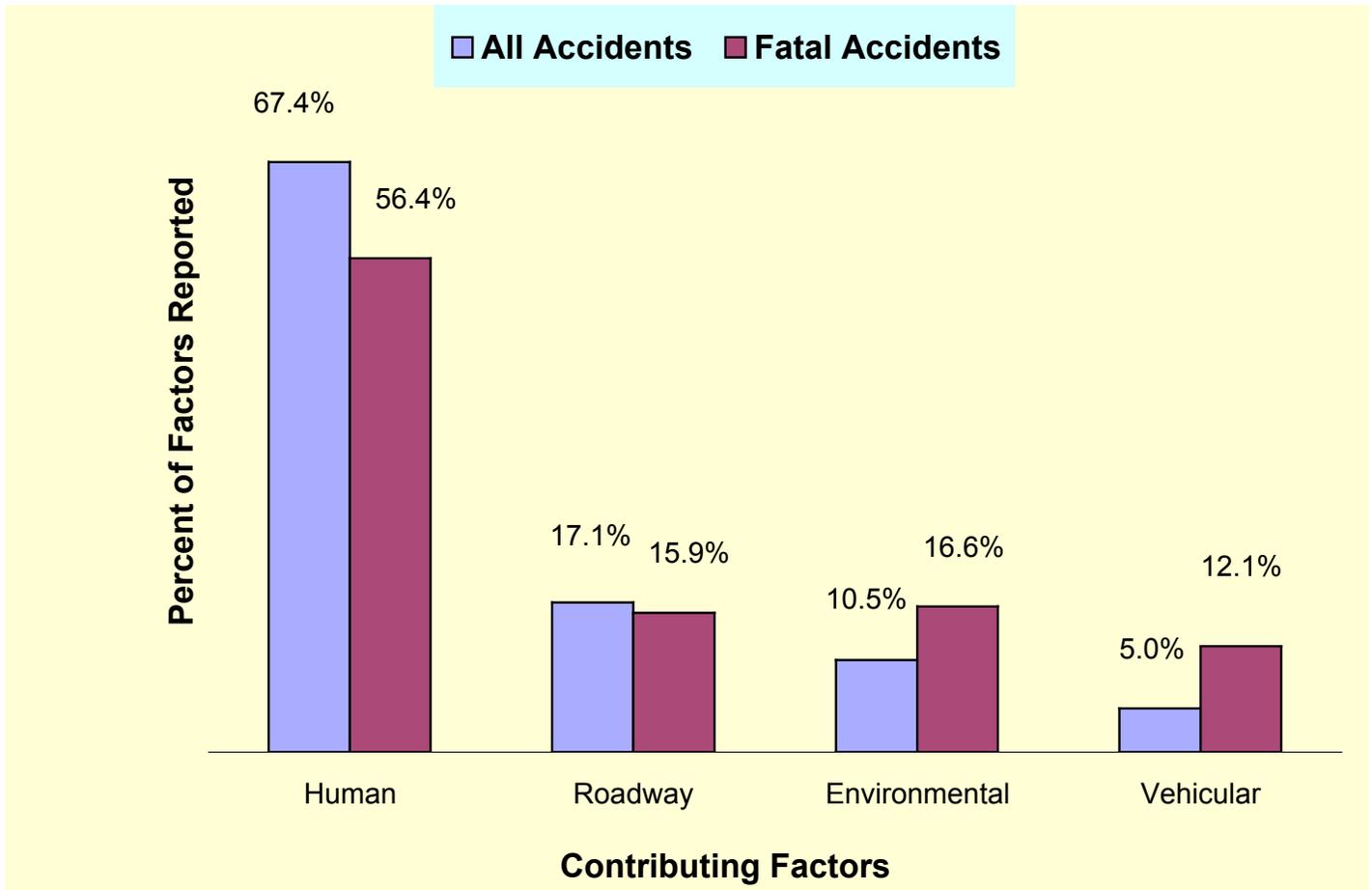
Figures 7 and 8 (adapted from Appendix Table C.6.1) show the major human factors that contributed to all collisions (Figure 7) and to fatal collisions (Figure 8) in 2002. Because some drivers were coded for two human factors, the number of occurrences does not correspond to the number of driver (vehicle) records. Alcohol/drug suspicion has been combined with human factor coding for these figures.

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<sup>7</sup> Appendix Statistical Tables X.X- X.X exclude “none” and “no improper” coding.

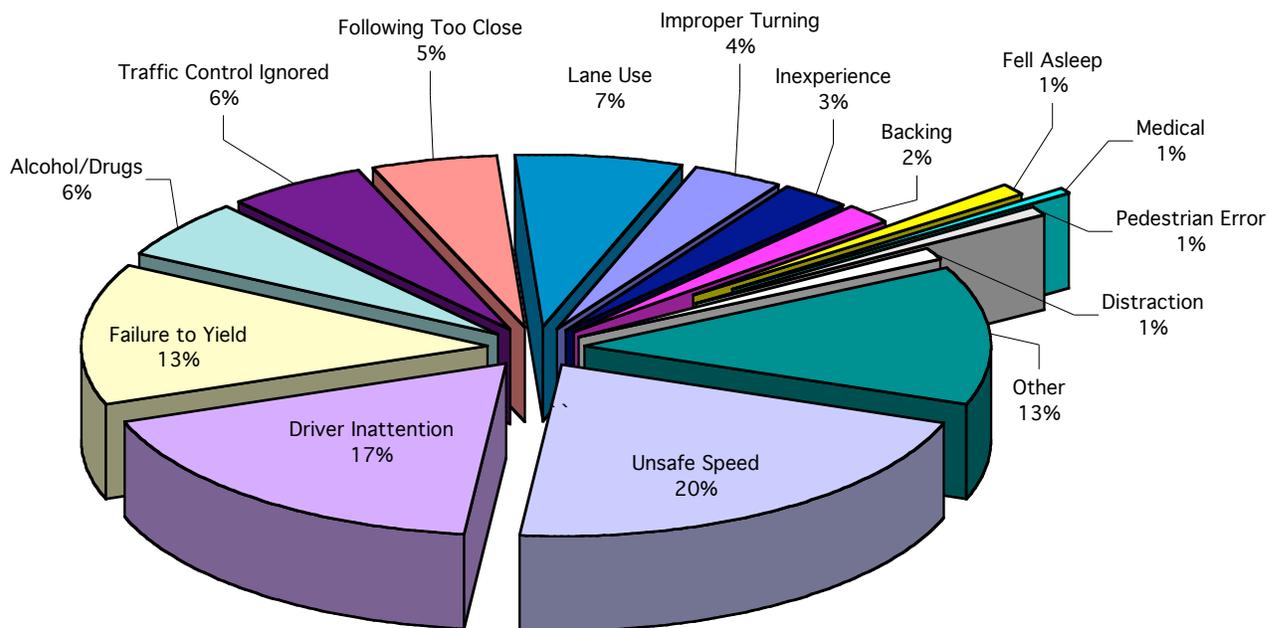
<sup>8</sup> “Other” and “unknown” vehicle circumstance coding exceeded coding for specific vehicle defects.

**Figure 6**  
**Factors Contributing To 2002 Traffic Collisions**



	All Accidents		Fatal Accidents	
	2001	2002	2001	2002
Human	79%	67%	82%	56%
Roadway	13%	17%	10%	16%
Environment	7%	11%	7%	17%
Vehicle	2%	5%	1%	12%

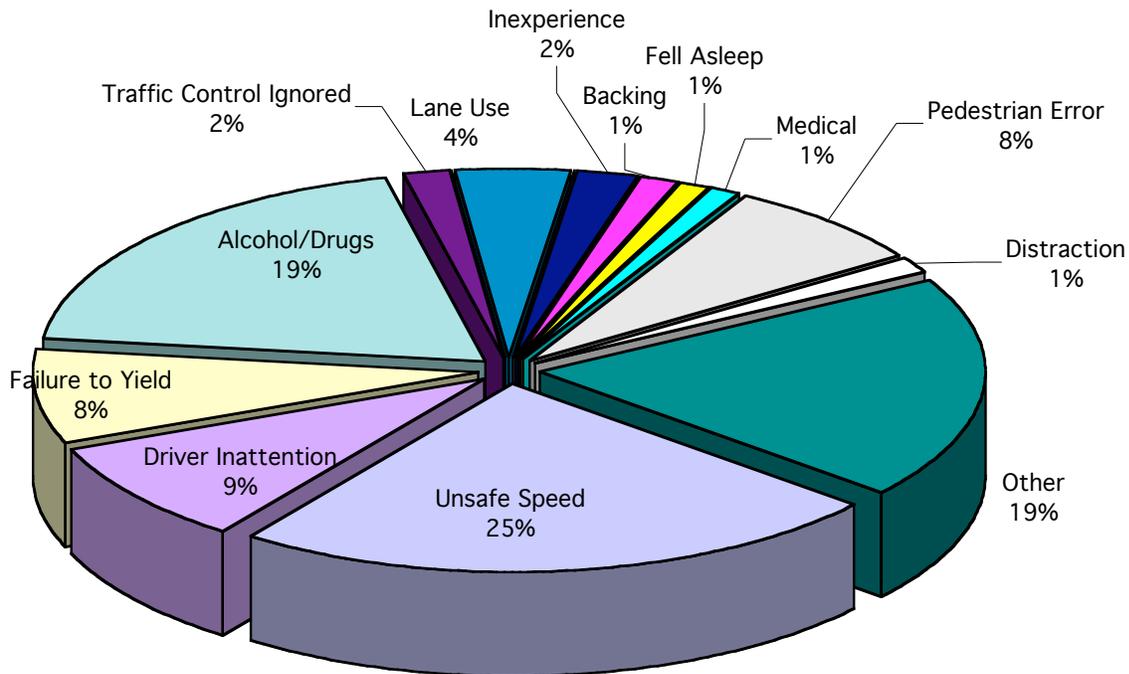
**Figure 7**  
**Major Human Factors Contributing**  
**To All Collisions in 2002**



Unsafe speed was the most frequently reported human contributing factor for all collisions, followed by driver inattention, failure to yield, and alcohol/drug use. These have been the top four contributing factors reported annually by police since 1994 (in the above rank order).

Comparing Figures 7 and 8 reveals that police suspected alcohol or illegal drug use more often in fatal collisions than in collisions overall (19% of the time in fatal collisions, 5% of the time in all collisions), consistent with the ten year trend.

**Figure 8**  
**Major Human Factors Contributing To**  
**Fatal Collisions in 2002**



Unsafe speed and suspected alcohol or illegal drug use were the most frequently recorded human factors on fatal collision reports during 2002 (Figure 8). Between 1994 and 1998, and in 2001, alcohol use was reported more frequently than unsafe speed as a contributing factor. Speed was reported more often than alcohol/drug use in 1999, in 2000, and again in 2002.

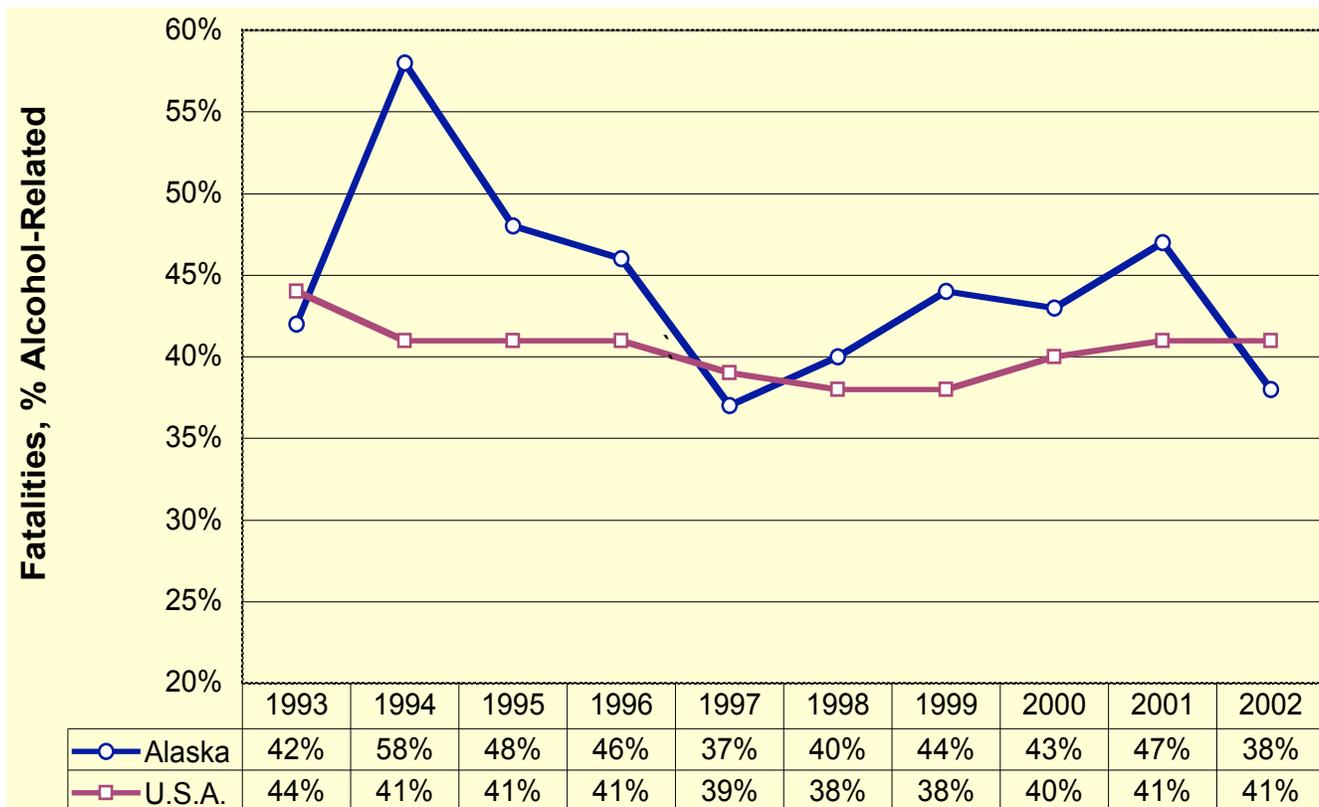
## ALCOHOL AND SPEED

Alcohol test results, traffic citations, and police suspicion of alcohol use are considered when categorizing collisions and injuries in this publication as being *alcohol-related*. Collisions can be designated alcohol-related based on police suspicion without confirming alcohol tests or based on alcohol related traffic citations (such as driving intoxicated or open container) without confirming alcohol test results. Alcohol tests are considered positive if nonzero (0.001% blood alcohol would be considered a positive test) and collisions can be designated alcohol-related if test results are the only data available. A crash can be designated alcohol related if an involved nonmotorist is impaired when involved motor vehicle drivers are not. Passenger involvement is not taken into consideration.

Statistics specifically for drunk driving collisions (those meeting the statutory 0.08% driver blood alcohol criteria) are not provided in this publication.

Figure 9 shows Alaska alcohol-related fatality rates (percentage of fatalities that occurred in alcohol related crashes) compared to national rates for the years 1993 to 2002. In 2002, 1129 traffic collisions were determined to be alcohol-related (8.5% of all crashes). Thirty-two fatal collisions involved alcohol use (41.0% of all fatal crashes). Thirty-four people died in alcohol related collisions (38.2% of all traffic fatalities).

**Figure 9**  
**Alaska and United States**  
**Alcohol-Related Fatality Rates, 1993-2002**



The thirty-four persons that died in alcohol related traffic collisions in 2002 included twenty-two occupants of automobiles and trucks (17 drivers, 5 passengers), five pedestrians, three off-road vehicle operators, and four motorcyclists. Seventeen driver fatalities in automobiles and trucks were alcohol impaired. Three passenger fatalities were in auto/truck/bus vehicles operated by impaired drivers, and two were in vehicles struck by impaired drivers. Three off-road vehicle operator fatalities and four motorcyclist fatalities were impaired. Four alcohol-impaired pedestrians were struck by motor vehicles whose drivers had not used alcohol, and one motor vehicle driver that was impaired struck one pedestrian that had not used alcohol. No bicyclists (pedalcyclists) were killed in alcohol related traffic collisions during 2002. One child under age 16 and three seniors over age 65 died in alcohol-related collisions. Alcohol was not involved in the motor vehicle collision with moose that resulted in a human death in 2002.

Figure 10 shows the types of vehicles people occupied when they were fatally injured in traffic collisions during 2002. Data is presented for vehicles involved in fatal alcohol related crashes and for vehicles in fatal crashes where alcohol was not considered a factor. Sport utility vehicles and minivans are grouped with light trucks/pickups for this figure.

**Figure 10**  
**Fatalities, Percent of Vehicle Occupants**  
**2002 Collisions and Alcohol-Related Collisions**

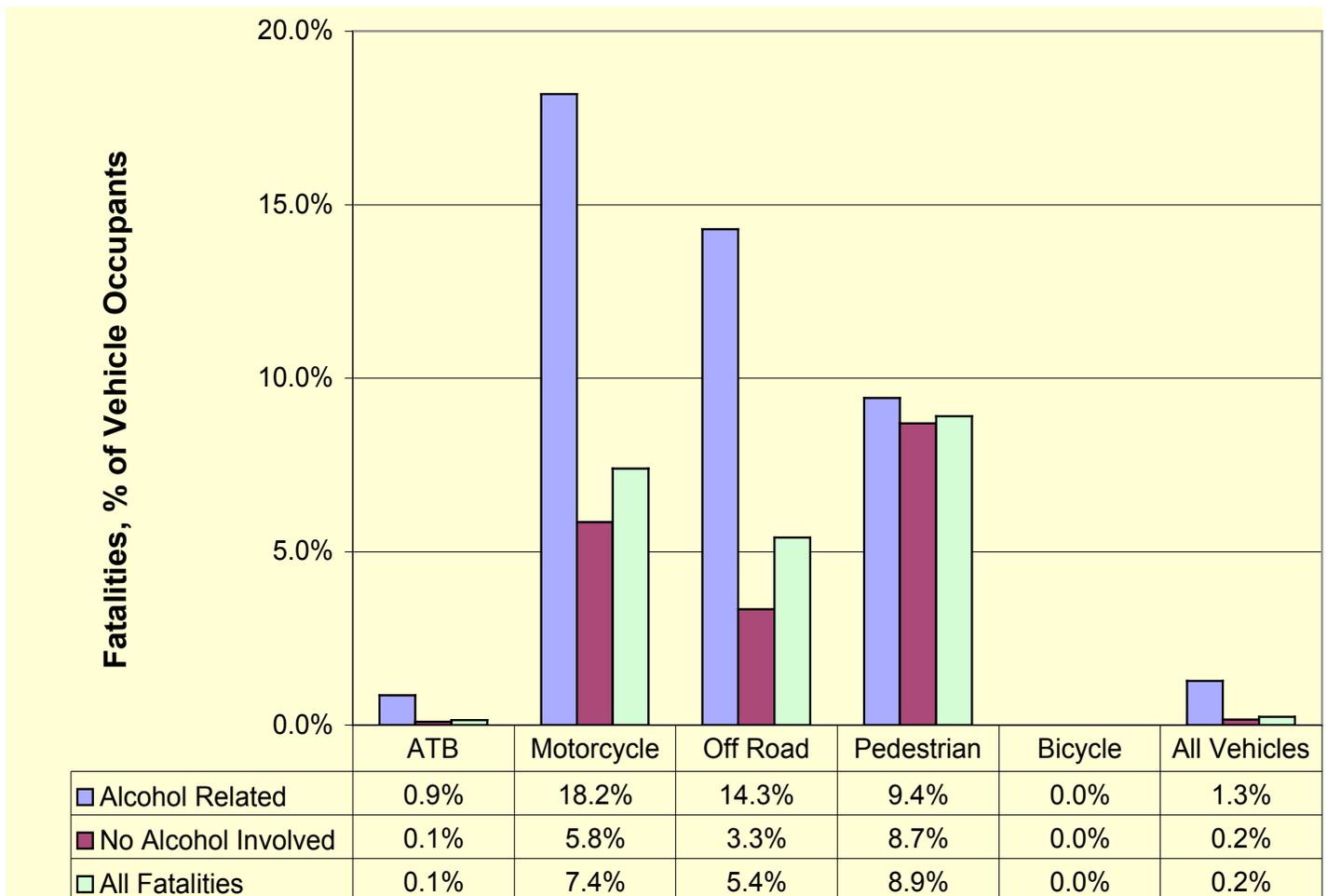


Table 5 summarizes traffic collisions over six holiday periods during 2002, showing the number of collisions as well as the number of persons injured or killed in all collisions during each holiday (“all”) and in alcohol-related collisions during each holiday (“alc”). Thirteen percent (13.4%) of holiday collisions were alcohol-related in 2002, slightly less than the previous two years (13.9% in 2001, 15.5% in 2000). Less than sixteen percent (15.5%) of injuries plus fatalities during holiday periods were alcohol-related in 2002 (21.2% in 2001, 25% in 2000). Seven of ten holiday traffic fatalities in 2002 were alcohol-related.

**TABLE 5**  
**2002 Holiday Traffic Collisions<sup>9</sup>**

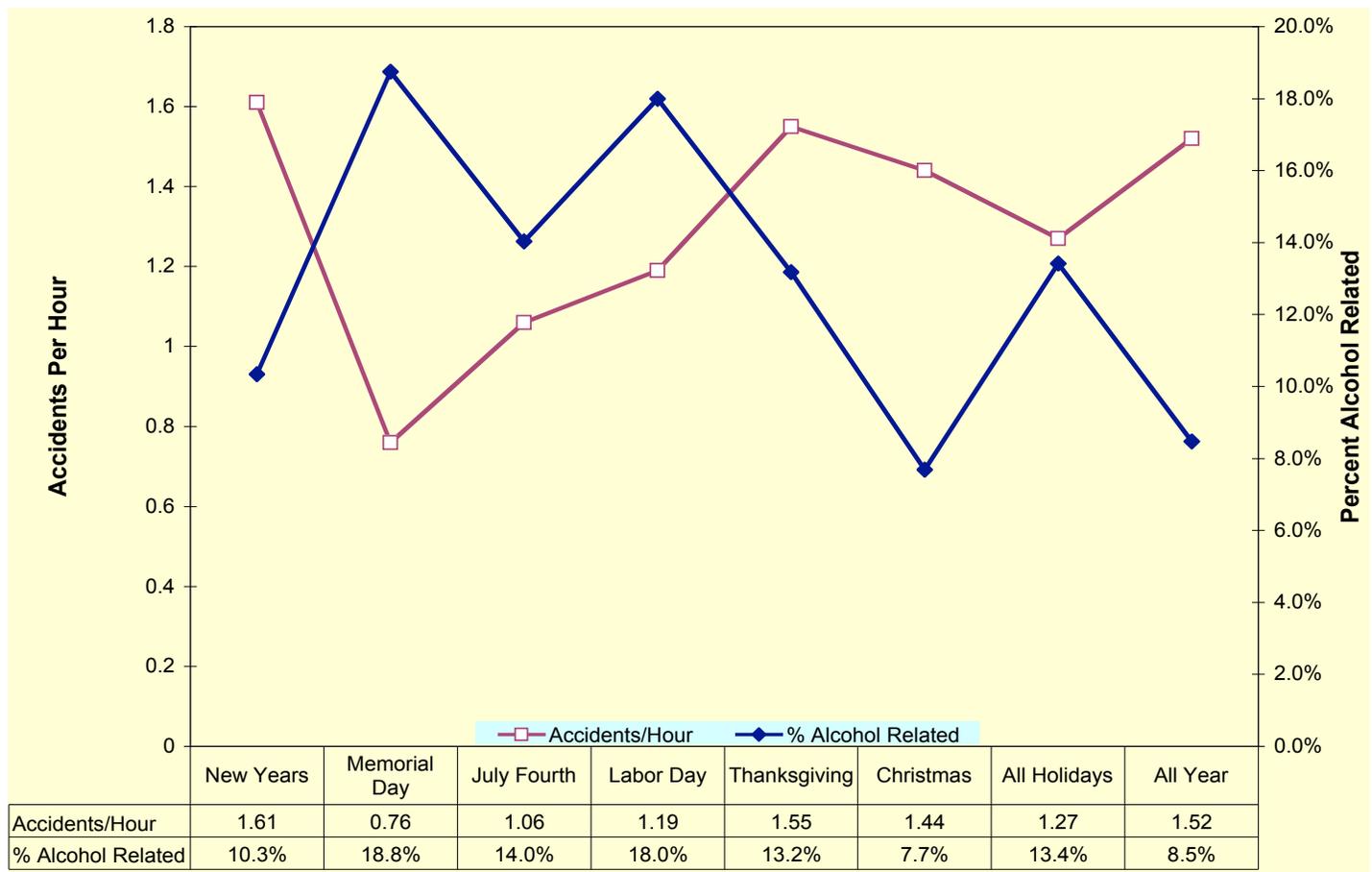
HOLIDAY	COLLISION TYPE	ALL	ALC	INJURY TYPE	ALL	ALC
<b>NEW YEARS</b>						
6 PM Friday 12/28/01	PDO ACC	128	15			
through	INJURY ACC	45	2	INJURIES	66	3
5:59 AM Wednesday 1/02/02	FATAL ACC	1	1	FATALITIES	1	1
(108 hours)	TOTAL ACC	174	18			
<b>MEMORIAL DAY</b>						
6 PM Friday 5/24/02	PDO ACC	42	8			
through	INJURY ACC	22	4	INJURIES	30	5
5:59 AM Tuesday 5/28/02	FATAL ACC	0	0	FATALITIES	0	0
(84 hours)	TOTAL ACC	64	12			
<b>FOURTH of JULY</b>						
6 PM Wednesday 7/03/02	PDO ACC	70	10			
through	INJURY ACC	42	4	INJURIES	68	10
5:59 AM Monday 7/08/02	FATAL ACC	2	2	FATALITIES	2	2
(108 hours)	TOTAL ACC	114	16			
<b>LABOR DAY</b>						
6 PM Friday 8/30/02	PDO ACC	67	9			
through	INJURY ACC	32	8	INJURIES	46	12
5:59 AM Tuesday 9/03/02	FATAL ACC	1	1	FATALITIES	1	1
(84 hours)	TOTAL ACC	100	18			
<b>THANKSGIVING</b>						
6 PM Wednesday 11/27/02	PDO ACC	109	14			
through	INJURY ACC	53	6	INJURIES	87	13
5:59 AM Monday 12/02/02	FATAL ACC	5	2	FATALITIES	6	3
(108 hours)	TOTAL ACC	167	22			
<b>CHRISTMAS</b>						
6 PM Tuesday 12/24/02	PDO ACC	35	2			
through	INJURY ACC	17	2	INJURIES	29	2
5:59 AM Thursday 12/26/02	FATAL ACC	0	0	FATALITIES	0	0
(36 hours)	TOTAL ACC	52	4			
<b>HOLIDAY TOTALS</b>	<b>COLLISIONS</b>	<b>671</b>	<b>90</b>	<b>INJURIES + FATALITIES</b>	<b>336</b>	<b>52</b>

The percentage of injuries due to alcohol related events was greatest during the Labor Day weekend (27.6% of Labor Day injuries plus fatalities), and least during the New Years holiday (6.3%). The percentage of holiday crashes that were alcohol-related was greatest during the Memorial Day and Labor Day holidays (18.8% and 18.0%, respectively) and least over the Christmas holiday (7.7%).

