1995

Traffic Collisions in Washington State

Data Summary &
Highway
Safety
Problem
Analysis

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Introduction

This document identifies and analyzes traffic safety problems and trends in Washington State. Factors which contribute to the occurrence of traffic collisions and resultant fatalities, injuries and property damage are outlined. The analysis is intended to give traffic safety program specialists the information needed to design new countermeasures, monitor their progress and document program outcomes.

Data and analysis are presented in areas such as safety-restraint use, heavy truck collisions, and population segments which are at greatest risk including drinking drivers, youth, older drivers, pedestrians, bicyclists, and motorcyclists. Current year data are compared to that of recent years for trend identification.

Sources of data include traffic collision records (Washington State Patrol), the Fatal Accident Reporting System (Washington Traffic Safety Commission), driver records (Department of Licensing), vehicle registration records (Department of Licensing), highway/roadway information (Washington State Department of Transportation), and population data (Office of Financial Management).

The collision record system includes all collisions on public roadways reported to the WSP. The reporting criteria are death, injury, or property damage of $500 or more. The records include both citizen reports and law enforcement investigation reports. The data elements include information on vehicles, roadways, collision circumstances, and the drivers, passengers, pedestrians, and bicyclists involved in collisions. In some tables and charts, fatalities and injuries are combined so that numbers are large enough for statistical reliability.

The resources of the Traffic Records Data Center at the Washington Traffic Safety Commission have been used to analyze and summarize the data. Special thanks to DOT Transportation Data Office and WSP Accident Records and Computer Services.

IMPORTANT

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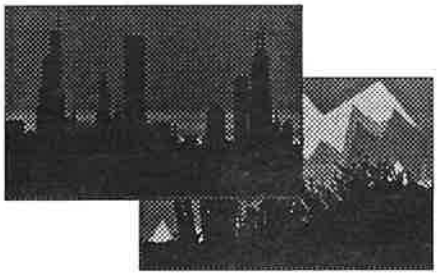
I. Overview



In Washington State in 1995, 654 persons were killed in traffic crashes, a 2.3 percent increase from the previous year. This increase reversed a 2.2 percent average yearly decline during the previous 4 years. The death rate per 100 million miles of travel was 1.33, which is the lowest rate on record. The number of serious injuries was 2.0 percent more than the previous year. The serious injury rate was 11.04 serious injuries per 100 million miles of travel, also the lowest rate on record (Table 1-1).

Table 1-1: Overview of traffic crashes
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	135,198	129,899	123,965	125,565	121,686	4.1%	2.2%
Fatal	577	574	579	593	603	0.5%	-1.6%
Injury	56,589	54,782	51,500	51,186	49,048	3.3%	3.8%
Property dmg only	78,032	74,543	71,886	73,786	72,035	4.7%	1.2%
Persons killed	654	639	661	651	683	2.3%	-2.2%
Persons injured	84,236	81,419	76,332	75,803	72,004	3.5%	4.2%
Serious injury	5,438	5,331	5,713	6,531	6,839	2.0%	-7.9%
Evident injury	24,805	25,165	24,549	24,246	24,212	-1.4%	1.3%
Possible injury	53,993	50,923	46,070	45,026	40,953	6.0%	7.6%
Drivers involved	243,688	233,099	221,503	224,316	215,989	4.5%	2.6%
Vehicles involved	254,056	243,438	231,756	234,938	226,262	4.4%	2.5%
Motor veh. travel*	49,248	47,674	46,426	48,644	45,663	3.3%	1.6%
Death rate**	1.33	1.34	1.42	1.34	1.50	-0.9%	-3.3%
Serious injury rate**	11.04	11.18	12.31	13.43	14.98	-1.3%	-9.3%
Economic loss +	$2,189	$2,126	$2,094	$2,122	$2,118	3.0%	0.1%

*In millions of miles. Source: WSP, WSDOT, Nat'l Safety Council

**Deaths/injuries per 100 million vehicle miles of travel.

+In $millions; based on National Safety Council estimates in constant 1994 dollars.
(Death =$920,000; serious inj =$46,000; evident inj =$14,000; possible inj =$8,800; ppty dmg only =$6,600.)

The estimated economic loss to the state from traffic-related injury, death, and damage amounted to $2.189 billion. This value is based on National Safety Council estimates of average costs of traffic collisions and injuries. Components of the estimate include property damage, medical costs, emergency care costs, wage and productivity losses, insurance administration, and legal/court costs. Economic losses (in 1994 constant dollars) increased by 3.0 percent compared to the previous year.

Exposure and rates

Motor vehicle travel increased 3.3 percent from the previous year. Motor vehicle registrations were up 0.8 percent, the number of licensed drivers was down 2.3 percent, and the state's population was up 1.8 percent compared to the previous year (Table 1-2).

Table 1-2: Travel, registered vehicles, licensed drivers & population
Fatality and collision rates - five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearl change
Total collisions	135,198	129,899	123,965	125,565	121,686	4.1%	2.2%
Persons killed	654	639	661	651	683	2.3%	-2.2%
Motor vehicle travel*	49,248	47,674	46,426	48,644	45,663	3.3%	1.6%
Motor veh. registration	4,570,615	4,535,415	4,428,944	4,435,259	4,381,757	0.8%	1.2%
Licensed drivers**	3,774,980	3,862,305	3,784,430	3,689,741	3,572,038	-2.3%	2.6%
State's population	5,429,900	5,334,400	5,240,900	5,116,685	5,000,400	1.8%	2.2%
*Fatality rate*** *by:*							
Vehicle travel	1.33	1.34	1.42	1.34	1.50	-0.9%	-3.3%
Motor vehicle reg.	1.43	1.41	1.49	1.47	1.56	1.6%	-3.3%
Licensed drivers	1.73	1.65	1.75	1.76	1.91	4.7%	-4.7%
Population	1.20	1.20	1.26	1.27	1.37	0.5%	-4.2%
*Collision rate*** *by:*							
Vehicle travel	274.5	272.5	267.0	258.1	266.5	0.8%	0.8%
Motor vehicle reg.	295.8	286.4	279.9	283.1	277.7	3.3%	1.0%
Licensed drivers	358.1	336.3	327.6	340.3	340.7	6.5%	-0.4%
Population	249.0	243.5	236.5	245.4	243.4	2.2%	0.1%

* In millions of miles

Source: WSDOT, DOL, OFM

** The decrease in licensed drivers in 1995 was result of DOL record system "housecleaning."

*** Fatalities/collisions by: 100 million vehicle miles traveled, 10,000 registered vehicles 10,000 licensed drivers and 10,000 population.

Traffic safety statistics: 1972 to 1995

Exposure statistics, including total licensed drivers, population, vehicle registration and travel, have generally increased each year (average increases have been 1% to 5%). The year 1995 established a new high in motor vehicle collisions with 135,198. The annual traffic death total ranged from a high of 1,034 in 1979 to a low of 639 deaths in 1994. The fatality rate was 3.82 in 1972, declining to 1.33 in 1995 (Table 1-3).

Table 1-3: Population, vehicle travel and collision summary
1972 - 1995

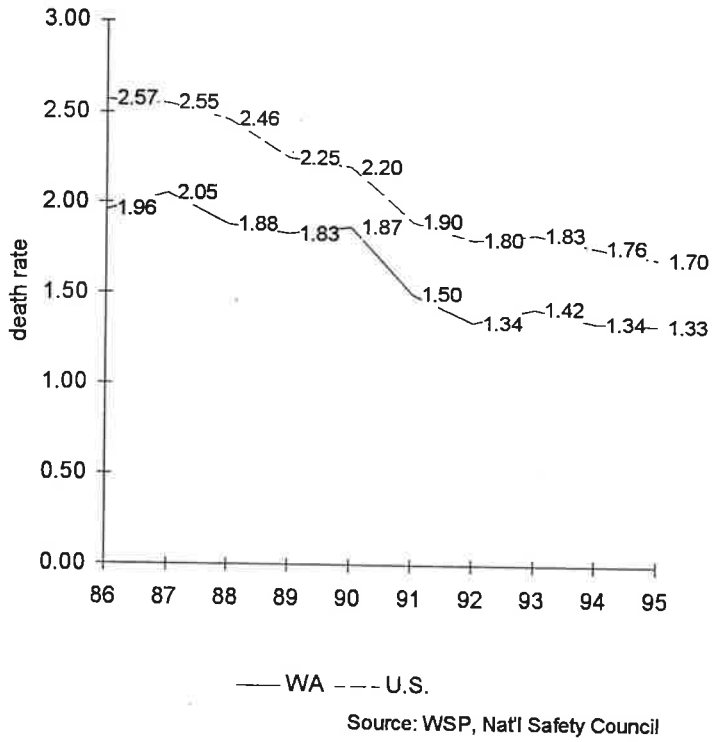
year	population	lic. drivers	reg. vehicles	travel*	collisions**	injuries	deaths +	death rate@
1972	3,418,800	2,011,893	2,315,310	22,363	101,002	55,454	855	3.82
1973	3,424,300	2,113,460	2,453,880	23,457	105,515	58,039	776	3.31
1974	3,448,100	2,122,131	2,545,975	22,585	106,242	57,716	761	3.37
1975	3,493,990	2,176,505	2,640,944	24,023	120,635	64,145	771	3.21
1976	3,571,591	2,324,697	2,785,500	25,932	120,864	66,309	825	3.18
1977	3,661,975	2,339,215	2,952,383	27,449	119,058	71,356	927	3.38
1978	3,774,300	2,485,248	3,042,265	29,378	116,923	64,669	1,006	3.42
1979	3,911,200	2,579,368	3,186,898	29,122	118,686	65,399	1,034	3.55
1980	4,132,353	2,662,659	3,293,065	28,696	113,751	61,532	985	3.43
1981	4,250,200	2,732,722	3,408,871	30,346	111,993	61,083	872	2.87
1982	4,264,000	2,774,212	3,313,348	30,353	100,644	54,789	757	2.49
1983	4,285,100	2,867,032	3,372,966	32,275	106,597	58,317	705	2.18
1984	4,328,100	2,973,468	3,459,772	33,344	111,655	61,366	761	2.28
1985	4,384,100	2,980,717	3,546,152	33,978	120,056	63,806	756	2.22
1986	4,419,700	3,029,375	3,651,102	36,416	122,918	66,707	714	1.96
1987	4,481,100	3,156,600	3,833,058	38,520	126,807	67,665	790	2.05
1988	4,565,000	3,264,065	3,896,828	41,698	125,920	72,449	785	1.88
1989	4,660,700	3,350,324	4,084,367	42,696	128,800	73,993	781	1.83
1990	4,866,692	3,366,146	4,233,853	44,157	132,056	76,064	825	1.87
1991	5,000,400	3,572,038	4,381,757	45,663	121,686	72,004	683	1.50
1992	5,116,685	3,689,741	4,435,259	48,664	125,565	75,803	651	1.34
1993	5,240,900	3,784,430	4,428,944	46,426	123,965	71,886	661	1.42
1994	5,334,400	3,862,305	4,535,415	47,674	129,899	81,419	639	1.34
1995	5,429,900	3,774,980	4,570,615	49,248	135,198	84,236	654	1.33

Source: WSP, OFM, DOL, WSDOT

* In millions of vehicle miles traveled.
Method used by WSDOT for estimating miles traveled changed for 1993, resulting in lower mileage.
**Minimum damage for a reportable collision was increased from $100 to $300 to the property of one person on 7/1/77 and to $500 on 10/1/87.
+State adopted a 90-day fatal-reporting policy in 1980 and a 30-day fatal-reporting policy in 1989.
@ Traffic deaths per 100 million vehicle miles of travel.

A comparison of Washington and U.S. traffic fatality rates over the past 10 years is shown in Figure 1-1. Washington and the U.S. have both shown decreases, but Washington has maintained a lower rate than the nation.

Figure 1-1:
Death rate (deaths per 100M miles)
Ten-year trend - Washington vs U.S.



Source: WSP, Nat'l Safety Council

Persons involved in traffic collisions

Drivers accounted for 352 of Washington's 654 traffic fatalities in 1995. Of pedestrians involved in traffic collisions, 3.70 percent were killed (Table 1-4).

Table 1-4: Status of persons involved in collisions
By injury severity - 1995

status	killed	serious injury	evident injury	possible injury	no injury	total involved	pct killed of total involved*
Drivers (no m/cyclists)	352	2,904	14,247	36,221	174,610	228,334	0.15%
Passengers (no m/cylists)	178	1,547	7,564	16,445	59,521	85,255	0.21%
Pedestrians	75	390	1,012	546	6	2,029	3.70%
Motorcyclists	36	408	866	396	284	1,990	1.81%
Pedalcyclists	13	187	1,102	367	48	1,717	0.76%
Other/unknown	0	2	14	18	0	34	-----
Total	654	5,438	24,805	53,993	234,469	319,359	0.77%

* Not including unknown injury.

Source: WSP

The age groups of 15-19 and 75-older had the highest fatality rates with 2.39 and 2.41 deaths per 10,000 population, respectively. The 15-19 age group also had the highest injury rate, with 346.9 injuries per 10,000 population (Table 1-5).

Table 1-5: Persons killed and injured in traffic collisions
By age group and sex - 1995

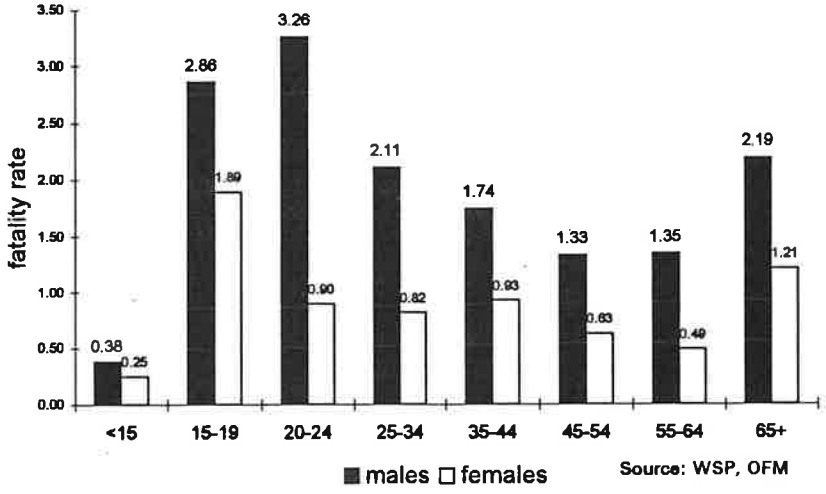
age	population*	killed	death rate**	serious injury	evident injury	possible injury	total injured	injury rate**
0 - 4	411,410	12	0.29	83	591	811	1,485	36.1
5 - 9	422,693	10	0.24	135	977	1,236	2,348	55.5
10 - 14	403,225	17	0.42	227	1,221	1,532	2,980	73.9
15 - 19	359,477	86	2.39	841	4,365	7,264	12,470	346.9
20 - 24	345,425	73	2.11	765	3,495	6,979	11,239	325.4
25-34	846,132	124	1.47	1,175	5,119	11,919	18,213	215.3
35-44	934,076	125	1.34	953	3,566	10,136	14,655	156.9
45-54	673,743	66	0.98	532	2,233	6,411	9,176	136.2
55-64	406,063	37	0.91	252	1,134	2,978	4,364	107.5
65-74	349,414	35	1.00	212	805	1,757	2,774	79.4
75 & older	278,242	67	2.41	171	699	1,071	1,941	69.8
Age not stated	-------	2	-------	92	600	1,899	2,591	-------
Males	2,700,401	438	1.62	3,162	14,028	23,542	40,732	150.8
Females	2,729,499	216	0.79	2,268	10,697	30,255	43,220	158.3
Sex not stated	-------	0	-------	8	80	196	284	-------
Total	5,429,900	654	1.20	5,438	24,805	53,993	84,236	155.1

*1995 population by age (breakdown done biannually by OFM). Source: WSP, OFM

**Persons killed/injured per 10,000 population.

Males had higher fatality rates than women in all age groups. The highest rate for males was in the 20-24 year age group. For women, the highest rate was for age 15-19 (Figure 1-2).

Figure 1-2:
Traffic deaths per 10,000 population
By age group and sex - 1995



Traffic collisions by month, day of week and hour of day

During 1995, the months recording the greatest number of traffic deaths were July and August. The greatest number of collisions and injuries occurred in December (Table 1-6).

Table 1-6: Persons killed and injured in collisions
By month - 1995

	persons		collisions			
	killed	injured	fatal	injury	ppty dmg	total
January	48	6,702	39	4,610	6,580	11,229
February	31	5,496	30	3,760	5,534	9,324
March	46	6,310	40	4,283	6,130	10,453
April	64	6,129	52	4,166	5,738	9,956
May	45	6,686	44	4,480	5,851	10,375
June	51	6,927	46	4,640	6,019	10,705
July	71	6,882	61	4,478	5,790	10,329
August	68	7,594	60	5,020	6,511	11,591
September	60	7,613	53	5,056	6,544	11,653
October	50	7,354	44	4,996	6,923	11,963
November	57	8,051	51	5,455	7,773	13,279
December	63	8,492	57	5,645	8,639	14,341
Total	654	84,236	577	56,589	78,032	135,198

Source: WSP

Nearly half of Washington's fatal collisions occurred on the weekend days of Friday, Saturday and Sunday. Of total reported collisions, the majority occurred on weekdays (Table 1-7).

Table 1-7: Collisions by day of week and hour of day - 1995

	total week			Monday - Thursday			Friday - Sunday		
	total	injury	fatal	total	injury	fatal	total	injury	fatal
midnight	2,715	1,067	27	1,100	429	12	1,615	638	15
1:00 a.m.	2,340	971	23	870	360	7	1,470	611	16
2:00 a.m.	2,159	854	35	743	289	14	1,416	565	21
3:00 a.m.	1,132	463	13	429	169	5	703	294	8
4:00 a.m.	952	343	16	432	153	6	520	190	10
5:00 a.m.	1,398	572	8	822	330	6	576	242	2
6:00 a.m.	2,996	1,233	21	1,981	835	12	1,015	398	9
7:00 a.m.	6,002	2,518	10	4,493	1,924	7	1,509	594	3
8:00 a.m.	5,577	2,192	14	3,842	1,537	9	1,735	655	5
9:00 a.m.	4,699	1,824	11	2,909	1,123	6	1,790	701	5
10:00 a.m.	5,498	2,167	15	3,240	1,259	11	2,258	908	4
11:00 a.m.	7,043	2,792	14	4,089	1,604	6	2,954	1,188	8
noon	8,425	3,466	26	4,873	1,978	13	3,552	1,488	13
1:00 p.m.	8,784	3,589	19	4,947	2,023	11	3,837	1,566	8
2:00 p.m.	10,029	4,338	35	5,888	2,502	21	4,141	1,836	14
3:00 p.m.	11,013	4,717	26	6,820	2,921	16	4,193	1,796	10
4:00 p.m.	11,871	5,241	31	7,359	3,257	21	4,512	1,984	10
5:00 p.m.	12,565	5,552	37	8,059	3,559	19	4,506	1,993	18
6:00 p.m.	8,521	3,775	35	4,904	2,154	16	3,617	1,621	19
7:00 p.m.	5,829	2,513	33	3,124	1,358	13	2,705	1,155	20
8:00 p.m.	4,476	1,828	37	2,367	986	17	2,109	842	20
9:00 p.m.	4,253	1,768	37	2,153	911	22	2,100	857	15
10:00 p.m.	3,677	1,515	24	1,717	720	10	1,960	795	14
11:00 p.m.	3,244	1,291	30	1,485	612	12	1,759	679	18
Total	135,198	56,589	577	78,646	32,993	292	56,552	23,596	285

Source: WSP

Traffic collisions during holiday periods

Of the major holiday periods, New Years had the highest rate of fatalities per 24 hours with 3.4, followed by the 4th of July with 3.1. Christmas had the highest rate of collisions with 443.7 collisions per 24 hours. Overall, holiday periods had a somewhat higher fatality rate than the full year (Table 1-8).

Table 1-8: Traffic collisions during major holiday periods
Deaths, injuries, collisions per hour - 1995

	number of hours	deaths	injuries	collisions	rate per 24-hours deaths	rate per 24-hours collisions
New Years Eve (94-95)	78	11	460	781	3.4	240.3
Memorial Day	78	6	594	865	1.8	266.2
4th of July	102	13	877	1,303	3.1	306.6
Labor Day	78	6	770	1,027	1.8	316.0
Thanksgiving	102	10	959	1,442	2.4	339.3
Christmas	78	5	906	1,442	1.5	443.7
Total holidays	438	40	4,106	6,079	2.2	333.1
Full year	8,760	654	84,236	135,198	1.8	370.4

Source: WSP

Traffic collisions & deaths by type of roadway

During 1995, the interstate system recorded the lowest death rate per vehicle miles traveled with 0.52 deaths per 100 million miles. The greatest number of fatalities occurred on county roads and state highways, which also experienced high fatality rates. City streets had by far the greatest number of total collisions with 61,893, followed by state highways and county roads. The greatest amount of vehicle travel was on state highways with an estimated 14,114 millions of vehicle miles traveled (Table 1-9).

Table 1-9: Highways, travel and collisions
By type of highway - 1995

type of highway	highway miles	%	miles traveled +	%	collisions	fatalities	death rate*
County roads	41,342	51.9%	9,190	18.7%	24,550	201	2.19
State highways	6,273	7.9%	14,114	28.7%	32,363	262	1.86
City streets	12,650	15.9%	12,209	24.8%	61,893	106	0.87
Interstate system	764	1.0%	13,199	26.8%	15,485	68	0.52
Other traffic ways**	18,684	23.4%	536	1.1%	907	17	3.17
Total	79,713	100.0%	49,248	100.0%	135,198	654	1.33

+WSDOT estimate in millions of vehicle miles traveled. Source: WSP, WSDOT, WTSC

*Fatalities per hundred million vehicle miles

**Includes parks/forest service roads. Does not include all-terrain-vehicle trails.

Table 1-10 compares collisions in urban and rural areas. Just under two-thirds of total collisions occurred in urban areas. Nearly three quarters of fatalities occurred in rural areas.

Table 1-10: Collisions & injury severity in urban and rural areas*
By collision severity - 1995

	urban	rural	total
Total collisions	87,787	47,411	135,198
Vehicles involved	174,996	79,060	254,056
Fatal clsns	161	416	577
Injury clsns	35,194	21,395	56,589
Ppty dmg only clsns	52,432	25,600	78,032
Persons killed	170	484	654
Serious injuries	2,495	2,943	5,438
Evident injuries	12,647	12,158	24,805
Possible injuries	35,997	17,996	53,993
Total injured	51,139	33,097	84,236
Population	2,857,002	2,572,898	5,429,900
Fatalities per 10,000 pop	0.6	1.9	1.2
Collisions per 10,000 pop	307.3	184.3	249.0

Source: WSP, OFM

*Urban =cities with 2,500 or more population.
Rural =unincorporated areas or cities with under 2,500 population.

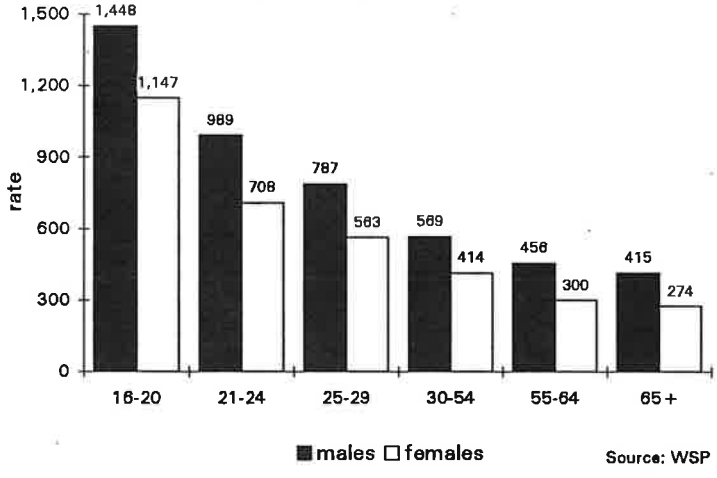
In 1995, drivers under age 30 had higher collision and fatal collision rates than older drivers. Drivers 17 and 19 years of age had the highest rates of fatal collisions per 10,000 licensed drivers (Table 1-10). For younger drivers, both males and females experienced higher collision rates. Males had consistently higher rates than females (Figure 1-3).

Table 1-11: Driver distribution and collision involvement
By age group and sex*- 1995

age	lic drivers	total collisions	collision rate*	fatal collisions	fatal clsn rate**
Under 16	-------	741	-------	11	-------
16	35,856	4,701	1,311.1	15	4.2
17	48,059	7,261	1,510.9	24	5.0
18	58,072	7,783	1,340.2	27	4.6
19	54,434	7,054	1,295.9	27	5.0
20	58,818	6,505	1,106.0	20	3.4
21	62,906	5,897	937.4	27	4.3
22	63,309	5,397	852.5	24	3.8
23	63,163	5,376	851.1	20	3.2
24	72,421	5,740	792.6	16	2.2
25-29	387,765	26,393	680.6	97	2.5
30-34	432,631	25,400	587.1	81	1.9
35-39	458,252	24,210	528.3	97	2.1
40-44	442,039	20,949	473.9	88	2.0
45-49	391,796	17,065	435.6	55	1.4
50-54	285,329	11,798	413.5	54	1.9
55-59	207,946	8,182	393.5	35	1.7
60-64	170,328	6,264	367.8	30	1.8
65-69	155,359	5,126	329.9	23	1.5
70 & over	326,497	11,489	351.9	60	1.8
Males	1,954,700	139,051	711.4	621	3.2
Females	1,820,280	91,838	504.5	214	1.2

* Does not include age or sex not stated. Source: WSP, DOL
** Collisions/fatal collisions per 10,000 licensed drivers.