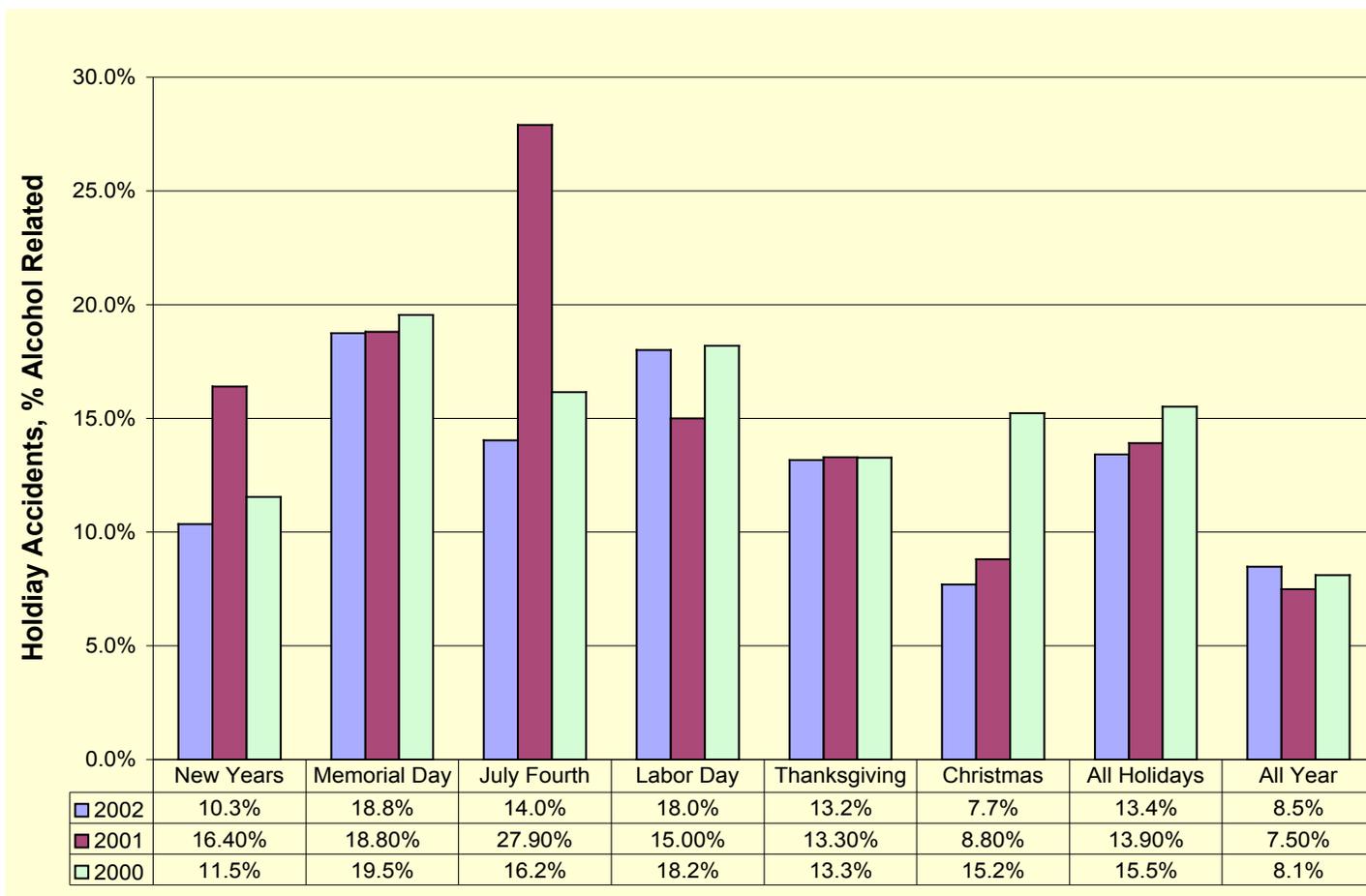
Figure 11 shows the percentage of collisions that were alcohol-related during each holiday in 2002. An hourly rate (for all traffic collisions during that holiday interval) has been provided to facilitate comparisons between holidays. The lengths of the New Years, Independence Day, and Christmas holiday intervals vary each year, but the lengths of the Memorial Day, Labor Day, and Thanksgiving holiday intervals do not change. Timing and publicity surrounding police drunk driving enforcement during specific holidays likely also affected alcohol-related crash statistics for holidays.

Figure 12 compares alcohol-related holiday crashes between 2000 and 2002. Table 6 provides the average hourly crash rate (all crashes, acc/hour) and number of hours in the holiday for each year. Alcohol-related crashes, on average, occurred more frequently during summer holidays between 2000 and 2002 than winter holidays. The average number of crashes per hour for all holidays combined (each year) were lower than the average number of crashes per hour throughout that year.

**Figure 11**  
**2002 Holiday Traffic Collisions**  
**Crashes per Hour and Percent Alcohol-Related**



**Figure 12**  
**2000 to 2002 Holidays**  
**Percent Alcohol-Related**



**TABLE 6 <sup>10</sup>**  
**2000 to 2002 Holiday Intervals**  
**Average Crashes per Hour and Hours in Holiday**

HOLIDAY	2002		2001		2000	
	Acc/Hour	Hours	Acc/Hour	Hours	Acc/Hour	Hours
New Years	1.61	108	1.60	84	1.73	60
Memorial Day	0.76	84	1.01	84	1.04	84
July Fourth	1.06	108	1.19	36	1.20	108
Labor Day	1.19	84	1.27	84	1.01	84
Thanksgiving	1.55	108	1.61	108	1.18	108
Christmas	1.44	36	2.52	108	1.10	84
All Holidays	1.27	528	1.62	504	1.18	528
All Year	1.52		1.74		1.61	

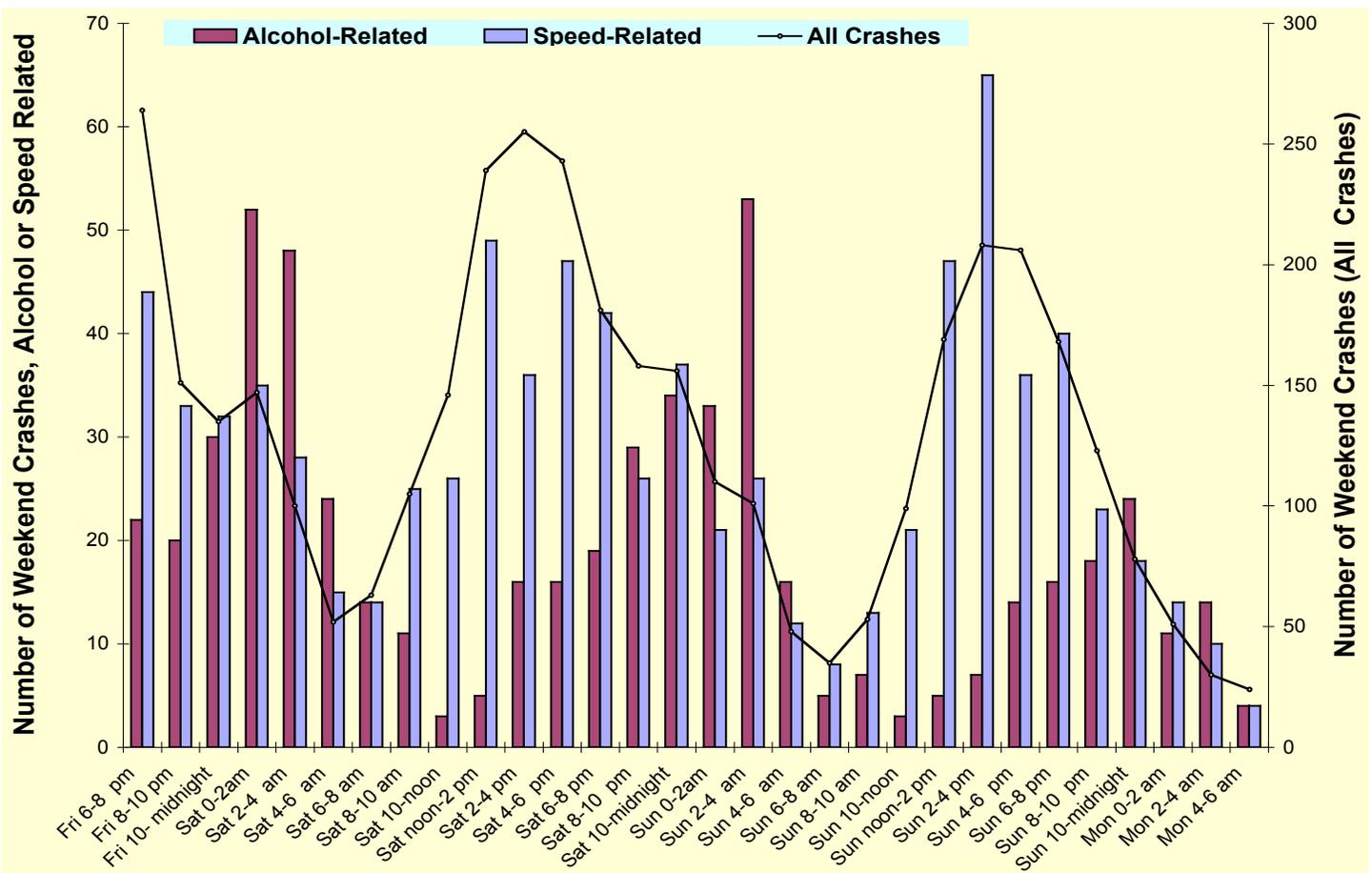
<sup>10</sup> Source: **Traffic Safety Facts 2002**, National Center for Statistics & Analysis. This fact sheet was provided by the National Highway Traffic Safety Administration internet site at [www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/Availinf.html](http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/Availinf.html).

Fifty-one percent (50.8%) of all alcohol related crashes during 2002 occurred on weekends, between 6 p.m. Friday evening and 6 a.m. Monday morning. Alcohol related crashes occurred 9.6 times per hour during weekends, but only 5.2 times per hour the remainder of the week.

During weekends, the incidence of alcohol related collisions increased to 14.7% (from 8.5% throughout the week, and from 5.9% of crashes between Monday and Friday). The percentage of fatal crashes that involved alcohol rose to 53.6% (from 41% throughout the week and from 34% of fatal crashes between Monday and Friday).

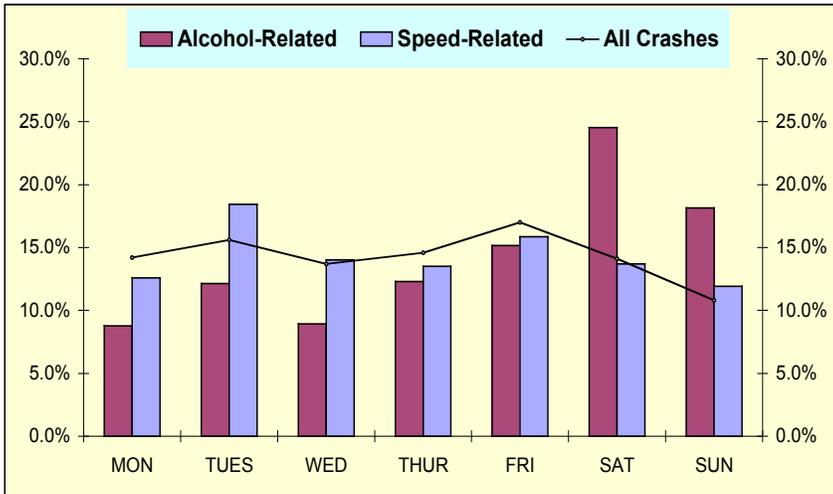
Figure 13 plots numbers of weekend alcohol-related and speed-related crashes, by time of day. Numbers of alcohol-related crashes peaked between ten in the evening and four the following morning. Peaks of speed-related crashes occurred between noon and six in the evening. Relative numbers of alcohol-related crashes decreased on Sunday, but speed-related crashes did not.

**Figure 13**  
**Weekend Traffic Collisions**  
**Alcohol and Speed Involvement**

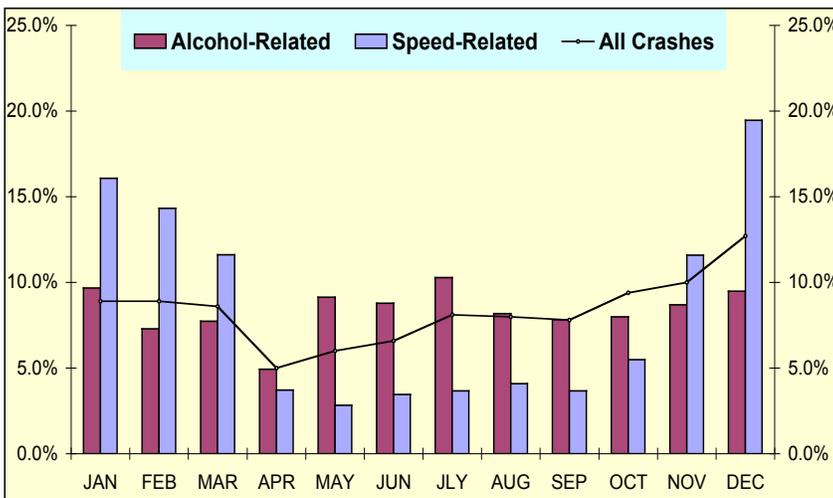


Speed contributed to 2805 traffic collisions (21.1% of all crashes) and to 847 weekend collisions (30.2% of weekend crashes). Twenty-seven fatal crashes (34.6% of all fatal crashes) and nine fatal weekend crashes (32.1% of weekend fatal crashes) involved speed in 2002.

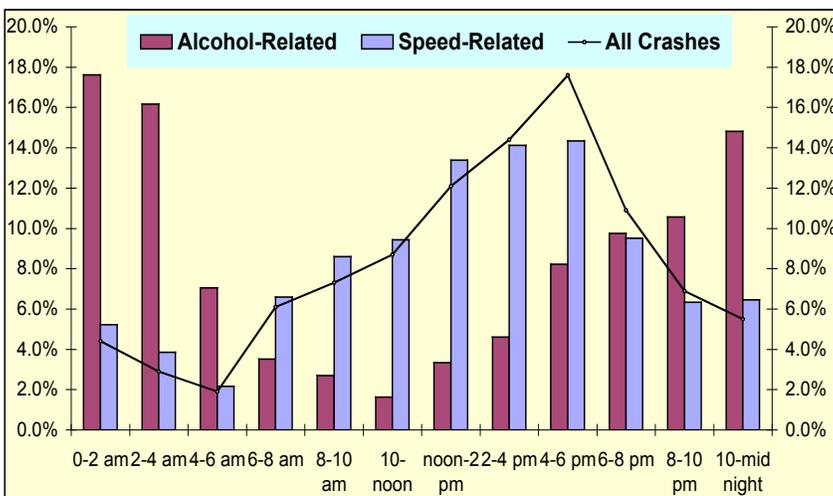
Speeding appears to be the inverse of alcohol, with peaks in winter or in the afternoon (Figures 14, 15, and 16). Drivers were least likely to be ticketed for speeding or to be coded for the human factor “unsafe speed” when involved in crashes between April and September. Police may have a general tendency to cite more drivers for “basic speed” (unsafe speed for conditions or too fast for conditions) after responding to winter crashes on slick road surfaces than after responding to summer crashes.



**Figure 14**  
**Distribution: Alcohol and Speed-Related Crashes 2000 by Month of Year**



**Figure 15**  
**Distribution: Alcohol and Speed-Related Crashes 2000 by Day of Week**



**Figure 16**  
**Distribution: Alcohol and Speed-Related Crashes 2000 by Time of Day**

Twenty-nine percent (29.4%) of alcohol-related crashes also involved unsafe or excessive speed. Thirteen fatal crashes were coded for both alcohol and speed involvement (16.7% of all fatal crashes in 2002).

**Figure 17**  
**Drivers of Automobiles, Trucks, and Buses**  
**Speeding and Alcohol Use by Driver Age**  
**(Percentage Of All Drivers)**

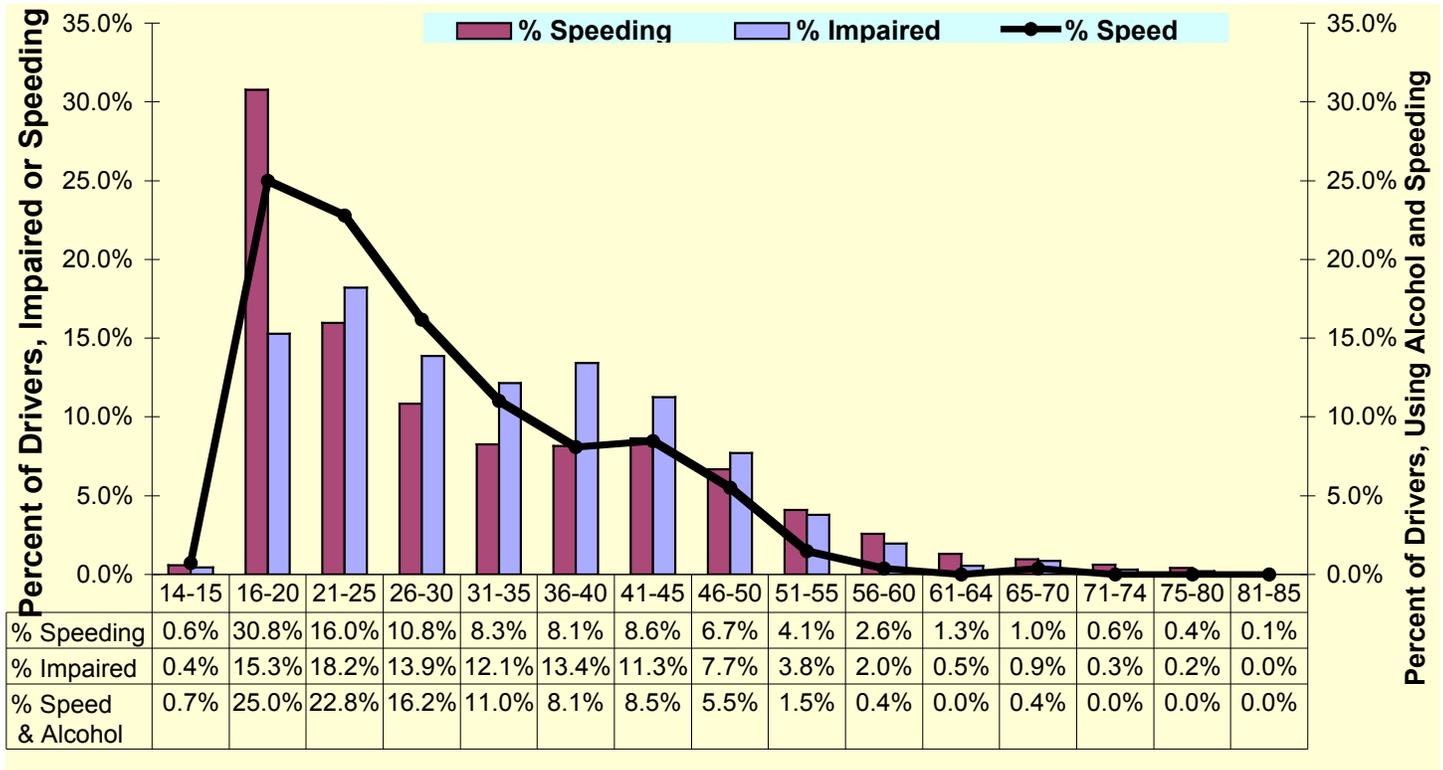
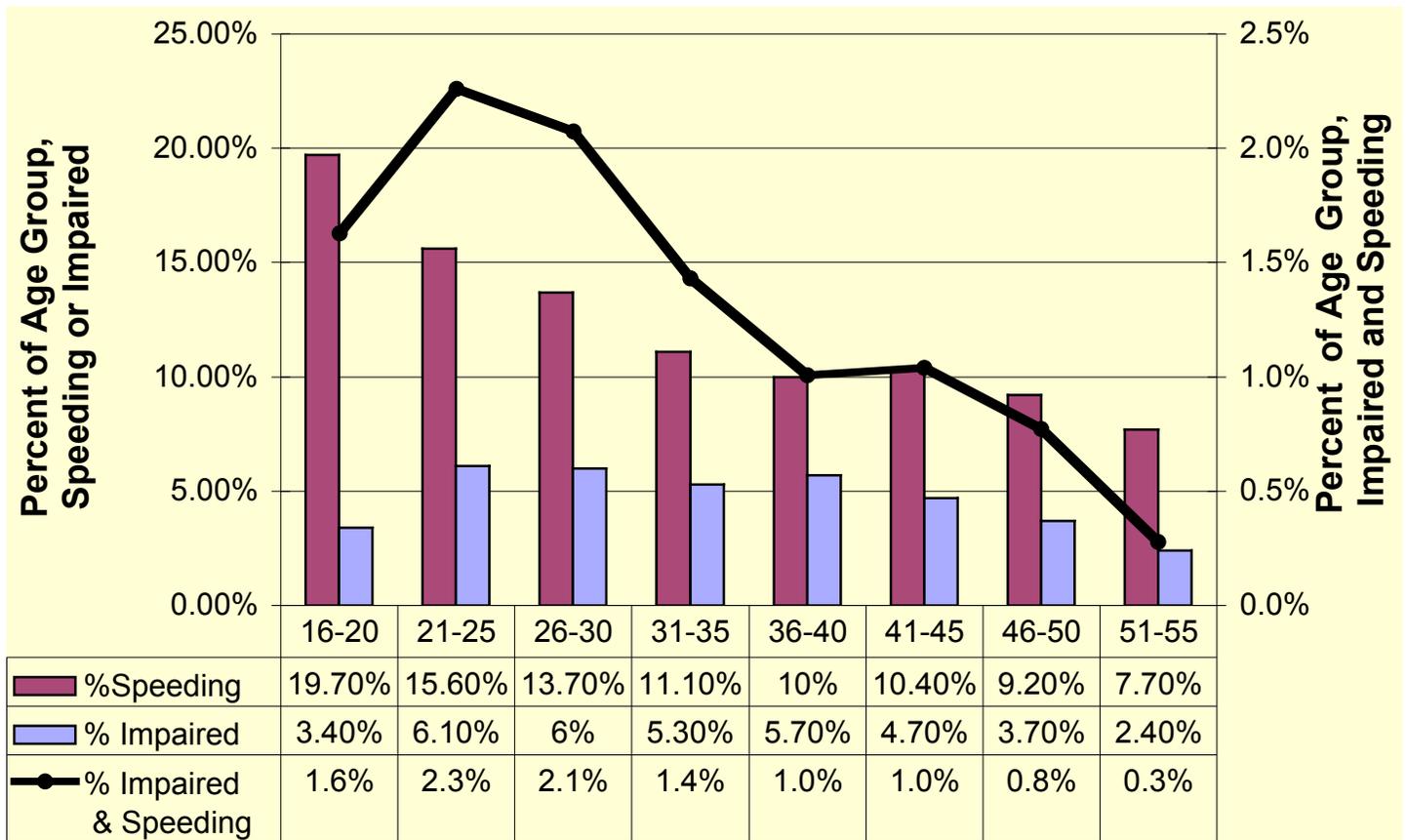


Figure 17 presents data for all automobile, truck and bus drivers involved in traffic collisions during 2002 (percent of all drivers, by age)<sup>11</sup>. A third of alcohol impaired drivers and 47% of speeding drivers were under 26 years of age. Almost 48% of drivers that were both impaired and speeding at the time of the crash were between 16 and 25 years of age. Drivers between 16 and 25 comprised about 30% of all automobile, truck, and bus drivers involved in traffic collisions in 2002 and 33.5% of drivers with valid Alaska licenses (including instruction permits).

<sup>11</sup> About 8.5% of automobile, truck and bus driver ages were not reported. Data for drivers with unknown age was not used for Figure 17. Age was not reported for 6.6% of speeding ATB drivers, for 7.2% of impaired ATB drivers, or for 2% of ATB drivers that were speeding while impaired by alcohol.

Figure 18 shows alcohol and speed involvement within driver age groups. Almost 20% (19.7%) of drivers between the ages of 16 and 20 were speeding when involved in traffic collisions and 3.4% were alcohol impaired. Speeding was less frequent among drivers aged 21 to 25 (15.6%) but alcohol use was more frequent (6.1%). Speeding was less frequent among drivers aged 21 to 25 (15.6%) but alcohol use was more frequent (6.1%).

**Figure 18**  
**Speeding and Alcohol by Driver Age**  
**(Percentage Within Age Group)**



There were 23969 drivers (of all vehicle types, including non-motorists) involved in traffic collisions during 2002 (both police and driver reported). Police coded 1137 drivers as suspected of alcohol use or a combination of alcohol and drug use and reported alcohol test results for 752 drivers. There were 474 drivers that tested for blood alcohol concentrations (BAC) at or exceeding 0.08% (legal intoxication by Alaska statute). Seventy-one drivers tested positive for alcohol use but below 0.08% BAC. Negative tests (0.0% BAC) were reported for 207 drivers. Police suspicion of (illegal) drug use was coded for 71 drivers.

## Safety Equipment and Occupant Ejection

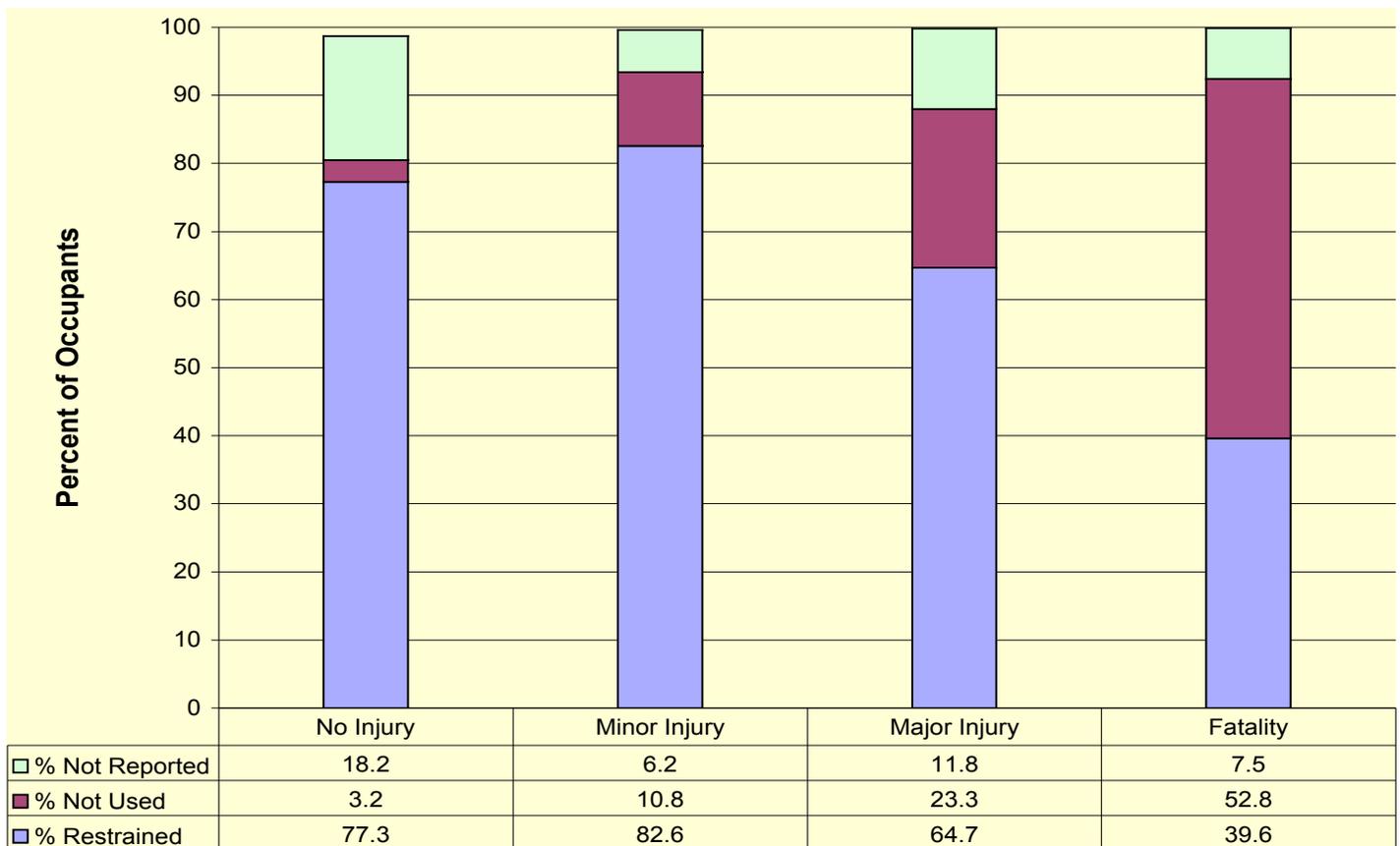
Seatbelt use, airbag deployment, and occupant ejection information is not collected on the driver report form. Discussions that follow are restricted to police reported data unless otherwise indicated.

### Seatbelt Use

Seventy-five percent (74.8%) of all automobile, truck, and bus occupants were restrained by combination lap and shoulder restraint systems or by properly installed and used child safety seats. Another 3% used lap belt only, shoulder harness only, or were restrained by improperly installed or fitted child seats. Only 4.7% were reported by police to have failed to wear any safety restraint. About sixteen percent of the time, police failed to report seatbelt use on collision forms.

About 80% of automobile, truck and bus occupants that were not injured or received only superficial injuries used seatbelts at the time of the crash. Seatbelts were not used as often by occupants that received major or fatal injuries—less than 40% of fatalities and less than 65% of occupants with major injuries wore seatbelts at the time of the crash (Figure 19).

**Figure 19**  
**Safety Restraint Use**  
**By Occupants of Automobiles, Trucks, and Buses**



Appendix tables III.B.8.1, III.B.8.2, and III.B.8.3 present police reported safety restraint use and seating position for child occupants of automobiles, trucks, and buses. Tables provide data for infants and toddlers through 3 years of age, children ages 4 through 10, and children between 11 and 15 years of age. State law requires that all children under four years of age be restrained in child safety seats.

Ninety-three percent (93.1%) of infants and toddlers (through age 3) were riding in rear seat positions when crashes occurred. There were no fatalities in this age group and only 3 major injuries, 2 of which occurred in front seats with no proper child restraint. Eighty-one percent (81.7%) of infants and toddlers were reported by police to be properly restrained in child safety seats. Police failed to report child restraint for 4.2% of children in this age group.

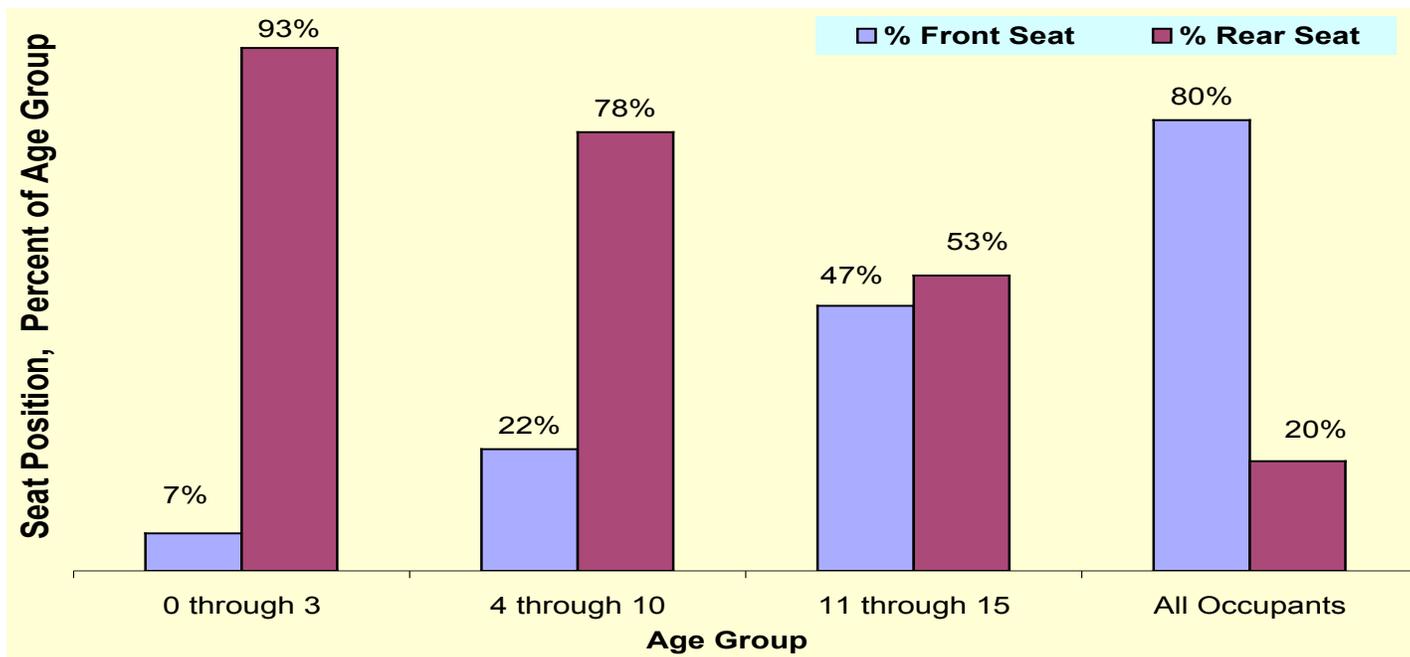
Seventy-eight percent (78.3%) of children between 4 and 10 years of age occupied rear seat positions. There were two fatalities in this age group, one unrestrained in a front seat position, and the other restrained by a lap and shoulder belt in a rear seat position. About fourteen percent of children in this age group used child restraints (13.5% proper use only; 14% including those in child restraints used improperly). Almost 71% used lap/shoulder combinations, lap belts alone, or shoulder straps alone (57.8% used lap/shoulder combination restraints). Police failed to report child restraint or seatbelt use for 10% of children in this age group.

Fifty-three percent (52.7%) of children between ages 11 and 15 occupied rear seat positions. There were 2 fatalities in this age group, one in a front seat and one in a rear seat position (both unrestrained). Sixty-eight percent of children between 11 and 15 used lap/shoulder combination belts and an additional 9% used lap belts alone or shoulder straps alone. Four children in this age group were coded as being restrained in properly installed child safety seats and 1 child was coded for restraint in a child safety seat improperly used. Police failed to report restraint use for 11.8% of automobile, truck, and bus occupants in this age group.

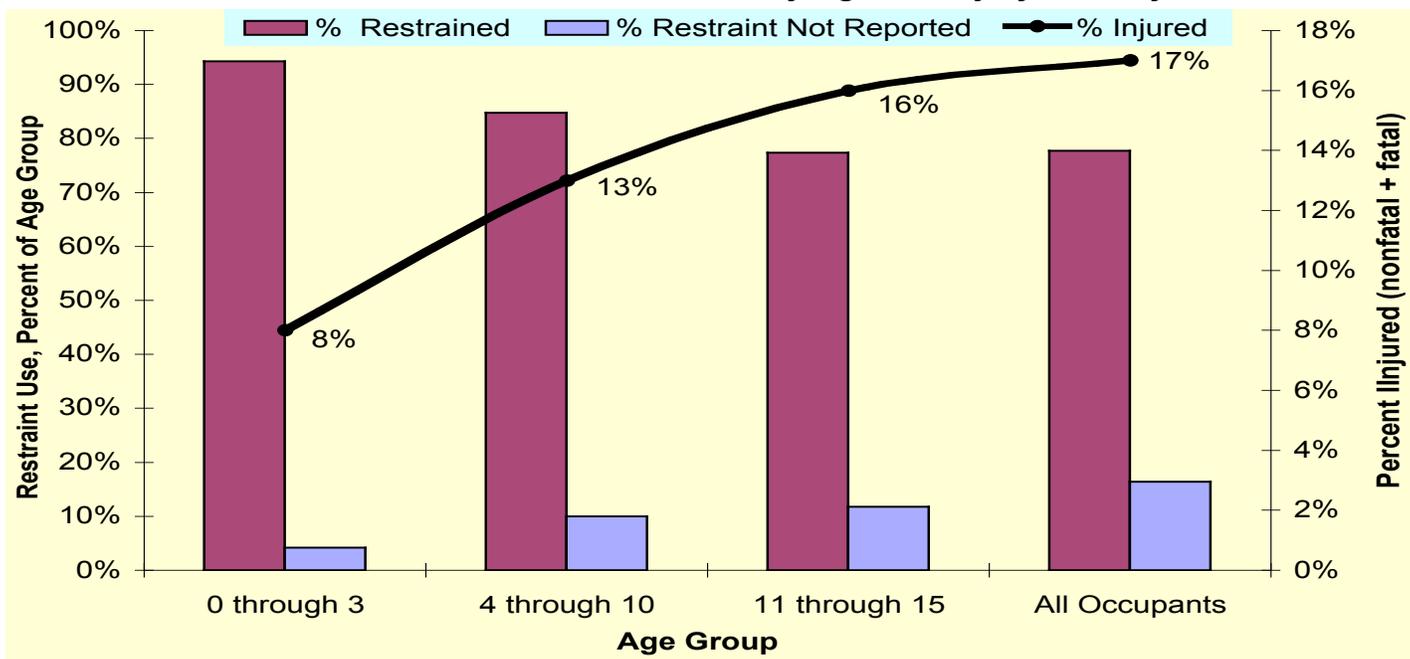
Figure 20 shows percentage of children riding in front and rear seat positions in automobiles, trucks, and buses that were involved in police reported collisions. Seat position data for all occupants (children and adults, all ages combined) is also presented.

Figure 21 summarizes percent restraint use (any belt combination or child seat), police non-reporting, and percent injury (nonfatal+fatal injuries) for children and all occupants.

**Figure 20**  
**Front and Rear Seat Occupants**  
**Of Automobiles, Trucks, and Buses**



**Figure 21**  
**Automobile, Truck, and Bus Occupants**  
**Seatbelt and Child Restraint Use by Age and Injury Severity**



## Airbag Deployment and Seat Position

Police reported that airbags were available and deployed for 3.3% of all auto, truck, and bus occupants. Airbags were available but did not deploy for 17.3% of all occupants. Seventy-nine percent of the time, police did not report airbag data.

The number of vehicles involved in crashes that were equipped with airbags and the number of persons seated in positions protected by airbags are not available. Side bag protection for rear seat occupants is not provided in most vehicles manufactured prior to 2002 and rear seat occupants are not protected by front deployed airbags. Appendix tables have been provided detailing injury severity for front and rear occupants by restraint use and airbag deployment.

Eighty percent (80.4%) of auto, truck, and bus occupants occupied front seat positions and 19.6% sat in rear seat positions. Front seat occupants were injured more frequently than those in rear seat positions (16.5% of front seat occupants and 10.4% of rear seat passengers were coded for minor injuries), but the proportions of occupants with major or fatal injuries were similar for front and rear seat positions. Almost 84 percent (83.5%) of front seat occupants used some form of safety restraint, while only 54.5% of rear seat occupants buckled up. Airbags deployed for 4.1% of front seat occupants but only for 0.14% of those riding in rear seat positions.

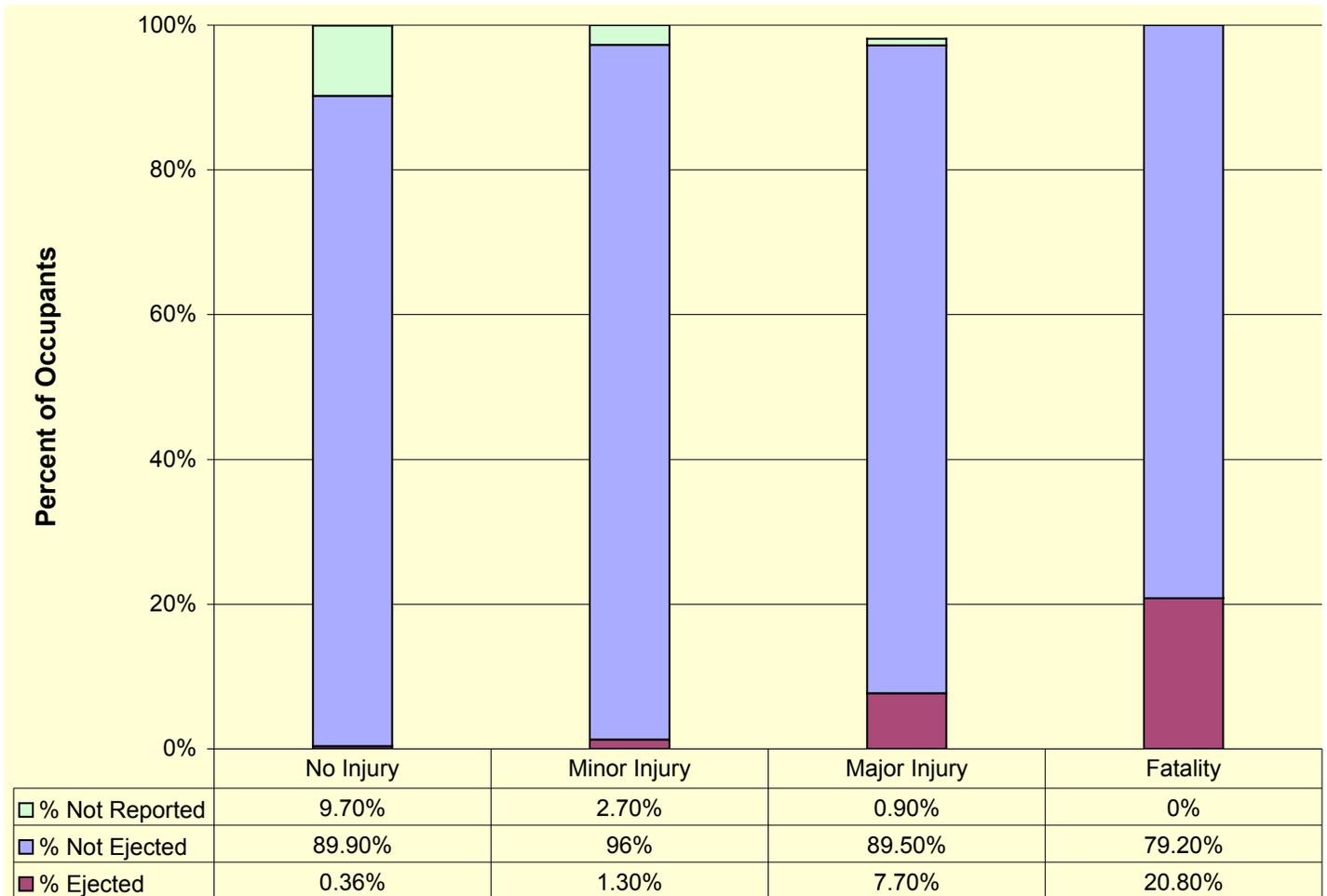
## **Occupant Ejection**

Less than 1% (0.6%) of all automobile, truck, or bus occupants were ejected during crash events, but among those receiving fatal injuries, 20.8% were ejected from their vehicles. Ten of 53 auto, truck, and bus fatalities were fully ejected and one was partially ejected.

Figure 22 shows the relationship between occupant ejection and injury to automobile, truck, and bus occupants. Partial and full ejection data is combined for the “percent ejected” category. Information about the effectiveness of restraint use for preventing ejection can be found in Appendix III.B.3.1. Almost seventy-three percent (72.8%) of persons that were uninjured after being ejected from automobiles, trucks or buses had worn safety restraints at the time of the crash. In contrast, only nine percent (9.1%) of fatalities wore safety restraints prior to being ejected from their vehicles.

With no seat restraints to keep them in position, riders of motorcycles and off-road vehicles were ejected from their seats and vehicles more frequently than occupants of other road vehicle types. Figure 23 compares the percent of occupants ejected and occupant injury severity for motorcycle riders, off-road vehicle riders (including all terrain vehicles and snowmobiles), and automobile, truck, and bus occupants.

**Figure 22**  
**Occupant Ejection From Automobiles, Trucks, and Buses**



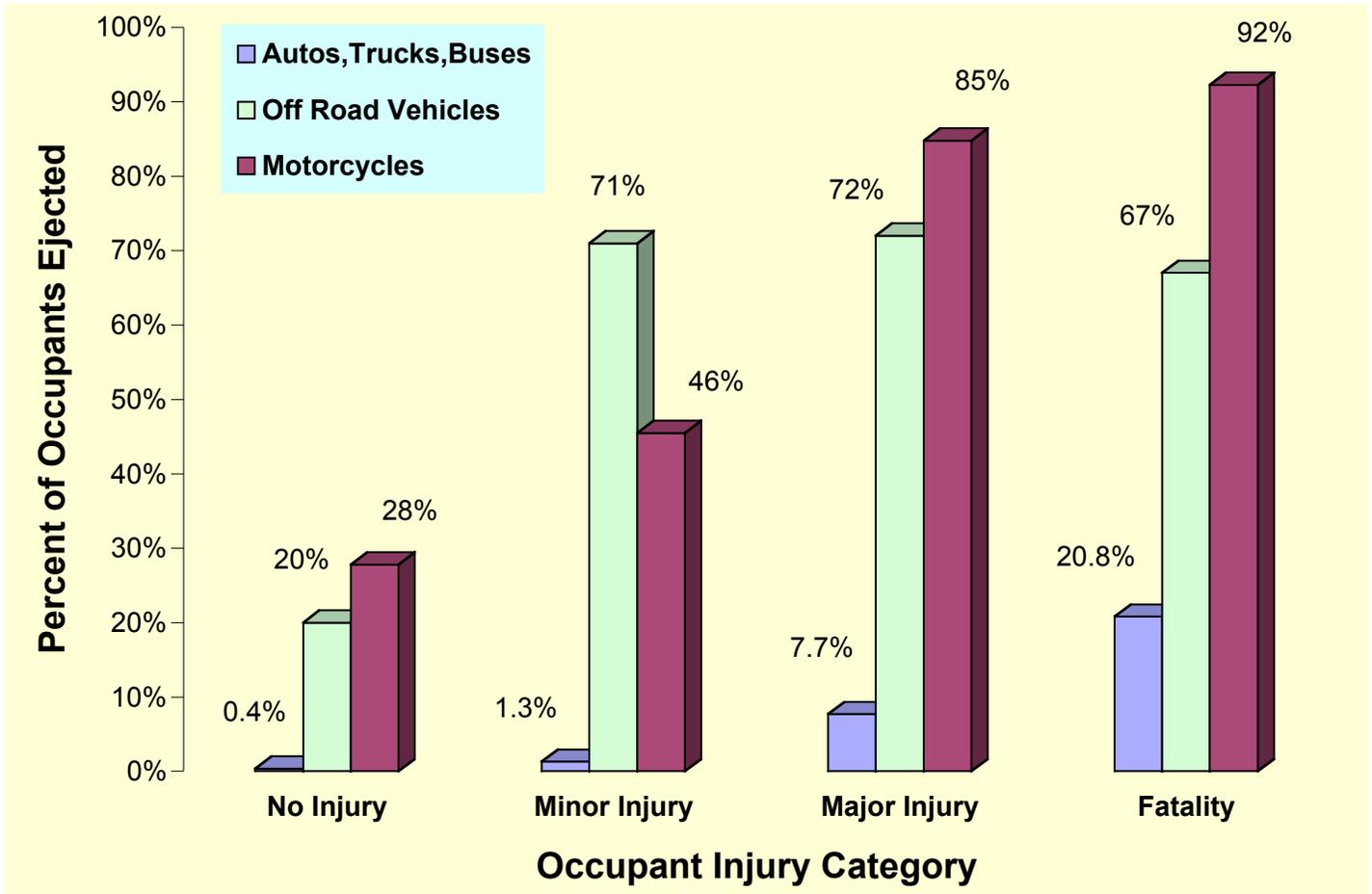
**Helmet Use by Motorcyclists and Off-Road Vehicle Riders**

Riders of open vehicle types such as motorcycles, snow machines, and all terrain vehicles, have only helmet (head protection) available to them. State law does not currently require operators of such vehicles to wear head protection while operating on public roadways.

Almost fifty-three percent (52.9%) of all motorcyclists involved in police reported crashes wore motorcycle helmets. Only 38.5% of motorcycle riders that received fatal injuries used head protection.

Riders of off-road vehicles, including snow machines and all terrain vehicles, were less inclined to wear helmets. Only 24.5% of all off-road vehicles riders involved in traffic collisions during 2002 wore helmets. None of the 6 fatalities in this group used head protection.

**Figure 23**  
**Occupant Ejection Comparison by Vehicle Type**



## TEMPORAL DISTRIBUTIONS

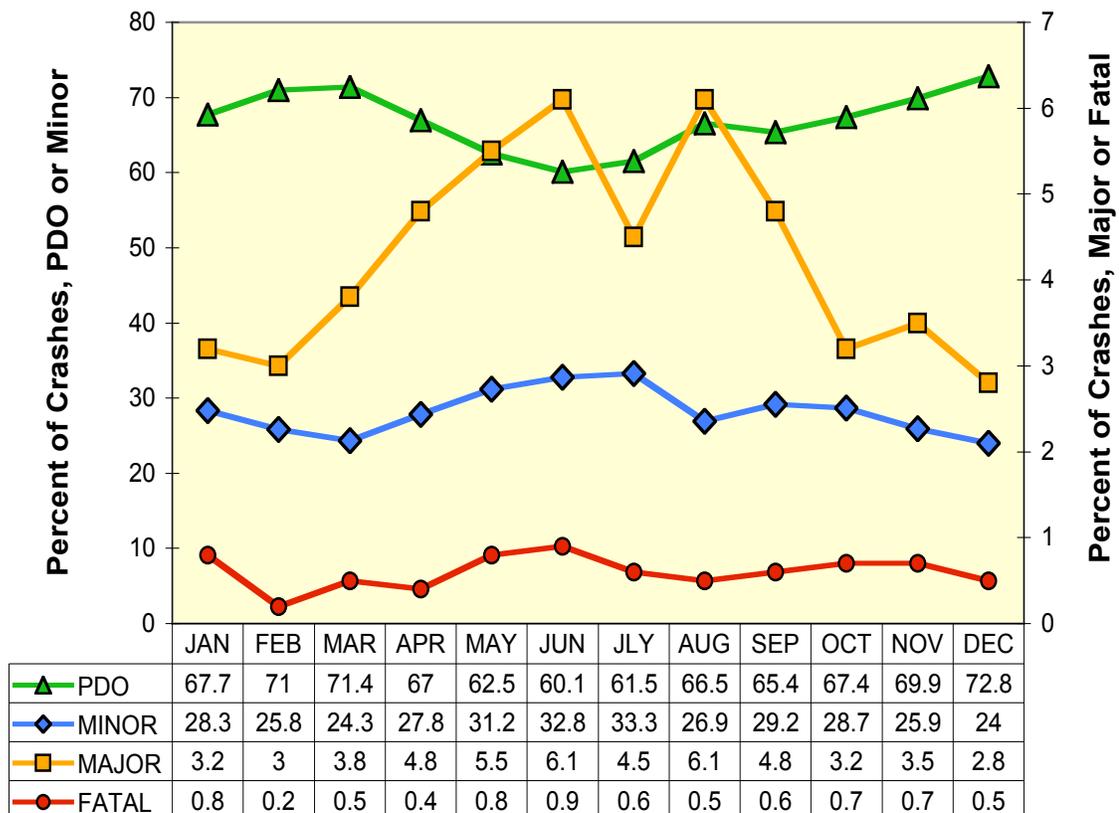
On average, there were 1110 traffic collisions per month and 36.5 traffic collisions per day in 2002. Thirty-one percent of all collisions (31.4%) happened between midnight and 11:59 a.m. and sixty-seven percent (67.4%) happened between noon and 11:59 p.m. (time of day was not reported for 1.3% of crashes).

### Month of Year

From January to December 2002, the percentage of all crashes that caused only property damage ranged monthly from 60.1% (June) to 72.8% (December). The percentage of all crashes that involved minor injuries ranged from 24.0% (December) to 33.3% (July). Major injury crashes ranged from 2.8% (December) to 6.1% (June and August) of all reported crashes each month. The percentage of crashes that involved fatalities ranged monthly from 0.2% to 0.9%.

During the late spring and summer of 2002, the percentage of crashes that involved injuries or fatalities increased while the percentage of crashes that caused only property damage fell proportionally. Numbers of major injury and fatal collisions are often higher during summer months, possibly due to higher daily traffic volumes, higher speeds with lower levels of driver caution, and longer hours of daylight. When drivers reduce speed and are more cautious due to adverse driving conditions during the winter months, crashes that do occur are often less severe.

**Figure 24**  
**2002 Collision Severity By Month**



During 2002, fatal crashes were most frequent in January, October, and November, though fatal crash frequencies in the summer months of June and July were also high (Figure 25). Crash frequency (all severities categories combined) was highest in the month of December (12.7% of all crashes during the year; more than double the frequencies in April and May). April was the safest month to drive on Alaska roadways in 2002; 5% of all crashes and 3.8% of fatal crashes occurred in April.

**Figure 25**  
**Month of Year Crash Distribution,**  
**2002 Traffic Collisions and Fatal Crashes**

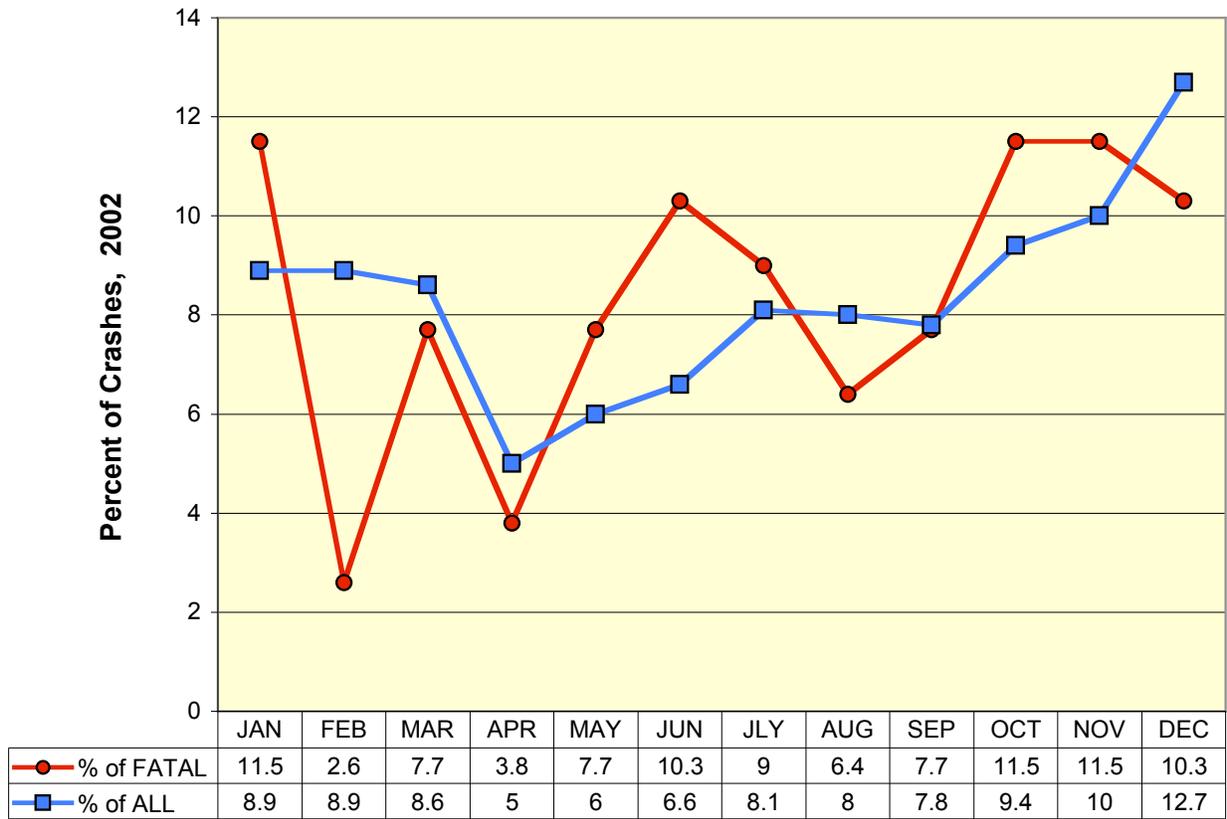
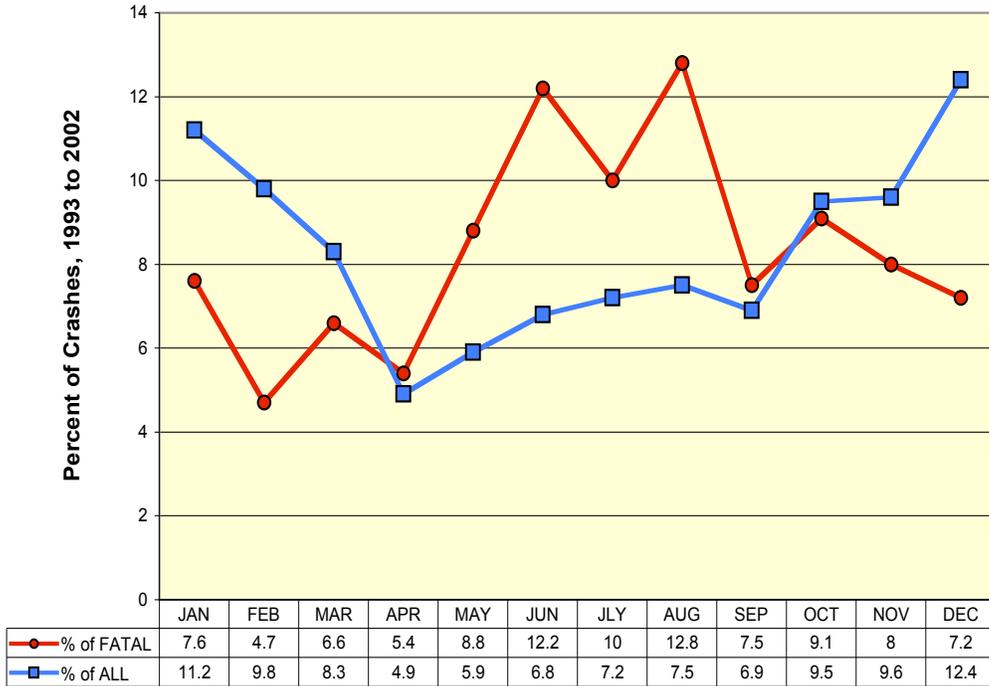
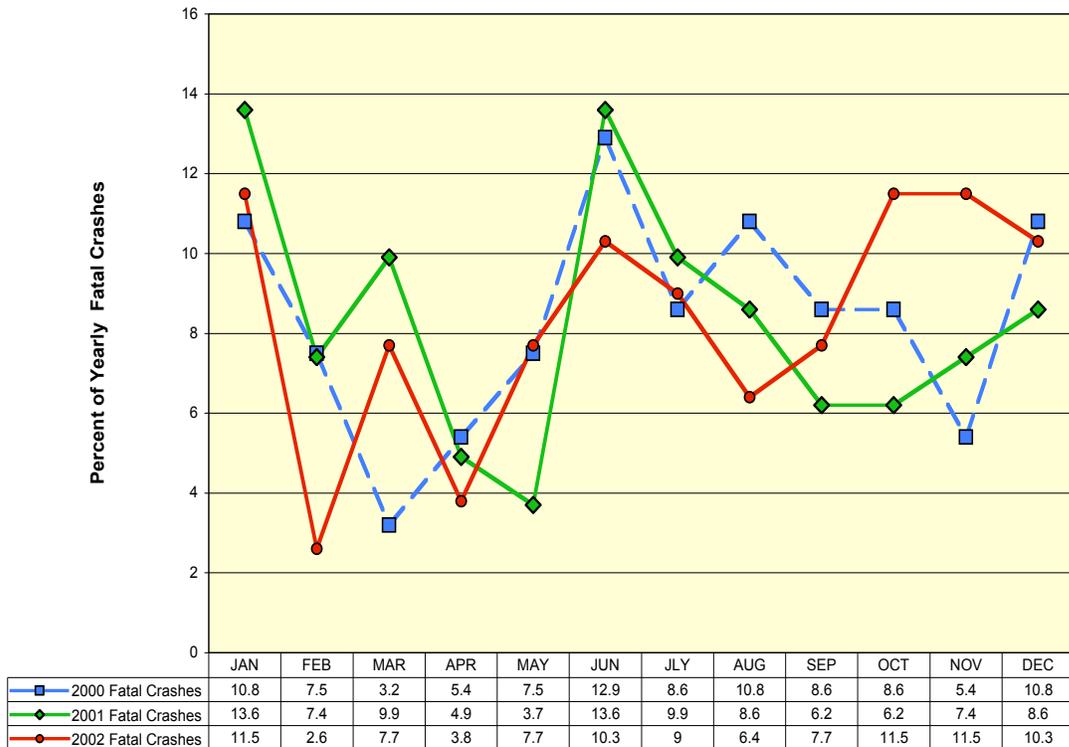


Figure 26 plots crash distribution by month for all crashes and for fatal crashes that occurred between 1993 to 2002 (10 year aggregate data). Figure 27 compares monthly fatal crash distributions for the last three years.