Figure 1-3:
Collisions per 10,000 licensed drivers
By driver age and sex - 1995



Source: WSP

Single- and multiple-vehicle collision types

In single-vehicle collisions, the first harmful event most often recorded was "struck fixed/other object." Vehicle-pedestrian collisions resulted in the highest percentage of fatalities. Of multiple-vehicle collisions, the largest percentage of fatalities occurred in head-on collisions (Table 1-12).

Table 1-12: First harmful event in investigated collisions
Single & multiple collisions - 1995

	fatal	injury	ppty dmg only	total	pct fatal
Single-vehicle collisions					
Vehicle-pedestrian	70	1,779	5	1,854	3.8%
Vehicle-railway train	1	18	41	60	1.7%
Overturned	79	3,047	2,295	5,421	1.5%
Struck fixed/other object	190	7,666	11,903	19,759	1.0%
Vehicle-bicyclist	13	1,617	42	1,672	0.8%
Non-collision	5	189	451	645	0.8%
Vehicle-animal	1	247	1,465	1,713	0.1%
Total single-vehicle	359	14,563	16,202	31,124	1.2%
Multiple vehicle clans					
Head-on	49	471	202	722	6.8%
Broadside - opp. direction	36	576	587	1,199	3.0%
Angular direction	57	8,985	12,452	21,494	0.3%
Sideswipe	25	2,449	7,754	10,228	0.2%
Broadside - same direction	4	842	2,140	2,986	0.1%
Enter/leave driveway	12	4,525	8,475	13,012	0.1%
One left/one straight-opp dir	6	3,080	3,842	6,928	0.1%
Struck parked vehicle	7	915	7,379	8,301	0.1%
Rear-end	22	19,884	17,658	37,564	0.1%
Enter/leave parked position	0	299	1,341	1,640	0.0%
Total multiple vehicle	218	42,026	61,830	104,074	0.2%
Total collisions	577	56,589	78,032	135,198	0.4%

Source: WSP

Driver violations

Driver violations in traffic collisions are shown in Table 1-13. These violations represent the judgment of police officers as to driver behavior factors that may have contributed to collision occurrences. The majority of violations noted by police include right-of-way violations, excessive speed, following too closely, and inattention.

Figure 1-4 illustrates the top 10 driver violations in fatal collisions. Speeding (both "exceeding safe speed" and "exceeding posted speed") and DUI accounted for the vast majority of driver violations in fatal collisions.

Table 1-13: Contributory driver violations in investigated collisions*
By collision severity - 1995

	fatal	injury	ppty dmg only	total	pct of clsns which were fatal clsns +
Failure to yield right of way**	49	11,362	16,183	27,594	0.2%
Exceeding safe speed	141	11,215	12,399	23,755	0.6%
Following too closely	11	8,728	8,056	16,795	0.1%
Driver inattention	62	6,526	11,492	18,080	0.3%
Disregarding signs/signals	45	4,144	4,211	8,400	0.5%
Driving under the influence	213	4,432	3,170	7,815	2.7%
Improper turning - inc. "U" turn	2	1,030	3,172	4,204	0.0%
Defective equipment	18	1,411	2,120	3,549	0.5%
Exceeding posted speed	87	1,937	1,724	3,748	2.3%
Other violations	6	496	2,227	2,729	0.2%
Over center line	84	1,116	910	2,110	4.0%
Improper passing	10	735	1,454	2,199	0.5%
Apparently asleep	26	1,137	776	1,939	1.3%
Improper parking location	2	78	471	551	0.4%
Failing to signal/improper signal	1	154	300	455	0.2%
Under influence of drugs	10	155	105	270	3.7%
Did not dim headlights	1	100	97	198	0.5%
Total violations in collisions	768	54,756	68,867	124,391	0.6%

*More than one violation was recorded for some collisions. Source: WSP
** Includes failure to yield to pedestrians.
+Percentage of total collisions associated with a driver violation which resulted in fatalities.

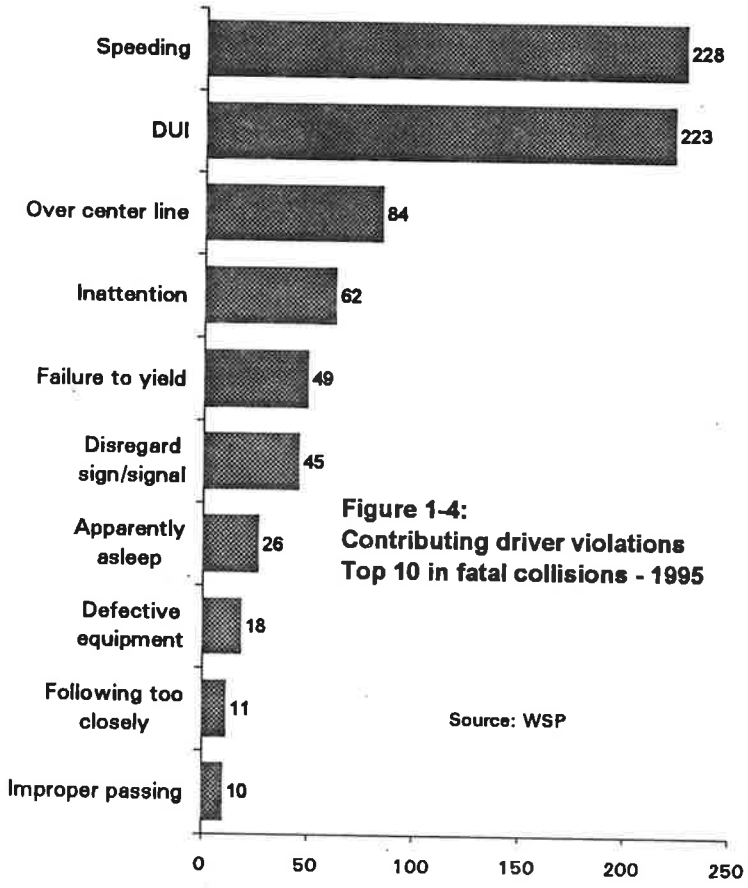


Figure 1-4:
Contributing driver violations
Top 10 in fatal collisions - 1995

Source: WSP

Vehicle condition

Defective brakes and worn or smooth tires were the leading defects noted by law enforcement officers in investigated collisions in 1995. Defective headlights recorded the highest percentage of fatal collisions (Table 1-14).

Table 1-14: Vehicle defects noted in investigated collisions*
By collision severity - 1995

	fatal collisions	injury collisions	ppty dmg only clsns	total collisions	pct of clsns which were fatal clsns +
Defective brakes	9	716	744	1,469	0.6%
Worn or smooth tires	26	634	586	1,246	2.1%
Puncture or blowout	2	134	211	347	0.6%
Defective rear lights	1	102	126	229	0.4%
Defective steering	0	91	139	230	0.0%
Power failure	1	94	107	202	0.5%
Defective headlights	3	46	44	93	3.2%
Other lights/reflectors insufficient	0	34	44	78	0.0%
All other defects	11	630	1,118	1,759	0.6%
Total defects	53	2,481	3,119	5,653	0.9%
No defects noted	799	84,306	102,015	187,120	0.4%
Percent with defects noted	6.6%	2.9%	3.1%	3.0%	-------

*More than one defect was noted for some vehicles. Source: WSP

+Percentage of total collisions associated with a vehicle defect which resulted in fatalities.

Table 1-15: Traffic exposure factors
By county - 1995

county	population	licensed drivers	registered vehicles	centerline miles*	miles traveled**
Adams	15,200	10,915	16,105	2,585.7	403,353
Asotin	19,100	13,348	16,484	594.5	134,201
Benton	131,000	91,190	112,236	1,889.6	1,288,056
Chelan	60,000	43,601	59,198	2,308.2	810,999
Clallam	63,600	44,860	55,650	1,089.7	481,510
Clark	291,000	202,932	238,620	2,495.0	2,309,923
Columbia	4,200	2,923	4,739	846.5	80,823
Cowlitz	89,400	61,935	82,717	1,171.8	1,348,434
Douglas	29,600	19,446	23,404	3,126.6	369,651
Ferry	7,100	4,727	4,870	1,816.6	174,497
Franklin	44,000	27,420	45,323	1,707.8	463,643
Garfield	2,350	1,927	2,763	565.1	60,047
Grant	64,500	42,864	56,993	3,749.0	870,837
Grays Harbor	67,700	46,673	57,551	1,631.8	527,798
Island	68,900	45,952	51,753	1,358.0	405,887
Jefferson	25,100	18,337	21,725	974.0	266,573
King	1,613,600	1,174,752	1,369,868	7,448.1	14,370,335
Kitsap	220,600	148,550	173,168	1,681.0	1,371,468
Kittitas	30,100	20,633	27,820	2,463.4	941,709
Klickitat	18,100	13,005	17,016	1,488.4	329,651
Lewis	65,500	47,795	62,439	1,810.1	898,220
Lincoln	9,700	6,435	11,680	2,525.2	331,039
Mason	45,300	31,599	41,955	980.6	357,201
Okanogan	36,900	27,182	33,079	3,447.9	422,968
Pacific	20,800	15,046	18,216	739.5	190,005
Pend Oreille	10,700	7,920	9,874	1,619.4	169,032
Pierce	660,200	424,237	473,203	3,747.4	5,178,497
San Juan	12,300	9,180	12,604	342.2	16,225
Skagit	93,100	66,316	94,056	1,486.0	1,135,984
Skamania	9,550	5,381	6,527	965.1	78,838
Snohomish	525,600	359,211	438,711	3,740.8	4,636,216
Spokane	401,200	272,417	328,475	4,581.1	2,795,645
Stevens	35,400	24,077	28,987	2,352.0	330,467
Thurston	189,200	148,069	196,982	1,548.2	1,722,996
Wahkiakum	3,700	2,219	2,914	187.9	34,921
Walla Walla	52,700	31,825	38,089	1,282.8	450,194
Whatcom	148,300	103,111	127,674	1,808.9	1,392,952
Whitman	40,500	24,521	29,143	2,412.6	397,696
Yakima	204,100	129,723	178,004	3,234.2	1,699,864
Unknown/other		2,726			
Total	5,429,900	3,774,980	4,570,615	79,802.6	49,248,355

Source: WSP, DOL, DOT

*Total length of all public roadways in miles, regardless of number of lanes.

**Miles traveled estimated by WSDOT - in millions of miles.

Table 1-16: Traffic deaths, injuries and miles traveled
By county - 1995

county	miles traveled*	deaths	serious injuries	evident injuries	possible injuries	ppty dmg only clsns	total collisions	collision rate**	fatality rate**	econ loss +
Adams	403,353	6	43	132	103	221	386	95.7	1.49	$ 11.7
Asotin	134,201	2	18	66	54	178	277	206.4	1.49	$ 5.2
Benton	1,288,056	18	142	469	830	1,651	2,611	202.7	1.40	$ 47.9
Chelan	810,999	14	74	361	370	843	1,385	170.8	1.73	$ 30.2
Clallam	481,510	9	55	302	359	761	1,249	259.4	1.87	$ 23.2
Clark	2,309,923	25	275	1,156	2,589	3,427	6,216	269.1	1.08	$ 97.2
Columbia	80,823	0	7	38	24	61	106	131.2	0.00	$ 1.5
Cowlitz	1,348,434	11	85	542	785	1,441	2,423	179.7	0.82	$ 38.0
Douglas	369,651	8	27	147	127	274	480	129.9	2.16	$ 13.6
Ferry	174,497	4	20	39	32	80	152	87.1	2.29	$ 6.0
Franklin	463,643	7	56	220	270	550	924	199.3	1.51	$ 18.1
Garfield	60,047	0	1	18	7	36	55	91.6	0.00	$ 0.6
Grant	870,837	11	73	354	328	804	1,330	152.7	1.26	$ 26.6
Grays Harbor	527,798	13	92	360	490	1,095	1,750	331.6	2.46	$ 32.8
Island	405,887	4	46	184	320	512	871	214.6	0.99	$ 14.6
Jefferson	266,573	4	38	129	130	305	503	188.7	1.50	$ 10.4
King	14,370,335	115	1,638	6,782	20,906	28,047	48,190	335.3	0.80	$ 645.2
Kitsap	1,371,468	21	207	962	1,704	2,519	4,453	324.7	1.53	$ 73.9
Kittitas	941,709	12	56	340	358	865	1,358	144.2	1.27	$ 27.2
Klickitat	329,651	8	30	115	69	261	411	124.7	2.43	$ 12.7
Lewis	898,220	16	143	378	479	1,209	1,896	211.1	1.78	$ 38.8
Lincoln	331,039	3	23	67	46	117	206	62.2	0.91	$ 5.9
Mason	357,201	9	59	252	357	540	991	277.4	2.52	$ 21.2
Okanogan	422,968	20	47	211	155	439	734	173.5	4.73	$ 27.8
Pacific	190,005	7	18	117	125	241	415	218.4	3.68	$ 11.6
Pend Oreille	169,032	3	30	51	32	110	200	118.3	1.77	$ 5.9
Pierce	5,178,497	66	576	2,888	7,626	8,403	15,693	303.0	1.27	$ 250.2
San Juan	16,225	0	12	42	25	59	118	727.3	0.00	$ 1.7
Skagit	1,135,984	23	80	507	853	1,365	2,318	204.1	2.02	$ 48.5
Skamania	78,838	2	20	50	49	131	213	270.2	2.54	$ 4.8
Snohomish	4,636,216	46	327	2,228	5,326	6,671	11,988	258.6	0.99	$ 179.5
Spokane	2,795,645	33	397	1,994	4,077	5,660	10,052	359.6	1.18	$ 149.8
Stevens	330,467	23	78	203	167	323	606	183.4	6.96	$ 31.2
Thurston	1,722,996	19	205	806	1,788	2,748	4,673	271.2	1.10	$ 72.1
Wahkiakum	34,921	1	0	22	24	44	73	209.0	2.86	$ 1.7
Walla Walla	450,194	10	54	248	228	690	1,057	234.8	2.22	$ 21.7
Whatcom	1,392,952	20	128	664	1,009	1,927	3,133	224.9	1.44	$ 55.2
Whitman	397,696	7	28	180	156	482	750	188.6	1.76	$ 14.8
Yakima	1,699,864	54	230	1,181	1,616	2,942	4,952	291.3	3.18	$ 110.4
Total	49,248,355	654	5,438	24,805	53,993	78,032	135,198	274.5	1.33	$ 2,189.2

*In thousands of vehicle miles traveled.

Source: WSP, WSDOT, Nat'l Safety Council

**Traffic deaths/collisions per 100 million vehicle miles traveled.

+In $millions; based on National Safety Council estimates in constant 1994 dollars.
(Death =$920,000; serious inj =$46,000; evident inj =$14,000; possible inj =$8,800; ppty dmg only =$6,600.)

Table 1-17: Traffic deaths, injuries and collisions*

Cities over 10,000 population - 1995

	population	deaths	injuries	collisions	death rate**	collision rate**
250,000 and over						
Seattle	532,900	39	12,527	21,454	0.73	402.6
100,000 to 250,000						
Spokane	188,800	8	3,966	6,463	0.42	342.3
Tacoma	184,500	14	4,997	7,089	0.76	384.2
Bellevue	102,000	2	1,810	3,181	0.20	311.9
50,000 to 100,000						
Everett	79,180	10	1,769	2,854	1.26	360.4
Federal Way	74,290	4	1,346	2,105	0.54	283.3
Vancouver	65,360	4	1,417	2,328	0.61	356.2
Yakima	60,850	3	1,344	2,315	0.49	380.4
Bellingham	57,830	1	725	1,584	0.17	273.9
25,000 to 50,000						
Kennewick	48,130	1	682	1,270	0.21	263.9
Renton	44,890	5	1,303	2,102	1.11	468.3
Kirkland	44,620	3	728	1,279	0.67	286.6
Kent	42,350	7	1,202	1,992	1.65	470.4
Redmond	40,030	1	558	1,091	0.25	272.5
Olympia	39,610	1	770	1,550	0.25	391.3
Bremerton	37,170	2	652	1,304	0.54	350.8
Richland	36,270	5	340	725	1.38	199.9
Auburn	35,230	4	815	1,362	1.14	386.6
Longview	33,480	0	620	1,077	0.00	321.7
Lynnwood	31,950	0	930	1,461	0.00	457.3
Edmonds	31,320	0	351	576	0.00	183.9
Walla Walla	28,870	1	267	632	0.35	218.9
Burien	27,680	1	442	741	0.36	267.7
Puyallup	27,250	1	540	955	0.37	350.5
Bothell	25,850	0	379	601	0.00	232.5
Lacey	25,110	0	511	859	0.00	342.1
15,000 to 25,000						
Pullman	24,360	0	117	322	0.00	132.2
Wenatchee	24,180	1	329	566	0.41	234.1
Sea Tac	22,910	9	760	1,126	3.93	491.5
Pasco	22,500	3	399	660	1.33	293.3
Mount Vernon	21,580	1	288	541	0.46	250.7
Des Moines	21,450	2	172	283	0.93	131.9
Mercer Island	21,290	0	142	291	0.00	136.7
Mountlake Terrace	20,050	0	284	470	0.00	234.4
Oak Harbor	19,160	0	109	231	0.00	120.6
Port Angeles	18,540	0	226	463	0.00	249.7
Bainbridge Island	17,910	0	104	216	0.00	120.6
Marysville	16,890	1	218	463	0.59	274.1
Aberdeen	16,700	2	248	589	1.20	352.7
10,000 to 15,000						
Mukilteo	14,760	0	155	275	0.00	186.3
Tukwila	14,750	6	1,074	1,754	4.07	1189.2
Ellensburg	12,990	0	104	263	0.00	202.5
Anacortes	12,820	0	74	190	0.00	148.2
Centralia	12,730	1	275	598	0.79	469.8
Moses Lake	12,490	4	188	389	3.20	311.4
Kelso	11,870	1	317	550	0.84	463.4
Sunnyside	11,710	1	116	250	0.85	213.5
Tumwater	11,420	2	202	393	1.75	344.1
Enumclaw	10,170	0	81	149	0.00	146.5

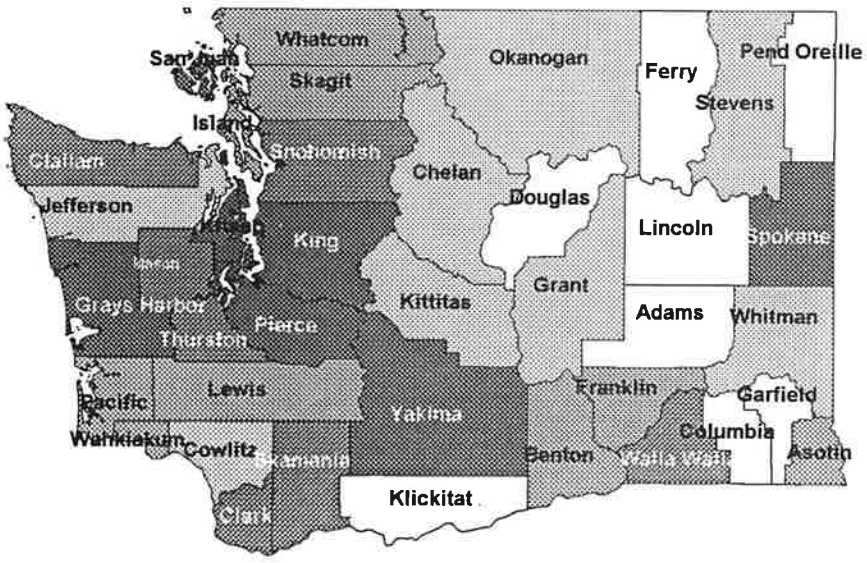
*Includes collisions occuring on the interstate system

Source: WSP, OFM

** Deaths/collisions per 10,000 population

Figure 1-5: Collision rates in Washington State - 1995

Collision rates represent traffic collisions per 100 million vehicle miles traveled. Darker shading of a county indicates a higher collision rate. Rates are divided into five groups for shading purposes. See Table 1-16 for exact rates. Source: WSP.



II. Drinking Drivers

Collisions where law enforcement reports noted the involvement of drinking drivers are summarized in Tables 2-1 and 2-2. Table 2-1 includes all collisions where the drivers were noted to have some level of alcohol in their system. Table 2-2 summarizes collisions only involving drivers over the legal limit of .10 BAC (DUI drivers). The percentage of all traffic fatalities that involved drinking drivers was 42.7 percent in 1995, and the percent involving DUI drivers was 36.1 percent.

Table 2-1: Drinking driver* collisions
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	12,467	12,387	12,725	14,113	14,776	0.6%	-5.7%
Number of drinking drivers	13,134	12,974	13,341	14,813	15,470	1.2%	-5.6%
Fatal collisions	242	244	267	278	300	-0.8%	-6.6%
Injury collisions	6,618	6,718	6,981	7,698	8,020	-1.5%	-5.7%
Prpty damage only**	5,607	5,425	5,477	6,137	6,456	3.4%	-5.5%
Persons killed	279	281	306	308	335	-0.7%	-5.6%
Percent of all traffic fatalities	42.7%	44.0%	46.3%	47.3%	49.0%	-3.0%	-3.5%
Total injuries	10,513	10,557	11,022	12,108	12,575	-0.4%	-5.6%
Serious injuries	1,431	1,385	1,596	1,938	2,132	3.3%	-13.3%
Evident injuries	4,736	4,850	5,083	5,549	5,944	-2.4%	-6.5%
Possible injuries	4,346	4,322	4,343	4,621	4,499	0.6%	-1.3%
Economic loss in $millions+	$464.1	$464.0	$500.5	$531.4	$571.7	0.0%	-6.7%

*All drinking drivers, including DUI
Source: WSP, National Safety Council
**Damage over $500
+In $millions; based on National Safety Council estimates in constant 1994 dollars.
Death =$920,000; serious inj=$46,000; evident inj=$14,000; possible inj=$8,800; ppty dmg only=$6,600.

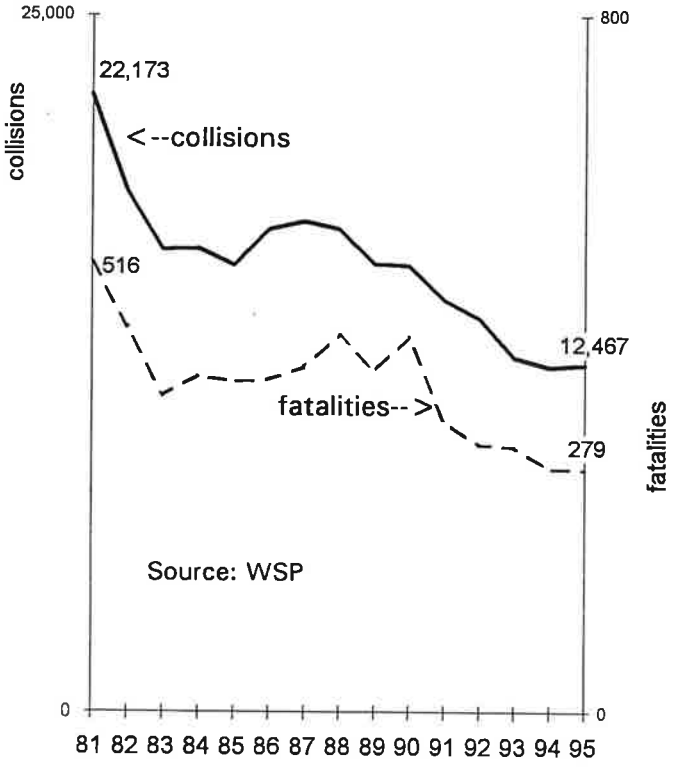
Table 2-2: Collisions involving drivers under the influence (DUI)
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	7,750	7,933	8,204	8,990	9,237	-2.3%	-4.9%
DUI drivers	7,815	7,984	8,283	9,086	9,331	-2.1%	-5.0%
Fatal collisions	207	213	241	243	271	-2.8%	-7.6%
Injury collisions	4,392	4,510	4,747	5,174	5,375	-2.6%	-5.7%
Prop. damage only*	3,151	3,210	3,216	3,573	3,591	-1.8%	-3.6%
Persons killed	236	243	279	269	304	-2.9%	-6.9%
% of all traffic fatalities	36.1%	38.0%	42.2%	41.3%	44.5%	-5.0%	-5.0%
Total injuries	7,110	7,170	7,603	8,267	8,598	-0.8%	-5.9%
Serious injuries	1,098	1,029	1,213	1,455	1,616	6.7%	-13.9%
Evident injuires	3,342	3,435	3,664	3,876	4,203	-2.7%	-6.5%
Possible injury	2,670	2,706	2,726	2,936	2,779	2,787	-4.2%

*Minimum damage: $500
Source: WSP

The number of drinking-driver-related collisions and resultant fatalities have been reduced by nearly one-half in the past 15 years.

Figure 2-1:
Drinking-driver-related collisions and fatalities - 15 year trend



Most persons involved in drinking-driver related collisions were drivers. Of the 104 pedestrians involved in drinking-driver related collisions, 8.65% were killed.