**Figure 26**  
**Month of Year Crash Distribution**  
**1993-2002 Aggregate**



**Figure 27**  
**Fatal Traffic Collisions 2000 to 2002**  
**Percent Distribution by Month of Year**



## Day of Week

Property damage only collisions ranged from a low of 65.3% of daily crashes (Saturday, during the weekend) to a high of 70.1% of daily crashes on Tuesday, during the workweek. The percentage of crashes that involved minor injuries ranged from a low of 26.4% on Monday and Tuesday to a high of 29.1% on Saturday. The percentage of crashes that caused major injuries ranged from 3.1% to 5.4% of daily crashes (low during the work week from Tuesday through Friday). Fatal crashes ranged from 0.5% to 0.9% of all daily crashes and occurred with the highest frequency on Saturday.

During 2002, the proportion of traffic collisions that involved injuries or fatalities increased on weekends while the proportion of crashes involving only property damage decreased slightly on weekends (Figure 28). The number of traffic collisions that happen daily between Monday and Friday is usually higher than the number that occur on either Saturday or Sunday, possibly due to heavier urban traffic volumes as people commute to work. There may be fewer crashes during weekends, but crashes that occur on Saturday or Sunday often result in more serious injuries.

**Figure 28**  
**2002 Collision Severity by Day of Week**

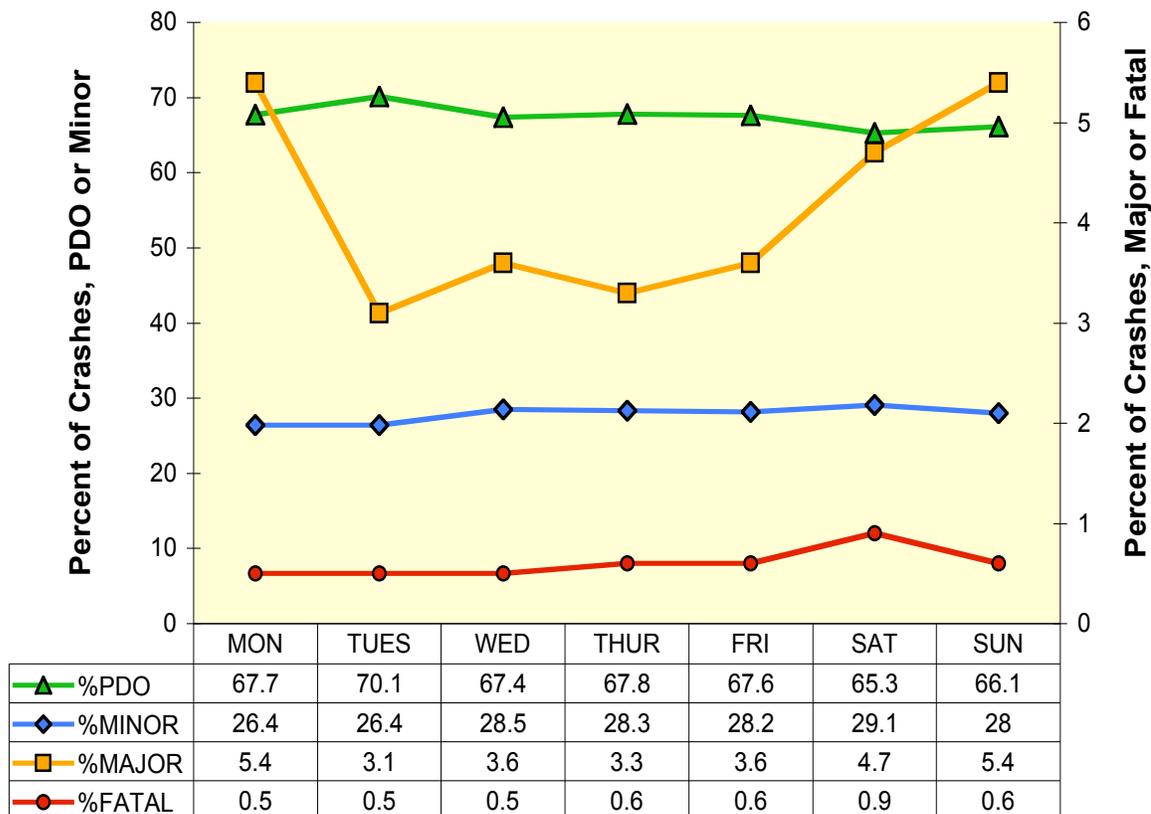
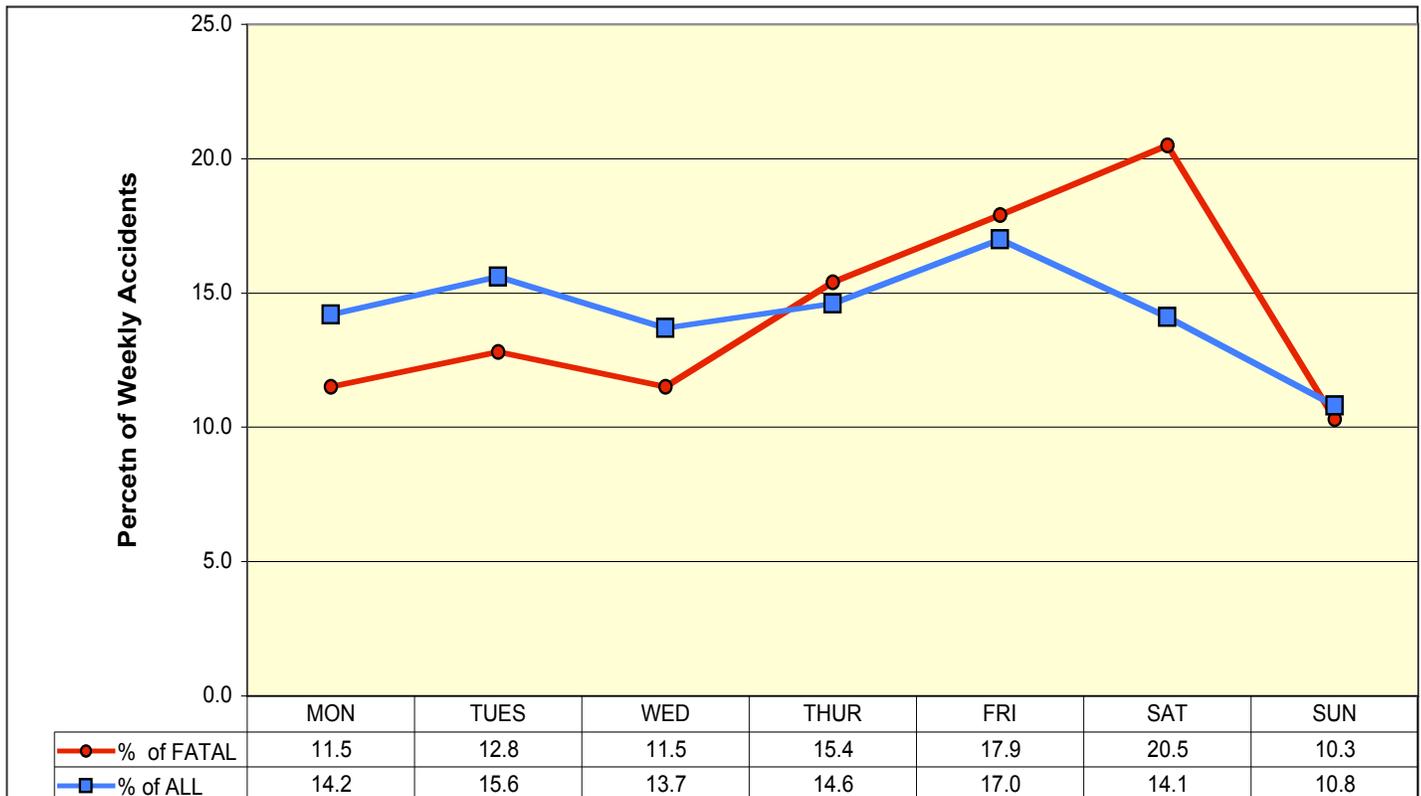


Figure 29 shows collision distribution by day of week during 2002, using standard 24-hour days ending at midnight. Figure 30 presents the corresponding distributions for the 10-year data aggregate.

In 2002, more crashes occurred on Friday than on any other day of the week (2263 crashes, or 17.0% of all collisions). The number of crashes that occurred on Sunday was lower than on any other day of the week (1434, or 10.8% of weekly collisions).

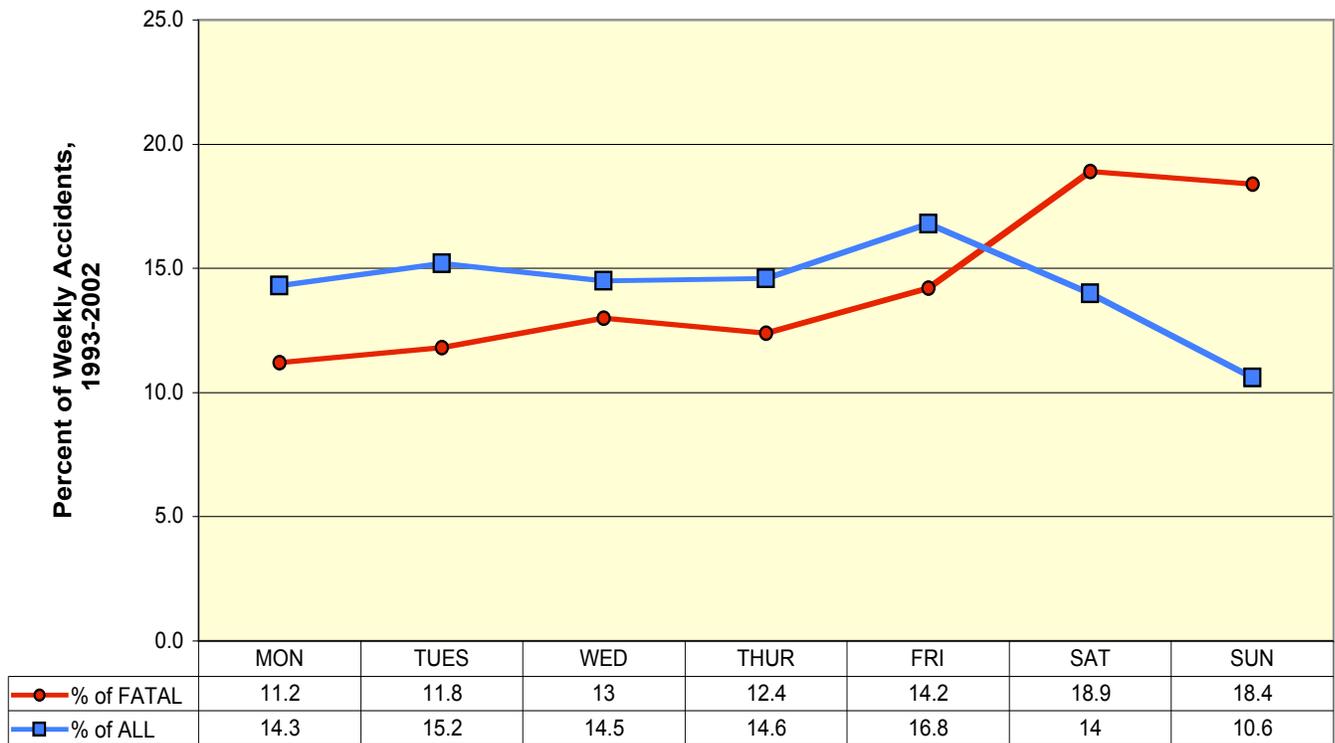
The percentage of fatal crashes that occurred on Saturday and Sunday combined (30.8%) decreased from the previous year (from 47% in 2001) while the percentage of all traffic collisions that occurred on Saturday and Sunday was unchanged (24.9% in 2002; 24.3% in 2001). The percentage of fatal crashes that occurred on Friday doubled (from 8.8% in 2001, to 17.9% in 2002) while the percentage of all crashes that occurred on Friday was unchanged from the previous year.

**Figure 29**  
**Day of Week Crash Distribution,**  
**2002 Traffic Accidents and Fatal Crashes**



The reduction in fatal crash frequency on Sundays in 2002 departs from the ten year aggregate and trend. Between 1999 and 2001, the numbers of fatal crashes on Sundays were similar to those on Saturdays, consistent with Figure 29.

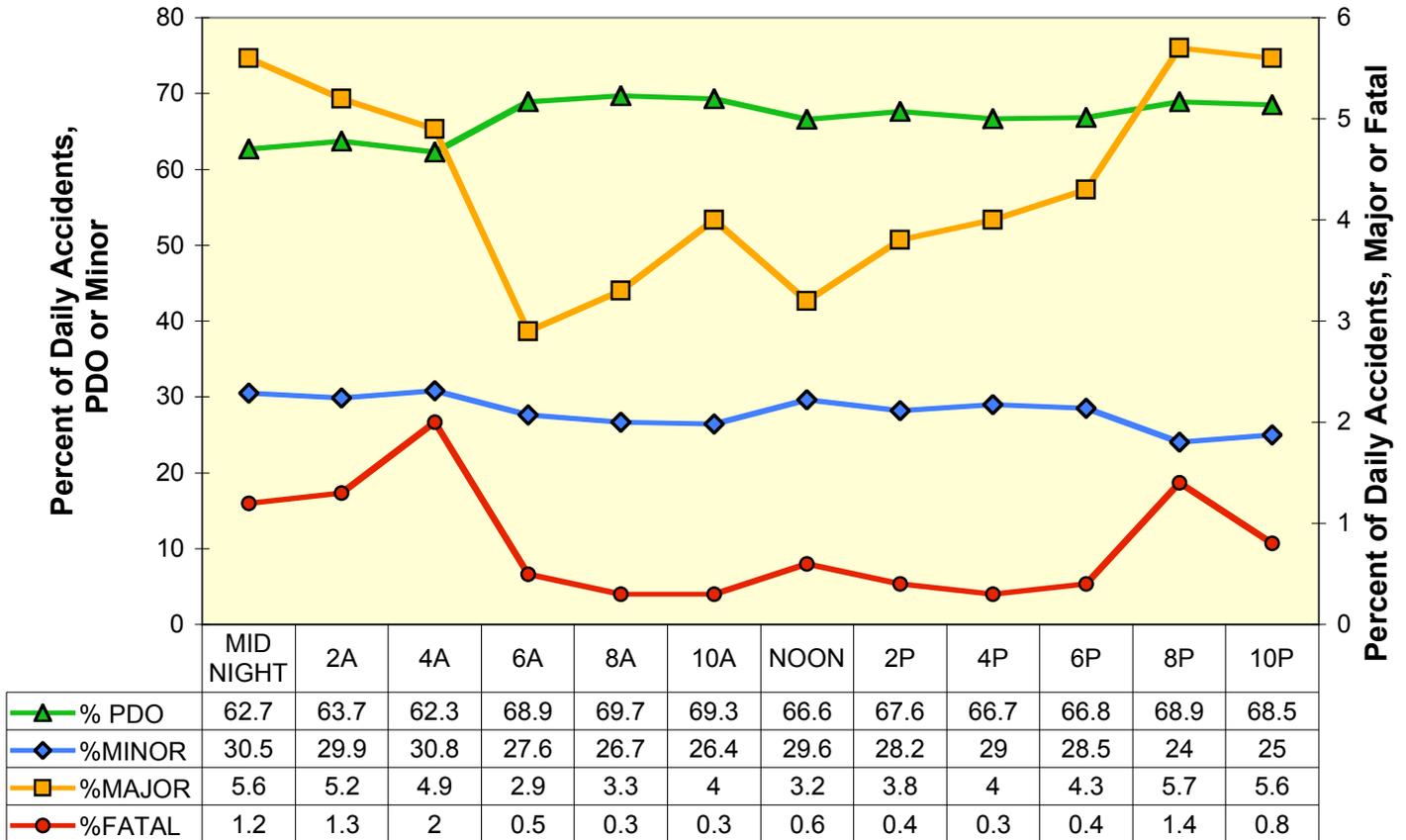
**Figure 30**  
**Day of Week Crash Distribution**  
**1993-2002 Aggregate.**



**Time of Day**

The percentage of property damage only collisions ranged from 62.3% between 4 and 5:59 in the morning, to 69.7% between 8 to 9:59 in the morning. The percent that involved minor injuries ranged from 24% to 30.8% (lowest between 8 and 9:59 in the evening; highest between 4 and 5:59 in the morning) while the percent that involved major injuries ranged from 2.9% to 5.7% (lowest between 6 and 7:59 in the morning; highest between 8 and 9:59 in the evening). The percent of collisions that involved fatalities was greatest between 4 and 5:59 in the morning. Time of day was not reported for about 1.3% of collisions (data not included in Figure 31).

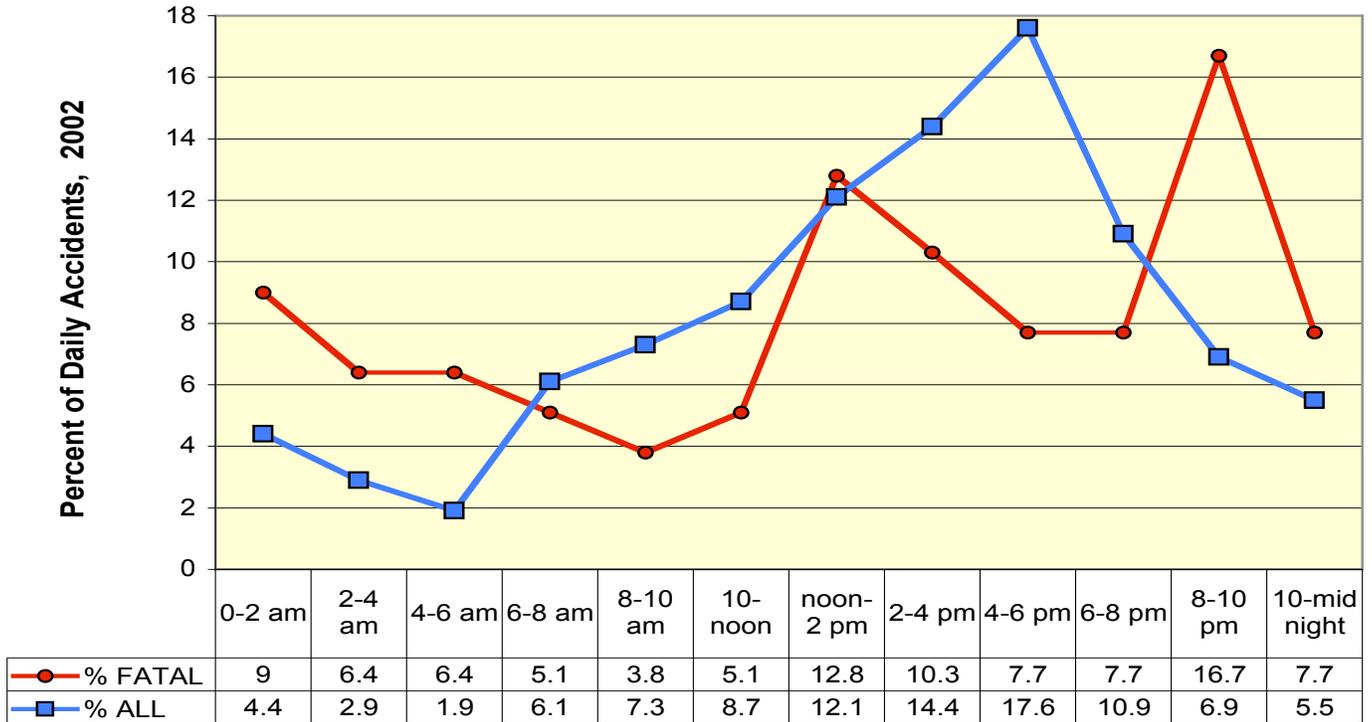
**Figure 31**  
**2002 Collision Severity by Time of Day**



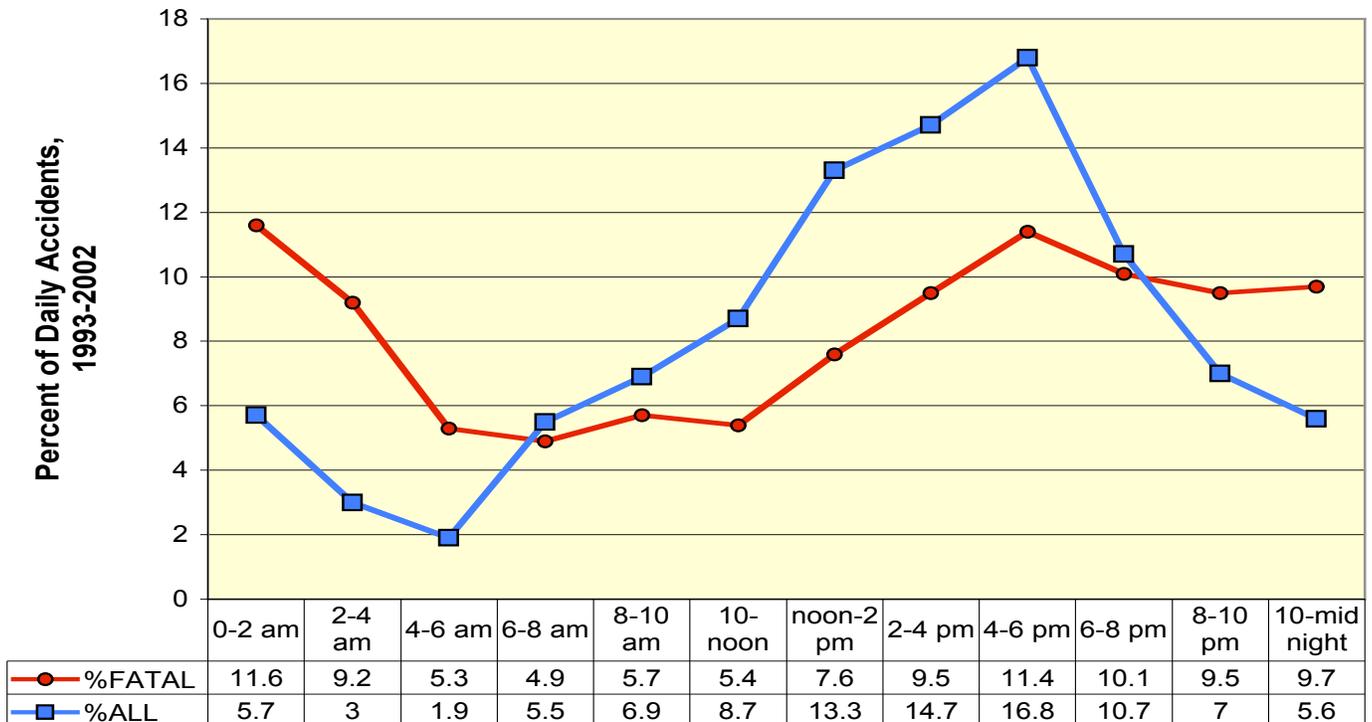
Traffic collisions (all severity classes combined) followed the expected hourly distribution in 2002, rising from lowest numbers of collisions between 4 and 5:59 in the morning, reaching a maximum during the afternoon rush hour, then falling steadily from midnight to 3:59 in the morning. Figure 32 plots crash distribution by time of day for the current year and Figure 33 presents the corresponding distribution for 1993-2002 combined.

Typically, numbers of fatal crashes increase after 4 in the afternoon (beginning with the afternoon commute) and remain high throughout the evening and early morning hours. Drivers are least likely to become involved in fatal crashes in the hours after 4 in the morning, extending through the morning commute to the noon hour. In 2002, the frequency of fatal crashes was greatest between 8 and 10 in the evening (16% of all fatal crashes during the day) and between noon and 2 in the afternoon (12%).

**Figure 32**  
**Traffic Collisions and Fatal Crashes**  
**By Time of Day For 2002**



**Figure 33**  
**Traffic Collision and Fatal Crash Distribution**  
**By Time of Day 1993-2002 Aggregate**



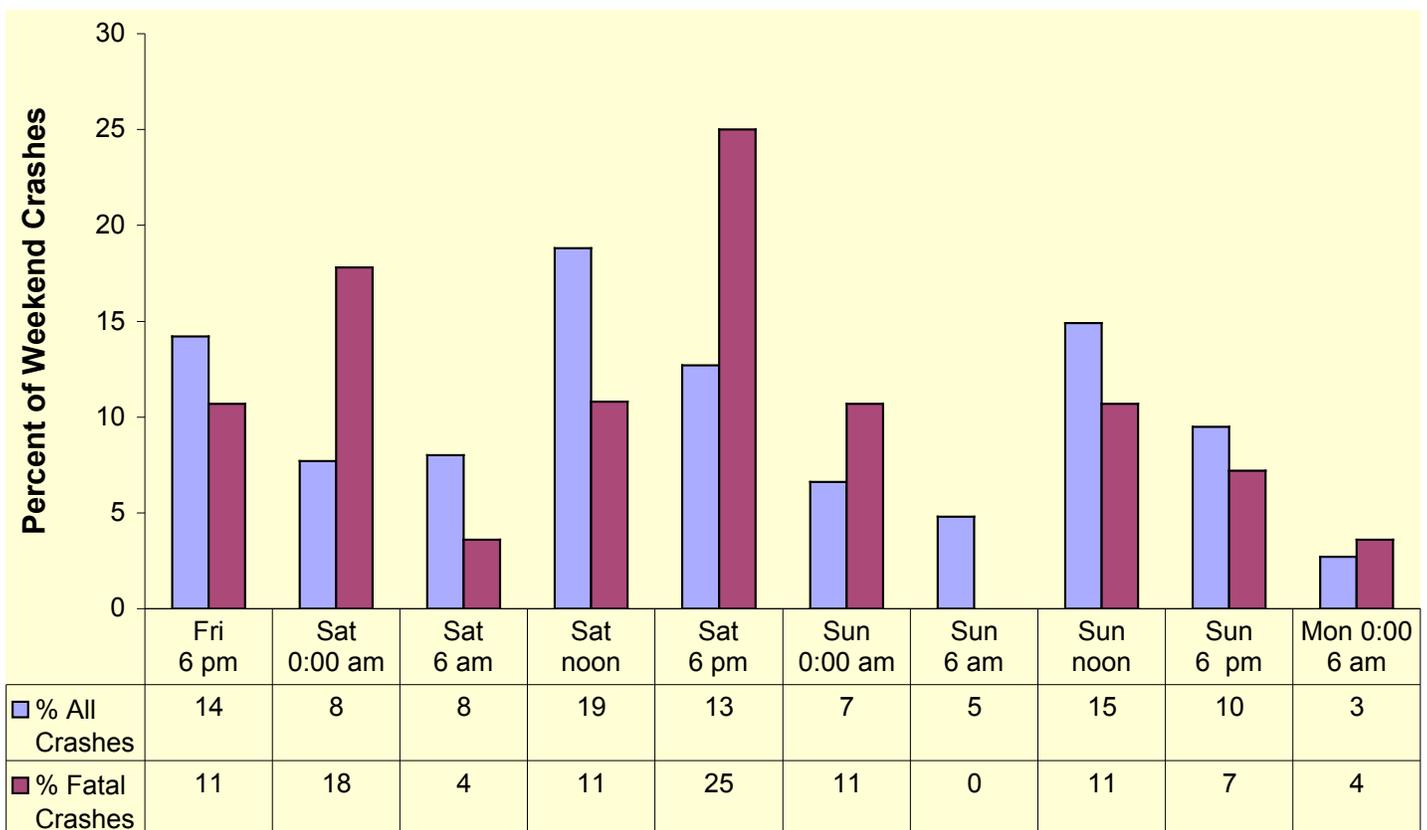
## Weekends.

Figure 34 summarizes 2002 crash activity during the 60 hour NHSTA weekend interval, from 6 p.m. Friday evening to 6 a.m. Monday morning.

Twenty-nine percent (29.3%) of all Alaska traffic collisions and 35.9% of fatal crashes occurred on weekends during 2002. The percentage of annual collisions that occurred on weekends in 2002 was similar to previous years (29.6% in 2001, 31.3% in 2000).

Weekend collisions in 2002 were most frequent on Saturday and Sunday afternoons between noon and 6 p.m., though overall crash frequency was also high Friday evening. Fatal crashes were most likely on Saturday evenings (7 fatal crashes between 6 p.m. and midnight) and very early Saturday morning, following Friday evening activities.

**Figure 34**  
**Weekend Traffic Collisions**



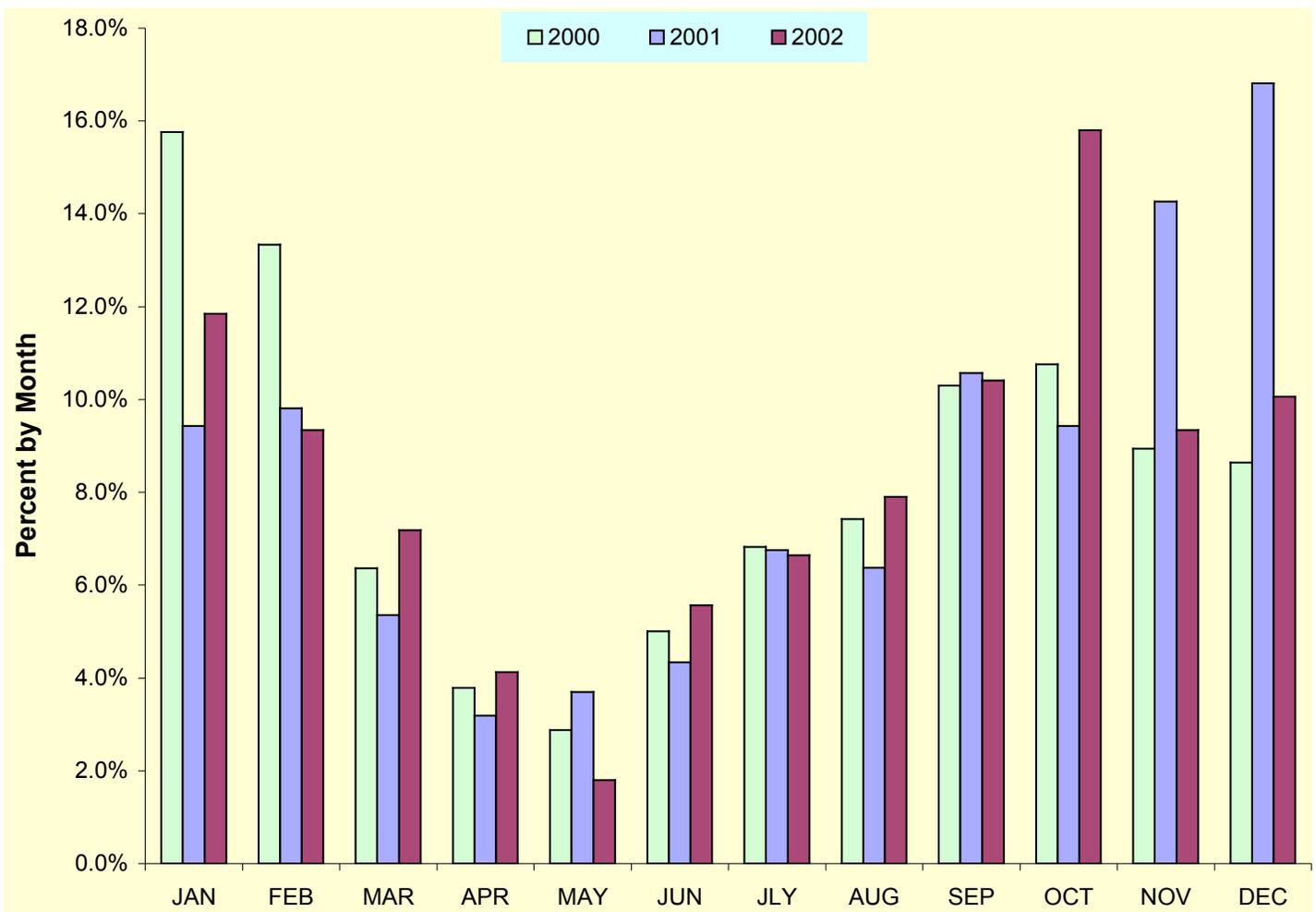
## COLLISIONS WITH MOOSE

There were 557 motor vehicle collisions with moose on Alaska roadways in 2002 (4.2% of all traffic collisions, based on the first crash event).

While overall collision rates and fatal collision rates probably reflect road conditions, traffic volumes, and driver error, collisions with moose may be more dependent on environmental conditions (snowfall patterns in Southcentral Alaska and hours of daylight) and are often the consequence of animal foraging behavior and visibility. Moose collision data is summarized in Appendix tables I.G.1.1 through I.G.9.1. Appendix tables include only data from collisions with live moose.

In 2002, moose collisions occurred more frequently in October (31%) than other months of the year. The month of May had the lowest frequency of encounters (1.8% of all moose collisions). On average, there were 62 moose collisions per month between September and February and 30 moose collisions per month between March and August in 2002. Figure 35 compares monthly distribution of moose collisions between 2000 and 2002.

**Figure 35**  
**Moose Collisions by Month of Year**  
**2000-2002**

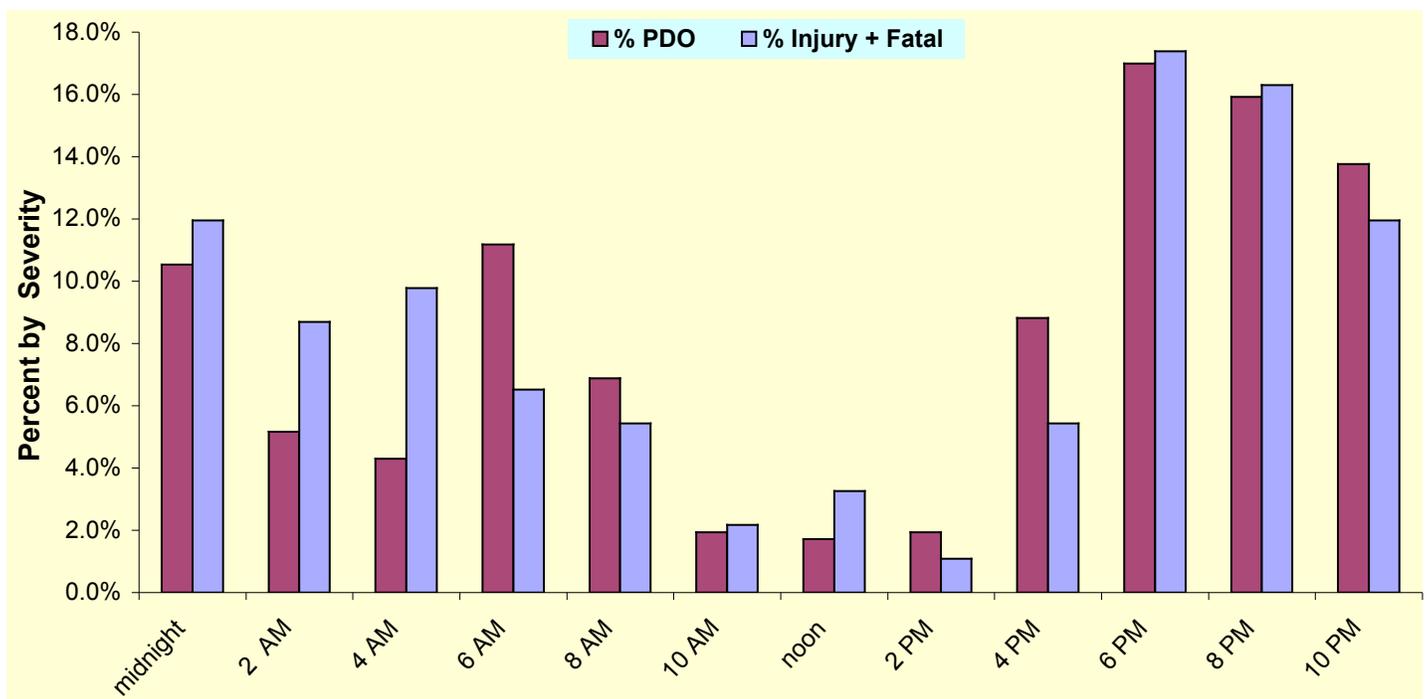


Forty-six percent (46.5%) of collisions with moose occurred during the six hours between 6 in the evening and midnight. Moose encounters on Alaska roadways were least likely during the midday (only 5.7% occurred in the six hours between 10 in the morning and 4 in the afternoon). The distribution of moose collisions by time-of-day in 2002 was similar to that in 2000 and 2001.

Motor vehicle collisions with moose usually result in fewer injuries to vehicle occupants than other traffic collisions. Eighty-four percent (83.5%) of moose collisions in 2002 caused only property damage, 14.9% resulted in only minor injuries to vehicle occupants and less than 2% caused major or fatal injuries (1.4% major and less than 0.2% fatal).

Figure 36 shows the percent of non-injury (PDO) and injury collisions (minor, major, and fatal combined) with moose by time-of day. Both non-injury and injury collisions were most frequent in the evening. On average, at any hour of the day 16% of moose collisions caused person injuries in 2002. That percentage increased to 25% between 2 and 3:59 in the morning then to 31% between 4 and 5:59 am, possibly due to reduced light conditions and less time for drivers to take evasive action. The single fatal collision with a moose in 2002 occurred in March between 4 and 6 in the morning on a rural local road.

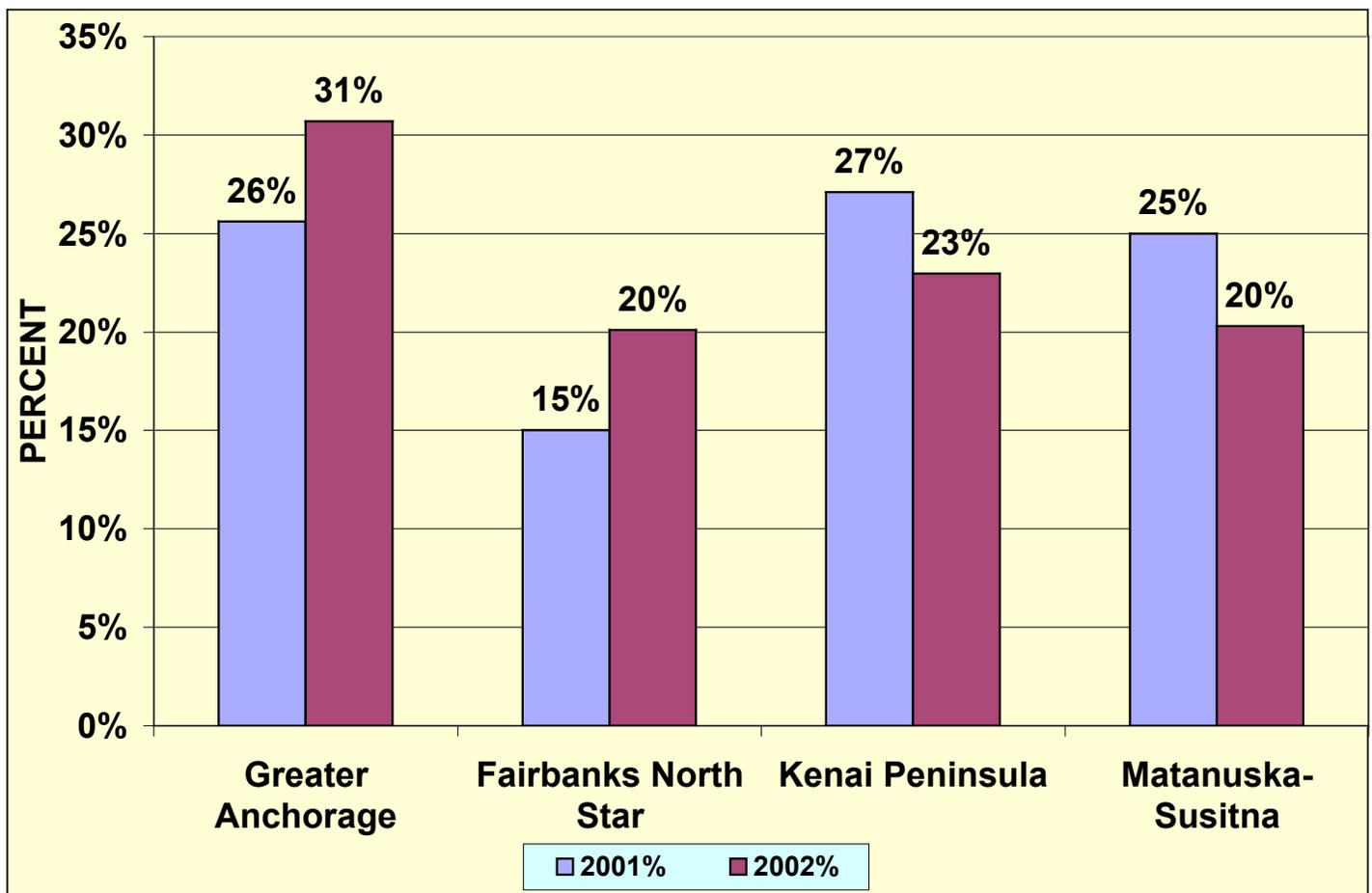
**Figure 36**  
**2002 Moose Collisions**  
**Time of Day and Crash Severity**



Most moose collisions occurred in darkness (60.5%) or in reduced light conditions (20% in either streetlight or twilight/dawn ambient light). No adverse weather conditions were coded for 79% of moose collisions; most occurred in clear or cloudy weather without precipitation or blowing debris.

Sixty-two percent (61.8%) of all moose collisions happened on rural roadways and thirty-eight percent occurred at urban locations. Over a third of rural and a third of urban moose collisions occurred on interstate highways. Forty-six percent of all moose collisions statewide occurred on the Sterling, Seward, Glenn, Parks, Richardson, Alaska, or Tok Cut-Off highways (see NHS Highway section of this publication for crash locations by traffic link).

Seventy-four percent (74%) of statewide moose collisions occurred in three large Southcentral boroughs. Moose collisions within the boundaries of the Municipality of Anchorage increased from 25.6% of statewide in 2001 to 30.7% in 2002. Kenai Peninsula moose crashes decreased slightly, from 27.1% of statewide in 2001 to 23% in 2002. Moose collisions in the Matanuska-Susitna Borough also decreased in 2000, from 25% in 2001 to 20.3% in the current year. Twenty percent (20.1%) of all moose collisions occurred in the Fairbanks Northstar Borough (up from 15% of statewide in 2001).



## **GEOGRAPHIC DISTRIBUTION OF TRAFFIC COLLISIONS**

Figures 37 through 45 (based on Appendix Table I.G.1.1) illustrate property damage and injury collision trends for the years 1993 through 2002. Figures 37 through 44 chart the percent of crashes that involved injuries (nonfatal and fatal combined), the percent of crashes that involved only property damage, and the total number of crashes for Alaska's eight most populous boroughs. Figure 20 summarizes for all other areas (less populous boroughs and unorganized areas). Statewide data was presented in Figure 1.

All boroughs reported fewer traffic collisions in 2002 than in 2001. All but the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kodiak Borough reported fewer collisions than had been recorded for any year in the past ten. This might be due to difficulties in distribution and use of the new police report forms and procedures. Problems collecting driver reported data might also have contributed.

Crash severity increased in all boroughs in 2002, expressed as the percentage of reported crashes that resulted in injuries or fatalities.

The number of major injury crashes increased in Anchorage, while the number of minor injury, number of property damage only, and total number of collisions that were reported decreased (see Appendix Statistical Tables). A similar pattern is apparent in Matanuska-Susitna Borough and Statewide data (all areas combined).

Reduced crash reporting may have influenced severity statistics for 2002, but the current year data is still consistent with data that indicates increasing severity of reported traffic collisions. Figures 46 and 47 show simple liner trends (regression coefficient in parenthesis in the data table row header) for crash severity (annual percent injury plus fatal crashes) in the most populous boroughs.

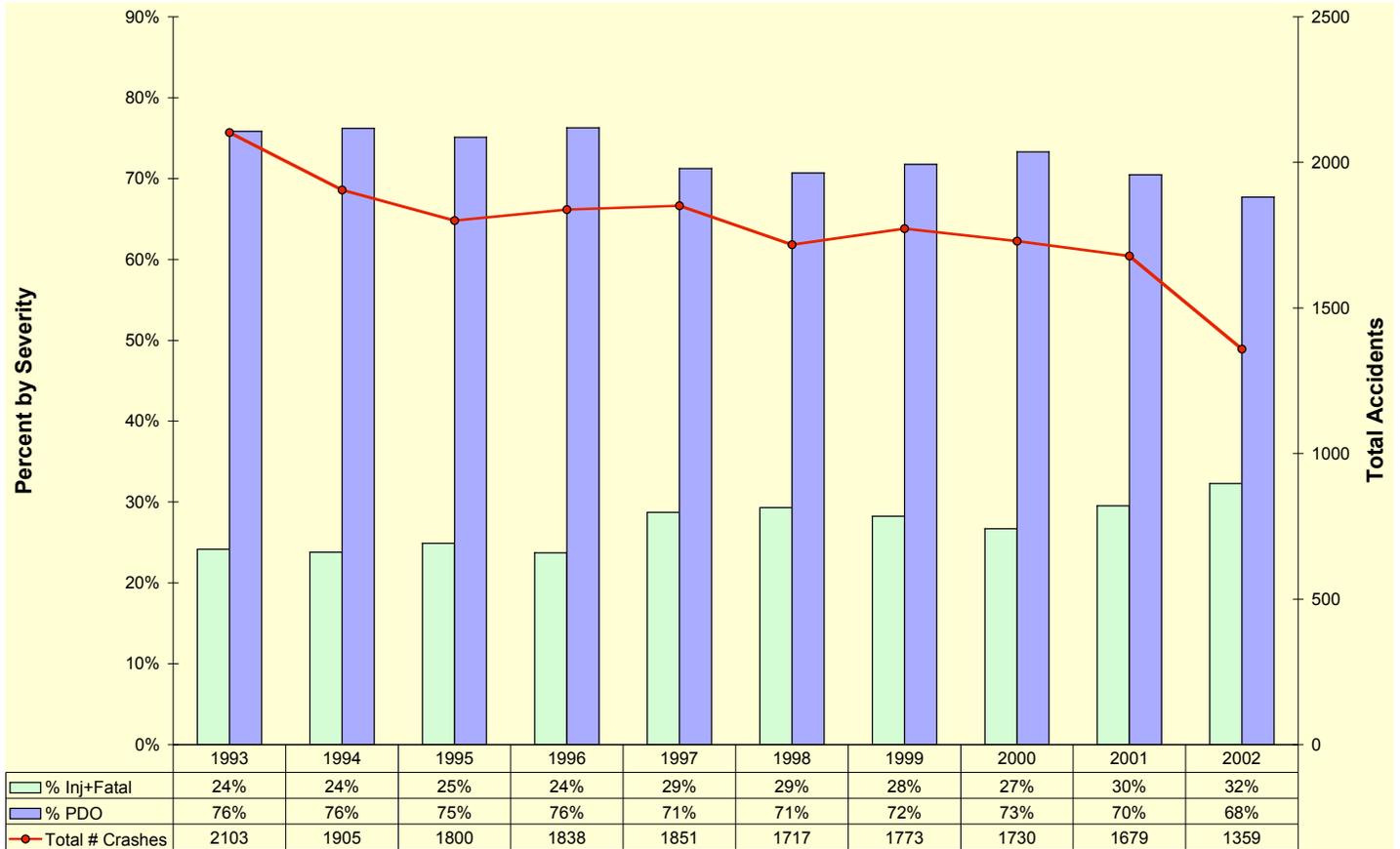
By mid-2002, about ten percent of the State's population lived within the Matanuska-Susitna Borough boundaries. Eleven percent (11.5%) of alcohol related crashes, twenty percent (20.3%) of moose collisions, and fourteen percent (14.1%) of fatal crashes occurred there in 2002. The percentage of traffic collisions that resulted in fatalities decreased from the previous year (0.778% in 2002, 1.116% in 2001) but remained higher than statewide.

The Municipality of Anchorage, with about 42% of the State's population, reported sixty-four percent (64.4%) of all traffic collisions and forty-one percent (41.0%) of all fatal crashes that occurred statewide during 2002. Seventy percent (70.4%) of motor vehicle collisions with pedestrians and 75.8% of collisions with bicyclists (pedalcyclists) occurred within Anchorage boundaries. Sixty-two percent (62.3%) of Alaska's alcohol-related crashes and thirty-one percent (30.7%) of collisions with moose occurred there. The percentage of traffic collisions that resulted fatalities was lower than statewide (0.585% statewide; 0.373% within the boundaries of the Municipality of Anchorage).

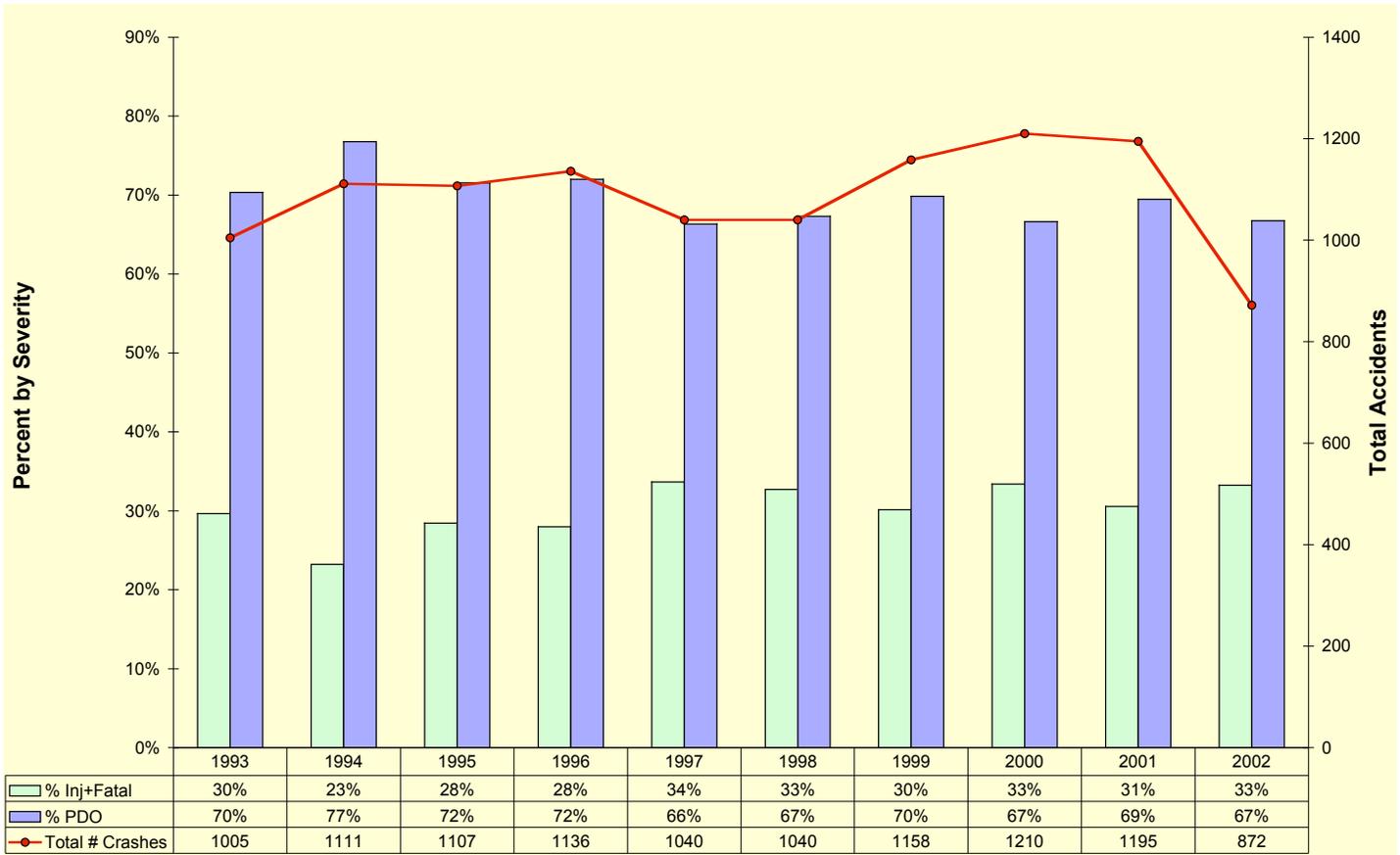
**Figure 37**  
**Anchorage Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



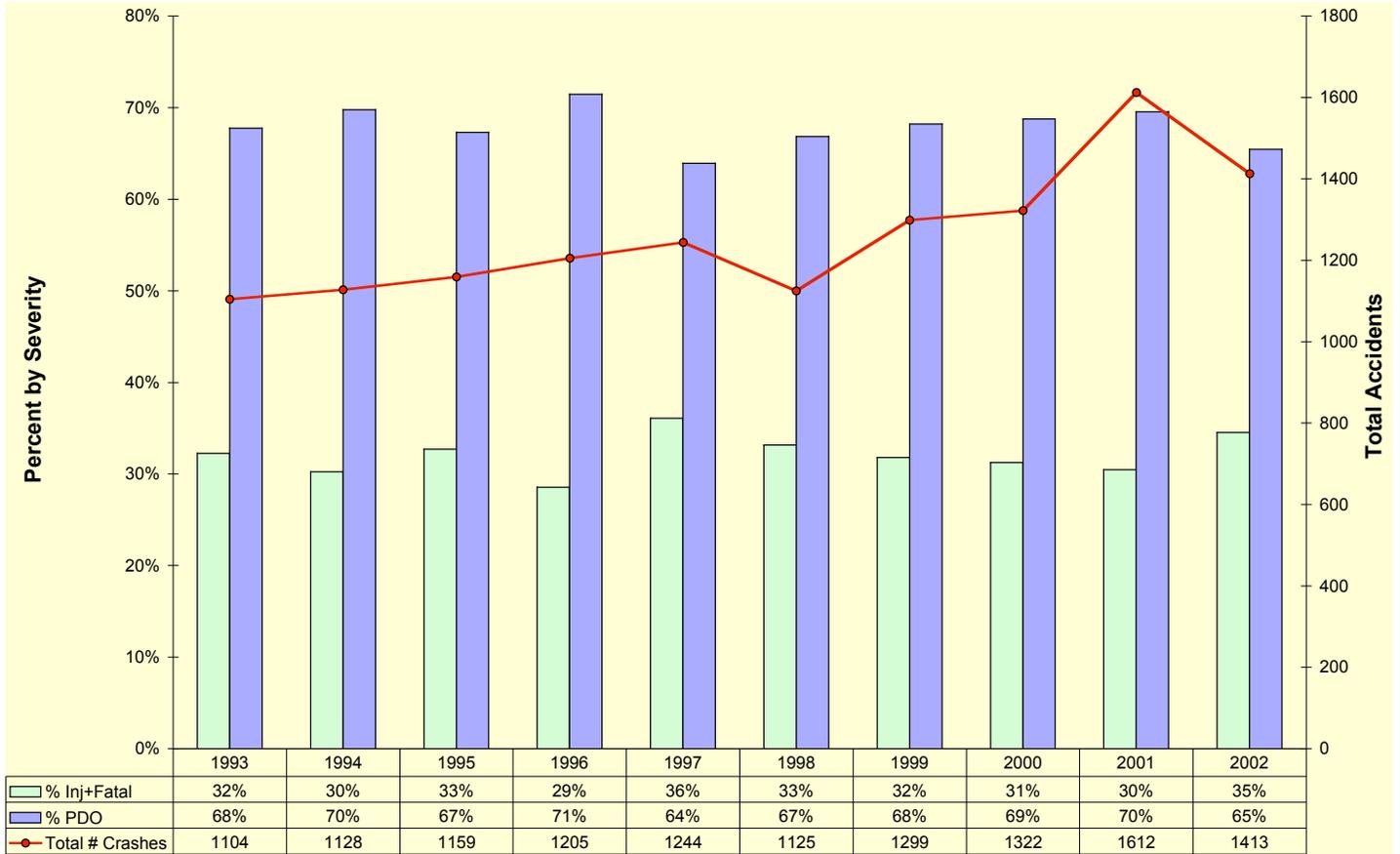
**Figure 38**  
**Fairbanks Northstar Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