Table 2-3: Status of persons involved in drinking driver collisions
By injury severity - 1995

status	killed	serious injury	evident injury	possible injury	no injury	total involved*	pct killed of total involved
Drivers (no m/cyclists)	171	845	3,062	2,700	10,982	17,760	0.96%
Passengers (no m/cylists)	85	445	1,428	1,571	5,038	8,567	0.99%
Motorcyclists	12	106	157	43	37	355	3.38%
Pedestrians	9	27	47	20	1	104	8.65%
Bicyclists	2	8	37	7	1	55	3.64%
Other/unknown	0	0	5	5	0	10	-----
Total	279	1,431	4,736	4,346	16,059	26,851	1.04%

*Not including unknown injury.
Source: WSP

Table 2-4: Persons killed/seriously injured in drinking-driver collisions
By age group and sex - 1995

age	population*	killed	serious injuries	total injured	rate** injured/killed
0 - 4	411,410	3	12	124	3.1
5 - 9	422,693	2	19	168	4.0
10 - 14	403,225	3	15	246	6.2
15 - 19	359,477	27	174	1,314	37.3
20 - 24	345,425	46	257	1,915	56.8
25-34	846,132	77	419	2,920	35.4
35-44	934,076	72	288	1,980	22.0
45-54	673,743	21	139	926	14.1
55-64	406,063	11	54	381	9.7
65-74	349,414	10	20	184	5.6
75 & older	278,242	6	7	80	3.1
Age not stated	-------	1	27	275	-------
Males	2,700,401	200	1,021	6,822	26.0
Females	2,729,499	79	408	3,691	13.8
Sex not stated	-------	0	2	2	-------
Total	5,429,900	279	1,431	10,513	19.9

Source: WSP

* 1995 population by age (breakdown done biannually by OFM).

** Persons killed or injured in drinking-driver collisions per 10,000 population.

Location of drinking-driver collisions

County roads recorded 91 fatal collisions involving drinking drivers followed by rural state routes with 67. The highest percentage of fatal collisions was on "other trafficways", followed by rural state routes, county roads, and interstates (Table 2-5).

Table 2-5: Drinking driver collisions and highway type
By severity - 1995

roadway type	fatal collisions	injury collisions	ppty dmg collisions	total collisions	pct fatal clsns
County roads	91	2,033	1,422	3,546	2.6%
State routes - rural	67	1,156	670	1,893	3.5%
City streets	33	2,167	2,444	4,644	0.7%
Interstate	29	608	479	1,116	2.6%
State routes - urban	15	586	528	1,129	1.3%
Other traffic ways*	7	68	64	139	5.0%
Total	242	6,618	5,607	12,467	1.9%

Source: WSP

*Includes parks/forest service roads. Does not include all-terrain-vehicle trails.

City streets and county roads had the highest numbers of drinking-driver related collisions. Interstate routes recorded the lowest number (Figure 2-2).

Figure 2-2:
Drinking driver collisions by highway type - 1995

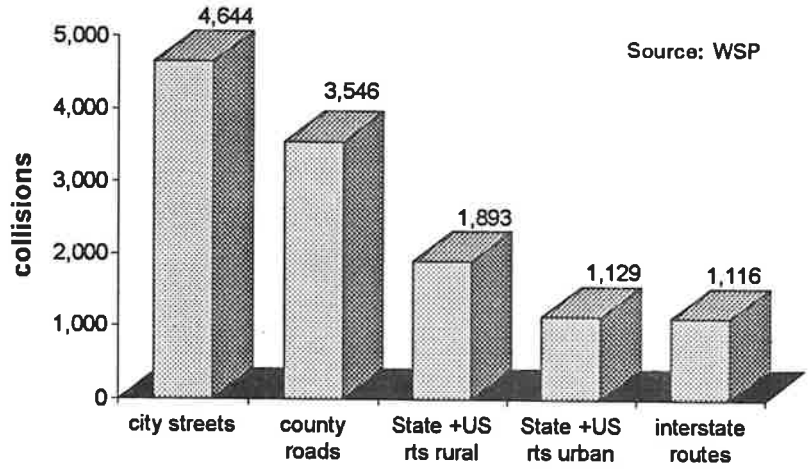


Table 2-6 presents data on drinking-driver-related, single and multiple-vehicle collisions in urban and rural areas (urban areas are incorporated cities with 2,500 or more population). Rural, single-vehicle collisions were the most deadly, with 3.6 percent fatal.

Table 2-6: Alcohol-related collisions - 1995
Urban/rural, single-/multiple-vehicle by severity*

	fatal	injury	ppty dmg only	total	pct fatal
Urban					
Single-vehicle	25	985	1,011	2,021	1.2%
Multiple-vehicle	21	2,017	2,191	4,229	0.5%
Total urban	46	3,002	3,202	6,250	0.7%
Rural					
Single-vehicle	144	2,283	1,529	3,956	3.6%
Multiple-vehicle	42	1,192	839	2,073	2.0%
Total rural	186	3,475	2,368	6,029	3.1%
Statewide total	232	6,477	5,570	12,279	1.9%

Source: WSP

*Does not include collisions with pedestrians, bicyclists, trains or animals.

In fatal collisions, 31.4% of all drivers involved had been drinking. The percentage of drivers drinking in injury and total collisions was lower, with 8.8% and 7.8% respectively (Table 2-7).

Table 2-7: Sobriety of drivers in collisions
By collision severity - 1995

sobriety of driver	fatal collisions	injury collisions	ppty dmg only clsns	total collisions	pct fatal
Had been drinking - impaired	213	4,432	3,170	7,815	2.7%
Had been drinking - not impaired*	35	2,523	2,761	5,319	0.7%
Total drivers drinking	248	6,955	5,931	13,134	1.9%
Had not been drinking	542	71,740	82,957	155,239	0.3%
Total drivers with known sobriety	790	78,695	88,888	168,373	0.5%
Sobriety not stated	59	27,281	47,975	75,315	0.1%
Percent drivers drinking	31.4%	8.8%	6.7%	7.8%	——

*Includes had been drinking, sobriety unknown. Source: WSP

Table 2-8 displays the number of drinking drivers by age groups involved in fatal and total collisions in 1995. Drivers age 16-19 had the highest rate of total and fatal drinking driver collisions with 57.5 and 1.11 collisions per estimated 100 million miles of travel.

Table 2-8: "Had been drinking" drivers in collisions
Fatal and total collisions by age & sex - 1995

drivers	miles traveled*	drivers in total collisions nmbr	drivers in total collisions rate**	drivers in fatal collisions nmbr	drivers in fatal collisions rate**
15 & under	----	43	----	1	----
16-19	1,625.2	935	57.5	18	1.11
20-24	4,166.4	2,351	56.4	43	1.03
25-29	6,298.8	2,118	33.6	38	0.60
30-34	7,338.0	2,017	27.5	36	0.49
35-39	7,470.9	1,854	24.8	43	0.58
40-44	6,289.0	1,280	20.4	32	0.51
45-49	4,964.2	854	17.2	10	0.20
50-54	3,348.9	463	13.8	6	0.18
55-59	2,511.6	285	11.3	10	0.40
60-64	1,886.2	220	11.7	2	0.11
65-69	1,423.3	145	10.2	6	0.42
70 & over	1,905.9	223	11.7	2	0.10
Not stated	----	346	----	1	----
Male	27,578.9	10,137	36.8	198	0.72
Female	21,669.1	2,823	13.0	49	0.23
Sex not stated	0	174	----	1	----
Total	49,248.0	13,134	26.7	248	0.50

Source: WSP, USDOT

*Percent of miles traveled estimates from
1990 Nationwide Personal Transportation Study - USDOT.
**Total/fatal collisions per 100 million miles of travel.

Figure 2-3:
Drinking-driver collision rates*
By age group and sex - 1995

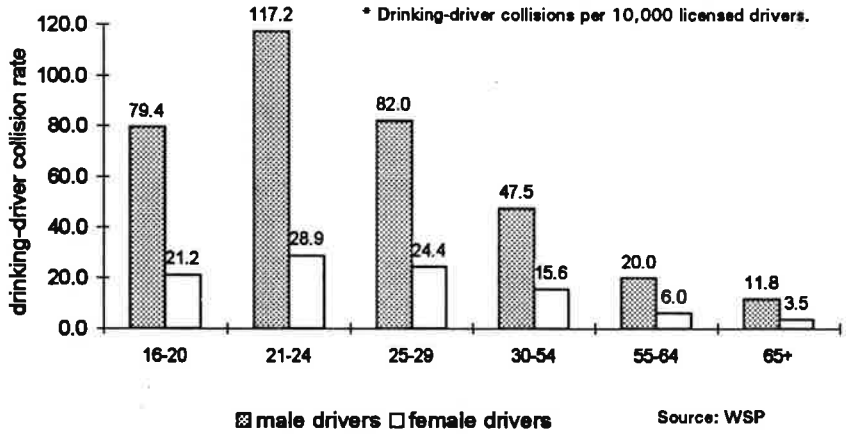
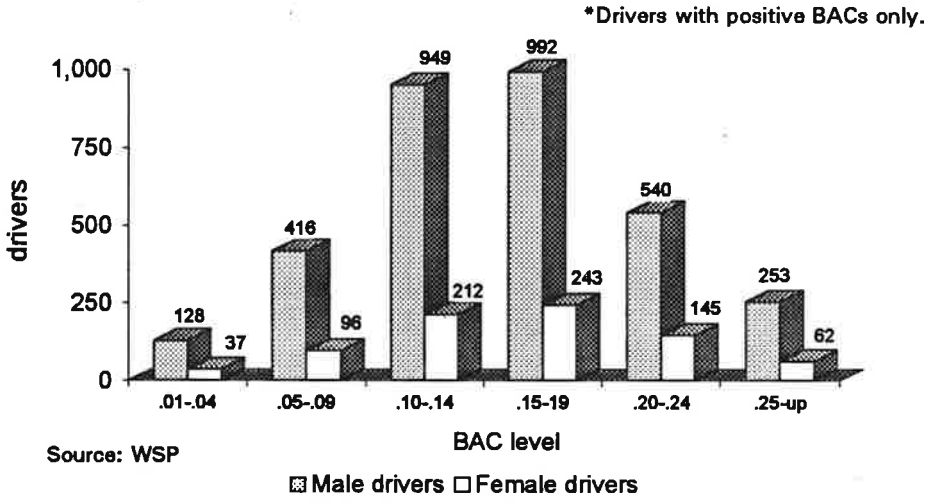


Figure 2-4 summarizes BAC levels of drivers involved in 1995 collisions (drivers with positive BACs only). BAC levels of .15 to .19 were most frequent. Over half had levels above .15.

Figure 2-4:
BAC levels of drivers* in collisions 1995



Data on the BAC levels for drinking drivers in fatal crashes are shown in Figure 2-5. The numbers of drivers with BACs of .15 and under has leveled off over the past 4 years after showing significant improvements, while the numbers of higher-BAC drivers in fatal crashes has declined steadily over the past six years.

Figure 2-5:
Driver BAC levels in fatal collisions
Above/below .15 BAC

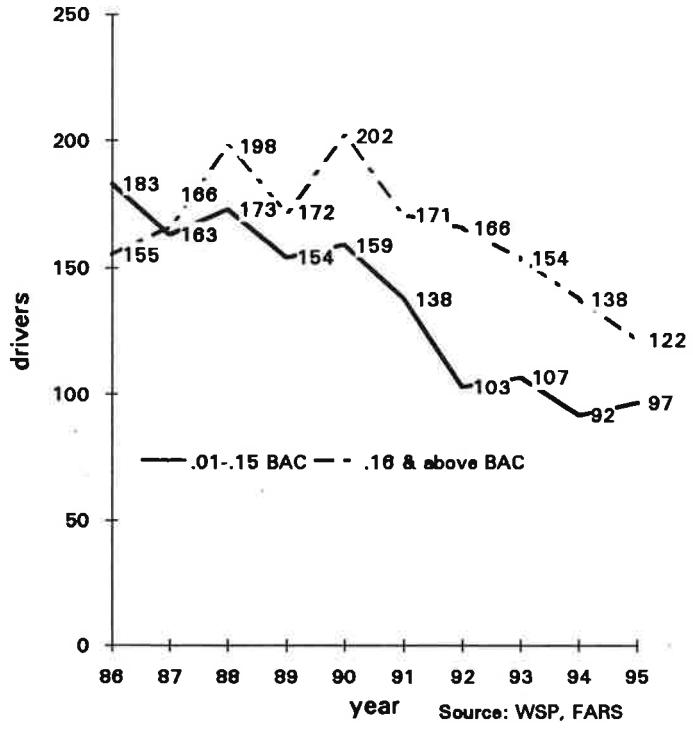


Table 2-9: Drivers with positive BAC readings who were killed
Five-year comparison - by age group

	1995		1994		1993		1992		1991	
age group	dvrs	avg BAC	dvrs	avg BAC	dvrs	avg BAC	dvrs	avg BAC	dvrs	avg BAC
16 - 20	13	0.15	15	0.16	16	0.15	12	0.13	20	0.18
21 - 24	21	0.18	19	0.19	33	0.18	39	0.18	31	0.17
25 - 34	46	0.18	48	0.21	53	0.19	55	0.19	62	0.17
35 - 44	47	0.19	38	0.19	33	0.17	40	0.20	30	0.21
45 - 54	9	0.17	22	0.24	18	0.25	9	0.23	18	0.23
55 - 64	5	0.16	4	0.20	3	0.17	5	0.13	8	0.18
65 & older	5	0.18	5	0.18	5	0.15	4	0.12	5	0.13
Total	146	0.17	151	0.20	161	0.18	164	0.17	174	0.17

Source: State Toxicologist

DUI & physical control citations and dispositions

The number of DUI citations filed in Washington courts in 1995 decreased over the preceding two years, along with the number of persons who were convicted of the original charge. The number of cases convicted on reduced charges have increased over the past 10 years (Table 2-10).

Table 2-10: Court dispositions for DUI/Physical Control
Ten-year comparison

	citations filed	convicted	reduced charges	deferred prosecution	not guilty
1986	38,041	19,086	5,506	5,431	723
1987	33,848	15,528	6,407	5,322	640
1988	34,920	14,605	6,071	6,085	565
1989	40,060	16,012	7,454	6,840	546
1990	42,075	15,800	7,969	7,906	499
1991	38,610	17,502	8,767	8,424	437
1992	44,144	20,682	9,420	9,879	529
1993	45,139	23,239	10,135	9,471	413
1994	41,409	17,103	10,646	9,308	316
1995	37,247	14,286	10,981	8,123	363

Source: OAC

Table 2-11: Drinking driver collisions*

Five-year comparison by county

county	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Adams	44	39	51	44	44	12.8%	-2.5%
Asotin	34	37	21	38	36	-8.1%	12.3%
Benton	210	207	232	222	230	1.4%	-3.2%
Chelan	134	152	145	159	170	-11.8%	-3.5%
Clallam	115	117	131	171	125	-1.7%	0.9%
Clark	560	548	572	601	622	2.2%	-4.1%
Columbia	15	10	19	21	22	50.0%	-20.5%
Cowlitz	260	241	249	263	244	7.9%	-0.2%
Douglas	59	82	68	56	67	-28.0%	8.5%
Ferry	27	30	23	46	34	-10.0%	5.2%
Franklin	100	96	117	135	144	4.2%	-12.5%
Garfield	6	8	8	3	5	-25.0%	42.2%
Grant	186	189	162	181	183	-1.6%	1.7%
Grays Harbor	224	202	219	235	276	10.9%	-9.8%
Island	104	114	100	124	124	-8.8%	-1.8%
Jefferson	82	59	51	67	80	39.0%	-8.1%
King	3,465	3,353	3,368	3,769	4,044	3.3%	-6.0%
Kitsap	484	462	557	667	705	4.8%	-13.0%
Kittitas	115	119	105	121	134	-3.4%	-3.2%
Klickatat	47	45	53	60	64	4.4%	-11.0%
Lewis	220	192	199	209	226	14.6%	-5.3%
Lincoln	31	26	25	36	35	19.2%	-7.9%
Mason	165	179	174	209	179	-7.8%	1.0%
Okanogan	131	137	106	126	123	-4.4%	5.3%
Pacific	66	75	80	80	88	-12.0%	-5.1%
Pend Oreille	30	28	27	27	39	7.1%	-9.0%
Pierce	1,469	1,543	1,699	1,877	1,977	-4.8%	-7.9%
San Juan	25	32	38	39	37	-21.9%	-4.3%
Skagit	289	355	300	328	312	-18.6%	5.0%
Skamania	34	30	33	44	41	13.3%	-8.9%
Snohomish	1,315	1,239	1,285	1,375	1,551	6.1%	-7.2%
Spokane	857	811	854	929	931	5.7%	-4.4%
Stevens	114	104	89	101	93	9.6%	4.5%
Thurston	393	405	414	505	482	-3.0%	-5.1%
Wahkiakum	10	11	15	15	10	-9.1%	7.8%
Walla Walla	104	108	101	119	114	-3.7%	-1.3%
Whatcom	357	361	367	412	423	-1.1%	-5.1%
Whitman	73	53	57	63	77	37.7%	-11.6%
Yakima	513	588	611	636	685	-12.8%	-4.9%
Total	12,467	12,387	12,725	14,113	14,776	0.6%	-5.7%

* A collision in which one or more drivers involved had been drinking. Source: WSP

Table 2-12: Drinking-driver-related* fatalities, injuries and collisions
By county - 1995

county	miles traveled**	fatalities	serious injury	evident injury	possible injury	ppty dmg only clsns	total clsns	collision rate***	econ loss+
Adams	403.4	3	6	19	15	18	44	10.9	$ 3.6
Asotin	134.2	0	3	16	4	17	34	25.3	$ 0.5
Benton	1,288.1	5	26	79	54	99	210	16.3	$ 8.0
Chelan	811.0	4	17	58	18	73	134	16.5	$ 5.9
Clallam	481.5	2	8	54	31	49	115	23.9	$ 3.6
Clark	2,309.9	7	86	221	170	258	560	24.2	$ 16.7
Columbia	80.8	0	4	7	5	4	15	18.6	$ 0.4
Cowlitz	1,348.4	3	18	107	69	122	260	19.3	$ 6.5
Douglas	369.7	2	15	27	12	23	59	16.0	$ 3.2
Ferry	174.5	2	9	5	6	8	27	15.5	$ 2.4
Franklin	463.6	5	20	35	25	47	100	21.6	$ 6.5
Garfield	60.0	0	0	2	0	4	6	10.0	$ 0.1
Grant	870.8	7	22	74	38	88	186	21.4	$ 9.4
Grays Harbor	527.8	7	28	103	48	99	224	42.4	$ 10.2
Island	405.9	2	7	30	34	49	104	25.6	$ 3.2
Jefferson	266.6	2	20	39	15	34	82	30.8	$ 3.7
King	14,370.3	41	378	1,025	1,472	1,648	3,465	24.1	$ 93.3
Kitsap	1,371.5	11	53	225	126	225	484	35.3	$ 18.3
Kittitas	941.7	8	13	68	31	40	115	12.2	$ 9.4
Klickatat	329.7	1	5	19	6	24	47	14.3	$ 1.6
Lewis	898.2	4	46	84	64	85	220	24.5	$ 8.1
Lincoln	331.0	3	7	17	3	13	31	9.4	$ 3.4
Mason	357.2	4	24	70	47	70	165	46.2	$ 6.6
Okanogan	423.0	13	22	58	25	52	131	31.0	$ 14.3
Pacific	190.0	3	9	30	24	27	66	34.7	$ 4.0
Pend Oreille	169.0	2	12	8	8	7	30	17.8	$ 2.6
Pierce	5,178.5	30	144	539	650	622	1,469	28.4	$ 51.6
San Juan	16.2	0	2	13	4	9	25	154.3	$ 0.4
Skagit	1,136.0	5	31	152	93	119	289	25.4	$ 9.8
Skamania	78.9	0	10	14	7	16	34	43.1	$ 0.8
Snohomish	4,636.2	19	82	521	490	581	1,315	28.4	$ 36.7
Spokane	2,795.6	13	82	329	323	390	857	30.7	$ 25.8
Stevens	330.5	19	37	71	25	30	114	34.5	$ 20.6
Thurston	1,723.0	9	48	132	141	169	393	22.8	$ 14.7
Wahkiakum	34.9	0	0	7	4	5	10	28.7	$ 0.2
Walla Walla	450.2	3	16	42	12	60	104	23.1	$ 4.6
Whatcom	1,393.0	8	58	160	98	172	357	25.6	$ 14.3
Whitman	397.7	5	5	27	11	36	73	18.4	$ 5.5
Yakima	1,699.9	27	58	249	138	215	513	30.2	$ 33.6
Total	49,248.4	279	1,431	4,736	4,346	5,607	12,467	25.3	$ 464.1

Source: WSP, WSDOT, Nat'l Safety Council

*A collision in which one or more drivers involved had been drinking.
**In millions of vehicle miles traveled.
***Traffic deaths/collisions per 100 million vehicle miles traveled
+In $millions; based on National Safety Council estimates in constant 1994 dollars.
(Death =$920,000/ serious inj =$46,000/ evident inj =$14,000/ possible inj =$8,800/ ppty dmg only =$6,600.)

Table 2-13: Drinking-driver-related collisions*
Cities over 10,000 population - 1995

	population	fatal	injury	ppty dmg only	total collisions	collision rate**
250,000 and over						
Seattle	532,900	14	724	724	1,462	27.4
100,000 to 250,000						
Spokane	188,800	3	246	219	468	24.8
Tacoma	184,500	3	305	227	535	29.0
Bellevue	102,000	0	77	88	165	16.2
50,000 to 100,000						
Everett	79,180	3	133	118	254	32.1
Federal Way	74,290	2	70	66	138	18.6
Vancouver	65,360	1	85	83	169	25.9
Yakima	60,850	0	67	65	132	21.7
Bellingham	57,830	1	43	81	125	21.6
25,000 to 50,000						
Kennewick	48,130	0	40	35	75	15.6
Renton	44,890	0	70	69	139	31.0
Kirkland	44,620	0	42	60	102	22.9
Kent	42,350	1	54	62	117	27.6
Redmond	40,030	0	23	17	40	10.0
Olympia	39,610	0	34	49	83	21.0
Bremerton	37,170	1	32	60	93	25.0
Richland	36,270	1	17	26	44	12.1
Auburn	35,230	0	50	59	109	30.9
Longview	33,480	0	41	47	88	26.3
Lynnwood	31,950	0	52	43	95	29.7
Edmonds	31,320	0	23	17	40	12.8
Walla Walla	28,870	1	17	36	54	18.7
Burien	27,680	0	29	27	56	20.2
Puyallup	27,250	1	24	33	58	21.3
Bothell	25,850	0	24	22	46	17.8
Lacey	25,110	0	30	21	51	20.3
15,000 to 25,000						
Pullman	24,360	0	9	20	29	11.9
Wenatchee	24,180	0	10	21	31	12.8
Sea Tac	22,910	4	64	46	114	49.8
Pasco	22,500	1	29	37	67	29.8
Mount Vernon	21,580	0	17	22	39	18.1
Des Moines	21,450	1	19	13	33	15.4
Mercer Island	21,290	0	6	6	12	5.6
Mountlake Terrace	20,050	0	18	22	40	20.0
Oak Harbor	19,160	0	6	9	15	7.8
Port Angeles	18,540	0	10	20	30	16.2
Bainbridge Island	17,910	0	15	10	25	14.0
Marysville	16,890	0	13	15	28	16.6
Aberdeen	16,700	0	15	29	44	26.3
10,000 to 15,000						
Mukilteo	14,760	0	10	18	28	19.0
Tukwila	14,750	2	49	58	109	73.9
Ellensburg	12,990	0	7	6	13	10.0
Anacortes	12,820	0	10	6	16	12.5
Centralia	12,730	0	27	19	46	36.1
Moses Lake	12,490	3	20	23	46	36.8
Kelso	11,870	0	24	28	52	43.8
Sunnyside	11,710	0	18	27	45	38.4
Tumwater	11,420	1	13	15	29	25.4
Enumclaw	10,170	0	4	7	11	10.8

*Collisions in which one or more drivers had been drinking. Source: WSP, OFM

**Drinking-driver-related collisions per 10,000 population

Figure 2-6: Drinking-driver collision rates in Washington State - 1995

Collision rates represented are drinking-driver-related traffic collisions per 100 million vehicle miles traveled. Darker shading indicates higher collision rates. Rates are divided into five groups for shading purposes. See Table 2-12 for exact rates. Source: WSP

III. Safety Restraint Use

Much of the restraint usage data in this summary are based upon collision investigation reports by law enforcement officers. Direct observation is usually not possible, so the investigating officer must rely on questioning those involved as to their seat belt use. There is a tendency for occupants to falsely report compliance with the seat belt law and the reported usage rates become artificially inflated. The collision-based rates are best used for comparison purposes.

The best available estimates of actual restraint use are from observational surveys. These studies are generally limited to shoulder-belt use by drivers and front-window-seat occupants.

Observed safety restraint use

Since the passage of the seat belt law in 1986, a steady increase in restraint usage has been associated with reductions of fatalities and serious injuries. Observed belt use in vehicles was 36% in 1986; it has more than doubled to 83% in 1995 (Table 3-1).

Table 3-1: Observed seatbelt use, deaths and injuries
Nine-year comparison

	1995	1994	1993	1992++	1991	1990	1989	1988	1987	1986+
Observed SB use rate*	83%	81%	78%	73%	69%	---	55%	53%	52%	36%
Fatal rate**	1.33	1.34	1.42	1.34	1.50	1.87	1.83	1.88	2.05	1.96
Serious injury rate**	11.04	11.18	12.31	13.43	14.98	17.33	18.84	19.95	22.08	22.92
Deaths	654	639	661	651	683	825	781	785	790	714
Serious injuries	5,438	5,331	5,713	6,531	6,839	7,653	8,044	8,318	8,506	8,348
Motor vehicle travel	49,248	47,674	46,426	48,644	45,663	44,157	42,696	41,698	38,520	36,416

* Statewide surveys conducted by WTSC each year except 1990. Source: WSP, DOT, WTSC

** Fatalities/serious injuries per 100 million miles of travel.

+Seatbelt law passed in 1986.

++In 1992, the rate-calculation method was modified to include passenger vehicles only, seatbelt use in trucks was excluded.

Western Washington occupants were observed wearing safety restraints at a rate of 85.2%, while Eastern Washington's rate was 75.7%. Western and Eastern Washington's rates increased 3.5% and 3.3% over 1994. Interstate highway travel had the highest rate at 87.0%, while the rate for city streets was lowest at 72.4%. More lanes of travel and higher speeds were associated with higher use-rates (Table 3-2).

Table 3-2: Observed belt use*
Five-year comparison by roadway characteristics

characteristic	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Western Washington	85.2%	82.3%	80.4%	75.6%	70.3%	3.5%	5.4%
Eastern Washington	75.7%	73.3%	70.1%	66.5%	64.3%	3.3%	4.5%
Interstate highways	87.0%	84.8%	80.9%	75.4%	71.9%	2.6%	5.7%
State routes	80.3%	75.9%	74.4%	69.7%	66.1%	5.8%	4.7%
US routes	75.5%	75.0%	73.0%	68.3%	67.2%	0.7%	3.8%
County roads	74.4%	69.8%	66.5%	60.1%	71.8%	6.6%	-0.2%
City streets	72.4%	68.3%	70.9%	62.3%	62.5%	6.0%	3.3%
Three or more lanes +	86.0%	85.3%	82.5%	76.5%	72.9%	0.8%	5.4%
Two lanes +	82.4%	77.7%	73.7%	69.4%	68.3%	6.0%	4.4%
One lane +	76.7%	73.2%	72.4%	67.5%	60.9%	4.8%	6.4%
Average speed 20 mph	69.4%	65.7%	68.7%	61.6%	62.1%	5.6%	2.1%
Average speed 40 mph	75.9%	74.5%	72.0%	66.5%	64.0%	1.8%	5.2%
Average speed 60 mph	85.0%	83.1%	79.2%	74.4%	72.3%	2.3%	4.8%
Commuter rush hours	83.3%	79.9%	77.0%	72.2%	70.5%	4.3%	4.3%
Non-rush hours	82.8%	80.6%	77.7%	73.6%	67.8%	2.8%	6.0%

*Observational surveys performed in September of each year. Source: WTSC
+For one direction of travel

Table 3-3 and Figure 3-1 summarize the types of restraint systems used and severity of injuries sustained in collisions. The higher the level of injury sustained, the lower the reported safety restraint use. Persons sustaining evident injuries were twice as likely to have used safety restraints as were persons killed.

Table 3-3: Types of restraints used* in collisions
By severity of injury - 1995

restraint type	killed	serious injury	evident injury	possible injury	no injury	total
Lap &shoulder belt	126	1,916	11,611	30,585	142,014	186,252
Lap belt	20	248	1,657	2,782	15,487	20,194
Shoulder belt	8	79	299	534	2,883	3,803
Child restraint	0	6	202	282	4,024	4,514
Air bag**/belted	10	79	427	366	468	1,350
Air bag**/no belt	5	17	37	26	26	111
Total restraints	169	2,345	14,233	34,575	164,902	216,224
No restraints	306	1,498	4,598	3,767	8,540	18,709
Percent used	35.6%	61.0%	75.6%	90.2%	95.1%	92.0%

*Where restraint use was stated. Source: WSP
** Air bag activated.

Figure 3-1:
Safety restraint use and injury severity - 1995

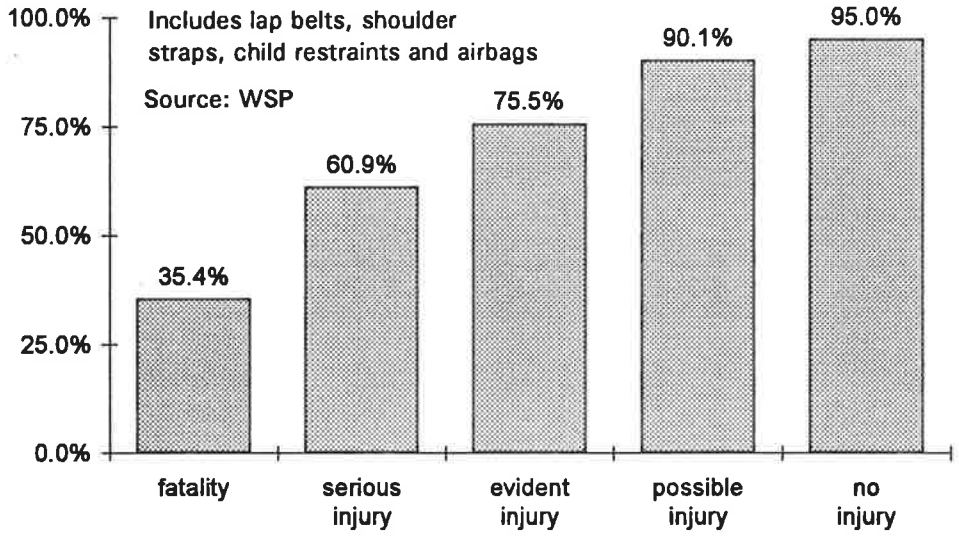


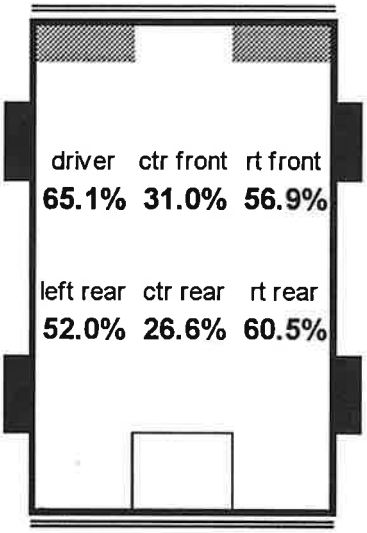
Table 3-4 displays restraint systems used in collisions by various age groupings. The age group of 11 to 15 had the lowest reported use rate. Overall, lap and shoulder belts were the most used safety restraint, followed by lap belt only. Child restraints were in use by 4,464 children in collisions, and air bags (with and without restraints) were deployed 1,452 times in collisions.

Table 3-4: Types of safety restraints used in collisions
By occupant age - 1995

age	lap & shldr belt	shldr belt	lap belt	air bag w/rstrnt	air bag no rstrnt	child restraint	total used	restraint not used	% used
Under 1	126	6	7	0	0	771	910	30	96.8%
1	222	8	51	1	0	1,244	1,526	57	96.4%
2	393	9	251	1	0	1,084	1,738	94	94.9%
3	681	20	404	2	0	556	1,663	120	93.3%
4	921	25	492	0	0	246	1,684	136	92.5%
5	942	18	524	1	0	94	1,579	151	91.3%
6 - 10	4,060	79	1,863	14	0	--	6,016	615	90.7%
11 - 15	5,849	126	1,966	16	3	--	7,960	1,399	85.1%
16 - 20	30,813	714	3,463	164	13	--	35,167	4,414	88.8%
21 - 24	18,544	388	1,403	132	27	--	20,494	2,218	90.2%
25 - 29	20,533	410	1,435	164	18	--	22,560	2,135	91.4%
30 - 64	84,307	1,596	6,192	706	41	--	92,842	5,990	93.9%
65 & over	13,537	286	842	123	6	--	14,794	715	95.4%
Unknown	3,803	98	502	16	4	469	4,892	541	90.0%
Total	184,731	3,783	19,395	1,340	112	4,464	213,825	18,615	92.0%

Source: WSP, WSDOT

Figure 3-2: Restraint use by seat position
Occupants who were seriously injured - 1995



Source: WSP

Observational survey of restraint use by children under age 10

In 1995, the WTSC conducted its second observational survey of restraint use by children under ten years of age. The survey revealed an overall usage rate of 80.9 percent, up from 77.9 percent in the 1994 survey (Figure 3-5). In addition, safety-restraint misuse was noted in the survey. Some type of restraint misuse was observed for nearly one-third of infants in restraint systems. The most common types of misuse observed were child too young for restraint type and infant seat not facing rear.

Table 3-5: Safety restraint use by children
WTSC observational surveys - 1994-95

	1995	1994
Overall use rate	80.9%	77.9%
By child age		
Infant (0 - 6 mos)	96.9%	95.3%
Toddler (6 mos - 3 yrs)	88.8%	86.2%
Pre-school (3 - 6 yrs)	78.8%	74.6%
School (6 - 10 yrs)	75.0%	68.0%
By driver sex		
Male	72.4%	68.7%
Female	83.4%	80.9%

	1995	1994
By driver age		
16-25	77.2%	76.0%
26-40	82.7%	78.9%
over 40	70.1%	75.0%
By driver seatbelt use		
Seatbelt used	93.4%	92.3%
Seatbelt not used	26.3%	33.4%
By vehicle value		
Low	61.6%	54.1%
Medium	83.3%	81.9%
High	90.7%	88.5%

Table 3-6: Restraint use* and severity of injuries

By county - 1995

	fatality			serious injury			evident/possble injury			no injur		
	used	n/used	pct	used	n/used	pct	used	n/used	pct	used	n/used	pct
Adams	2	2	50.0%	23	17	57.5%	143	51	57.5%	356	37	90.6%
Asotin	1	0	100.0%	6	8	42.9%	44	32	42.9%	250	66	79.1%
Benton	5	11	31.3%	55	55	50.0%	815	185	50.0%	3,876	240	94.2%
Chelan	7	6	53.8%	32	28	53.3%	437	124	53.3%	1,519	95	94.1%
Clallam	2	6	25.0%	22	14	61.1%	401	109	61.1%	1,460	95	93.9%
Clark	7	9	43.8%	114	66	63.3%	2,006	310	63.3%	6,441	445	93.5%
Columbia	0	0	——	0	6	0.0%	44	12	0.0%	99	20	83.2%
Cowlitz	1	6	14.3%	27	28	49.1%	820	186	49.1%	3,107	251	92.5%
Douglas	6	2	75.0%	10	17	37.0%	175	36	37.0%	578	39	93.7%
Ferry	1	2	33.3%	6	8	42.9%	37	21	42.9%	86	13	86.9%
Franklin	2	5	28.6%	21	26	44.7%	317	59	44.7%	1,146	107	91.5%
Garfield	0	0	——	0	0	——	14	7	—	31	1	96.9%
Grant	3	4	42.9%	19	33	36.5%	401	126	36.5%	1,480	175	89.4%
Grays Harbor	1	10	9.1%	34	27	55.7%	480	152	55.7%	2,051	157	92.9%
Island	0	3	0.0%	22	14	61.1%	346	58	61.1%	1,114	54	95.4%
Jefferson	1	3	25.0%	16	15	51.6%	175	38	51.6%	576	36	94.1%
King	24	37	39.3%	728	325	69.1%	16,752	1,948	69.1%	57,345	1,889	96.8%
Kitsap	8	9	47.1%	96	38	71.6%	1,851	292	71.6%	6,195	292	95.5%
Kittitas	4	6	40.0%	18	21	46.2%	453	114	46.2%	1,437	115	92.6%
Klickitat	0	4	0.0%	14	11	56.0%	108	51	56.0%	362	50	87.9%
Lewis	6	7	46.2%	70	43	61.9%	537	164	61.9%	2,360	159	93.7%
Lincoln	0	3	0.0%	9	11	45.0%	72	27	45.0%	193	18	91.5%
Mason	1	4	20.0%	27	19	58.7%	385	94	58.7%	1,065	97	91.7%
Okanogan	2	14	12.5%	10	22	31.3%	194	92	31.3%	565	81	87.5%
Pacific	5	1	83.3%	2	10	16.7%	140	33	16.7%	382	35	91.6%
Pend Oreille	1	2	33.3%	14	9	60.9%	57	14	60.9%	154	19	89.0%
Pierce	13	29	31.0%	273	152	64.2%	6,811	986	64.2%	20,405	950	95.6%
San Juan	0	0	——	1	7	12.5%	20	22	12.5%	48	13	78.7%
Skagit	12	4	75.0%	35	26	57.4%	870	208	57.4%	3,123	227	93.2%
Skamania	1	1	50.0%	8	8	50.0%	59	15	50.0%	186	16	92.1%
Snohomish	11	23	32.4%	137	90	60.4%	4,751	836	60.4%	15,600	780	95.2%
Spokane	7	19	26.9%	185	107	63.4%	3,394	727	63.4%	10,493	646	94.2%
Stevens	4	16	20.0%	21	37	36.2%	207	88	36.2%	444	55	89.0%
Thurston	5	10	33.3%	88	50	63.8%	1,662	250	63.8%	6,485	284	95.8%
Wahkiakum	0	0	——	0	0	——	26	13	——	75	2	97.4%
Walla Walla	6	3	66.7%	30	16	65.2%	278	85	65.2%	1,286	107	92.3%
Whatcom	6	9	40.0%	55	41	57.3%	1,049	238	57.3%	4,141	202	95.3%
Whitman	1	5	16.7%	13	8	61.9%	215	49	61.9%	889	56	94.1%
Yakima	12	31	27.9%	87	81	51.8%	1,699	457	51.8%	5,636	569	90.8%
Total	168	306	35.4%	2,328	1,494	60.9%	48,245	8,309	85.3%	163,039	8,493	95.0%

*Includes lap belts, shoulder straps, child restraints and air bags.

Source: WSP, DOT

IV. Youthful Drivers

In 1995, drivers age 24 and younger were involved in 50,133 collisions in which 231 persons were killed and 36,124 were injured. Total collisions in 1995 increased 4.1 percent over 1994. The average yearly change over the previous four years (1991-1994) had been -0.2 percent (Table 4-1).

Table 4-1: Collisions involving youthful drivers (24 & younger)
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	50,133	48,179	46,189	47,588	48,564	4.1%	-0.2%
Fatal collisions	199	196	223	219	221	1.5%	-3.7%
Injury collisions	22,576	22,106	20,909	21,172	20,922	2.1%	1.9%
Property damage only***	27,358	25,877	25,057	26,197	27,421	5.7%	-1.8%
Persons killed**	231	225	274	243	255	2.7%	-3.3%
Percent of all traffic fatalities	35.3%	35.2%	41.5%	37.3%	37.3%	0.3%	-1.3%
Total injuries**	36,124	35,281	33,275	33,805	32,546	2.4%	2.8%
Serious injuries	2,226	2,217	2,465	2,805	3,017	0.4%	-9.7%
Evident injuries	10,700	11,015	10,824	11,139	11,131	-2.9%	-0.3%
Possible injuries	23,198	22,049	19,986	19,861	18,398	5.2%	6.3%
Youth population (16-24)#	625,996	625,278	632,162	623,369	620,000	0.1%	0.3%
Youth licensed drivers	517,038	532,309	533,114	527,379	518,047	-2.9%	0.9%
Youth drivers in clsns	56,747	54,464	52,215	54,066	55,559	4.2%	-0.6%
Total collision rate*	969.62	905.09	866.40	902.35	937.44	7.1%	-1.1%
Fatal collision rate*	3.85	3.68	4.18	4.15	4.27	4.5%	-4.6%

*Youthful-driver fatal/total collisions per 10,000 youthful licensed drivers. Source: WSP, DOL, OFM

** All persons killed/injured in collisions involving youthful drivers.

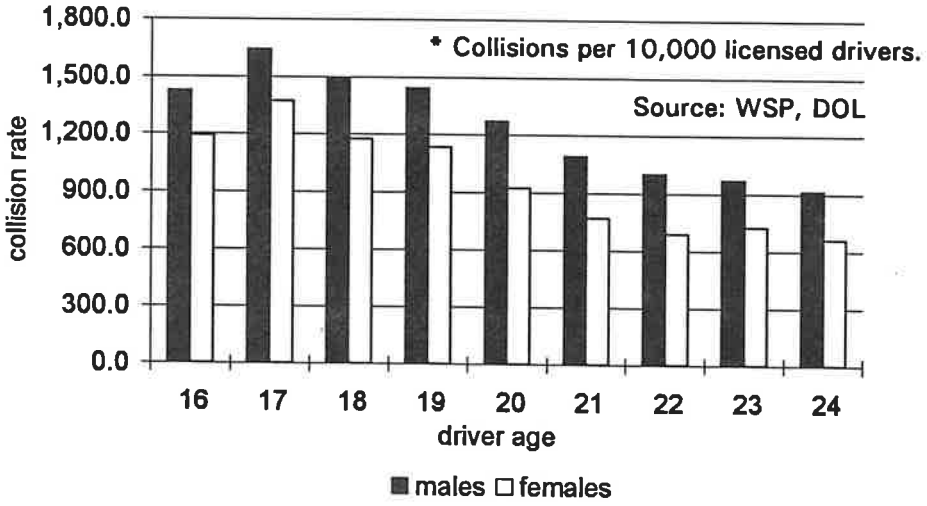
***Damage over $500

Youth population estimated for 1991.

Collision involvement by driver age

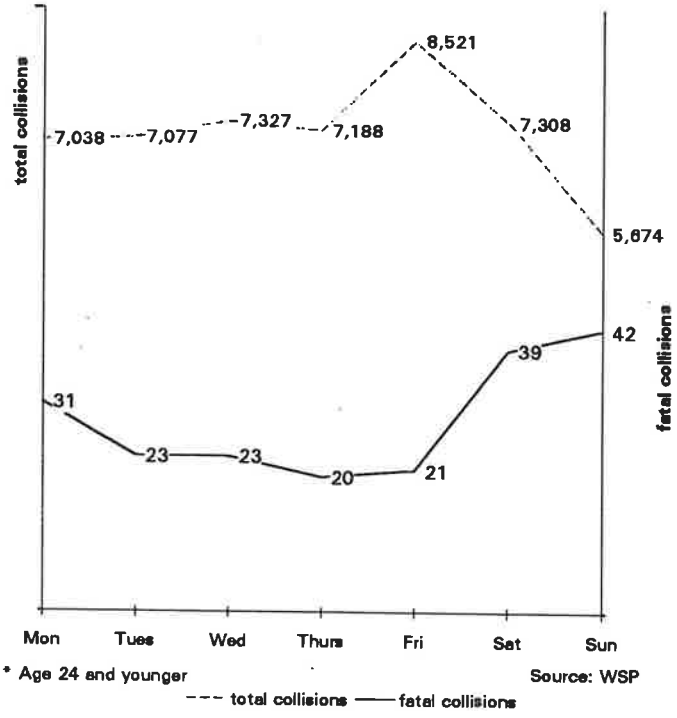
Drivers age 17 had the highest collision rate for both male and female youthful drivers. Males had consistently higher collision rates than females (Figure 4-1).

Figure 4-1:
Collision rates* of youthful drivers
By sex and age - 1995



During 1995, Friday was the day of the week accounting for the highest number of reported collisions involving youthful drivers. Sunday recorded the highest number of fatal collisions (Figure 4-2).

Figure 4-2:
Youthful drivers* in total & fatal collisions
By day of week - 1995



The most frequent type of collision involving youthful drivers were collisions with other moving vehicles. Single-vehicle collisions were more often fatal than collisions with other moving motor vehicles (Table 4-2).

Table 4-2: Collisions involving youthful drivers*
By first harmful event - 1995

type of collision	fatal	injury	ppty dmg only	total	pct fatal
Collision w/other moving motor vehicles	87	17,395	21,284	38,766	0.2%
Collision w/fixed/other object	62	2,947	3,911	6,920	0.9%
Overturning & other non-collision	29	1,292	867	2,188	1.3%
Collision w/parked vehicle	2	299	1,033	1,334	0.1%
Collision w/pedestrians/bicyclist	19	569	8	596	3.2%
Other collisions - animal & R.R. train	0	74	255	329	0.0%
Total single-vehicle-collisions**	112	5,181	6,074	11,367	1.0%
Total	199	22,576	27,358	50,133	0.4%

*Drivers 24 and younger. Source: WSP

**All types except "collision w/other moving motor vehicle."

Traffic collisions involving youthful drinking drivers

There were 3,274 collisions in 1995 which involved drivers age 24 and younger who had been drinking. As a result of these collisions 75 persons were killed and 2,997 persons were injured. Fatal collisions involving youthful drinking drivers declined 1.6 percent compared to the previous year (Table 4-3).

Table 4-3: Traffic collisions involving youthful drinking drivers*
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	3,274	3,262	3,522	3,988	4,419	0.4%	-9.6%
Fatal collisions	62	63	94	90	102	-1.6%	-13.4%
Injury collisions	1,740	1,821	1,998	2,215	2,481	-4.4%	-9.8%
Property damage only	1,472	1,378	1,490	1,683	1,836	6.8%	-9.1%
Persons killed	75	79	115	102	114	-5.1%	-9.7%
Percent of all traffic fatalities	11.5%	12.4%	17.4%	15.7%	16.7%	-7.2%	-8.0%
Persons injured	2,997	3,100	3,352	3,738	4,212	-3.3%	-9.7%
Serious injuries	435	468	518	623	746	-7.1%	-14.3%
Evident injuries	1,480	1,506	1,651	1,832	2,138	-1.7%	-11.0%
Possible injuries	1,082	1,126	1,183	1,283	1,328	-3.9%	-5.3%
Youthful drinking drivers	3,329	3,314	3,582	4,070	4,499	0.5%	-9.7%

*Drinking drivers age 24 and younger. Source: WSP

Teenage driver collisions

Teenage drivers (age 19 and under) were involved in 25,456 collisions, 100 fatal collisions, and 11,326 injury collisions during 1995. The fatal collision rate for teenage drivers was 5.1 fatal collisions per 10,000 licensed drivers, up 13.1% from the previous year (Table 4-4).

Table 4-4: Teenage driver collisions - 19 years & younger
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	25,456	23,843	22,227	22,519	21,646	6.8%	3.3%
Fatal collisions	100	87	94	80	89	14.9%	0.0%
Injury collisions	11,326	10,823	9,825	9,936	9,267	4.6%	5.4%
Licensed drivers	196,421	193,346	189,187	181,300	179,409	1.6%	2.5%
Teenage drivers involved	27,406	25,611	23,838	24,252	23,209	7.0%	3.4%
Fatal collision rate*	5.1	4.5	5.0	4.4	5.0	13.1%	-2.6%
Total collision rate*	1395.3	1324.6	1260.0	1337.7	1293.6	5.3%	0.9%

*Fatal/total collisions per 10,000 licensed drivers
Source: WSP, DOL

Teenage driver violations in collisions

"Speed too fast for conditions" was the most frequent driver violation for teenage drivers in collisions, noted in 24.0% of collisions. "Failure to yield right of way" was second, noted in 21.2% of the collisions (Table 4-5).

Table 4-5: Teenage driver violations in collisions*
By age - 1995

	16/yngr	17 yrs	18 yrs	19 yrs	total	
Speed–too fast for conditions	948	1,158	1,190	1,123	4,419	24.0%
Failure to yield right of way	796	1,115	1,094	902	3,907	21.2%
Following too closely	466	660	783	704	2,613	14.2%
Exceeding legal speed	283	249	286	219	1,037	5.6%
Disregarding traffic sig./signs	217	317	319	347	1,200	6.5%
Operating defective equipment	113	175	179	166	633	3.4%
Driving under the influence	56	101	145	218	520	2.8%
Crossing over the center line	73	94	110	86	363	2.0%
Improper passing	54	92	99	88	333	1.8%
All other circumstances+	740	883	956	844	3,423	18.6%
Total	3,746	4,844	5,161	4,697	18,448	100.0%

*Investigated collisions only
+Including driver inattention
Source: WSP

There were 7 counties in 1995 with no fatal collisions involving youthful drivers. Kittitas County had the highest youthful-driver collision rate, with 1,361.0 collisions per 10,000 youthful licensed drivers (Table 4-6).