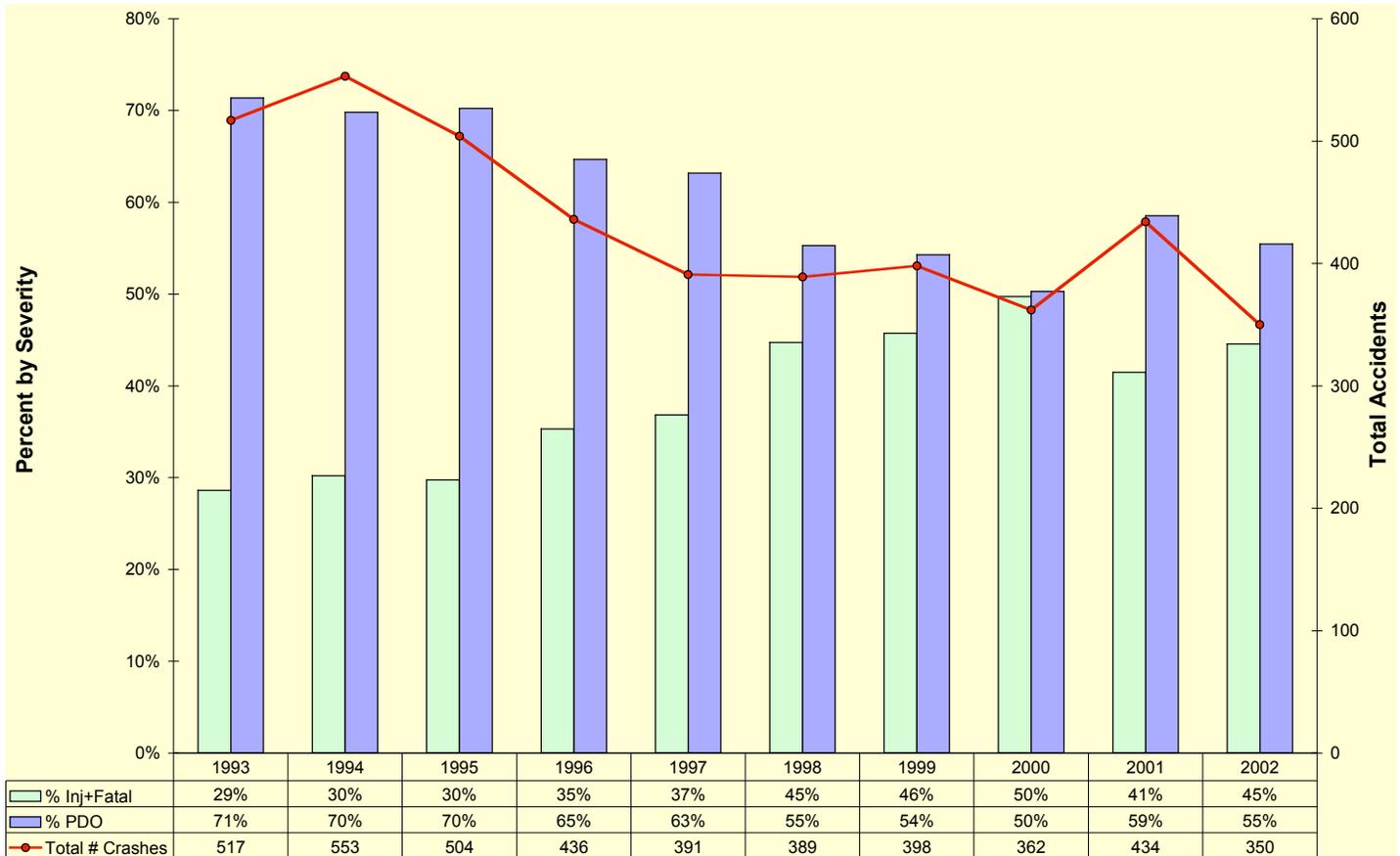
**Figure 39**  
**Kenai Peninsula Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



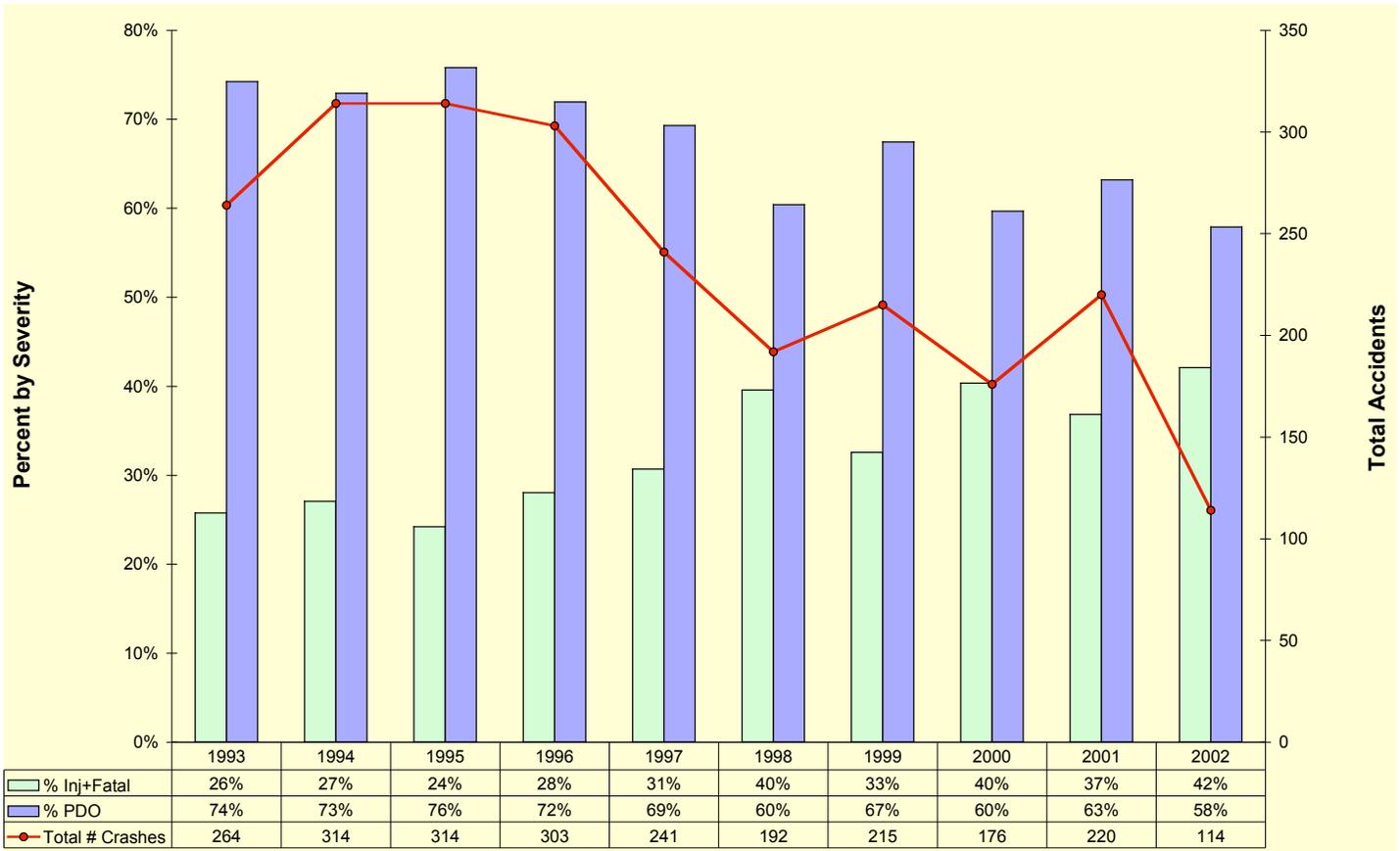
**Figure 40**  
**Matanuska-Susitna Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



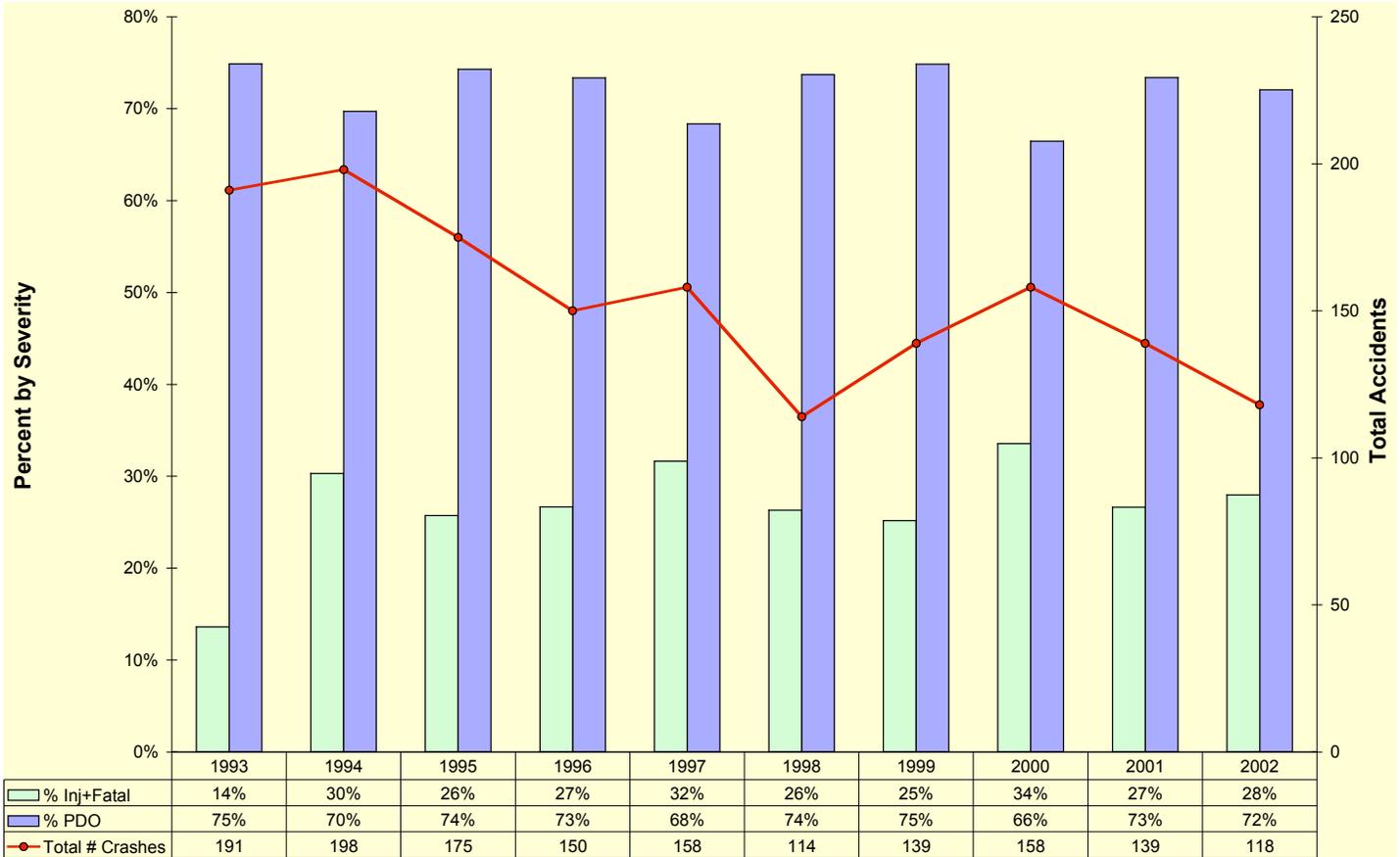
**Figure 41**  
**Juneau Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



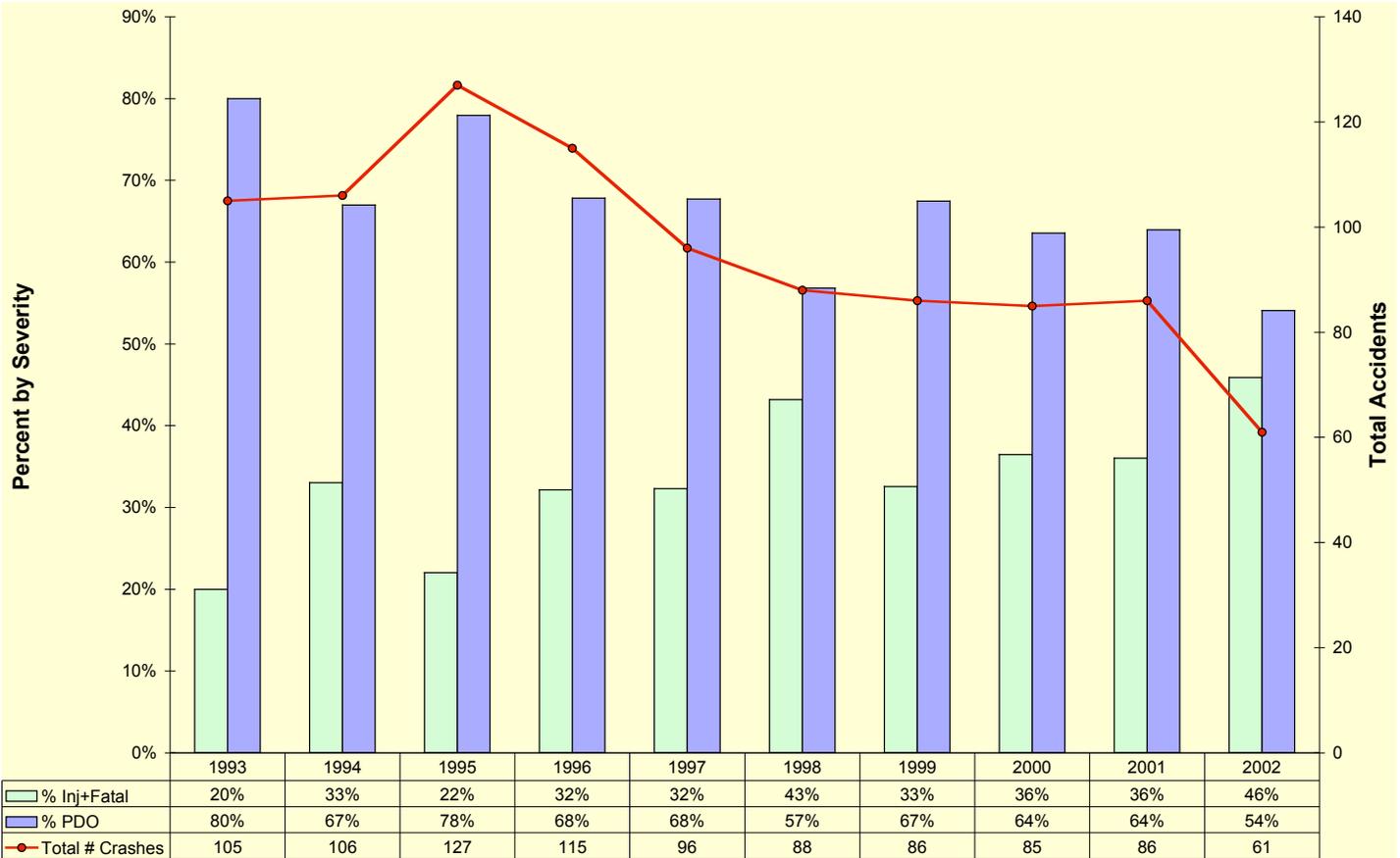
**Figure 42**  
**Ketchikan Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



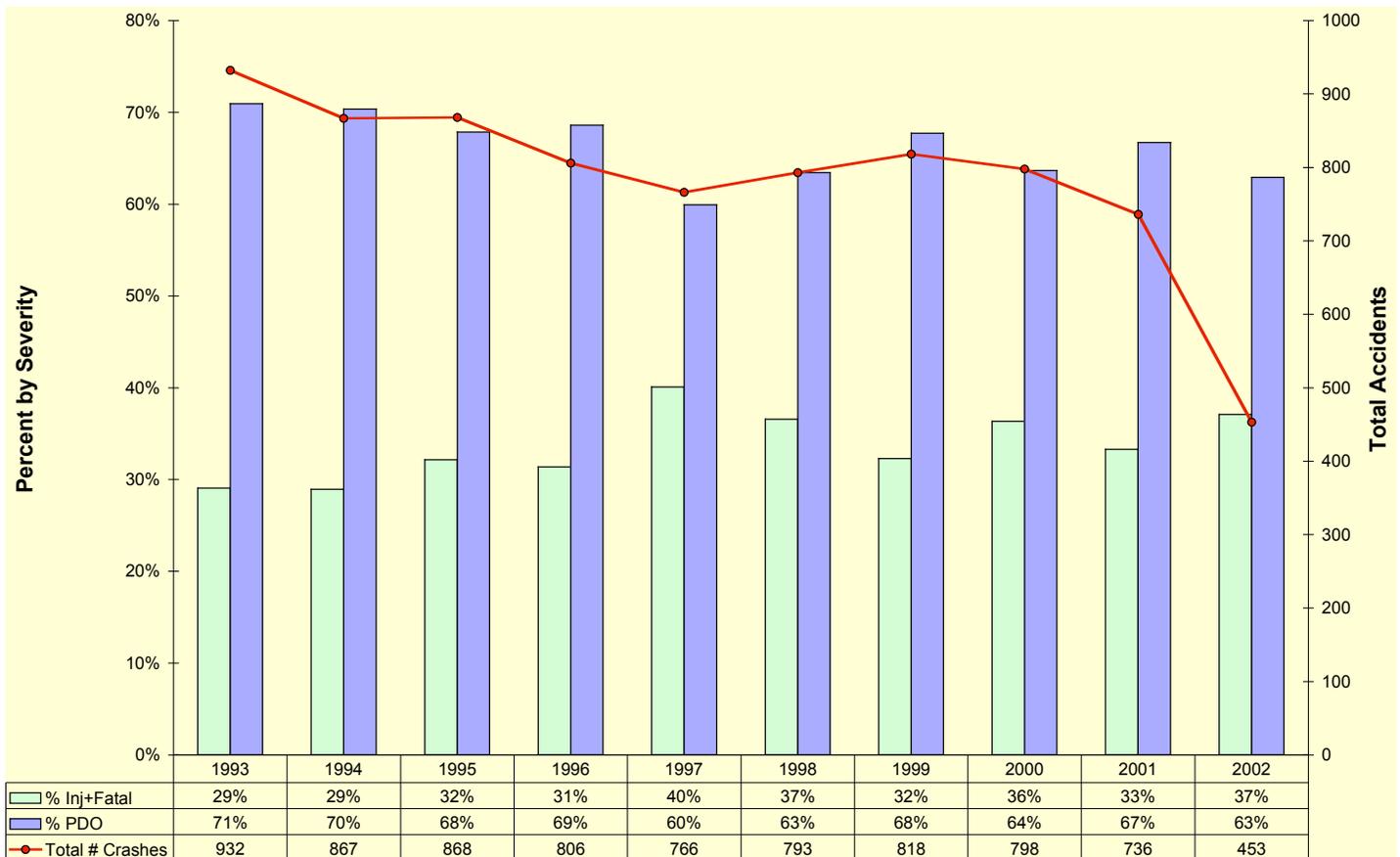
**Figure 43**  
**Kodiak Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



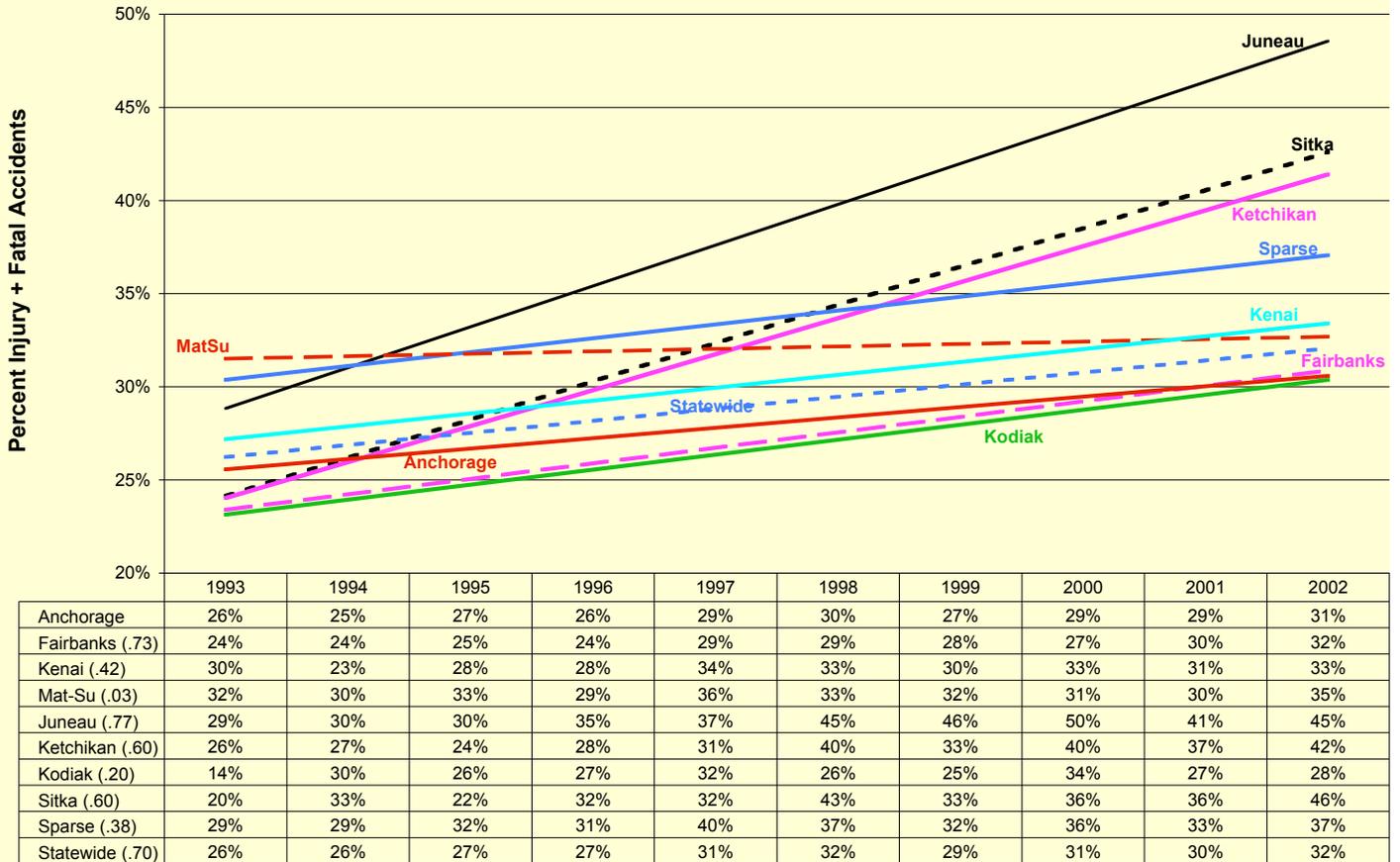
**Figure 44**  
**Sitka Borough Traffic Collisions**  
**By Collision Severity 1993-2002**



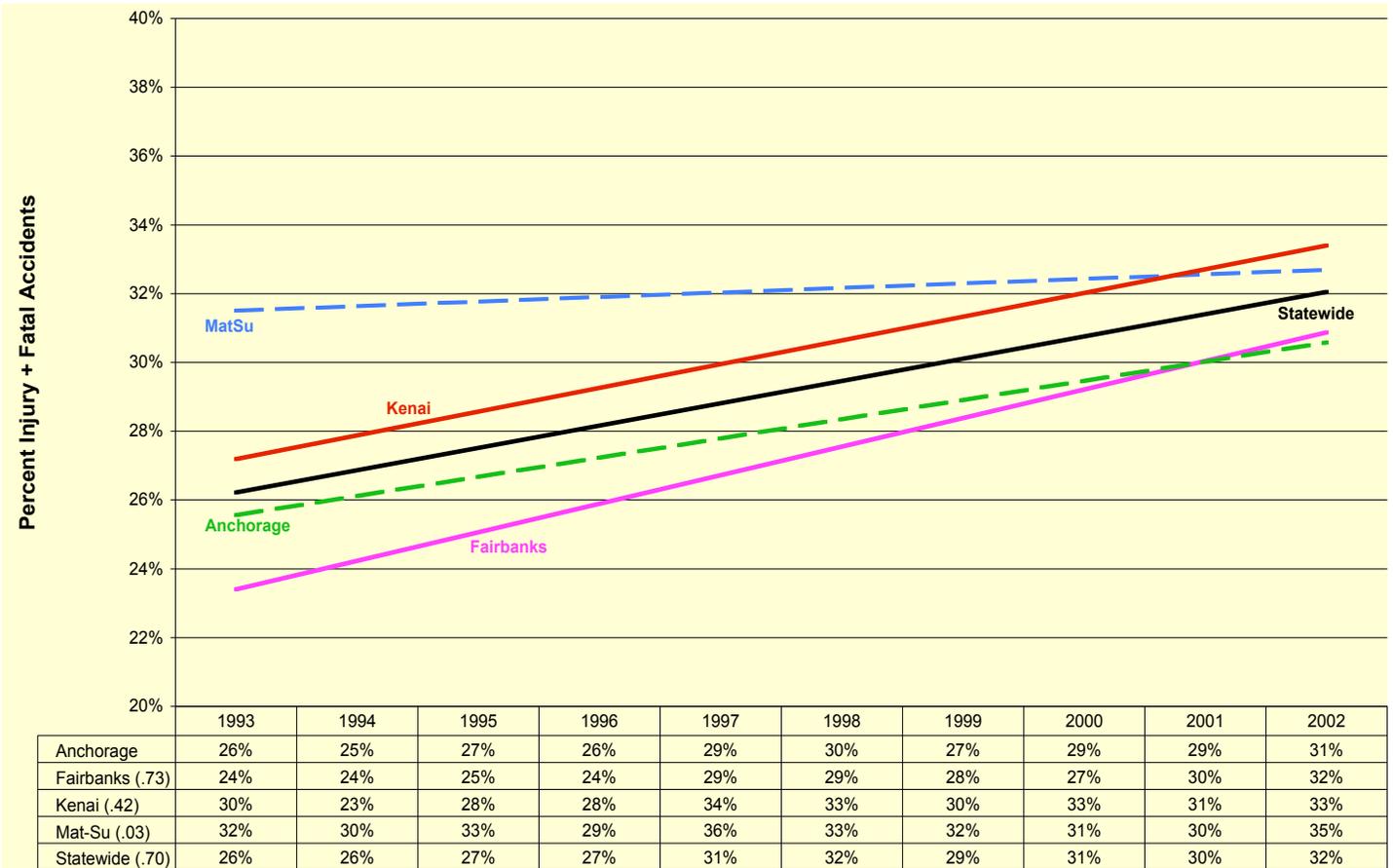
**Figure 45**  
**Sparsely Populated Regions**  
**Traffic Collisions by Collision Severity 1993-2002**



**Figure 46**  
**Crash Severity by Borough 1993-2002**



**Figure 47**  
**Crash Severity by Borough 1993-2002**

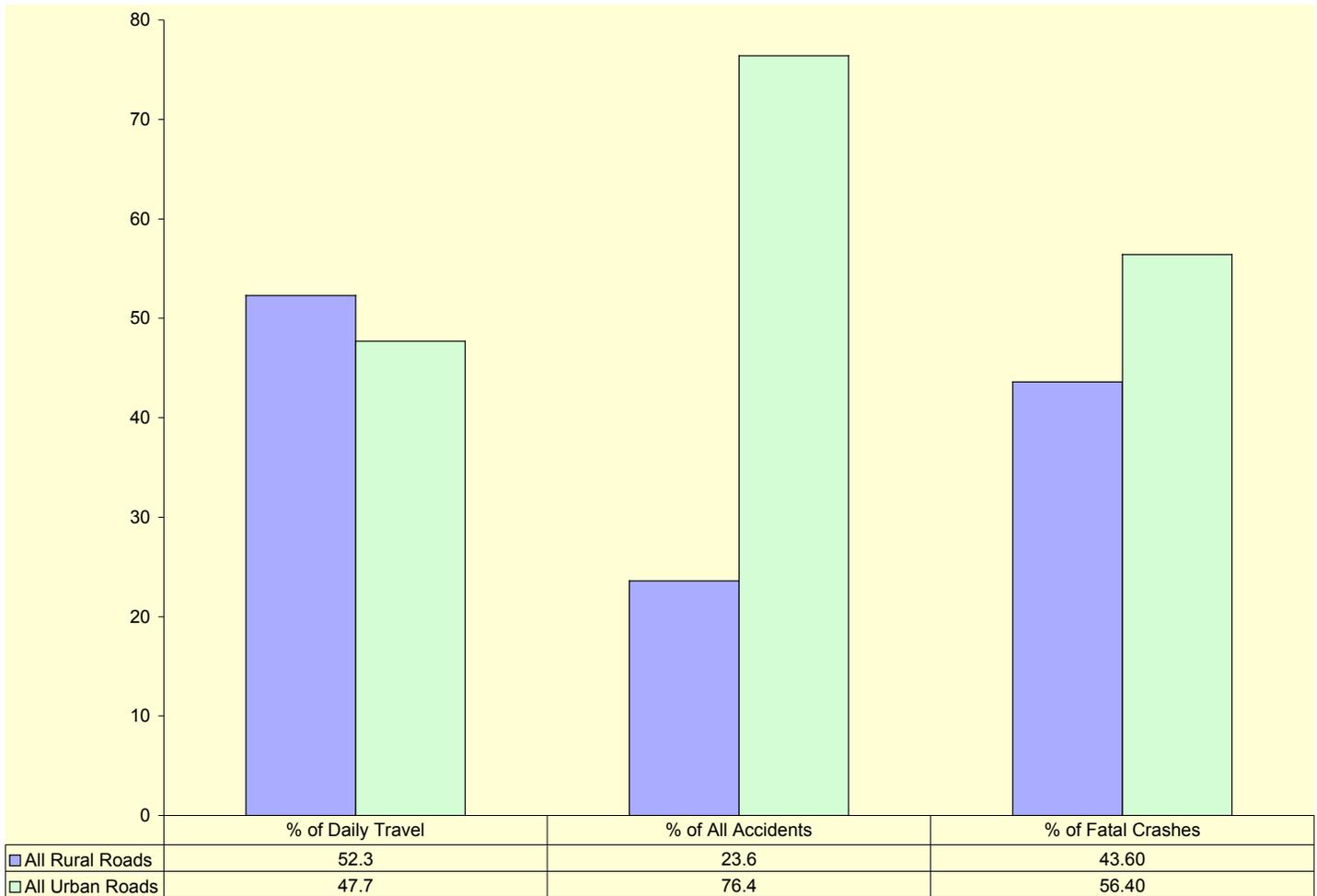


## ROAD TYPE & LOCATION

### Urban/Rural

Although traffic volumes on rural and urban roadways were similar, over three quarters of the traffic collisions that were reported in 2002 occurred on urban roadways (Figure 48). The percent urban/rural distribution for all 2002 collisions is consistent with Alaska crash data collected since 1993 (see ten year trends tables in Appendix).

**Figure 48**  
**Traffic Volume, Traffic Collisions, and Fatal Crashes**  
**Percentage At Urban and Rural Roadway Locations**

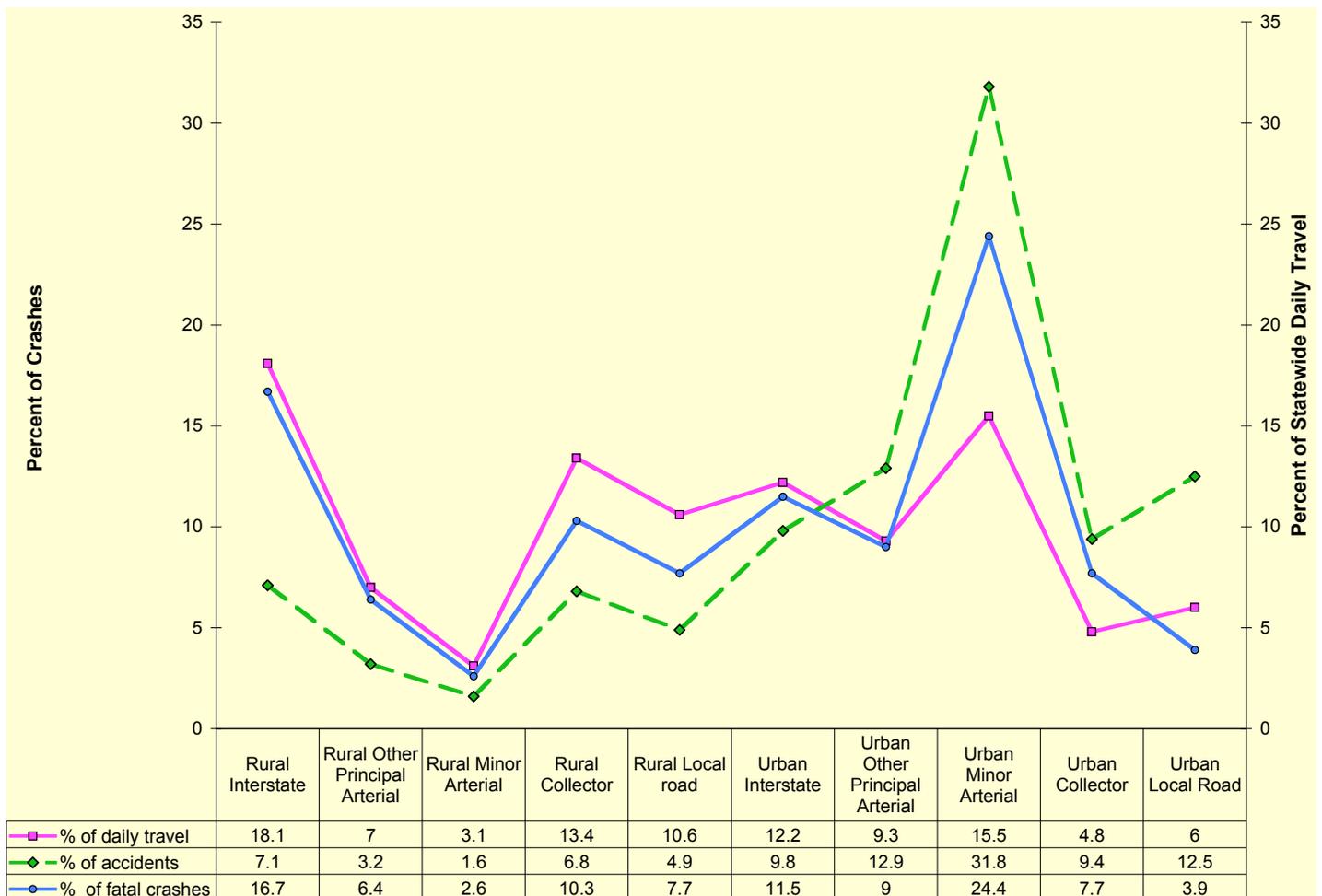


Urban/rural distribution of fatal crashes departed from the ten-year trend in 2002. Between 1993 and 2001, the percent of fatal crashes on rural roadways annually exceeded the percentage at urban locations. During 2002, fifty-six percent of fatal crashes occurred on urban roadways and forty-four percent occurred on rural roadways

## Functional Class and Rural/Urban

Figure 49 shows percent distributions of crashes and traffic volumes by road functional class at urban and rural crash locations.

**Figure 49**  
**2002 Crash and Traffic Distribution by Roadway Functional Class**



Traffic volumes were highest on rural instate highways (18% of average annual daily traffic in 2002), followed by urban minor arterials (15.5%), rural collectors (13.4%), and urban interstate roadways (12.2%). Seventeen percent (16.7%) of fatal crashes occurred on rural interstates, 24.4% on urban minor arterials, 10.3% on rural collectors, and 11.5% on urban interstates.

## Accident Rates

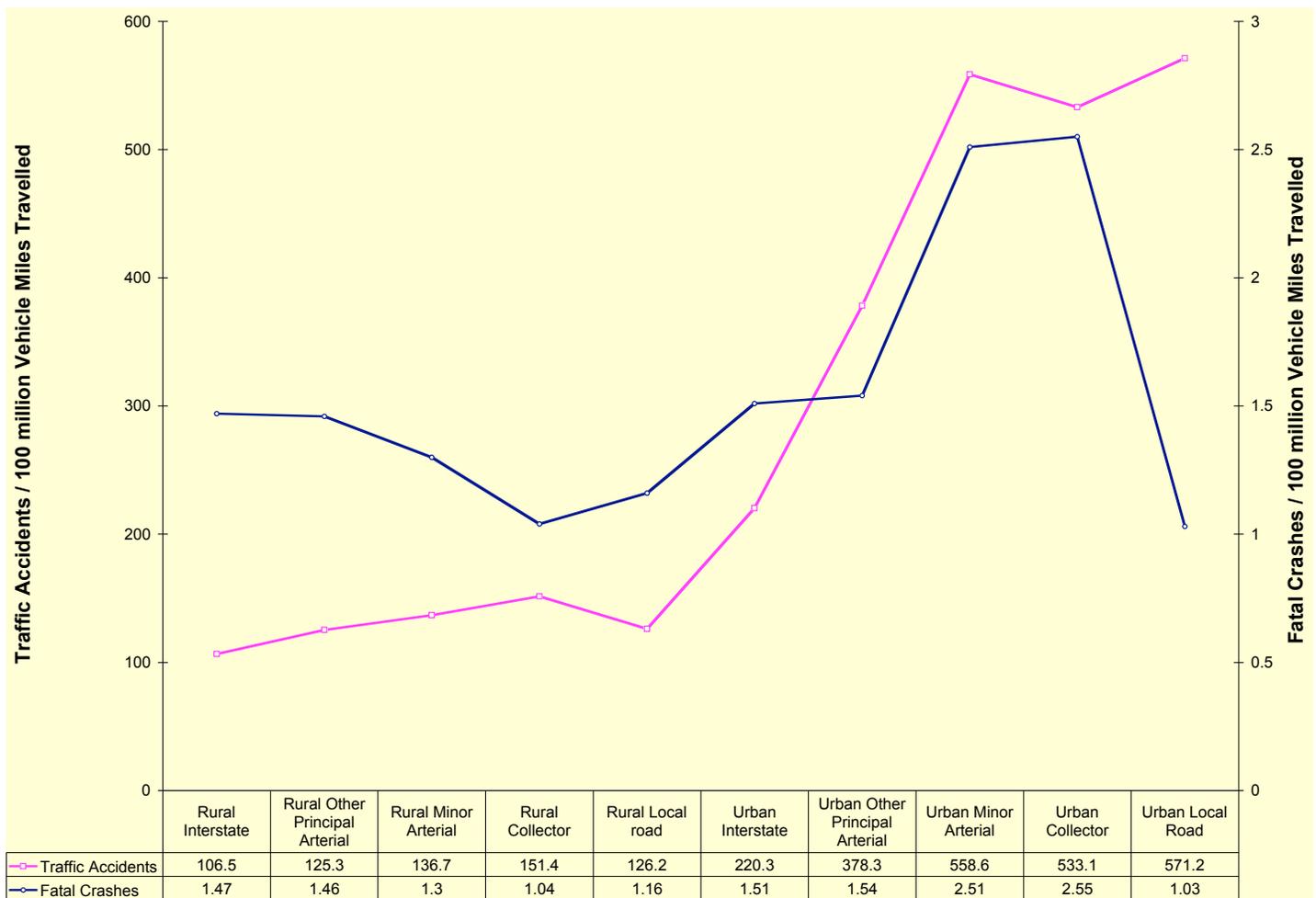
Statewide, there were 272 traffic collisions for every 100 million vehicle miles traveled during 2002. The collision rate at rural locations was 123 collisions per 100 million VMT and at urban locations, 436 collisions per 100 million VMT. There were 1.59 fatal crashes per 100 million VMT statewide, with 1.33 fatal crashes per 100 million VMT on rural roads and 1.88 on urban roads. Figure 50

presents collision rates and fatal crash rates by road functional class at urban and rural crash locations during 2002.

Collision rates (for property damage only, injury, and fatal crashes combined) on rural roads were less than half the rates on urban roads of the same class in 2002. The highest overall collision rates occurred on urban minor arterials, urban collectors, and urban local roads.

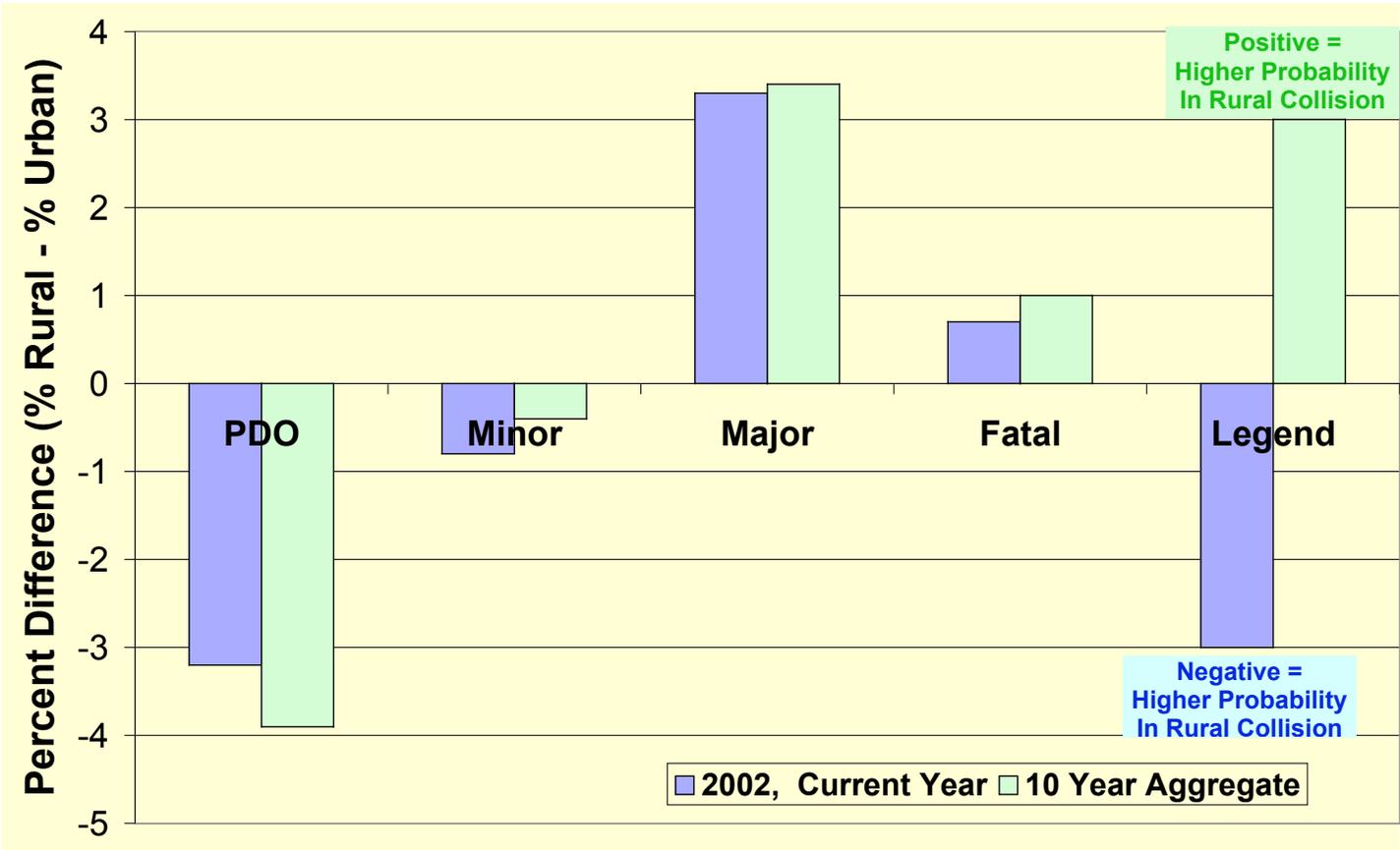
The highest fatal crash rates were calculated for urban minor arterial and urban collectors while the lowest fatal crash rates were calculated for urban local roads. Fatal crash rates for rural interstates and other rural principal arterials were similar to rates for urban interstates and other urban principal arterials.

**Figure 50**  
**2002 Collision and Fatal Crash Rates**  
**By Roadway Functional Class**



Although motorists were less likely to be involved in collisions on rural roadways, they were more likely to be injured or killed if a crash occurred at a rural location. The proportion of crashes that involved person injuries or fatalities was higher on rural than urban roadways, on average, for all road functional classes (see Appendix tables I.D.1.1 to I.D.1.3). In 2002 the percent of rural crashes that involved fatalities was higher by a marginal 0.7% than the percent of urban crashes that resulted in traffic deaths on what should be considered a statistically small sample size. For the same rural vs. urban comparison during 2002, the percent of crashes that caused major injuries was 3.3% higher in rural areas (percent minor injury, major injury, and fatal injury combined was 3.2% higher on rural roadways). The percent of rural crashes that involved property-damage-only was 3.2% less than at urban locations. The percent difference between rural and urban crash severity for 2002 displayed in Figure 51 is consistent with annual and aggregate crash data since 1993.

**Figure 51**  
**Crash Severity - Percent Difference Between**  
**Rural And Urban Locations**

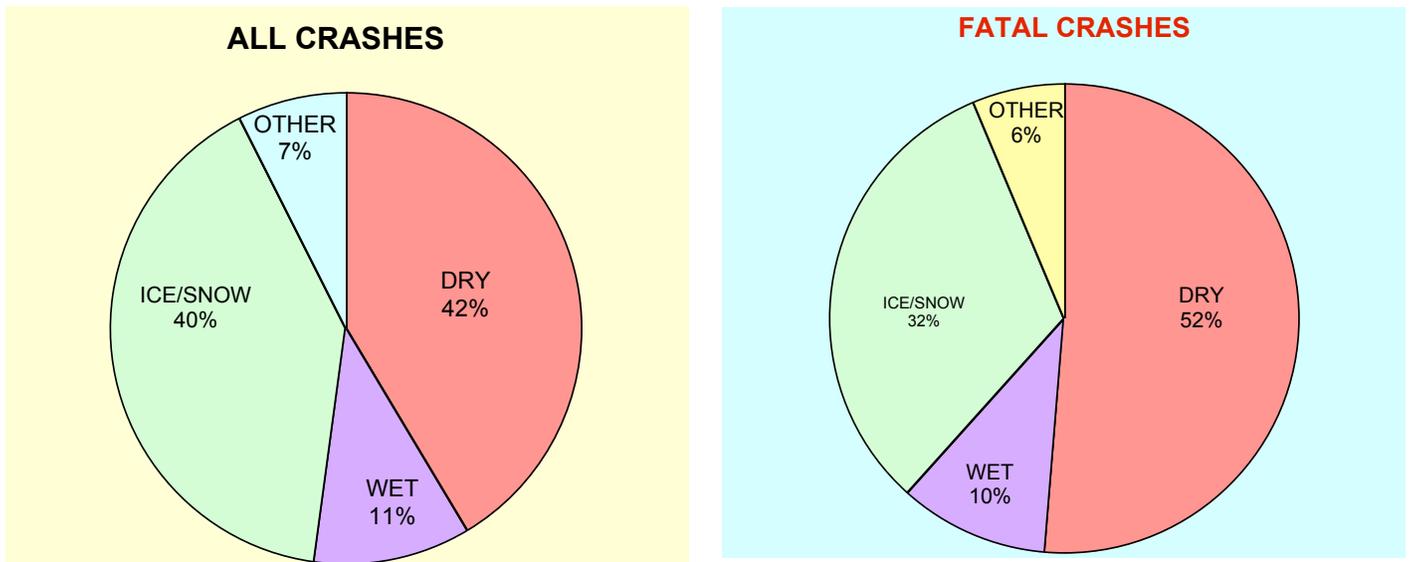


# ROADWAY

## Roadway Surface

Forty-one percent (41.4%) of crashes during the year occurred on dry pavement. Ice, slush, or snow was present on the road surface at 40.4% of crash locations and wet pavement conditions were coded for another 10.8% of crashes. About five percent of crash locations had loose gravel or standing water on the road surface. Figure 52 graphically contrasts surface conditions for all crashes versus fatal crashes.

**Figure 52**  
**Traffic Collisions and Fatal Crashes**  
**Percent by Road Surface Condition**



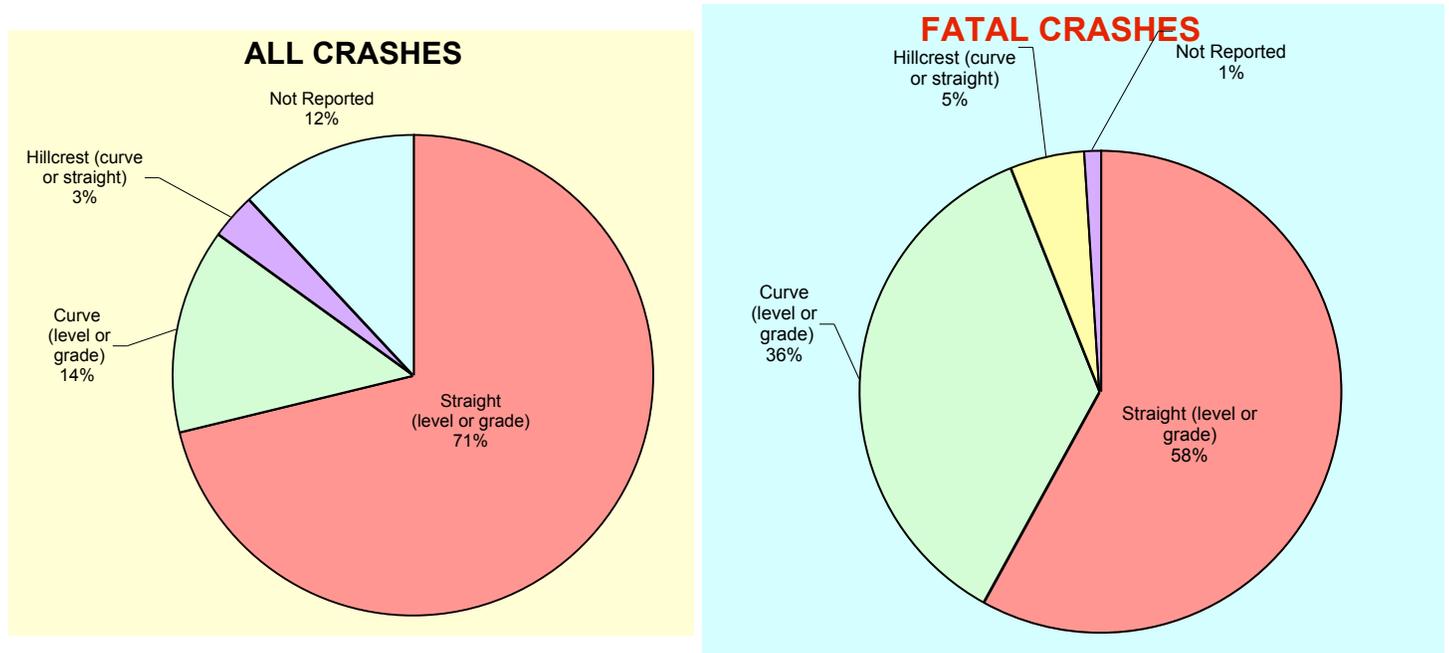
Compared with surface conditions at locations of property damage only and minor injury crashes, a higher proportion of major injury and fatal crashes occurred on dry pavement (51% of major and 51% of fatal); in contrast, a lower percentage occurred on ice or snow covered roadways (29% of major and 32% of fatal crashes). The proportion of major injury and fatal crashes that occurred on wet pavement was similar to the proportion for property damage only and minor injury crashes.

## Roadway Geometry

Most crashes (71% of property damage only, injury, and fatal crashes combined) occurred on straight stretches of roadway, either level or at grade. Fourteen percent of all collisions occurred on curves (either level or at grade) and another 3% occurred at hillcrests of either straight or curved roadways (Figure XX).

Fatal crashes also occurred most frequently on straight stretches of roadway (57.7%). Higher proportions of fatal crashes occurred on curves (35.9% of fatal crashes, 14% of all crashes) and at hillcrests (5.1% of fatal crashes, 3 % of all crashes), than collisions overall.

**Figure 53**  
**Traffic Collisions and Fatal Crashes**  
**Roadway Character**



## **Roadway Segment Accident Rates**

Statewide collision rates for 2002 as well as 2001 are provided in Table 8. Road categories in this table are based on the functional class of the roadway, presence of medians (divided or undivided), and opposing traffic (1 or 2 way traffic). Collision rate was calculated as the number of crashes per 1 million vehicle miles traveled at crash locations.

**TABLE 7 <sup>12</sup>**  
**2002 Statewide Average Segment Collision Rates**

Category	Road Type	Collision Rate	
		2002	2001
A	Undivided Urban & Rural Interstate	1.099	1.361
B	Divided Rural Interstate	0.736	0.906
C	Divided Urban Interstate/Other Freeway & expressway	1.107	1.368
D	Divided or Undivided Rural Arterial - Principal or Minor	1.075	1.278
E	Divided or Undivided rural Collector/Local Major or Minor	1.505	1.532
F	Undivided Urban Arterial/Principal or Minor/Two way Traffic	2.427	2.907
G	Undivided Urban Arterial/Principal or Minor/One way Traffic	4.021	3.909
H	Divided Urban Arterial/principal or Minor	2.042	2.156
J	Divided or Undivided Urban Collector & Local Roads	2.597	3.463

## **Intersection Accident Rates**

About half of all traffic collisions in 2002 occurred at intersections and 38% occurred at locations where no traffic could enter the roadway (not at junction). Twelve percent of crashes were not coded for road junction information.

Table 9 summarizes statewide average intersection collision rates for 2002. Intersections are grouped by number of conflicts and traffic control type. The analysis in Table 9 is based on “named intersections” (a group of intersections identified as statistically significant and tracked for safety analysis by Alaska DOT&PF Traffic Safety Engineers).

<sup>12</sup> Table 8 provided by Ron Martindale, Traffic Safety Engineer, ADOT&PF Central Region  
2002 Alaska Traffic Collisions

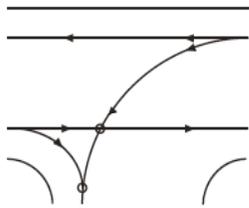
**TABLE 8 <sup>13</sup>**  
**Statewide Average Collision Rates at Intersection**

Number of Conflicts	Traffic Signal			Two Way Stop			Four Way Stop		
	Collision Rate		# of Sites	Collision Rate		# of Sites	Collision Rate		# of Sites
	2001	2002		2001	2002		2001	2002	
1	N/A	N/A	N/A	0.372	0.221	2	N/A	N/A	N/A
2	N/A	N/A	N/A	5.734	2.738	1	N/A	N/A	N/A
3	1.437	1.405	29	0.153	0.365	2	N/A	N/A	N/A
5	1.099	1.711	2	1.124	N/A	N/A	N/A	N/A	N/A
6	1.316	1.039	40	0.683	0.602	142	0.409	N/A	N/A
8	1.531	1.432	64	0.740	0.699	9	N/A	N/A	N/A
11	2.114	0.796	1	0.542	0.444	1	N/A	N/A	N/A
12	1.886	1.501	1	N/A	N/A	N/A	N/A	N/A	N/A
20	1.721	1.489	122	0.816	0.649	40	0.733	0.467	5

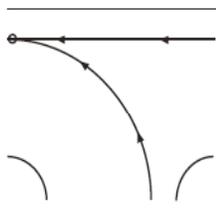
Most intersection crashes occurred either at “T” or 4-way intersections of public roads (44%, combined). Sixteen percent (15.9%) of all crashes occurred at or were related to traffic flow at “T” intersections. Twenty-seven percent (26.9%) occurred at or were related to traffic flow at 4-way intersections. Five percent of crashes occurred at junction with driveways (including private residences, businesses and public facilities) and 2.2% occurred at intersection with on ramps or off ramps.

Fatal crashes were less likely to occur at an intersection. Only 21.8% of fatal crashes occurred at “T”, “Y”, or 4-way intersections. Almost fifty-four percent (53.8%) of fatal crashes were not intersection related.

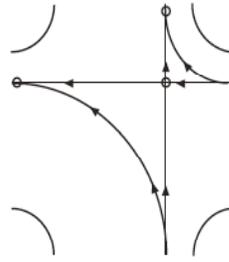
<sup>13</sup> Table 9 and Figure 53 were provided by Ron Martindale, Traffic Safety Engineer, ADOT&PF Central Region  
 2002 Alaska Traffic Collisions



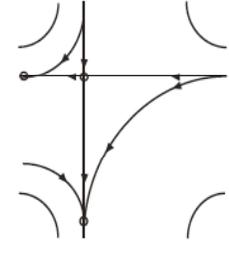
**Type 1 - 2 Conflicts**  
Tee - One-way vs Two-way



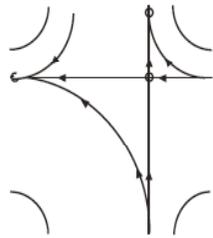
**Type 1 - One Conflict**  
Tee - One-way vs One-way



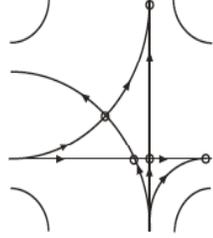
**Type 2 - 3 Conflicts**  
One-way vs One-way



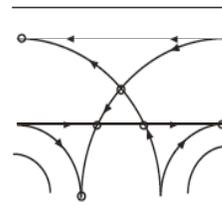
**Type 2 - 3 Conflicts**  
3rd Avenue @ 'C' Street



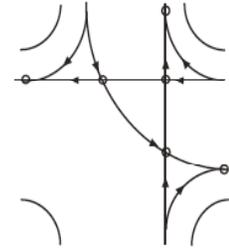
**Type 2 - 3 Conflicts**  
3rd Avenue @ Ingra Street



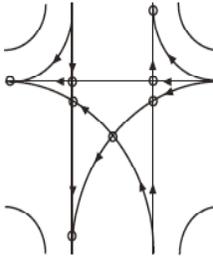
**Type 3 - 5 Conflicts**  
4th Avenue @ 'A' Street



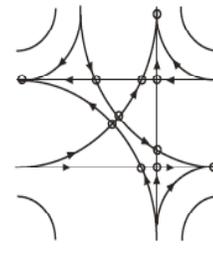
**Type 3 - 6 Conflicts**  
Tee - Two-way vs Two-way



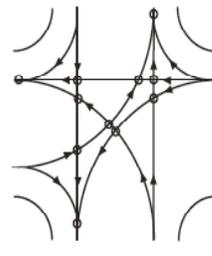
**Type 3 - 6 Conflicts**  
3rd Avenue @ Post Road



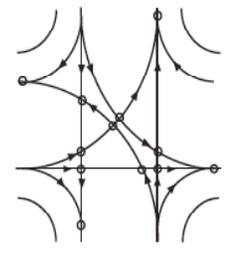
**Type 4 - 8 Conflicts**  
One-way vs Two-way



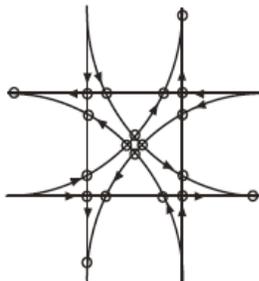
**Type 5 - 11 Conflicts**  
3rd Avenue @ 'E' Street



**Type 5 - 11 Conflicts**  
Boniface Parkway @  
Mountain View Drive



**Type 5 - 12 Conflicts**  
Fireweed Lane @  
Seward Highway



**Type 6 - 20 Conflicts**  
Two-way vs Two-way

**Figure 53**  
**Number of Conflicts at Intersections**  
**(Examples using Anchorage intersections)**

## National Highway System Collisions

The National Highway System (NHS) is a Federal-aid system mandated by Congressional legislation. Each state, in coordination with the Federal Highway Administration, has developed a statewide NHS list that incorporates highways of various functional classifications.