Table 4-6: Collisions involving youthful drivers (24 and under)
By county - 1995

county	youthful lic. drivers	persons killed	persons injured	total collisions	rate*	deaths per 1,000 clsn
Adams	1,950	2	113	150	769.2	13.3
Asotin	1,852	2	72	123	664.1	16.3
Benton	14,254	8	717	1,183	829.9	6.8
Chelan	6,318	3	332	488	772.4	6.1
Clallam	5,165	3	326	478	925.5	6.3
Clark	28,676	14	1,901	2,569	895.9	5.4
Columbia	385	0	38	44	1142.9	0.0
Cowlitz	9,183	4	694	975	1061.7	4.1
Douglas	2,936	1	127	196	667.6	5.1
Ferry	721	2	39	44	610.3	45.5
Franklin	5,049	2	251	380	752.6	5.3
Garfield	253	0	12	23	909.1	0.0
Grant	7,332	4	336	541	737.9	7.4
Grays Harbor	6,133	5	384	670	1092.5	7.5
Island	5,638	1	275	366	649.2	2.7
Jefferson	1,706	0	93	151	885.1	0.0
King	144,722	39	11,453	15,905	1099.0	2.5
Kitsap	20,574	8	1,382	1,826	887.5	4.4
Kittitas	3,468	3	299	472	1361.0	6.4
Klickitat	1,853	4	82	124	669.2	32.3
Lewis	7,259	2	434	750	1033.2	2.7
Lincoln	809	0	57	69	852.9	0.0
Mason	3,642	3	320	363	996.7	8.3
Okanogan	4,059	4	180	239	588.8	16.7
Pacific	1,697	2	99	128	754.3	15.6
Pend Oreille	1,094	1	43	71	649.0	14.1
Pierce	56,693	17	4,777	5,878	1036.8	2.9
San Juan	843	0	29	37	438.9	0.0
Skagit	9,081	13	622	966	1063.8	13.5
Skamania	681	0	51	66	969.2	0.0
Snohomish	48,466	17	3,468	4,632	955.7	3.7
Spokane	40,686	14	2,993	3,940	968.4	3.6
Stevens	3,449	13	162	206	597.3	63.1
Thurston	23,096	5	1,311	1,924	833.0	2.6
Wahkiakum	251	0	22	29	1155.4	0.0
Walla Walla	4,766	7	233	438	919.0	16.0
Whatcom	16,228	6	824	1,310	807.2	4.6
Whitman	5,133	2	176	380	740.3	5.3
Yakima	20,937	20	1,397	1,999	954.8	10.0
Total**	517,038	231	36,124	50,133	969.6	4.6

* Traffic collisions per 10,000 youthful licensed drivers

Source: WSP, DOL

V. Senior Drivers

During 1995, 31,061 senior drivers (55 years and older) were involved in 28,623 reported collisions, which included 133 fatal collisions and 11,825 injury collisions. The number of collisions involving senior drivers increased 7.1 percent from the previous year, and there were 16.7 percent more fatal collisions than the previous year. By contrast, the previous four years, 1991 through 1994, yielded an average decrease of 4.5 percent per year in fatal collisions involving senior drivers. Collision and fatal collision rates per 10,000 senior drivers both went up significantly (Table 5-1).

Table 5-1: Collisions involving senior drivers (55 & older)
Five-year comparison by severity

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	28,623	26,731	25,509	26,020	25,101	7.1%	2.2%
Fatal	133	114	114	144	134	16.7%	-4.5%
Injury	11,825	11,165	10,338	10,399	9,823	5.9%	4.4%
Property damage only***	16,665	15,452	15,057	15,477	15,144	7.9%	0.7%
Persons killed**	152	126	127	161	151	20.6%	-5.1%
Percent of all killed	23.2%	19.7%	19.2%	24.7%	22.1%	17.9%	-2.6%
Persons injuried**	18,228	17,230	15,831	15,995	14,944	5.8%	4.9%
Serious injuries	1,098	1,091	1,155	1,355	1,333	0.6%	-6.2%
Evident injuries	4,975	4,844	4,738	4,607	4,547	2.7%	2.1%
Possible injuries	12,155	11,295	9,938	10,033	9,064	7.6%	7.8%
Licensed senior dvrs	860,130	886,544	862,554	834,826	811,424	-3.0%	3.0%
Senior dvrs in collisions	31,061	28,982	27,790	28,403	27,237	7.2%	2.1%
Fatal collision rate*	1.55	1.29	1.32	1.72	1.65	20.2%	-7.2%
Total collision rate*	332.78	301.52	295.74	311.68	309.35	10.4%	-0.8%

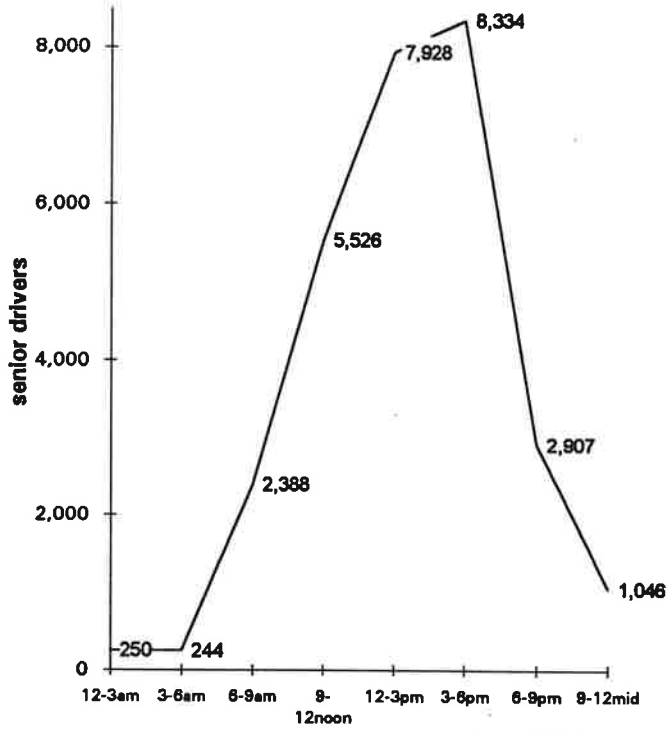
* Fatal/total collisions involving senior drivers per 10,000 licensed senior drivers. Source: WSP, DOL

** All persons killed/injured in collisions involving senior drivers.

*** Damage over $500

The greatest number of crashes involving senior drivers occurred between the hours of 12:00 noon and 6:00 p.m. Very few crashes were recorded between midnight and 6:00 a.m. (Figure 5-1).

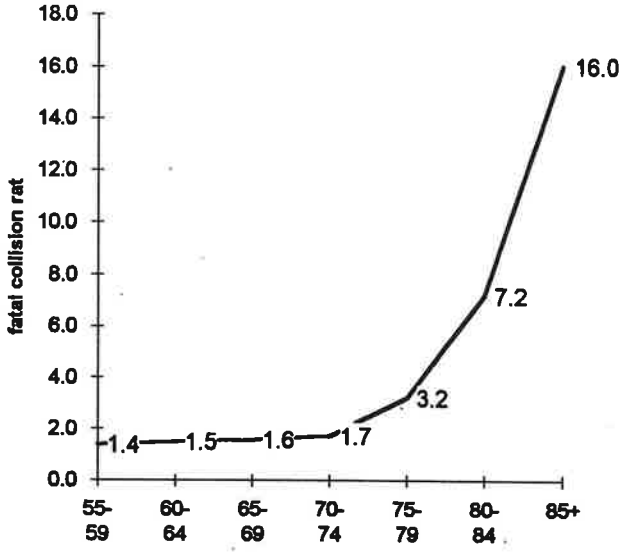
Figure 5-1:
Collisions involving senior drivers
By time (3-hour intervals) - 1995



Source: WSP

Figure 5-2 displays fatal collision rates by various senior driver age groups based upon estimated percentage of miles traveled. The 75-79, 80-84, and 85+ age groups showed increasing fatal collision rates. Although these rates are high, they are based on few fatal collisions and a smaller number of miles traveled than for younger age groups.

Figure 5-2:
Senior drivers in fatal collisions
Rate per miles traveled - 1995



* Fatal collisions per 100 million vehicle miles of travel. Percent of miles traveled by age groups est. for 1990 in USDOT research note, May 1992.

Source: WSP, USDOT

Senior driver collisions by first harmful event

The great majority of collisions involving senior drivers were crashes with other moving vehicles, with 25,129, including 91 fatal crashes. The collision type which recorded the highest percentage of fatal collisions was "collision with pedestrian/bicyclist" (Table 5-2).

Table 5-2: Collisions involving senior drivers*
By first harmful event - 1995

type of collision	fatal	injury	ppty dmg only	total	pct fatal
Collision w/other moving motor veh	91	10,238	14,800	25,129	0.4%
Collision with fixed/other object	18	718	912	1,648	1.1%
Collision with parked vehicle	0	101	486	587	0.0%
Collision with pedestrian/bicyclist	16	515	8	539	3.0%
Overturning & other non collision	8	224	192	424	1.9%
Other collisions inc. RR train, animal	0	29	267	296	0.0%
Total single-vehicle-collisions**	42	1,587	1,865	3,494	1.2%
Total	133	11,825	16,665	28,623	0.5%

*Collisions involving one or more senior drivers - age 55 or older Source: WSP

**All types except "collision w/other moving motor vehicle."

Senior driver violations in collisions

"Failure to yield right of way" was by far the most frequent senior driver violation in collisions during 1995, accounting for nearly one-third of all violations noted (Table 5-3).

Table 5-3: Senior driver violations in collisions
By age group - 1995

	55-59	60-64	65-69	70-74	75+	total	pct
Failure to yield right of way	1,018	851	833	888	1,923	5,513	37.3%
Speed too fast for conditions	507	378	298	253	334	1,770	12.0%
Following too closely	491	353	299	280	384	1,807	12.2%
Disregard traffic signal/signs	264	212	210	232	439	1,357	9.2%
DUI	169	137	85	57	45	493	3.3%
Defective equipment	84	59	42	32	51	268	1.8%
Improper passing	59	38	34	28	47	206	1.4%
Crossing over the centerline	49	39	44	26	42	200	1.4%
Exceeding legal speed	28	13	8	19	13	81	0.5%
All other violations+	688	561	480	473	885	3,087	20.9%
Total	3,357	2,641	2,333	2,288	4,163	14,782	100.0%

+Including driver inattention Source: WSP

In 1995, Kittitas County had the highest collision rate involving senior drivers with 467.7 collisions per 10,000 licensed senior drivers (Table 5-4).

Table 5-4: Collisions involving senior drivers (55 and older)
By county - 1995

county	senior lic. drivers*	fatalities	injuries	collisions	collision rate**
Adams	2,678	1	58	69	257.7
Asotin	4,103	1	33	80	195.0
Benton	19,631	2	265	550	280.2
Chelan	11,731	6	207	310	264.3
Clallam	16,338	2	201	381	233.2
Clark	43,873	9	812	1,347	307.0
Columbia	986	0	5	16	162.3
Cowlitz	16,499	2	390	619	375.2
Douglas	5,052	4	84	116	229.6
Ferry	1,262	2	17	25	198.1
Franklin	5,802	1	125	192	330.9
Garfield	710	0	6	10	140.8
Grant	11,241	0	165	292	259.8
Grays Harbor	14,046	0	240	433	308.3
Island	13,195	2	127	194	147.0
Jefferson	6,872	3	103	141	205.2
King	237,229	26	6,008	9,477	399.5
Kitsap	32,227	5	591	923	286.4
Kittitas	5,452	5	142	255	467.7
Klickitat	3,650	2	57	82	224.7
Lewis	14,107	8	223	438	310.5
Lincoln	2,298	0	22	43	187.1
Mason	10,808	1	152	230	212.8
Okanogan	7,532	2	66	142	188.5
Pacific	6,009	2	83	132	219.7
Pend Oreille	2,361	2	14	35	148.2
Pierce	94,151	18	2,560	3,474	369.0
San Juan	3,091	0	11	18	58.2
Skagit	18,816	4	363	577	306.7
Skamania	1,459	0	16	32	219.3
Snohomish	72,157	7	1,588	2,454	340.1
Spokane	64,836	3	1,471	2,231	344.1
Stevens	6,525	4	92	120	183.9
Thurston	32,659	6	624	998	305.6
Wahkiakum	832	1	6	16	192.3
Walla Walla	9,244	2	158	280	302.9
Whatcom	23,336	7	423	714	306.0
Whitman	5,102	1	73	110	215.6
Yakima	32,230	11	647	1,067	331.1
Total	860,130	152	18,228	28,623	332.8

Source: WSP, DOL

* Total senior licensed drivers includes 1412 with unknown county or "other"
** Traffic collisions per 10,000 licensed senior drivers.

VI. Pedestrians

During 1995, there were 1,944 collisions involving pedestrians in Washington State, an increase of 2.1 percent over 1994. There were 75 pedestrian fatalities in 1995, a decrease of 11.8 percent from 1994. In urban areas 42 were killed, compared to 33 killed in rural areas. The vast majority of pedestrian injuries (1,568) occurred in urban areas (Table 6-1).

Table 6-1: Pedestrians killed and injured in traffic collisions

Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Clsns involving pedestrians	1,944	1,904	1,808	1,800	1,857	2.1%	0.9%
Pedestrians killed	75	85	80	81	79	-11.8%	2.5%
Percent of all killed	11.5%	13.3%	12.1%	12.4%	11.6%	-13.8%	4.9%
Pedestrians injured	1,948	1,916	1,813	1,809	1,911	1.7%	0.2%
Serious injuries	390	394	405	431	464	-1.0%	-5.3%
Evident injuries	1,012	967	930	894	918	4.7%	1.8%
Possible injuries	546	555	478	484	529	-1.6%	2.1%
Rural*							
Pedestrians killed	33	45	39	33	41	-26.7%	4.7%
Pedestrians injured	380	415	387	420	455	-8.4%	-2.8%
Urban*							
Pedestrians killed	42	40	41	48	38	5.0%	3.1%
Pedestrians injured	1,568	1,501	1,426	1,389	1,456	4.5%	1.1%

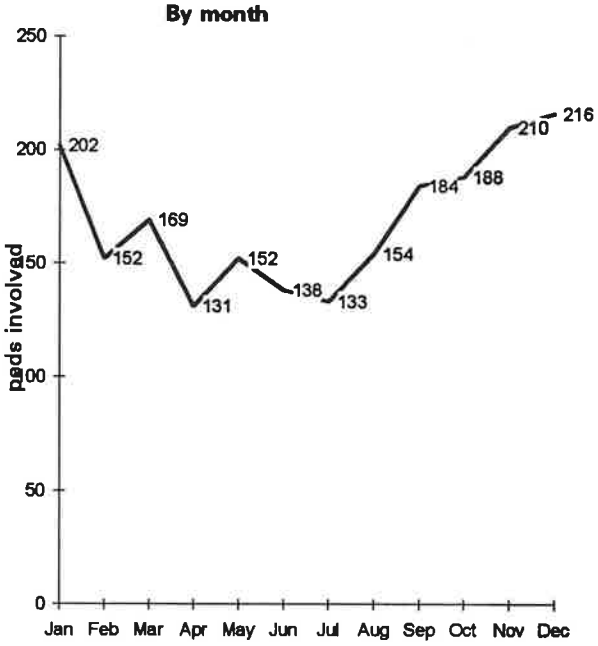
*Rural =Unincorporated or cities with less than 2,500 population

*Urban =Cities with 2,500 population and greater

Source: WSP

Collisions during 1995 involving pedestrians occurred somewhat less often during the summer months, then increased in September through December. January also had a relatively high number of collisions involving pedestrians (Figure 6-1).

Figure 6-1:
Pedestrians involved in traffic collisions
By month



Source: WSP

The age group with the highest rate of pedestrians involved in traffic collisions was the 15-19 age group with 7.0 pedestrians involved per 10,000 population. The 10-14 age group had the next highest rate with 5.9 (Table 6-2).

Table 6-2: Pedestrians involved in motor vehicle collisions
By age group - 1995

	population*	killed	serious injury	evident injury	possible injury	peds involved	rate**
0-4	411,410	3	25	54	16	98	2.4
5-9	422,693	3	24	114	34	176	4.2
10-14	403,225	1	52	131	52	237	5.9
15-19	359,477	2	34	136	79	252	7.0
20-24	345,425	6	30	65	69	171	5.0
25-34	846,132	11	53	149	89	302	3.6
35-44	934,076	16	54	121	83	274	2.9
45-54	673,743	5	36	93	47	181	2.7
55-64	406,063	7	27	47	31	112	2.8
65-74	349,414	5	29	41	12	87	2.5
75 & Older	278,242	16	21	41	15	93	3.3
Age not stated	------	0	5	20	19	46	------
Males	2,700,401	50	232	597	316	1,197	4.4
Females	2,729,499	25	157	410	228	823	3.0
Sex not stated	------	0	1	5	2	9	------
Total	5,429,900	75	390	1,012	546	2,029	3.7

*1995 population by age (breakdown done biannually by OFM). Source: WSP, OFM

**Pedestrians involved in traffic collisions per 10,000 population.

Pedestrian actions

Of pedestrians injured in urban areas during 1995, 828 were crossing at an intersection. Of pedestrians who were killed in urban areas, 19 were crossing not at an intersection (Table 6-3).

Table 6-3: Pedestrians killed and injured in urban areas*
By age and pedestrian action - 1995

	killed or injured						total	total
	0-4	5-14	15-24	25-64	65+	n/stat	injured	killed
Crossing at intersection	21	127	186	398	86	22	828	12
Crossing not at intersection	44	154	80	173	41	11	484	19
Not in roadway	2	11	25	38	10	2	83	5
Standing/working in roadwy	4	9	22	53	5	3	94	2
Playing in roadway	4	8	0	0	0	0	12	0
Walking with traffic	0	1	5	13	4	1	23	1
Walking against traffic	0	0	2	2	3	0	7	0
Lying in roadway	0	0	2	5	0	0	5	2
Other & not stated	2	9	7	19	2	0	38	1

*Urban =cities with 2,500 or greater population. Source: WSP

In rural areas during 1995, 121 pedestrians were injured and 13 were killed while crossing the roadway at an intersection (Table 6-4).

Table 6-4: Pedestrians killed and injured in rural areas*
By age and pedestrian action - 1995

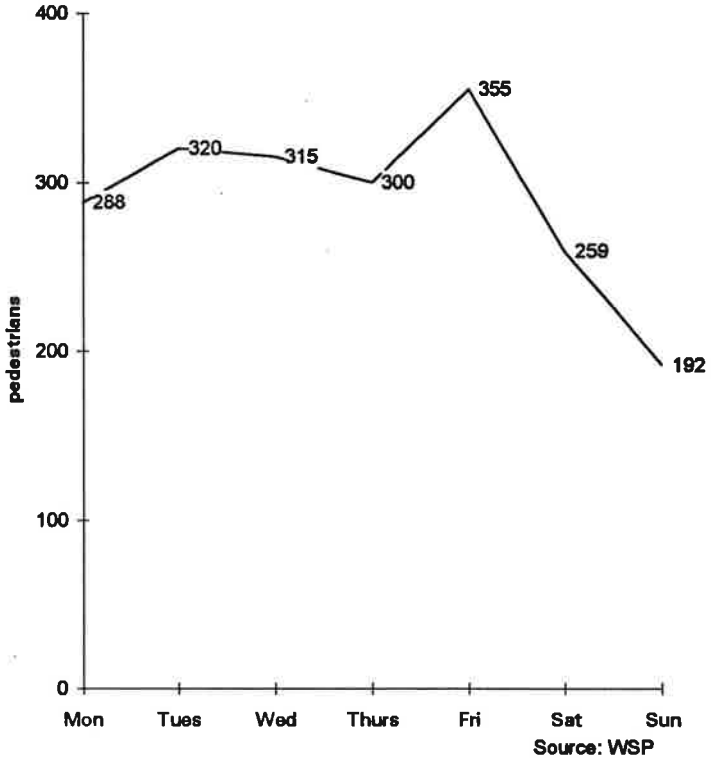
	killed & injured						total	total
action	0-4	5-14	15-24	25-64	65+	n/stat	injured	killed
Crossing at intersection	11	43	19	47	12	2	121	13
Crossing not at intersection	3	31	21	36	10	0	101	0
Not in roadway	2	4	20	31	4	1	60	2
Standing/working in roadwy	0	2	16	32	1	2	46	7
Walking with traffic	0	6	6	8	1	1	20	2
Other & not stated	1	5	7	4	0	0	15	2
Playing in roadway	4	3	2	1	0	1	11	0
Walking against traffic	0	0	0	6	1	0	4	3
Lying in roadway	0	0	3	3	0	0	2	4

*Rural =unincorporated areas or cities with under 2,500 population. Source: WSP

Pedestrian collisions by day of week/hour of day

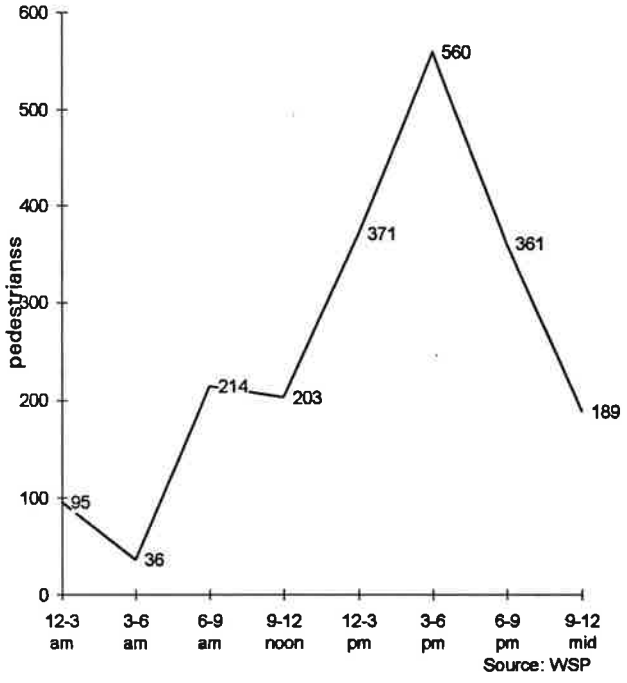
Pedestrians were least likely to be involved in traffic collisions on Saturdays and Sundays. The day of the week with the greatest number of pedestrians involved in traffic collisions was Friday with 355 (Figure 6-2).

Figure 6-2:
Pedestrians in collisions
By day of week - 1995



The majority of pedestrian collisions occurred between 12 noon to 9 p.m., peaking during the 3:00 to 6:00 p.m. period (Figure 6-3).

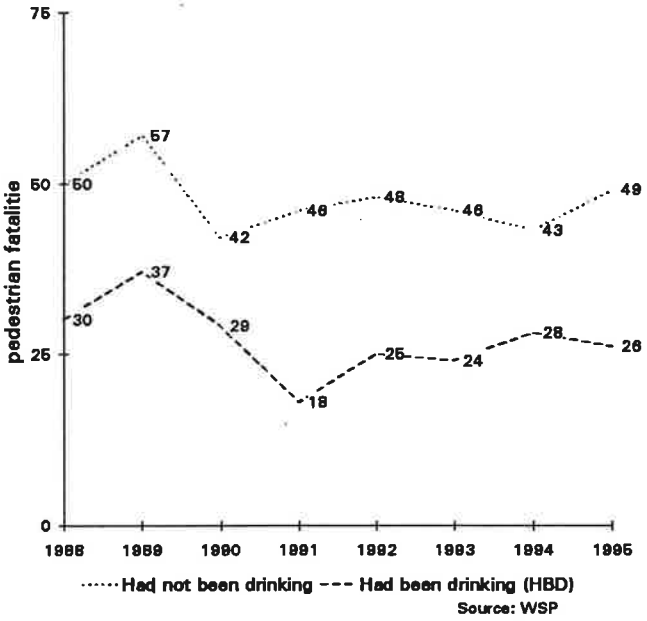
Figure 6-3:
Pedestrians in traffic collisions
By hour of day - 1995



Pedestrians and alcohol

During 1995, 26 pedestrians age 15 years and older had been drinking when involved in a fatal crash. Pedestrians who had been drinking account for a significant proportion of all pedestrian fatalities over the last eight years (Figure 6-4).

Figure 6-4:
Pedestrian fatalities - age 15 and over
Pedestrian drinking vs not drinking



Observational survey of driver compliance with the pedestrian crosswalk law

During 1995, the WTSC conducted its second annual survey to assess driver compliance with Washington State's pedestrian crosswalk law. The law requires drivers to stop when a pedestrian enters a crosswalk and wait until the pedestrian has crossed one lane beyond the centerline. Table 6-5 highlights the results.

Table 6-5: Driver compliance with the pedestrian crosswalk law
Survey conducted by WTSC - Fall 1995

	observations	pct driver complied
Total	1,880	64.3%
Male driver	1,213	64.0%
Female driver	667	64.8%
Teen driver	54	42.6%
Adult driver	1,646	65.6%
Senior driver	180	58.3%
Driver going straight	1,046	68.6%
Driver turning right	474	57.0%
Driver turning left	360	61.1%
Male pedestrian	948	62.7%
Female pedestrian	932	65.9%
Pre-school pedestrian	15	53.3%
Child pedestrian	85	76.5%
Teen pedestrian	289	69.2%
Adult pedestrian	1,251	63.6%
Senior pedestrian	240	57.9%

	observations	pct driver complied
Residential	141	73.8%
Hi sch/univ	401	67.6%
Business	1,338	62.3%
2-lane/2-lane	836	69.7%
2-lane/4-lane	431	68.2%
Mid-blk, 2-lane	205	64.4%
4-lane/4-lane	196	61.7%
Mid-blk, 4-lane	70	47.1%
Other	142	31.7%
Marked Xwalk	1,745	66.8%
Unmarked Xwalk	135	31.9%
Uncontrolled	340	56.8%
1-way stop	73	39.7%
2-way stop	452	67.7%
4-way stop	353	75.6%
Traffic light	662	62.4%

Table 6-6: Pedestrians killed & injured in traffic collisions
By county - 1995

county	population	killed	serious injury	evident injury	possible injury	total injured	collisions	collision rate**
Over 1,000,000								
King	1,613,600	33	164	440	272	876	881	5.46
250,000 to 750,000								
Pierce	660,200	10	40	116	56	212	211	3.20
Snohomish	525,600	4	25	106	54	185	180	3.42
Spokane	401,200	3	24	76	34	134	134	3.34
Clark	291,000	2	18	39	20	77	76	2.61
100,000 to 250,000								
Kitsap	220,600	2	25	18	25	68	67	3.04
Yakima	204,100	3	18	41	13	72	72	3.53
Thurston	189,200	1	11	30	13	54	52	2.75
Whatcom	148,300	1	7	15	7	29	29	1.96
Benton	131,000	0	7	14	1	22	22	1.68
50,000 to 100,000								
Skagit	93,100	3	2	13	1	16	19	2.04
Cowlitz	89,400	1	8	18	6	32	30	3.36
Grays Harbor	67,700	1	4	10	6	20	19	2.81
Island	68,900	0	1	2	5	8	6	0.87
Lewis	65,500	0	3	8	1	12	12	1.83
Clallam	63,600	0	4	5	3	12	12	1.89
Grant	64,500	2	5	6	2	13	13	2.02
Chelan	60,000	1	5	10	5	20	21	3.50
Walla Walla	52,700	0	2	5	7	14	14	2.66
25,000 to 50,000								
Mason	45,300	1	2	4	3	9	10	2.21
Franklin	44,000	0	3	7	4	14	14	3.18
Whitman	40,500	1	4	8	1	13	13	3.21
Okanogan	36,900	2	1	2	0	3	5	1.36
Stevens	35,400	2	4	6	1	11	8	2.26
Kittitas	30,100	1	1	1	0	2	3	1.00
Douglas	29,600	0	0	2	0	2	2	0.68
10,000 to 25,000								
Jefferson	25,100	0	0	0	2	2	2	0.80
Pacific	20,800	1	1	3	0	4	5	2.40
Asotin	19,100	0	0	2	1	3	3	1.57
Klickitat	18,100	0	0	2	2	4	4	2.21
Adams	15,200	0	0	1	0	1	1	0.66
San Juan	12,300	0	0	0	0	0	0	0.00
Pend Oreille	10,700	0	1	0	0	1	1	0.93
Under 10,000								
Lincoln	9,700	0	0	1	1	2	2	2.06
Skamania	9,550	0	0	0	0	0	0	0.00
Ferry	7,100	0	0	0	0	0	0	0.00
Columbia	4,200	0	0	1	0	1	1	2.38
Wahkiakum	3,700	0	0	0	0	0	0	0.00
Garfield	2,350	0	0	0	0	0	0	0.00
Total	5,429,900	75	390	1,012	546	1,948	1,944	3.58

*Motor vehicle-pedestrian collisions per 10,000 population.

Source: WSP, OFM

Table 6-7: Pedestrian fatalities, injuries & collisions
Cities 10,000 population & greater - 1995

city	population	deaths	injuries	collisions	collision rate*
250,000 and over					
Seattle	532,900	10	483	481	9.03
100,000 to 250,000					
Spokane	188,800	1	96	96	5.08
Tacoma	184,500	4	120	118	6.40
Bellevue	102,000	0	46	43	4.22
50,000 to 100,000					
Everett	79,180	2	73	69	8.71
Federal Way	74,290	0	33	34	4.58
Vancouver	65,360	0	41	41	6.27
Yakima	60,850	2	48	47	7.72
Bellingham	57,830	0	21	20	3.46
25,000 to 50,000					
Kennewick	48,130	0	11	9	1.87
Renton	44,890	3	23	25	5.57
Kirkland	44,620	3	23	23	5.15
Kent	42,350	2	31	32	7.56
Redmond	40,030	1	10	11	2.75
Olympia	39,610	0	24	24	6.06
Bremerton	37,170	0	41	39	10.49
Richland	36,270	0	9	8	2.21
Auburn	35,230	0	24	23	6.53
Longview	33,480	0	16	16	4.78
Lynnwood	31,950	0	14	14	4.38
Edmonds	31,320	0	11	10	3.19
Walla Walla	28,870	0	10	10	3.46
Burien	27,680	1	14	15	5.42
Puyallup	27,250	0	13	12	4.40
Bothell	25,850	0	7	7	2.71
Lacey	25,110	0	8	8	3.19
15,000 to 25,000					
Pullman	24,360	0	9	9	3.69
Wenatchee	24,180	1	15	16	6.62
Sea Tac	22,910	3	16	17	7.42
Pasco	22,500	0	14	14	6.22
Mount Vernon	21,580	1	4	5	2.32
Des Moines	21,450	0	7	7	3.26
Mercer Island	21,290	0	6	6	2.82
Mountlake Terrace	20,050	0	5	5	2.49
Oak Harbor	19,160	0	0	0	0.00
Port Angeles	18,540	0	7	7	3.78
Bainbridge Island	17,910	0	1	1	0.56
Marysville	16,890	0	9	8	4.74
Aberdeen	16,700	1	10	10	5.99
10,000 to 15,000					
Mukilteo	14,760	0	4	4	2.71
Tukwila	14,750	1	11	11	7.46
Ellensburg	12,990	0	1	1	0.77
Anacortes	12,820	0	2	2	1.56
Centralia	12,730	0	5	4	3.14
Moses Lake	12,490	1	7	7	5.60
Kelso	11,870	0	8	6	5.05
Sunnyside	11,710	0	4	3	2.56
Tumwater	11,420	0	3	3	2.63
Enumclaw	10,170	0	7	6	5.90

*Frequency per 10,000 population

Source: WSP,OFM

VII. Bicyclists

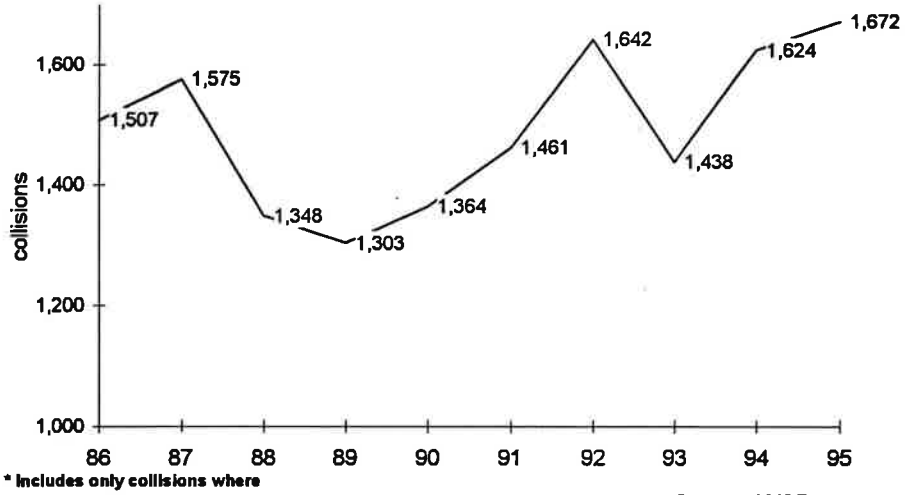
In 1995, traffic collisions involving bicyclists increased 2.5 percent over the previous year. There were 13 bicyclists killed and 1,656 bicyclists injured in collisions with motor vehicles in 1995. Bicyclist serious injuries have shown a steady decline over the past five years (Table 7-1). Total vehicle-bicyclist collisions reached a 10-year high in 1995 (Figure 7-1).

Table 7-1: Bicyclists killed & injured in traffic collisions
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Collisions inv bicyclists	1,677	1,636	1,443	1,649	1,465	2.5%	4.5%
Bicyclists killed	13	14	8	9	5	-7.1%	48.0%
% of all killed	2.0%	2.2%	1.2%	1.4%	0.7%	-9.3%	52.5%
Bicyclists injured	1,656	1,607	1,430	1,622	1,463	3.0%	3.8%
Serious injuries	187	195	202	224	226	-4.1%	-4.7%
Evident injuries	1,102	1,063	889	1,052	909	3.7%	6.6%
Possible injuries	367	349	339	346	328	5.2%	2.1%
Urban*injured	1,239	1,208	1,095	1,208	1,045	2.6%	5.5%
Urban killed	7	1	4	4	1	600.0%	75.0%
Rural*injured	417	399	335	414	418	4.5%	-0.3%
Rural killed	6	13	4	5	4	-53.8%	76.7%

*Urban =Cities with population of 2,500 and greater Source:WSP
Rural =Unincorporated or cities with population less than 2,500.

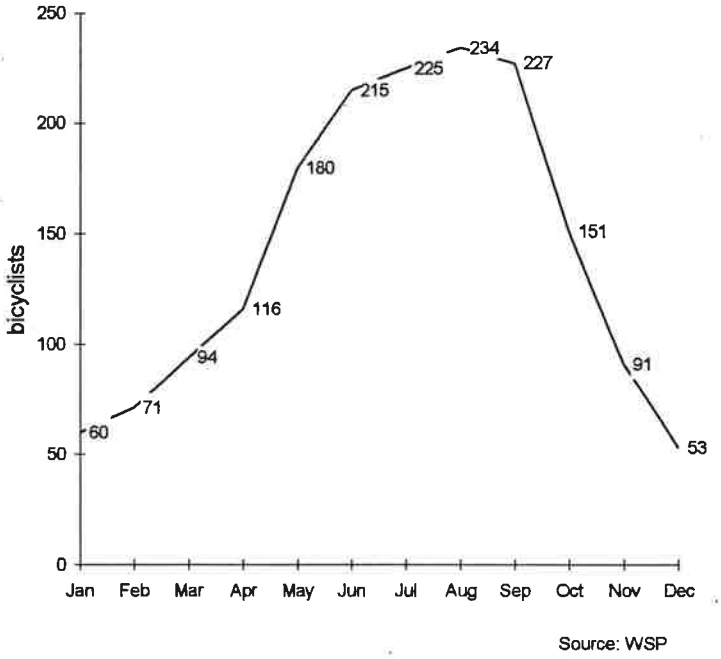
Figure 7-1:
Vehicle-bicyclist collisions*
Ten-year comparison



* Includes only collisions where vehicle-bicycle crash was first occurrence.
Source: WSP

The months of June, July, August and September recorded the highest numbers of bicyclists involved in traffic collisions during 1995. December recorded the least number with 53, and August recorded the most with 234 (Figure 7-2).

Figure 7-2:
Bicyclists involved in traffic collisions
By month - 1995



Source: WSP

Ages of bicyclists involved

In 1995, the age group with the highest rate of bicyclists involved in traffic collisions was the 10 to 14 group, with 11.8 bicyclists involved per 10,000 population. (Table 7-2).

Table 7-2: Bicyclists involved in motor vehicle collisions
By age group - 1995

	population*	killed	serious injury	evident injury	possible injury	bicyclists involved	rate**
0-4	411,410	0	4	9	3	20	0.5
5-9	422,693	1	27	135	32	198	4.7
10-14	403,225	3	61	324	76	476	11.8
15-19	359,477	3	26	159	66	260	7.2
20-24	345,425	1	12	119	39	175	5.1
25-34	846,132	2	35	163	66	274	3.2
35-44	934,076	2	10	98	49	159	1.7
45-54	673,743	0	8	44	11	63	0.9
55-64	406,063	1	3	13	3	20	0.5
65-74	349,414	0	1	4	0	5	0.1
75 & Older	278,242	0	0	1	0	1	0.0
Age not stated	------	0	0	33	22	66	------
Males	2,700,401	12	155	869	289	1,366	5.1
Females	2,729,499	1	32	231	77	346	1.3
Sex not stated	------	0	0	2	1	5	------
Total	5,429,900	13	187	1,102	367	1,717	3.2

* 1995 population by age (breakdown done biannually by OFM). Source: WSP, OFM

** Bicyclists involved in traffic collisions per 10,000 population.

Bicyclist actions associated with the most deaths and injuries was "crossing/entering traffic" with 3 killed and 689 injuries, followed by "riding with traffic" with 3 killed and 534 injuries (Table 7-3).

Table 7-3: Actions of bicyclists killed & injured
By severity - 1995

	killed	serious injury	evident injury	possible injury	total killed/inj	pct killed
Crossing/entering traffic	3	67	453	166	689	0.4%
Riding with traffic	3	62	360	109	534	0.6%
Riding against traffic	1	20	130	51	202	0.5%
Turned into vehicle path - same dir	3	18	69	15	105	2.9%
Turned into vehicle path - opp dir	2	14	62	14	92	2.2%
Crossing diagonally	0	2	14	8	24	0.0%
Fell into vehicle path	1	3	7	1	12	8.3%
Other & not stated	0	1	7	3	11	0.0%
Total	13	187	1,102	367	1,669	0.8%

Source: WSP

Bicycle Helmet Use

A second annual statewide observational survey of bicycle helmet usage was conducted by the WTSC in 1995. The overall statewide rate for bicycle helmet use was 44.9 percent, up from 39.5 percent in 1994. By age group, the highest use rate was for preschool children and the lowest was for teens. Females showed a higher rate of use than males (Table 7-4).

Table 7-4: Observed bicycle helmet use rates
Two-year comparison

	1995	1994		1995	1994
Overall	44.9%	39.5%	Female	51.4%	43.2%
			Male	42.7%	38.2%
Bike lane*	61.3%	49.2%			
Street w/bike lane	44.8%	42.3%	Pre-sch	60.0%	47.3%
Street	43.2%	41.9%	Child	51.9%	36.3%
Other	37.8%	29.0%	Teen	25.7%	20.4%
			Adult	46.7%	42.7%
Bike trail**	62.2%	47.8%	Senior	41.7%	46.5%
Park	51.4%	46.6%			
Business	42.5%	44.2%	Asian	55.8%	42.0%
School	54.7%	41.2%	White	46.0%	41.8%
College	33.2%	32.7%	Black	37.3%	35.2%
Resid (high econ)	22.1%	31.4%	Hispanic	18.5%	7.9%
Resid (mid econ)	43.2%	40.0%	Other	33.3%	9.1%
Resid (low econ)	25.0%	21.6%			

Source: WTSC

* An area of a roadway specifically designated for bicyclists.
** A path separate from a roadway that is designated for bicyclists and pedestrians.

Table 7-5: Bicyclists in traffic collisions
By county - 1995

county	population	killed	serious injury	evident injury	possible injury	total injured	collisions	collision rate*
Over 1,000,000								
King	1,613,600	3	63	415	163	641	657	4.07
250,000 to 750,000								
Pierce	660,200	1	21	110	35	166	165	2.50
Snohomish	525,600	1	16	92	27	135	134	2.55
Spokane	401,200	1	22	99	27	148	146	3.64
Clark	291,000	1	8	56	19	83	83	2.85
100,000 to 250,000								
Kitsap	220,600	0	11	34	16	61	61	2.77
Yakima	204,100	1	6	30	8	44	45	2.20
Thurston	189,200	1	6	47	13	66	65	3.44
Whatcom	148,300	0	5	30	10	45	46	3.10
Benton	131,000	0	4	21	4	29	28	2.14
50,000 to 100,000								
Skagit	93,100	0	1	13	4	18	19	2.04
Cowlitz	89,400	1	5	28	7	40	43	4.81
Grays Harbor	67,700	0	1	18	5	24	24	3.55
Island	68,900	0	2	2	4	8	8	1.16
Lewis	65,500	1	5	19	4	28	27	4.12
Clallam	63,600	0	0	9	3	12	13	2.04
Grant	64,500	1	4	10	2	16	18	2.79
Chelan	60,000	0	1	11	3	15	15	2.50
Walla Walla	52,700	0	0	6	1	7	7	1.33
25,000 to 50,000								
Mason	45,300	0	0	3	1	4	4	0.88
Franklin	44,000	0	0	2	0	2	2	0.45
Whitman	40,500	0	0	9	2	11	13	3.21
Okanogan	36,900	0	0	6	0	6	6	1.63
Stevens	35,400	0	1	2	0	3	3	0.85
Kittitas	30,100	0	0	11	5	16	16	5.32
Douglas	29,600	0	0	4	0	4	4	1.35
10,000 to 25,000								
Jefferson	25,100	0	0	2	1	3	3	1.20
Pacific	20,800	0	1	4	1	6	6	2.88
Asotin	19,100	0	1	2	0	3	3	1.57
Klickitat	18,100	0	0	3	1	4	4	2.21
Adams	15,200	0	1	1	0	2	2	1.32
San Juan	12,300	0	1	1	0	2	2	1.63
Pend Oreille	10,700	0	0	0	0	0	0	0.00
Under 10,000								
Lincoln	9,700	0	1	0	0	1	1	1.03
Skamania	9,550	0	0	0	1	1	1	1.05
Ferry	7,100	0	0	0	0	0	0	0.00
Columbia	4,200	0	0	1	0	1	1	2.38
Wahkiakum	3,700	1	0	0	0	0	1	2.70
Garfield	2,350	0	0	1	0	1	1	4.26
Total	5,429,900	13	187	1,102	367	1,656	1,677	3.09

*Motor-vehicle--bicycle collisions per 10,000 population

Source: WSP, OFM

Table 7-6: Traffic collisions involving bicyclists
Cities 10,000 population & greater - 1995

city	population	killed	injured	collisions	rate*
250,000 and over					
Seattle	532,900	1	344	354	6.64
100,000 to 250,000					
Spokane	188,800	1	148	145	7.68
Tacoma	184,500	0	78	75	4.07
Bellevue	102,000	0	31	31	3.04
50,000 to 100,000					
Everett	79,180	1	37	38	4.80
Federal Way	74,290	0	20	19	2.56
Vancouver	65,360	0	33	34	5.20
Yakima	60,850	0	32	31	5.09
Bellingham	57,830	0	34	35	6.05
25,000 to 50,000					
Kennewick	48,130	0	10	10	2.08
Renton	44,890	0	8	8	1.78
Kirkland	44,620	0	10	10	2.24
Kent	42,350	0	28	29	6.85
Redmond	40,030	0	20	20	5.00
Olympia	39,610	1	67	65	16.41
Bremerton	37,170	0	22	22	5.92
Richland	36,270	0	14	14	3.86
Auburn	35,230	0	30	31	8.80
Longview	33,480	0	16	16	4.78
Lynnwood	31,950	0	16	15	4.69
Edmonds	31,320	0	11	11	3.51
Walla Walla	28,870	0	7	7	2.42
Burien	27,680	0	10	10	3.61
Puyallup	27,250	0	14	16	5.87
Bothell	25,850	0	9	9	3.48
Lacey	25,110	0	9	9	3.58
15,000 to 25,000					
Pullman	24,360	0	7	8	3.28
Wenatchee	24,180	0	11	11	4.55
Sea Tac	22,910	0	8	8	3.49
Pasco	22,500	0	1	1	0.44
Mount Vernon	21,580	0	7	7	3.24
Des Moines	21,450	0	5	5	2.33
Mercer Island	21,290	0	8	8	3.76
Mountlake Terrace	20,050	0	1	1	0.50
Oak Harbor	19,160	0	5	5	2.61
Port Angeles	18,540	0	9	10	5.39
Bainbridge Island	17,910	0	6	6	3.35
Marysville	16,890	0	8	8	4.74
Aberdeen	16,700	0	10	10	5.99
10,000 to 15,000					
Mukilteo	14,760	0	5	5	3.39
Tukwila	14,750	1	4	5	3.39
Ellensburg	12,990	0	12	11	8.47
Anacortes	12,820	0	4	4	3.12
Centralia	12,730	1	8	8	6.28
Moses Lake	12,490	1	8	10	8.01
Kelso	11,870	0	18	20	16.85
Sunnyside	11,710	0	2	2	1.71
Tumwater	11,420	0	7	7	6.13
Enumclaw	10,170	0	2	2	1.97
TOTAL	2,338,750	7	1,205	1,217	5.20

*Collisions involving bicyclists per 10,000 pop. Source: WSP, OFM

VIII. Motorcycles

During 1995, motorcycle fatalities, injuries and collisions all increased slightly compared to the previous year. This was a reversal of a trend that showed an average yearly decrease in each category for 1991 through 1994 (Table 8-1).

Table 8-1: Collisions involving motorcycles
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	1,788	1,744	1,739	2,044	2,048	2.5%	-4.9%
Fatal	35	34	38	48	41	2.9%	-4.8%
Injury	1,501	1,473	1,489	1,745	1,751	1.9%	-5.4%
Property dmg only	252	237	212	251	256	6.3%	-1.9%
Persons killed**	36	35	39	49	44	2.9%	-6.4%
Percent of all killed	5.5%	5.5%	5.9%	7.5%	6.4%	0.5%	-4.0%
Persons injured**	1,780	1,752	1,810	2,112	2,114	1.6%	-5.9%
Serious injury	417	406	439	533	576	2.7%	-10.9%
Evident injury	902	889	909	1,073	1,018	1.5%	-4.0%
Possible injury	461	457	462	506	520	0.9%	-4.2%
MC drivers killed	34	32	35	42	35	6.3%	-1.7%
MC passengers killed	2	3	3	6	8	-33.3%	-25.0%
MC drivers injured	1,452	1,419	1,452	1,699	1,709	2.3%	-5.8%
MC passengers injured	218	209	211	253	228	4.3%	-2.2%
MC drivers involved	1,771	1,726	1,742	2,031	2,035	2.6%	-5.1%
MC endorsements	216,852	223,195	225,230	225,316	210,862	-2.8%	2.0%
Registered motorcycles	95,103	97,075	96,609	98,131	100,970	-2.0%	-1.3%
Collision rate*	18.80	17.97	18.00	20.83	20.28	4.6%	-3.7%
Fatality rate*	0.38	0.36	0.40	0.50	0.44	5.0%	-5.1%

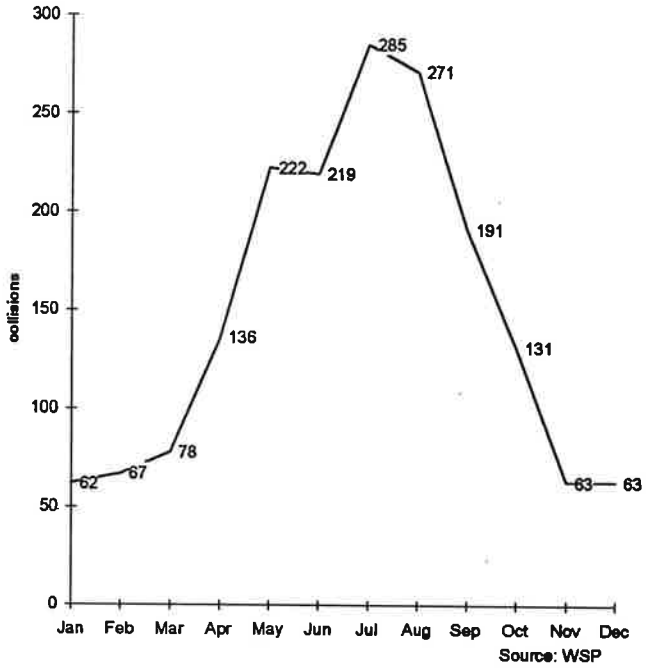
*Motorcycle collisions/fatalities per 1,000 registered motorcycles.

**Includes occupants of other vehicles, pedestrians/pedalcyclists.

Source: WSP, DOL

As illustrated in Figure 8-1, the summer months of July and August experienced the greatest number of motorcycle collisions with 285 and 271, respectfully. Relatively few collisions involving motorcyclists were reported in January, February, March, November or December (Figure 8-1).

Figure 8-1:
Motorcycle collisions
By month - 1995



Source: WSP

As shown in Table 8-2, motorcycle collisions have generally decreased after peaking in 1979. Fatalities have also shown decreases since 1980. Motorcycle registrations peaked in 1981 and have declined through 1995.

Table 8-2: Motorcycle collisions, fatalities and injuries
1971 to 1995

year	registered m'cycles	collisions	m'cycles involved	rate*	total fatalities	m'cyclists killed	total injuries	m'cyclists injured
1971	74,574	1,957	1,972	26.2	54	51	2,107	1,934
1972	81,200	1,893	1,937	23.3	48	43	2,076	1,932
1973	91,782	2,200	2,235	24.0	38	35	2,406	2,230
1974	110,024	2,605	2,657	23.7	60	58	2,764	2,583
1975	110,130	2,518	2,556	22.9	57	51	2,664	2,459
1976	111,211	2,761	2,807	24.8	61	61	2,978	2,752
1977+	115,454	3,093	3,230	26.8	76	75	3,432	3,230
1978	106,212	3,282	3,350	30.9	117	115	3,610	3,416
1979	129,641	3,992	4,054	30.8	121	119	4,350	4,126
1980	135,899	3,914	3,985	28.8	129	119	4,201	3,991
1981	139,931	3,727	3,796	26.6	105	101	3,920	3,752
1982	131,667	3,376	3,424	25.6	109	108	3,341	3,289
1983	127,950	3,312	3,362	25.9	77	77	3,555	3,351
1984	126,703	3,477	3,527	27.4	75	72	3,656	3,434
1985	125,224	3,699	3,762	29.5	85	82	3,884	3,632
1986	122,751	3,508	3,562	28.6	81	80	3,673	3,427
1987	124,215	3,379	3,443	27.2	90	90	3,497	3,288
1988	117,155	2,773	2,813	23.7	77	77	2,896	2,737
1989	110,617	2,516	2,557	22.7	75	69	2,724	2,511
1990@	103,537	2,167	2,198	20.9	62	60	2,223	2,061
1991	100,970	2,048	2,087	20.3	44	43	2,114	1,965
1992	98,131	2,044	2,078	20.8	49	48	2,112	1,952
1993	96,609	1,739	1,778	18.0	39	38	1,810	1,663
1994	97,075	1,744	1,774	18.0	35	35	1,752	1,650
1995	95,103	1,788	1,814	18.8	36	36	1,780	1,665

*Collisions per 1,000 motorcycles registered
Source: WSP, DOL
+Repeal of the Mandatory Helmet Law effective 9/27/77
@Mandatory Helmet Law Reinstated 6/30/90

Location of motorcycle collisions

City streets recorded the highest number of total collisions involving motorcycles with 925. County roads and rural state routes recorded 12 fatalities each. On rural state routes, 4.1 percent of collisions were fatal collisions (Table 8-3).