Tables 10 through 21 provide the calendar year 2002 collision histories for selected Alaskan NHS routes. Each route consists of individual traffic links (segments of the road network between intersections or significant points of interest). The intersections or points of interest define where traffic volumes are expected to change due to businesses, residential areas, or intersection with traffic corridors. Each traffic link begins with and includes the route/milepoint location stated (Mileage).

Data is provided for the Sterling, Seward, Glenn, Parks, Richardson, and Alaska Highways, and for the Tok Cutoff. For each traffic link, collision counts are provided by crash severity (PDO, Minor, Major, and Fatal), for total collisions (Total), for crashes with "moose collision" as the first crash event coding (Moose), and for alcohol-related collisions (Alcohol-Related). Estimates of traffic volumes are also provided for each traffic link.

The average annual daily traffic (AADT) estimates are taken from the Highway Analysis System, the Alaska Department of Transportation and Public Facilities integrated highway database. The AADT have not been corrected for multi-axle vehicles or rounded.

Route totals for the NHS highways detailed by link in Tables 10 through 21 are summarized below. Thirty-five percent (34.6%) of all fatal crashes, 46.3% of all moose collisions, and 13.6% of all alcohol-related crashes occurred on the seven selected NHS highways. Collisions on these roadways comprised 15.5% of all collisions statewide.

<b>NHS Route</b>	<b>Moose</b>	<b>Alcohol</b>	<b>Fatal</b>	<b>Total</b>	<b>Miles</b>
Sterling	68	24	6	294	138
Seward	28	40	6	499	126
Glenn	63	41	6	537	180
Parks	61	39	5	522	323
Richardson	30	9	3	192	363
Alaska	7	0	1	15	198
Tok Cut-Off	1	0	0	12	122

**TABLE 9**  
**Statewide Highway NHS 2002 Collisions**  
**Homer – Soldotna**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
0.00	Southwest Marine Highway								
	to	4,107	2	1	0	0	3	0	1
4.25	Airport Bypass								
	to	6,111	0	1	0	0	1	0	
5.31	Lake Street/Pioneer Avenue								
	to	8,873	1	0	0	0	1	0	
6.05	Olsen Lane/Bunnell/Main								
	to	6,490	1	1	0	0	2	0	
6.31	Lake Street/Pioneer Avenue								
	to	8,957	0	0	0	0	0	0	
6.45	Crittenden Drive								
	to	6,590	1	0	0	0	1	1	
7.36	West Hill Drive								
	to	4,773	0	0	0	0	0	0	
9.22	Sterling Loop								
	to	4,725	1	0	0	0	1	0	
9.76	Sterling Loop								
	to	3,710	3	2	0	0	5	2	1
11.64	Diamond Ridge/Olsen Mnt Rd								
	to	2,929	3	1	0	0	4	2	
13.89	Old Sterling Highway								
	to	4,210	0	0	0	0	0	0	
14.37	North Anchor Point Road								
	to	2,990	4	5	2	0	11	3	
21.50	Old Sterling Highway								
	to	3,780	0	0	1	0	1	0	
21.72	Milo Fritz Road								
	to	2,622	1	0	0	0	1	0	
26.30	Staritski Loop Road								
	to	2,480	6	1	2	0	9	2	
40.10	Deep Creek Road								
	to	3,360	0	2	1	0	3	0	2
42.48	Niniichik Village Road								
	to	2,190	10	1	0	0	11	5	
50.18	Sterling Lane								
	to	2,637	11	4	1	0	16	6	2
59.37	Clam Gulch Road								
	to	3,380	6	3	1	1	11	4	1
62.62	Cohoe Road								
	to	3,130	3	0	0	0	3	2	
65.47	Cohoe Road								
	to	5,180	7	3	0	0	10	1	1
67.50	Pollards Place								
	to	3,470	18	6	1	0	25	5	1
73.84	Reflection Lake Road								
	to	4,281	1	1	0	0	2	1	
75.52	Arc Loop Road								

**Table 10**  
**Sterling Highway NHS 2002 Collisions**  
**Soldotna - Seward Highway**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
75.52	Arc Loop Road								
	to	5,960	12	2	1	1	16	3	
79.76	Kalifornsky Beach Road								
	to	17,327	12	2	0	0	14	1	
80.17	South Kobuk Street								
	to	19,830	9	4	0	0	13	0	
80.48	Binkley Street								
	to	16,534	4	2	0	0	6	0	1
80.70	South Birch Lane								
	to	15,580	4	3	0	0	7	0	2
81.03	Kenai Spur Road								
	to	13,004	8	5	3	0	16	3	
82.50	Mackeys Lakes Road								
	to	11,090	16	5	2	0	23	14	2
85.38	Forest Lane Road								
	to	8,238	4	7	0	2	13	4	2
87.54	Robinson Loop Road								
	to	4,173	4	2	0	0	6	3	
91.16	Robinson Loop Road								
	to	6,590	1	1	0	0	2	0	
92.56	Moose River								
	to	3,689	2	0	1	0	3	0	1
95.37	Kenai Keys Road								
		3,550	2	1	0	0	3	0	
99.26	Skilak Lake Road								
	to	2,780	11	4	1	0	16	0	2
116.47	Skilak Lake Road								
	to	3,200	5	2	0	0	7	1	
119.10	Sportsmans Lodge								
	to	2,870	5	0	0	0	5	1	
122.74	Unknown Feature								
	to	3,194	4	2	0	1	7	0	1
127.04	Snug Harbor Road								
	to	3,320	0	3	0	0	3	0	2
130.07	Quartz Creek Road								
	to	3,042	5	4	2	1	12	4	2
137.60	Sterling Wye								
	to	1,540	1	0	0	0	1	0	
138.18	Seward Highway								
<b>TOTAL</b>	<b>Sterling Highway</b>		<b>188</b>	<b>81</b>	<b>19</b>	<b>6</b>	<b>294</b>	<b>68</b>	<b>24</b>

**Table 11**  
**Seward Highway NHS 2002 Collisions**  
**Seward - South Anchorage**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
0.000	Lowell Point Road								
	to	4,145	1	1	0	0	2	0	1
0.645	A Street								
	to	7,711	0	0	1	0	1	0	
1.422	Dock Road								
	to	9,140	2	0	0	0	2	0	
3.265	Nash Road								
	to	6,588	1	0	0	0	1	0	
3.769	Resurrection River Road								
	to	4,430	3	2	0	0	5	1	2
6.660	Bear Lake Road								
	to	3,356	9	4	0	0	13	1	
16.979	Primrose Spur								
	to	1,770	5	1	2	2	10	0	
28.920	Moose Pass Station Road								
	to	1,740	5	1	0	0	6	0	
32.343	Johnson Pass Trail								
	to	1,618	4	0	0	0	4	0	
36.497	Sterling Highway								
	to	2,760	1	0	0	1	2	0	1
37.108	Sterling Wye								
	to	3,450	12	3	1	0	16	0	3
45.372	Summit Lake Lodge								
	to	4,003	6	4	0	0	10	1	
55.728	Hope Road								
	to	4,050	8	6	0	1	15	0	
67.446	Turnagain Pass								
	to	4,265	4	2	0	0	6	0	1
74.459	Northwest of Ingram Creek								
	to	3,845	3	1	0	0	4	0	
78.032	Portage Glacier Road								
	to	5,090	2	3	0	0	5	2	1
79.613	Whittier Ferry Train Stop								
	to	5,387	8	8	3	0	19	1	1
89.300	Alyeska Road								
	to	7,690	8	4	3	1	16	2	
99.995	Bird Creek Sawmill Road								
	to	8,090	6	4	2	0	12	0	1
103.035	Indian Road								
	to	8,740	10	3	6	0	19	0	3
110.854	McHugh Creek Campground								
	to	8,959	5	3	0	0	8	2	
114.457	Old Seward Highway								
	to	9,311	7	1	0	0	8	5	
117.205	Rabbit Creek Road								
	to	14,678	1	0	1	0	2	0	
117.690	De Armoun Overcrossing								

**Table 12**  
**Seward Highway NHS 2002 Collisions**  
**South Anchorage**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
117.690	De Armoun Overcrossing								
	to	23,001	3	5	1	0	9	5	
118.717	Huffman Undercrossing								
	to	28,655	7	2	0	0	9	2	1
119.746	O'Malley Undercrossing								
	to	37,975	28	5	0	0	33	1	4
121.499	Seward-Dimond SB Ramp								
	to	55,896	13	7	1	0	21	0	1
121.974	Seward-76th Ave SB Ramp								
	to	61,430	9	12	0	0	21	1	1
122.529	Seward-Dowling NB Ramp								
	to	60,942	22	11	1	0	34	1	2
123.537	Seward-Tudor NB Ramp								
	to	53,623	32	24	2	0	58	2	6
124.324	36th Avenue								
	to	48,504	25	13	1	0	39	0	5
124.709	Benson Boulevard								
	to	47,524	21	6	0	1	28	0	1
124.839	Northern Lights Boulevard								
	to	49,011	25	10	1	0	36	0	2
125.020	Fireweed Lane								
	to	53,800	17	7	1	0	25	1	3
125.290	Ingra Street								
<b>TOTAL</b>	<b>Seward Highway</b>		<b>313</b>	<b>153</b>	<b>27</b>	<b>6</b>	<b>499</b>	<b>28</b>	<b>40</b>

**Table 13  
Glennallen Highway NHS 2002 Collisions  
Anchorage - Palmer**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
0.000	Airport Heights Drive								
	to	38,281	23	14	6	1	44	0	2
0.665	Bragaw Street								
	to	43,230	15	11	3	0	29	1	3
1.705	Boniface Overpass								
	to	46,890	7	4	0	0	11	3	
2.323	Turpin Street								
	to	48,170	16	4	1	1	22	2	2
3.240	Muldoon-Glenn EB Ramp								
	to	56,310	15	4	2	0	21	4	2
4.850	Glenn-Arctic Valley Ramp								
	to	54,060	24	9	2	0	35	4	
6.570	Ft Rich-Glenn NB Ramp								
	to	48,223	31	16	3	1	51	7	7
10.140	Glenn-Hiland NB Ramp								
	to	41,025	11	9	1	0	21	4	1
11.945	Glenn-Artillery NB Ramp								
	to	27,570	16	6	2	0	24	2	1
13.965	North Eagle River Rd Overpass								
	to	30,960	15	5	1	0	21	4	1
15.947	South Birchwood Lp Underpass								
	to	34,980	12	19	1	1	33	3	7
19.373	North Birchwood Lp Overpass								
	to	28,500	13	6	0	0	19	2	3
20.412	South Peters Creek Rd Underpass								
	to	27,410	2	1	2	0	5	0	1
21.435	North Peters Creek Overpass								
	to	25,540	24	14	1	1	40	6	
24.735	Eklutna Overpass								
	to	24,600	16	6	3	0	25	3	1
28.257	Old Glenn Highway Overpass								
	to	21,398	27	6	3	0	36	4	3
34.085	Parks Highway								
	to	9,273	16	7	0	0	23	0	4
39.195	Springer Inner Loop								
	to	12,250	0	1	0	0	1	0	
39.635	South Colony Way								
	to	11,890	7	2	0	0	9	0	1
40.250	Palmer/Wasilla Highway								
	to	11,220	3	1	0	0	4	0	1
40.770	Old Glenn at Palmer								
	to	8,900	0	0	0	0	0	0	
41.020	Scott Road								
	to	8,619	2	2	1	0	5	0	
42.265	Fishhook/Willow Road								

**Table 14**  
**Glennallen Highway NHS 2002 Collisions**  
**Palmer - Richardson Highway**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
42.265	Fishhook/Willow Road								
	to	4,110	1	0	0	0	1	0	
43.565	Farm Loop Road								
	to	2,706	5	5	2	0	12	5	1
53.655	Jonesville Road								
	to	2,052	9	2	2	0	13	3	
70.585	Chickaloon Branch Road								
	to	1,450	11	3	0	0	14	4	
87.215	Victory Bible Camp Road								
	to	1,823	2	2	0	0	4	0	
99.040	Caribou Creek								
	to	1,744	1	0	1	0	2	1	
110.255	Northern Region Boundary								
	to	1,025	0	1	0	0	1	0	
119.866	Eureka Lodge								
	to	1,025	3	0	1	1	5	0	
129.940	Nelchina DOT Maint Stat Rd								
	to	893	1	0	0	0	1	0	
151.239	Lake Louise Road								
	to	986	1	0	0	0	1	1	
163.958	Tolsona Creek								
	to	1,104	3	1	0	0	4	0	
172.136	Milepost 181								
	to	1,568	0	0	0	0	0	0	
178.447	Aurora School Road								
	to	2,408	0	0	0	0	0	0	
180.240	Richardson Highway								
<b>TOTAL</b>	<b>Glenallen Highway</b>		<b>332</b>	<b>161</b>	<b>38</b>	<b>6</b>	<b>537</b>	<b>63</b>	<b>41</b>

**Table 15**  
**Parks Highway NHS 2002 Collisions**  
**Glennallen Highway - Talkeetna**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
0.000	Glenn Highway								
	to	20,632	5	1	0	0	6	0	2
0.380	Matanuska Truck								
	to	19,670	7	2	1	0	10	0	1
2.580	Gershen Loop & Hyer Road								
	to	21,100	3	0	0	0	3	0	
2.750	Fairview Loop Road								
	to	18,070	19	11	1	0	31	0	
4.160	Seward Meridian Road								
	to	20,292	15	8	3	0	26	0	
5.890	Palmer/Wasilla Highway								
	to	33,270	28	13	1	0	42	0	
6.610	Crusey Street								
	to	30,575	15	9	2	0	26	0	2
7.000	Goose Bay/Knik Road								
	to	25,953	5	2	3	0	10	0	1
7.440	Airport Drive								
	to	23,043	9	3	5	0	17	0	2
8.330	Lucas Road								
	to	16,800	3	0	2	0	5	0	1
9.340	Church Road								
	to	16,850	26	13	4	0	43	10	2
13.560	Pittman Road								
	to	10,503	13	11	0	1	25	3	4
17.110	Big Lake Road								
	to	5,800	6	2	0	0	8	1	
21.840	Little Susitna River								
	to	3,580	6	9	2	0	17	2	3
32.060	Nancy Lake Access Road								
	to	3,580	1	2	0	0	3	0	1
33.970	Long Lake Road								
	to	4,416	0	0	0	0	0	0	
34.450	Old Willow Road								
	to	3,290	2	0	0	0	2	0	
36.020	Flshook/Willow Road								
	to	2,733	4	3	0	0	7	2	1
39.510	Little Willow Creek								
	to	2,720	6	3	0	0	9	0	
45.760	Milepost 81								
	to	2,954	2	1	2	0	5	0	2
47.920	Kashwitna River								
	to	2,670	8	2	0	0	10	2	
53.450	Sheep Creek								
	to	2,550	14	4	1	0	19	5	1
61.160	Montona Creek								
	to	2,177	0	2	0	0	2	0	
63.320	Talkeetna Road								

**Table 16**  
**Parks Highway NHS 2002 Collisions**  
**Talkeetna - Richardson Highway**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
63.32	Talkeetna Road								
	to	1,650	2	1	1	0	4	0	
68.75	Susitna River								
	to	1,530	4	3	0	0	7	1	
79.57	Petersville Road								
	to	1,420	2	1	0	0	3	3	
81.78	Milepost 117								
	to	1,141	7	3	1	0	11	6	1
97.51	Chulitna River								
	to	1,311	13	2	1	0	16	0	1
111.80	Byers Lake Wayside Road								
	to	1,287	4	2	0	1	7	2	
128.03	Little Coal Creek								
	to	1,178	4	8	1	0	13	0	
149.82	East Fork Chulitna River								
	to	1,303	2	2	0	0	4	0	1
174.50	Denali Highway								
	to	1,719	10	5	0	0	15	2	1
201.72	Denali National Park Road								
	to	2,707	3	3	0	0	6	1	2
213.23	Healy Road								
	to	1,963	5	4	0	0	9	0	2
240.25	Nenana River at Rex								
	to	1,883	2	0	0	0	2	1	
247.922	Anderson Road								
	to	1,624	6	6	0	0	12	4	
273.079	Chevron Station 2nd Entrance								
	to	1,960	16	11	0	1	28	7	2
305.873	Old Nenana Highway/Ester W								
	to	2,275	10	6	1	0	17	5	1
313.517	Old Nenana Highway/Ester E								
	to	4,380	3	1	0	0	4	0	
314.297	Gold Hill Road								
	to	5,225	7	2	2	0	11	3	1
317.571	Sheep Creek Road								
	to	8,325	0	1	0	0	1	0	
318.509	Chena Ridge Road/Geist Road								
	to	13,869	1	1	0	0	2	0	
319.219	Chena River Bridge								
	to	8,869	5	2	0	0	7	0	2
320.577	University Avenue South								
	to	13,491	5	2	1	1	9	1	1
321.767	Peger Road								
	to	13,070	3	3	0	0	6	0	1
322.709	West Cowles/Lathrop Street								
	to	15,903	1	0	0	1	2	0	
323.680	Richardson Hwy Ramps								
<b>TOTAL</b>	<b>Parks Highway</b>		<b>312</b>	<b>170</b>	<b>35</b>	<b>5</b>	<b>522</b>	<b>61</b>	<b>39</b>

**Table 17**  
**Richardson Highway NHS 2002 Collisions**  
**Valdez - Alaska Highway**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
0.000	Meals Avenue/Egan Drive								
	to	5,307	2	2	0	0	4	0	
2.203	Mineral Creek Loop								
	to	5,922	0	0	0	0	0	0	
3.426	Mineral Creek Loop								
	to	4,169	0	0	0	0	0	0	
6.746	Dayville Road								
	to	1,709	4	0	0	0	4	0	1
20.277	Lowe River Upper Cross								
	to	473	2	0	0	1	3	0	
69.122	Little Tonsina River Campground								
	to	580	3	0	0	0	3	2	
86.533	Edgerton Hwy/McCarthy Rd								
	to	1,044	0	0	0	0	0	0	
95.286	Old Edgerton Loop Road								
	to	1,175	2	0	0	0	2	0	
109.790	Old Rich Hwy Loop(Copper Cntr)								
	to	2,432	0	0	0	0	0	0	
117.588	Glennallen Highway								
	to	988	1	0	2	0	3	0	
131.591	Tok Cutoff Highway								
	to	575	1	0	0	0	1	0	
150.543	Sourdough Creek								
	to	625	7	0	0	0	7	2	
188.283	Denali Highway								
	to	550	0	0	0	0	0	0	
203.241	Fielding Lake Road								
	to	496	3	2	0	0	5	2	
227.630	White Alice/Black Rapids Rd								
	to	683	6	1	0	0	7	1	
263.883	Fort Greely Access Road								
	to	1,666	2	2	0	0	4	1	
268.673	Alaska Highway (mp 198.00)								
<b>TOTAL</b>	<b>Valdez - Delta Junction</b>		<b>33</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>43</b>	<b>8</b>	<b>1</b>

**Table 18**  
**Richardson Highway NHS 2002 Collisions**  
**Alaska Highway - Airport Way**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
268.673	Alaska Highway								
	to	3,588	1	0	0	0	1	0	
269.093	Delta Fire Guard Station								
	to	2,662	0	2	0	1	3	0	
271.006	Jack Warren								
	to	1,790	8	5	0	0	13	2	
289.015	Shaw Creek								
	to	1,447	5	2	1	0	8	2	
307.937	Lost Lake Road								
	to	1,505	4	4	1	0	9	1	
320.716	Salcha Drive								
	to	2,208	2	2	0	0	4	1	
329.796	Balch Way								
	to	3,278	11	0	0	0	11	5	
345.559	Old Rich Hwy (Eielson)								
	to	9,259	9	5	0	0	14	2	1
347.821	Laurance Road								
	to	11,434	2	1	1	0	4	0	
350.441	Badger Loop Road Overpass								
	to	13,087	3	3	0	1	7	0	2
352.152	Old Rich Hwy (North Pole)								
	to	14,488	16	15	2	0	33	3	5
358.007	Badger Loop Road								
	to	23,102	13	6	1	0	20	6	
361.878	Parks-Richardson EB Ramp								
	to	19,608	15	7	0	0	22	0	
362.990	Steese Hwy/Airport Way								
<b>TOTAL</b>	<b>Delta Junction - Fairbanks</b>		<b>89</b>	<b>52</b>	<b>6</b>	<b>2</b>	<b>149</b>	<b>22</b>	<b>8</b>
<b>TOTAL</b>	<b>Valdez - Delta Junction</b>		<b>33</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>43</b>	<b>8</b>	<b>1</b>
<b>TOTAL</b>	<b>Richardson Highway (Valdez-Fbx)</b>		<b>122</b>	<b>59</b>	<b>8</b>	<b>3</b>	<b>192</b>	<b>30</b>	<b>9</b>

**Table 19**  
**Alaska Highway NHS 2002 Collisions**  
**Alaska/Canadian Border - Richardson Highway**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
0.000	Alaska/Canadian Border								
	to	446	0	1	0	0	1	0	
41.127	Northway Road								
	to	472	1	2	0	0	3	0	
77.654	Taylor Highway								
	to	936	0	0	0	0	0	0	
85.314	Tok River								
	to	1,172	0	1	0	0	1	0	
90.136	Tok Cutoff Highway								
	to	1,404	0	0	0	1	1	0	
101.729	New Tanacross								
	to	413	3	0	0	0	3	2	
156.058	Johnson River								
	to	586	3	2	1	0	6	5	
190.340	Clearwater Rd								
	to	927	0	0	0	0	0	0	
195.638	Triple H Road								
	to	1,182	0	0	0	0	0	0	
196.795	South Clearwater Avenue								
	to	1,454	0	0	0	0	0	0	
198.000	Richardson Highway								
<b>TOTAL</b>	<b>ALCAN Border - Richardson Hwy</b>		<b>7</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>15</b>	<b>7</b>	

**Table 20**  
**Tok Cutoff NHS 2002 Collisions**  
**Richardson Highway - Alaska Highway**

MILEAGE	FEATURE	ADT	NUMBER OF ACCIDENTS						
			PDO	Minor Injury	Major Injury	Fatal	Total	Moose	Alcohol Related
0.000	Richardson Highway								
	to	824	0	0	0	0	0	0	
2.613	Postoffice Entrance 1								
	to	515	1	0	0	0	1	0	
17.529	Tulsona Creek								
	to	436	2	2	0	0	4	0	
58.786	Nabesna Road								
	to	400	2	1	0	0	3	1	
79.699	Mentasta Spur Road								
	to	456	3	0	0	0	3	0	
96.015	Old Tok Cutoff								
	to	1,050	1	0	0	0	1	0	
121.079	Tok Hwy Maintenance Station								
	to	1,062	0	0	0	0	0	0	
121.930	Alaska Highway								
<b>TOTAL</b>	<b>Richardson Hwy - Alaska Hwy</b>		<b>9</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>

## **Crash Data Source**

### **Summary**

Ninety percent of the traffic collisions (12007 of 13325 crash reports) processed into the HAS Collisions database for 2002 were submitted on the police report form 12-200; ten percent (1318 reports) were submitted by drivers using report form 12-209. The total number of collision reports processed decreased by 12.8% from the previous year.

Police reported crashes increased about five percent (from 85 % in 2000 and 85.3% in 2001, to 90.1% in 2002) while driver reported crashes decreased proportionately (from 15% in 2000 and 14.7% in 2001, to 9.9% in 2002). Property damage only crash reporting by police increased 6.6%, minor injury crash reporting decreased marginally (-0.2%), and major injury crash reporting by police increased 1.3% from the previous year.

### **Statutory Reporting Requirements**

Alaska State law (AS 28.35.080) requires the reporting of any motor vehicle collision that results in the death or injury of one or more persons or that causes total property damage of \$2,000 or more. Drivers involved in such collisions are required to report crash information to a police agency. If the police agency with jurisdiction declines to investigate, drivers must submit crash information to the Department of Administration, Division of Motor Vehicles (using driver report form 12-209). When police investigate a motor vehicle collision, they assume responsibility to report crash information to the Division of Motor Vehicles, using police report form 12-200. Drivers are not required to submit a report to the Division of Motor Vehicles if a police agency has investigated and assumed responsibility for reporting it.

Alaska State law also requires that drivers or vehicle owners provide proof of motor vehicle liability insurance to the Department of Administration, Division of Motor Vehicles if they are involved in a motor vehicle collision on public property that involves injury, death, or total property damage exceeding \$501 (AS28.22.021). Because of this, many drivers voluntarily file the driver report form 12-209 for collisions with less than \$2000 damage

### **Police Reporting Policies**

Some legally reportable Alaska motor vehicle collisions (injury collisions and those with total damage equal to \$2000 or more) escape investigation by local police officers or State Troopers and probably also go unreported by drivers. Alaska State Troopers may not perform a formal crash investigation when there are no apparent injuries, the crash does not involve collision with wildlife, and all vehicles can be driven away from the collision scene. Each local police agency establishes its own policy for investigating traffic collisions, with some departments having a floor of \$5,000 or more before they will do an on-scene investigation. If police decline to investigate, some drivers may not understand their obligation to report, or may choose not to report the crash to the Division of Motor Vehicles.

## **Reporting Decline**

In addition to differences attributable to policy or procedural differences in local police and Alaska State Trooper reporting, 2002 data collection declines may also have been complicated by training and distribution problems with both the new 12200 Police Report Form and the new 12209 Driver Report Form.

## **Collision Severity**

The new report forms implemented on January 1, 2002 collect damage information for each involved vehicle using two data elements: vehicle damage type (disabling or functional), and vehicle damage estimate (greater or less than \$501). Non-vehicular damage (presence or absence of other property damage) is collected only from police reported crashes. A dollar estimate for vehicle damage is not assigned and the cost of all damage in a collision is no longer estimated or stored.

For this publication, (collision) damage severity has been derived from vehicle damage reporting. Damage severity over \$501 was assigned if any vehicle involved in the crash had vehicle damage estimate greater than \$501. Damage severity under \$501 was assigned if no vehicle was coded for damage over \$501. Appendix tables I.C.1.1 and I.C.3.1 show the number of crashes reported by police and drivers by crash severity (most serious injury in the collision) and damage severity (most serious damage to vehicles in the collision). Appendix statistical tables detailing number of vehicles with functional or disabling damage is also provided in the Appendix Statistical Table I.D.10.1.

Eighty-two percent (82.1%) of all crashes involved over \$501 damage to at least one involved vehicle. Drivers reported 8.5% of all collisions with more than \$501 vehicular damage and 16.2% of all collisions with less than \$501 damage to vehicles. Police reported 91.5% and 83.8%, respectively.

Eighty-three percent (83.3%) of police reported crashes and 70.6% of driver reported crashes were coded for more than \$501 damage to involved vehicles. Twenty-nine percent of driver reported crashes were coded for less than \$501 damage to vehicles, or had no coding for vehicle damage estimates.

Eighty-one percent of property damage only (PDO; non-injury) crashes had damage to vehicles exceeding \$501 in 2002 and 19% were coded for vehicular damage of less than \$501. In the five years preceding database changes, about 17% of property damage only crashes typically had less than \$500 damage to all vehicles and other property combined<sup>14</sup>.

Based on data converted to new database specifications and calculating "damage severity" as described above, 24% to 26.9% of PDO crashes that occurred between 1993 and 2002 involved less than \$501 damage to any involved vehicles. The percentage of PDO crashes with damage less than \$501 decreased by 6.9% between 2001 and 2002 (25.9% in 2001, 19% in 2002). It is unknown whether this change was due to data conversion choices and a new method used for calculating collision damage severity, or whether it was due to real changes in reporting and crash occurrence. Both police-reported and driver-reported low valuation PDO crashes decreased in 2002.

<b>Percent of PDO Crashes &lt;\$501</b>	<b>10 year average (1993-2002)</b>	<b>2002</b>	<b>Percent Difference</b>
Driver Reported	40.1%	30.5%	-9.6%
Police Reported	23.0%	17.4%	-5.6%