Table 8-3: Location of motorcycle collisions
By severity - 1995

location	persons killed	persons injured	fatal clsns	injury clsns	pty dmg* only clsns	total clsns	pct fatal
City streets**	9	876	9	750	166	925	1.0%
County roads	12	458	12	387	41	440	2.7%
State route- rural	12	283	11	231	25	267	4.1%
Interstate	2	132	2	106	17	125	1.6%
Other trafficways***	1	31	1	27	3	31	3.2%
Total	36	1,780	35	1,501	252	1,788	2.0%

*Property damage only collisions (no deaths or injuries) - damage over $500. Source: WSP

**Including U.S. and state routes in cities

***Includes parks/forest service roads. Does not include all-terrain-vehicle trails.

Overturning was the most frequent motorcycle collision type with 481. Of multiple-vehicle motorcycle collisions, the most frequent was rear-end with 263 (Table 8-4).

Table 8-4: First harmful event in motorcycle collisions
Single & multiple collisions - 1995

	fatal	injury	ppty dmg only	total collisions	pct fatal
Single motorcycle collisions					
Overturned	5	446	30	481	1.0%
Struck fixed object	18	192	8	218	8.3%
Motorcycle-animal	0	53	4	57	0.0%
Motorcycle-pedestrian	0	12	0	12	0.0%
Non-collision	0	6	0	6	0.0%
Struck other object	0	8	1	9	0.0%
Motorcycle-bicyclist	0	6	0	6	0.0%
Total single motorcycle	23	723	43	789	2.9%
Multiple vehicle clsns (w/m c)					
Rear-end	1	206	56	263	0.4%
Angular direction	2	176	29	207	1.0%
Enter/leave driveway	2	153	36	191	1.0%
One left/one straight-opp dir	1	93	9	103	1.0%
Sideswipe	2	80	23	105	1.9%
Struck parked vehicle	1	10	44	55	1.8%
Broadside (same or opp. dir.)	2	34	6	42	4.8%
Enter/leave parked position	0	18	3	21	0.0%
Head-on	1	8	3	12	8.3%
Total multiple vehicle	12	778	209	999	1.2%
Total motorcycle collisions	35	1,501	252	1,788	2.0%

Source: WSP

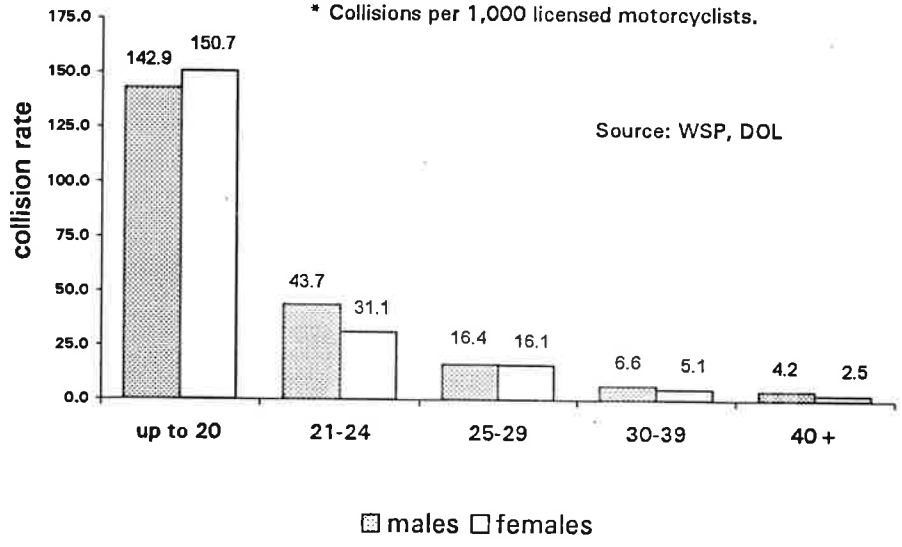
As illustrated in Table 8-5 and Figure 8-2 for 1995, younger motorcycle drivers (up to age 20) had higher collision rates (collisions per 1,000 licensed motorcycle drivers). Male motorcycle drivers had slightly higher rates than female drivers except for the younger age group.

Table 8-5: Motorcycle drivers in collisions
By age group - 1995

age	licensed m/cyclists	motorcycle drivers in fatal clsns	injury clsns	total clsns	clsn rate*
Under 16	-------	0	35	36	-------
16	38	0	18	21	552.63
17-18	449	2	45	54	120.27
19-20	1,209	1	117	132	109.18
21-22	2,423	2	115	129	53.24
23-24	3,413	2	110	123	36.04
25-29	15,062	6	216	248	16.47
30-34	26,498	4	202	218	8.23
35-39	39,803	6	187	215	5.40
40-44	45,002	3	171	194	4.31
45-54	55,201	7	201	239	4.33
55-64	19,449	2	65	75	3.86
65/over	8,305	0	16	16	1.93
Not stated		0	21	71	-------
Males	201367	35	1,436	1,658	8.23
Females	15485	0	75	83	5.36
Sex not stated	-------	0	8	30	-------

*Collisions per 1,000 licensed drivers. Source: WSP, DOL

Figure 8-2:
Motorcycle drivers collision rates*
By age and sex - 1995



Motorcyclist violations in collisions

As shown in Table 8-6, speeding was the most-reported motorcyclist violation in fatal, injury and property-damage-only collisions. DUI was the second most-reported motorcyclist violation.

Table 8-6: Motorcyclist violations in collisions*
By severity - 1995

violation	fatal	injury	ppty dmg only	total collisions	pct fatal
Speeding	21	437	29	487	4.3%
D.U.I.	8	128	5	141	5.7%
Following too closely	1	86	8	95	1.1%
Defective equipment	1	73	5	79	1.3%
Improper passing	1	49	11	61	1.6%
Failed to yield	0	67	17	84	0.0%
Over center line	3	23	5	31	9.7%
Disregd signs/signals	1	33	1	35	2.9%
Other violations	4	192	26	222	1.8%
Total	40	1088	107	1,235	3.2%

*Investigated collisions only. Source: WSP

Helmet use in collisions

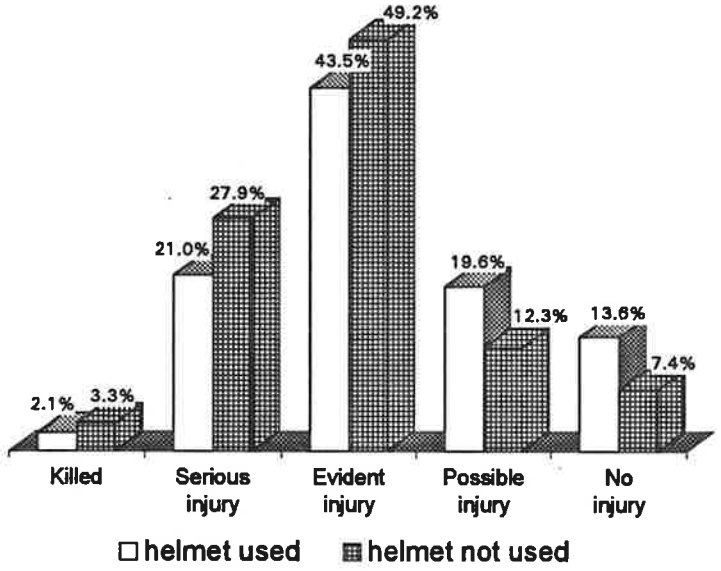
In 1995, there were 1,431 motorcyclists in collisions wearing a helmet, and there were 122 in collisions while not wearing a helmet. Among the helmeted riders, 2.1 percent were killed. Among unhelmeted riders, 3.3 percent were killed (Table 8-7, Figure 8-3).

Table 8-7: Motorcyclist injuries and helmet use
By severity - 1995

	killed	serious injury	evident injury	possible injury	no injury	unknown injury	total	pct fatal
Helmet used	30	301	622	281	195	2	1,431	2.1%
Helmet not used	4	34	60	15	9	0	122	3.3%
Unknown use	0	22	67	50	55	24	218	0.0%
Pct used*	88.2%	89.9%	91.2%	94.9%	95.6%	100.0%	92.1%	------
Total	34	357	749	346	259	26	1,771	1.9%

*Percent used does not including unknown use. Source: WSP

Figure 8-3:
Severity of motorcyclist injuries
Percentage by helmet use - 1995



Source: WSP

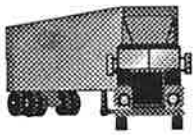
Observed motorcycle helmet use

WTSC's 1995 observational survey of motorcycle helmet use revealed a 98 percent use rate. Approved helmets were worn by 86.5 percent of motorcyclists, and non-approved helmets were worn by 11.5 percent.

Table 8-8: Motorcyclists killed and injuried
By severity and county - 1995

county	registered m/cycles	killed	serious injury	evident injury	possible injury	total injured	collisions	collision rate*
Adams	177	0	0	1	1	2	2	11.3
Asotin	312	1	1	5	1	7	7	22.4
Benton	2,343	1	10	21	4	35	42	17.9
Chelan	1,800	0	4	5	5	14	18	10.0
Clallam	1,239	1	3	12	7	22	19	15.3
Clark	4,071	0	27	33	11	71	71	17.4
Columbia	98	0	1	1	0	2	2	20.4
Cowlitz	1,509	2	10	17	2	29	32	21.2
Douglas	676	0	0	7	0	7	7	10.4
Ferry	94	1	4	2	0	6	7	74.5
Franklin	638	0	4	5	0	9	7	11.0
Garfield	20	0	0	0	0	0	0	0.0
Grant	1,074	0	5	7	2	14	13	12.1
Grays Harbor	1,072	0	9	17	3	29	24	22.4
Island	1,142	0	5	10	3	18	19	16.6
Jefferson	672	0	5	1	1	7	8	11.9
King	28,225	8	123	245	157	525	607	21.5
Kitsap	4,570	1	16	41	17	74	78	17.1
Kittitas	855	0	8	6	3	17	16	18.7
Klickitat	317	2	5	4	0	9	10	31.5
Lewis	1,117	2	11	12	3	26	29	26.0
Lincoln	125	0	1	3	0	4	2	16.0
Mason	924	1	5	15	4	24	24	26.0
Okanogan	782	2	8	12	1	21	19	24.3
Pacific	308	0	2	3	0	5	5	16.2
Pend Oreille	181	0	3	3	0	6	7	38.7
Pierce	9,533	4	33	97	48	178	182	19.1
San Juan	377	0	0	3	0	3	3	8.0
Skagit	2,198	0	8	18	10	36	37	16.8
Skamania	149	0	1	3	0	4	6	40.3
Snohomish	10,208	5	28	82	46	156	166	16.3
Spokane	6,809	3	23	59	27	109	123	18.1
Stevens	584	0	4	3	0	7	5	8.6
Thurston	3,883	1	17	30	13	60	62	16.0
Wahkiakum	35	0	0	3	0	3	2	57.1
Walla Walla	796	0	1	10	1	12	12	15.1
Whatcom	2,872	1	11	22	14	47	44	15.3
Whitman	556	0	0	12	0	12	18	32.4
Yakima	2,706	0	12	36	12	60	53	19.6
Total	95,047	36	408	866	396	1,670	1,788	18.8

* Collisions involving motorcycles per 1,000 motorcycles registered. Source: WSP, DOL



IX. Heavy Trucks

During 1995 there were 6,676 collisions involving heavy trucks (in excess of 10,000 pound gross weight), up 4.9% from the previous year. The heavy truck collision rate (collisions per 100 million miles traveled) was up 1.8 percent from the previous year (Table 9-1).

Table 9-1: Traffic collisions involving heavy trucks (10,000 lbs & greater)
Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Collisions involving heavy trucks	6,676	6,364	5,816	5,530	5,617	4.9%	4.3%
Fatal collisions	60	55	62	49	54	9.1%	2.0%
Injury collisions	2,108	2,081	1,853	1,650	1,687	1.3%	7.5%
Property damage only clsns	4,508	4,228	3,901	3,831	3,876	6.6%	3.0%
Persons killed	75	58	71	60	63	29.3%	-1.6%
Percent of all traffic fatalities	11.5%	9.1%	10.7%	9.2%	9.2%	26.3%	0.3%
Persons injured	2,996	2,883	2,695	2,335	2,354	3.9%	7.2%
Serious injuries	294	244	234	279	275	20.5%	-3.5%
Evident injuries	889	954	953	810	826	-6.8%	5.3%
Possible injuries	1,813	1,685	1,508	1,246	1,253	7.6%	10.7%
Heavy truck miles traveled*	4,234.8	4,111.4	3,971.8	4,458.3	4,551.3	3.0%	-3.1%
Fatality rate**	1.8	1.4	1.8	1.3	1.4	25.5%	3.0%
Collision rate**	157.6	154.8	146.4	124.0	123.4	1.8%	8.1%
Heavy trucks registered***	138,700	133,000	130,000	132,300	136,500	4.3%	-0.8%
Heavy-truck drivers involved	6,743	6,447	5,884	5,546	5,684	4.6%	4.4%
Heavy trucks involved	6,916	6,590	6,029	5,683	5,811	4.9%	4.4%

*In millions

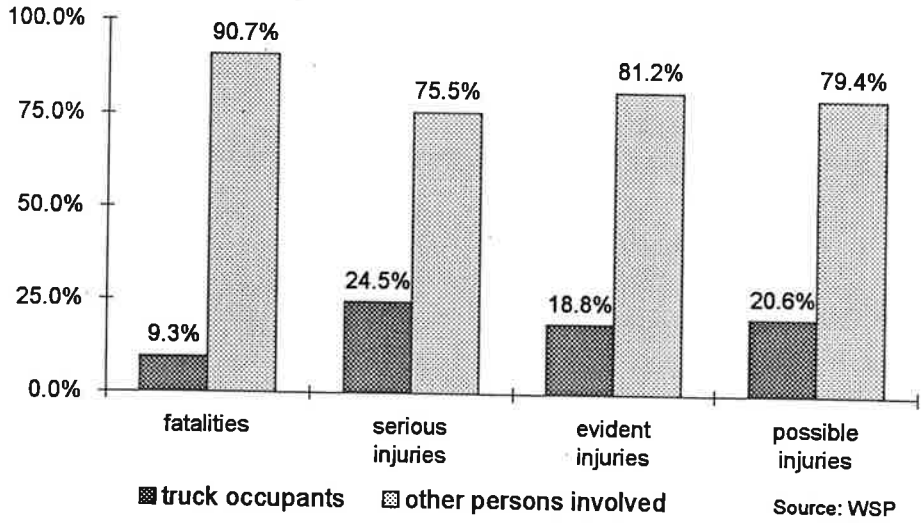
Source: WSP, DOL, DOT

**Fatalities/collisions per 100 million heavy truck miles traveled.

***Estimated by DOT and DOL

Figure 9-1 shows that occupants of heavy trucks are far less likely to be killed or injured than the occupants of other vehicles involved in collisions with heavy trucks.

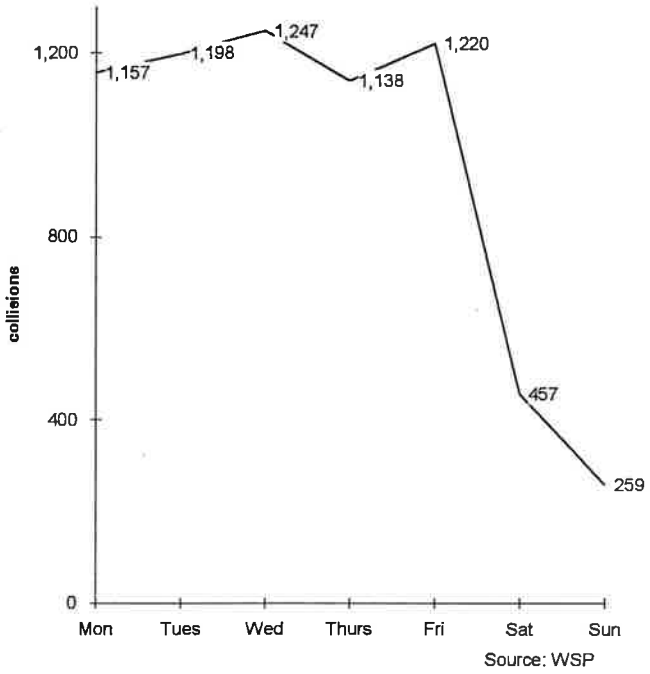
Figure 9-1:
Persons involved in heavy truck collisions
By severity and status - 1995



Heavy truck collisions by day of week and hour of day

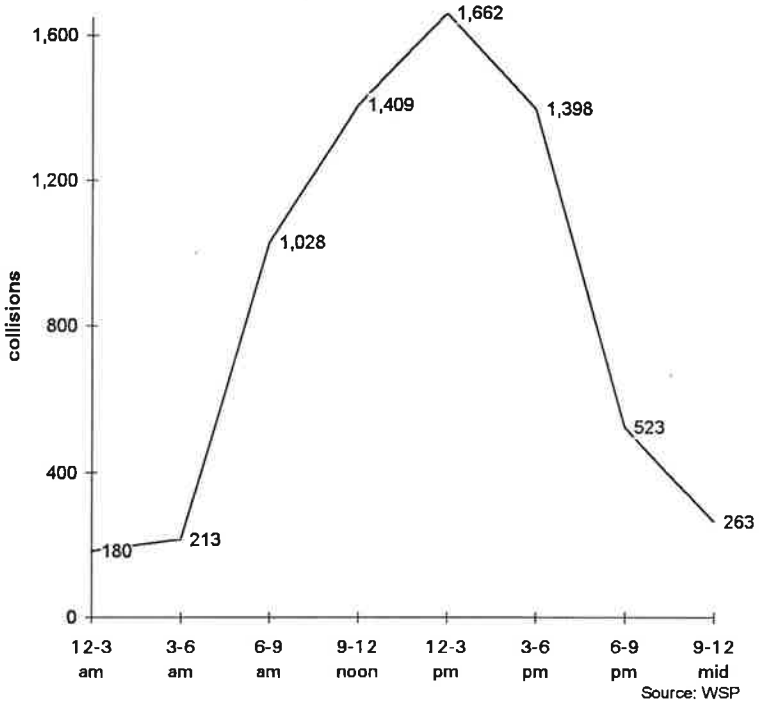
By day of week, the number of collisions involving heavy trucks were roughly equivalent for weekdays during the year. Saturday and Sunday were dramatically lower (Figure 9-2).

Figure 9-2:
Collisions involving heavy trucks
By day of week - 1995



In 1995 the number of heavy truck collisions was highest during the 12:00 noon to 3:00 p.m. time period, with 1,662. The majority of collisions occurred between 9 a.m. and 6 p.m. (Figure 9-3).

Figure 9-3:
Collisions involving heavy trucks
By time (3-hour intervals) - 1995



During 1995, heavy trucks were involved in 5,084 collisions involving other moving motor vehicles, including 48 fatal crashes. In addition, heavy trucks were involved in 731 collisions with fixed or other objects (Table 9-2).

Table 9-2: First harmful event in collisions involving heavy trucks
By severity - 1995

type of collision	fatal	injury	ppty dmg only	total collisions	pct fatal
Clsn w/other moving motor veh	48	1,719	3,317	5,084	0.9%
Collision with fixed/other object	3	145	583	731	0.4%
Collision with parked vehicle	1	56	315	372	0.3%
Overturning	4	134	160	298	1.3%
Other non-collision	1	14	95	110	0.9%
All other collisions*	3	40	38	81	3.7%
Total	60	2,108	4,508	6,676	0.9%

*Pedestrians, pedalcyclists, RR train & animal. Source: WSP

In 1995, failure to yield the right of way was the leading heavy-truck-driver violation in collisions, with 806 violations noted. Exceeding legal or safe speed and driver inattention were the next most frequent violations. Apparently asleep was the violation associated with the highest percentage of fatal collisions (Table 9-3).

Table 9-3: Heavy truck driver violations in collisions
By severity of collision - 1995

	fatal	injury	ppty dmg only	total	pct fatal
Failure to yield right of way	1	266	539	806	0.1%
Exceeding legal or safe speed	5	327	371	703	0.7%
Driver inattention	5	166	501	672	0.7%
Improper turning	0	46	390	436	0.0%
Following too closely	2	244	203	449	0.4%
Operating defective equipment	6	104	218	328	1.8%
Disregarding traffic sig./signs	2	53	108	163	1.2%
Apparently asleep	2	20	12	34	5.9%
Crossing over the center line	2	28	31	61	3.3%
Improper passing	0	17	26	43	0.0%
Driving under the influence	1	12	14	27	3.7%
All other circumstances +	2	44	284	330	0.6%
Total	28	1,327	2,697	4,052	0.7%

+Includes fail to signal, imprp signal, imprp parking, fail to dim headlights. Source: WSP

Heavy truck defects

Defective brakes were noted for 144 heavy trucks in collisions, including 6 in fatal collisions. Worn or smooth tires and puncture or blow out were each noted for 20 heavy trucks (Table 9-4).

Table 9-4: Defects of heavy trucks in collisions
By collision severity - 1995

	fatal	injury	ppty dmg only	total
Defective brakes	6	75	63	144
Worn or smooth tires	1	8	11	20
Puncture or blowout	1	8	11	20
Defective rear lights	0	2	12	14
Defective steering	0	3	6	9
Defective headlights	0	1	2	3
Other defects	2	36	141	179
Total defects	10	133	246	389
No defects noted	53	1,841	3,730	5,624
Percent with defects noted	18.9%	7.2%	6.6%	6.9%
Total	10	133	246	389

Source: WSP

Table 9-5: Collisions involving heavy trucks
By county - 1995

county	centerline miles*	fatal	injury	ppty dmg only	total collisions	collision rate**
Adams	2,585.7	2	19	31	52	2.01
Asotin	594.5	0	2	6	8	1.35
Benton	1,889.6	3	34	95	132	6.99
Chelan	2,308.2	2	20	56	78	3.38
Clallam	1,089.7	0	24	36	60	5.51
Clark	2,495.0	3	105	177	285	11.42
Columbia	846.5	0	1	0	1	0.12
Cowlitz	1,171.8	1	34	90	125	10.67
Douglas	3,126.6	0	15	20	35	1.12
Ferry	1,816.6	2	8	5	15	0.83
Franklin	1,707.8	0	22	45	67	3.92
Garfield	565.1	0	2	5	7	1.24
Grant	3,749.0	1	33	51	85	2.27
Grays Harbor	1,631.8	2	35	72	109	6.68
Island	1,358.0	1	9	20	30	2.21
Jefferson	974.0	1	9	9	19	1.95
King	7,448.1	6	714	1,735	2,455	32.96
Kitsap	1,681.0	3	47	97	147	8.74
Kittitas	2,463.4	2	52	118	172	6.98
Klickitat	1,488.4	2	17	21	40	2.69
Lewis	1,810.1	3	35	84	122	6.74
Lincoln	2,525.2	0	6	10	16	0.63
Mason	980.6	0	16	24	40	4.08
Okanogan	3,447.9	1	13	26	40	1.16
Pacific	739.5	2	6	16	24	3.25
Pend Oreille	1,619.4	0	7	8	15	0.93
Pierce	3,747.4	6	267	446	719	19.19
San Juan	342.2	0	0	0	0	0.00
Skagit	1,486.0	3	47	77	127	8.55
Skamania	965.1	0	4	14	18	1.87
Snohomish	3,740.8	4	157	335	496	13.26
Spokane	4,581.1	4	111	243	358	7.81
Stevens	2,352.0	0	10	24	34	1.45
Thurston	1,548.2	1	78	136	215	13.89
Wahkiakum	18,793.0	0	1	2	3	0.02
Walla Walla	1,282.8	0	11	37	48	3.74
Whatcom	1,808.9	3	45	121	169	9.34
Whitman	2,412.6	0	20	41	61	2.53
Yakima	3,234.2	2	72	175	249	7.70
Total	98,407.6	60	2,108	4,508	6,676	6.78

Source: WSP

*Total length of all public roadways in miles, regardless of number of lanes.

** Collisions involving heavy trucks per 100 miles of roadway.

X. Light Trucks and Vans

Table 10-1 displays a five-year comparison of collisions involving light trucks (pickup trucks, vans and panel trucks with a gross weight of under 10,000 pounds). There were 65,817 collisions during 1995 involving light trucks, an increase of 6.1 percent compared to the previous year. The number of persons killed in collisions involving light trucks was 289, a 13.7 percent reduction from 1994.

Table 10-1: Traffic collisions involving light trucks*

Five-year comparison

	1995	1994	1993	1992	1991	'95 chg from prev year	'91 - '94 avg yearly change
Collisions involving light trucks	65,817	62,041	57,757	56,270	52,907	6.1%	5.5%
Fatal collisions	253	281	249	266	259	-10.0%	3.1%
Injury collisions	26,728	25,210	22,866	21,892	20,364	6.0%	7.4%
Property damage only clsns	38,836	36,550	34,642	34,112	32,284	6.3%	4.2%
Persons killed	289	335	289	292	294	-13.7%	4.7%
Percent of all traffic fatalities	44.2%	52.4%	43.7%	44.9%	43.0%	-15.7%	7.2%
Persons injured	40,845	38,800	34,868	33,384	30,926	5.3%	7.9%
Serious injuries	2,471	2,474	2,453	2,742	2,827	-0.1%	-4.2%
Evident injuries	11,470	11,570	10,830	10,330	10,109	-0.9%	4.6%
Possible injuries	26,904	24,756	21,585	20,312	17,990	8.7%	11.3%
Total light trucks involved	78,264	73,584	67,967	65,896	61,344	6.4%	6.3%
Light trucks registered**	1,080,000	1,076,694	1,053,200	1,092,900	1,081,900	0.3%	-0.1%
Fatal collision rate +	2.3	2.6	2.4	2.4	2.4	-10.2%	3.1%
Collision rate +	609.4	576.2	548.4	514.9	489.0	5.8%	5.6%

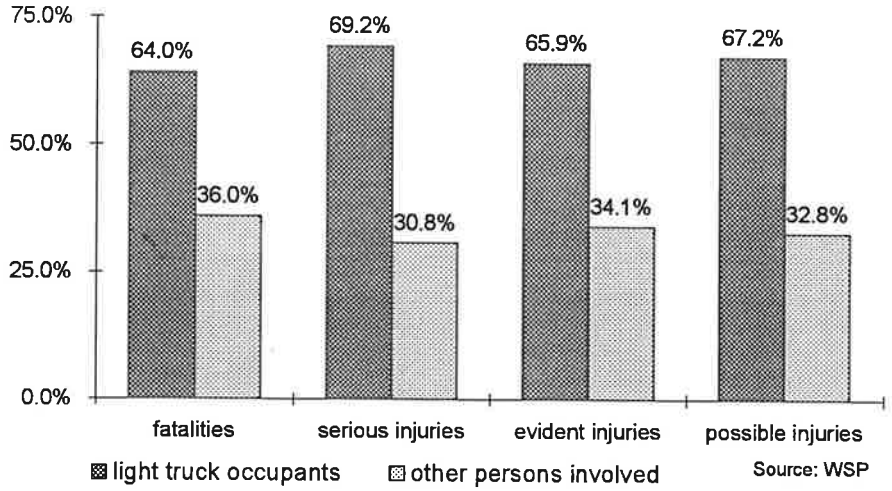
*Pickups, panel trucks, delivery trucks/vans, passenger vans <10,000 lbs. Source: WSP, DOL, DOT

** Estimated by DOT and DOL

+Fatal collisions / collisions per 10,000 registered trucks

Figure 10-1 shows that about two-thirds of fatalities and injuries in 1995 collisions involving light trucks were the occupants of the light truck. The remaining one-third were pedestrians and occupants of other vehicles.

Figure 10-1:
Persons involved in light truck collisions
By severity and status - 1995



Crash types in collisions involving light trucks

By collision type, most collisions involving light trucks were with other moving motor vehicles. In light-truck collisions involving overturning, 1.0 percent resulted in at least one fatality (Table 10-2).

Table 10-2: First harmful event in collisions involving light trucks*
By severity - 1995

type of collision	fatal	injury	ppty dmg only	total collisions	pct fatal
Clsn w/other moving motor veh	131	21,171	29,638	50,940	0.3%
Collision with fixed/other object	55	2,534	3,776	6,365	0.9%
Overturning	24	1,201	1,157	2,382	1.0%
Collision with parked vehicle	4	498	3,435	3,937	0.1%
Other non-collision	0	30	85	115	0.0%
All other collisions**	38	1,125	691	1,854	2.0%
Total	252	26,559	38,782	65,593	0.4%

*Pickups, panel trucks, delivery trucks/vans, passenger vans <10,000 lbs. Source: WSP
Includes only first three vehicles involved in each collision.
**Pedestrians, pedalcyclists, RR train & animal.

Table 10-3: Violations of light truck drivers in collisions*
By severity of collision - 1995

	fatal	injury	ppty dmg only	total	pct fatal
Exceeding legal or safe speed	61	4,070	4,600	8,731	0.7%
Failure to yield right of way	11	2,931	4,467	7,409	0.1%
Following too closely	2	2,960	2,544	5,506	0.0%
Driver inattention	16	1,410	2,406	3,832	0.4%
Driving under influence-alcohol/drugs	73	1,609	1,221	2,903	2.5%
Disregarding traffic sig./signs	11	1,072	1,099	2,182	0.5%
Operating defective equipment	3	432	778	1,213	0.2%
Improper turning	1	273	902	1,176	0.1%
Improper passing	5	220	473	698	0.7%
Apparently asleep	5	358	245	608	0.8%
Crossing over the center line	28	294	266	588	4.8%
All other circumstances +	6	391	1,651	2,048	0.3%
Total	222	16,020	20,652	36,894	0.6%

*Pickups, panel trucks, delivery trucks/vans, passenger vans <10,000 lbs. Source: WSP
Includes only first three vehicles involved in each collision.
+Includes fail to signal, imprp signal, imprp parking, fail to dim headlights

Table 10-4: Defects of light trucks in collisions*
By collision severity - 1995

	fatal	injury	ppty dmg only	total
Defective brakes	1	226	244	471
Worn or smooth tires	5	156	155	316
Puncture or blowout	0	32	72	104
Defective rear lights	1	43	54	98
Defective steering	0	30	55	85
Power failure	0	25	23	48
Other lights/reflectors insufficient	0	10	21	31
Defective headlights	0	11	14	25
Other defects	5	243	530	778
Total defects	12	776	1,168	1,956
No defects noted	252	23,349	31,343	54,944
Percent with defects noted	4.8%	3.3%	3.7%	3.6%
Total	12	776	1,168	1,956

Source: WSP

*Pickups, panel trucks, delivery trucks/vans, passenger vans <10,000 lbs.
Includes only first three vehicles involved in each collision.

Table 10-5: Collisions involving light trucks

By county - 1995

county	fatal	injury	ppty dmg only	total collisions	pct of clsns which were fatal clsns +
Adams	4	80	92	176	2.3%
Asotin	1	46	111	158	0.6%
Benton	5	471	827	1,303	0.4%
Chelan	7	295	485	787	0.9%
Clallam	4	250	443	697	0.6%
Clark	14	1,341	1,805	3,160	0.4%
Columbia	0	19	32	51	0.0%
Cowlitz	6	482	762	1,250	0.5%
Douglas	4	99	162	265	1.5%
Ferry	1	27	53	81	1.2%
Franklin	2	184	273	459	0.4%
Garfield	0	12	16	28	0.0%
Grant	5	237	423	665	0.8%
Grays Harbor	4	344	634	982	0.4%
Island	3	158	283	444	0.7%
Jefferson	4	110	157	271	1.5%
King	46	8,824	12,937	21,807	0.2%
Kitsap	7	930	1,316	2,253	0.3%
Kittitas	6	244	437	687	0.9%
Klickitat	2	78	135	215	0.9%
Lewis	8	346	627	981	0.8%
Lincoln	1	41	58	100	1.0%
Mason	4	217	270	491	0.8%
Okanogan	4	142	246	392	1.0%
Pacific	4	90	133	227	1.8%
Pend Oreille	1	48	66	115	0.9%
Pierce	27	3,471	4,176	7,674	0.4%
San Juan	0	19	34	53	0.0%
Skagit	3	482	664	1,149	0.3%
Skamania	0	36	72	108	0.0%
Snohomish	20	2,550	3,527	6,097	0.3%
Spokane	14	2,176	2,984	5,174	0.3%
Stevens	8	134	177	319	2.5%
Thurston	4	891	1,331	2,226	0.2%
Wahkiakum	0	18	25	43	0.0%
Walla Walla	3	172	329	504	0.6%
Whatcom	9	564	930	1,503	0.6%
Whitman	2	118	243	363	0.6%
Yakima	16	982	1,561	2,559	0.6%
Total	253	26,728	38,836	65,817	0.4%

Source: WSP

*Pickups, panel trucks, delivery trucks/vans, passenger vans <10,000 lbs.

*Total length of all public roadways in miles, regardless of number of lanes.

**Collisions involving heavy trucks per 100 miles of roadway.

+Percentage of total collisions associated with a county which resulted in fatalities.

XI. Pupil Transportation

During the 1994-1995 school year, there were 468 school bus collisions reported in which 290 persons were injured. Of the injured, there were 132 pupils, 24 school bus drivers, and 2 other occupants. No school bus occupants have been killed during the last five school years. The 7 fatalities during the last five years were pedestrians, bicyclists or occupants of other vehicles (Table 10-1).

Table 10-1: Collisions involving school buses

Five-year comparison

Severity, exposure & rates	94-95	93-94	92-93	91-92	90-91	'95 chg from prev year	'91 - '94 avg yearly change
Total collisions	468	366	402	348	340	27.9%	3.0%
Fatal collisions	1	0	2	0	4	-----	-----
Injury collisions	137	124	108	92	92	10.5%	10.7%
Property damage collisions	330	242	292	256	244	36.4%	0.6%
Total persons killed	1	0	2	0	4	-----	-----
Pupils	0	0	0	0	0	-----	-----
School bus drivers	0	0	0	0	0	-----	-----
Other occupants of school bus	0	0	0	0	0	-----	-----
Pedestrian/bicyclist	1	0	1	0	2	-----	-----
Occupants of other vehicles involved	0	0	1	0	2	-----	-----
Total persons injured	290	262	237	192	189	10.7%	11.9%
Pupils	132	130	104	85	82	1.5%	17.0%
School bus drivers	24	23	26	20	16	4.3%	14.5%
Other occupants of school bus	2	1	2	2	1	-----	-----
Pedestrian/bicyclist	6	12	4	3	4	-----	-----
Occupants of other vehicles involved	126	96	101	82	86	31.3%	4.5%
Injuries to school bus occupants *	158	154	132	107	99	2.6%	16.0%
Serious injuries	4	0	5	0	1	-----	-----
Evident injuries	32	9	34	16	8	-----	-----
Possible injuries	122	145	93	91	90	-15.9%	19.7%
School bus registration@	7,947	7,672	7,534	7,349	7,113	3.6%	2.6%
Collision rate **	58.9	47.7	53.4	47.4	47.8	23.4%	0.4%
Miles traveled (in thousands)@	90,983.6	90,302.2	87,691.4	87,972.7	83,060.5	0.8%	2.9%
Collision rate by mileage ***	0.51	0.41	0.46	0.40	0.41	26.9%	0.3%

* Includes school bus passengers and driver

Source: WSP, SPI

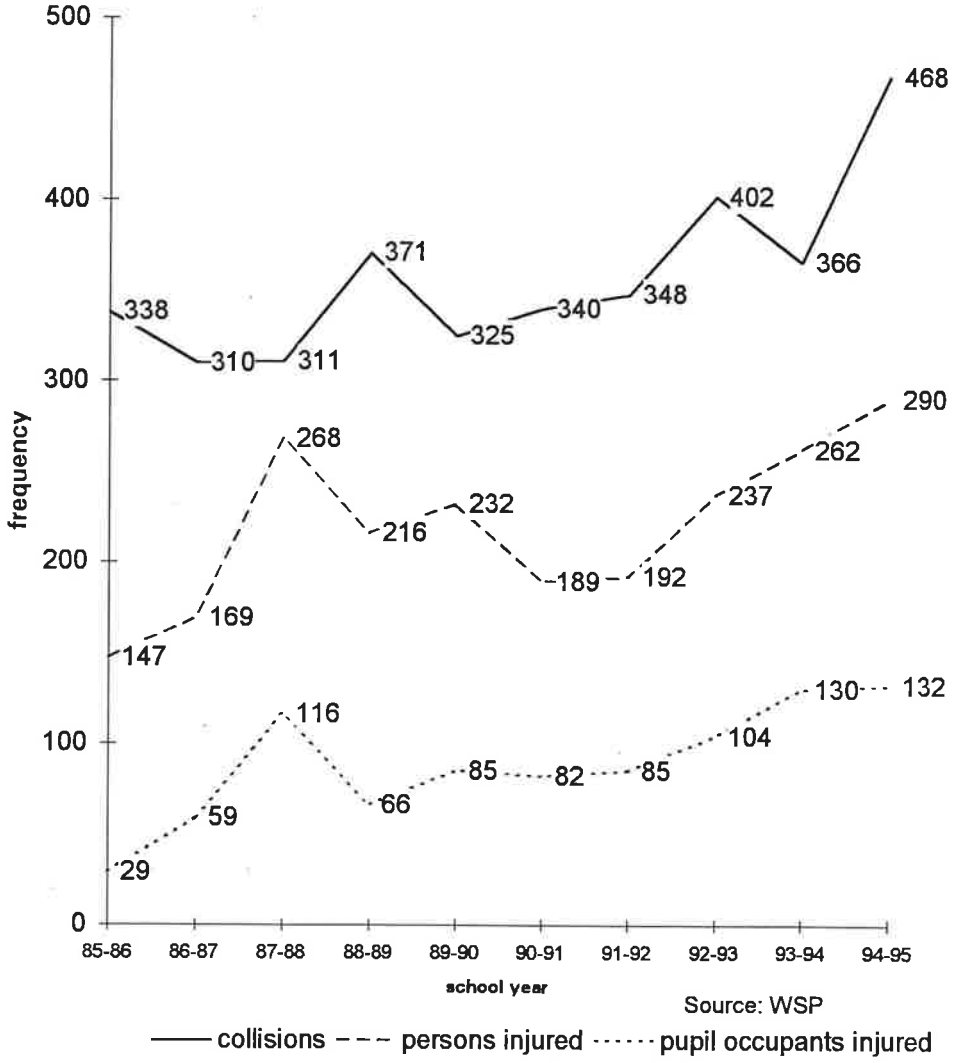
** Collisions per 1,000 registered school buses.

*** Collisions per 100,000 miles traveled.

@ Registration and mileage are preliminary for 94-95.

Figure 10-1 displays a ten-year trend of school bus collisions, persons injured and pupil occupants injured. There has been an overall upward trend in these three categories.

Figure 10-1:
School bus collisions and injuries
Ten-year comparison



Appendix

Data Summary & Highway Safety Problem Analysis

Glossary

Collisions

Collision A crash involving one or more motor vehicles on a public roadway which results in personal injury or death, or damage to any one person's property to an apparent extent of $500 or more.

Fatal collision
A traffic collision where one or more persons are killed or die within 30 days as a result of the collision.

Investigated collision
A collision that has been investigated by a law enforcement officer. Data relating to alcohol involvement, contributing circumstances (driver violations), vehicle defects and safety-restraint use are collected from investigated collisions.

Injury classes

Fatal injury / fatality
A motor-vehicle, traffic-related injury that results in death within 30 days of the collision.

Serious injury
An injury other than fatal that prevents the injured person from continuing normal activities; an "incapacitating" injury.

Evident injury
Any injury not incapacitating but evident to others at the scene.

Possible injury
Any injury reported or claimed other than the above; includes momentary unconsciousness, limping, complaint of pain, nausea or hysteria.

Death/injury rates

Vehicle miles traveled
Traffic deaths/injuries per 100 million vehicle miles of travel (travel is estimated by WSDOT).

Registered vehicles
Traffic deaths/injuries/collisions per 10,000 registered vehicles; 1,000 for motorcycles and school buses.

Population Traffic deaths/injuries/collisions per 10,000 population.

Licensed drivers
Traffic deaths/injuries/collisions per 10,000 licensed drivers.

Calculation of economic loss

The calculable costs of motor vehicle collisions include wage loss, medical expense, legal and insurance administration costs, and property damage. Costs are per person for deaths and injuries and per crash for property damage only collisions. The National Safety Council estimated average 1994 costs are as follows:

Death	$920,000
Serious injury	$ 46,000
Evident injury	$ 14,000
Possible injury	$ 8,800
Property damage only	$ 6,600

Persons Involved in Collisions (Status)

Occupant Any person who is within or upon a motor vehicle. Occupants include drivers and passengers.

Driver An occupant who is in actual physical control of a motor vehicle in transport.

Passenger Any occupant of a motor vehicle other than the driver.

Bicyclist Any rider of a bicycle in transport. Bicycles include bicycles and tricycles. Motor-driven cycles are not included.

Pedestrian Any person who is not an occupant or a Bicyclist.

Location

Urban area Incorporated areas with population of 2,500 or greater.

Rural area Unincorporated or incorporated areas with population less than 2,500.

Roadway Any public roadway or highway used for motor vehicle travel.

Alcohol Involvement

Drinking driver collision

A collision in which one or more drivers had some level of alcohol in their system; includes DUI.

DUI / driving under the influence

Driving or in physical control of a motor vehicle while under the influence of alcohol (BAC of .10 and over) and/or when the investigating officer determines that the driver's driving ability was impaired by alcohol.

HBD / had been drinking

The investigating officer has determined that the driver had consumed some amount of alcohol and/or BAC test results greater than zero.

Vehicles

Motorcycle Does not include mopeds, motorized bicycles, or motorized wheelchairs.

Heavy truck 10,000 pounds or more gross weight.

Light truck Under 10,000 pounds gross weight; includes pickup trucks and passenger vans.

Milestones in Washington Traffic Safety

1905: Car owners required to register vehicles.

1921: Driver's license required.

1933 Driving test required for driver's license.

1959 Director of DOL given the power to suspend or revoke driver's licenses.

1963 Driver Education Act requiring new drivers under 18 to take a driver class.

1967: Creation of Washington Traffic Safety Commission.
Mandatory motorcycle helmet law.
Minimum driver's license age raised from 16 to 18 (16 with driver education).

1968: Implied consent law.

1971: Habitual traffic offender law.

1973: Speed limit reduced to 55 mph.

1975: Negligent homicide statute.
Deferred prosecution statute.

1977 Motorcycle helmet law repealed.

1979: DUI law modified to make .10% BAC illegal per se.
Mandatory day in jail for first DUI offense.

1982: Alcohol assessment and education/treatment required for DUI.

1983: Vehicular homicide and assault statute.
Open container law for alcoholic beverages.

1984 Mandatory child restraint law for children less than age 1 (effective 1/1/84).

1985: Deferred prosecution procedures made more stringent.

1986: Mandatory seat belt law.

1987: Speed limit increased to 65 mph (60 mph for trucks) on rural interstate highways.
Motorcycle helmets required for persons under 18 years of age.
Children under 5 years of age prohibited from riding on motorcycles.

1989: DUI youth (under 19) lose license for 90 days or until age 19, whichever is longer.

1990: Mandatory insurance required.
Mandatory motorcycle helmet law for all ages.

1991: Mandatory installation of crossing arms on school buses.

1992: DUI victim panels authorized as a sentencing option.
Children less than age 2 required to ride in child safety seats (effective 7/1/93).

1993: Enhancement of pedestrian crosswalk law.
Vehicle confiscation for second DUI conviction.

1994: Omnibus Drunk Driving Act of 1994 - stiffer penalties for higher BAC/repeat offenses and zero tolerance (.02% BAC for drivers under age 21).
Child safety seats required for children less than age 3 (effective 6/9/94).
Primary seatbelt enforcement for children less than age 10.

1995: Law enforcement authorized to take blood sample when driver is suspected of DUI-drugs.

Appendix

Traffic Safety Data Resource Material

Accident Facts
National Safety Council
Statistics Department
444 N. Michigan Ave., Chicago, IL 60611
- Includes a section on motor vehicle traffic collisions.

Annual Traffic Report
Washington State Department of Transportation
Planning, Research and Public Transportation Programs.
Transportation Building, P.O. Box 47372, Olympia, WA 98504-7372
- Contains traffic volumes on state highways.

Caseloads of the Courts of Limited Jurisdiction of Washington
Office of the Administrator for the Courts
1206 S. Quince St., P.O. Box 41170, Olympia, WA 98504-1170
- Includes DUI citation and disposition information.

Crime Trends in Washington Jurisdictions
Washington Association of Sheriffs and Police Chiefs (WASPC)
P.O. Box 826, Olympia, WA 98507
- Includes statistics on DUI arrests.

Fatal Accident Reporting System
National Highway Traffic Safety Administration (NHTSA)
US Department of Transportation (USDOT).
National Transportation Systems Center, DTS-44
Kendall Square, Cambridge, MA 02142
- Statistics on nationwide traffic fatalities.

Population Trends for Washington State
Office of Financial Management (OFM), Forecasting Division.
300 Insurance Building, P.O. Box 43113, Olympia, WA 98504-3113

Washington State Highway Accident Report
Washington State Department of Transportation
Planning, Research and Public Transportation Division
Transportation Building, P.O. Box 47372
Olympia, WA 98504-7372
- Accident rates for state highway sections.

Washington State Reportable Motor Vehicle Traffic Collision Statistics
Washington State Patrol
Accident Records Section
4242 Martin Way, P.O. Box 42628
Olympia, WA 98504-2628

Documents listed above are updated annually.

Bibliography of WTSC-Sponsored Research Studies & Surveys

Values & Traffic Safety; Social & Economic Sciences Research Center, WSU; October, 1985

Identification of High Risk Traffic Accident Populations in Washington; Thomas Galdabini Marketing Research & Planning; December 1987, July 1988.

Washington State's Second Offender Laws for Driving While Intoxicated: Results of Two (Three, Four and Six) Years of Evaluation; Jeanne Kleyn, Gina Beretta, Brent L. Baxter; Alcohol and Drug Institute, UW; February 1988, May 1989, May 1990, August 1992.

An Examination of Factors Associated with the Conviction of Offenders for DUI; Elise Lake, Jeanne Kleyn; Alcohol and Drug Institute, UW; March 1988.

A Report on Driving While Intoxicated Among Asian Americans, African Americans, Hispanic Americans, & Native Americans; Center for Study & Teaching of At-Risk Students (C-STARS); October 1990.

Safety Restraint Usage and Survivability in Fatal Motor Vehicle Crashes; William Cooper; Philip Salzberg, Ph.D.; April 1991.

Motorcycle Helmet Use, Injury Outcome, and Hospital Costs: A Population-Based Study of Motorcycle Crash Victims; Philip Salzberg, Ph.D.; Frederick Rivara, MD, MPH; Jefferson Rowland, MS; June 1991.

Safety Restraint Usage Rates in Washington, 1991; Philip Salzberg, Ph.D.; Richard Thurston; October 1991.

Uninsured Driving in Washington State: A Report to the Legislature on Substitute Senate Bill 5499 (1989 Legislative Session); Philip Salzberg, Ph.D.; November 1991.

Vehicle Registration Cancellation for Driving with a Suspended Drivers License, An Evaluation of Substitute House Bill 196 (1987 Legislative Session); Philip Salzberg, Ph.D.; November 1991.

Deferred Prosecution of DUI Cases in Washington State: An Evaluation of Offender Characteristics and Recidivism; Brent Baxter, Ph.D.; Philip Salzberg, Ph.D.; Jeanne Kleyn, Ph.D.; February 1992.

Safety Restraint and Motorcycle Helmet Usage Rates in Washington State; Philip Salzberg, Ph.D.; Richard Thurston; August 1992, December 1993, updated December 1994, July 1995, July 1996.

Public Policy Preferences on Traffic Safety Issues: Results of a Statewide Survey (1992-1993); Bill Schreckhise, Ruth Self, Jami Anderson, Nicholas Lovrich; April 1993.

The Effectiveness of Deferred Prosecution in Reducing DUI Recidivism: An Update; Brent L. Baxter, Ph.D.; Philip M. Salzberg, Ph.D.; Jeanne E. Kleyn, Ph.D.; December 1993.

High-BAC DUI Arrestees: Distinguishing Characteristics and Risk of Recidivism and Crashes; Brent L. Baxter, Ph.D.; October 1994.

Drug and Alcohol Use in Fatally Injured Drivers in Washington State; Barry K. Logan Ph.D., Eugene W. Schwilke; February 1995.

Alcohol-Related Fatal Collisions in Washington State: Driver and Crash Characteristics; William Cooper; Philip Salzberg, Ph.D.; March 1995.

Observational Survey of Driver Compliance with the Pedestrian Crosswalk Law; Charlie Saibel; Philip Salzberg, Ph.D.; Richard Thurston; March 1995, October 1995, February 1996.

Observational Survey of Safety Restraint and Car Safety Seat Use for Children; Charlie Saibel; Philip Salzberg, Ph.D.; Richard Thurston; June 1995, September 1995.

Bicycle Helmet Survey; Charlie Saibel; Philip Salzberg, Ph.D.; Richard Thurston; August 1995, October 1995.

Motorcycle Helmet Use and Injury Outcome and Hospitalization Costs from Crashes in Washington State; Jefferson Rowland, MS, Frederick Rivara, MD, MPH, Phillip Salzberg, PhD, Robert Soderberg, Ronald Maier, MD, Thomas Koepsell, MD, MPH; American Journal of Public Health, January 1996, Vol. 86, No. 1.

Public Opinion Survey on Traffic Safety Issues; Philip M. Salzberg, Ph.D.; WTSC; February 1996

Appendix

The Counties of Washington State