MINNESOTA
1983

MOTOR VEHICLE CRASH FACTS

A COMPILATION OF STATISTICAL TABLES LISTING FATALITIES, INJURIES, AND PROPERTY DAMAGE RESULTING FROM MOTOR VEHICLE CRASHES AND ROADWAY ACCIDENTS IN MINNESOTA

DEPARTMENT OF PUBLIC SAFETY
STATE OF MINNESOTA

MINNESOTA
MOTOR VEHICLE CRASH FACTS
1983

OFFICE OF TRAFFIC SAFETY
DEPARTMENT OF PUBLIC SAFETY
207 TRANSPORTATION BLDG.
ST. PAUL, MINNESOTA 55155

TABLE OF CONTENTS

INTRODUCTION

The 1983 edition of Minnesota Motor Vehicle Crash Facts has been produced by the Office of Traffic Safety, Minnesota Department of Public Safety, in accordance with Minnesota Statutes, Section 169.10. The information presented is derived from accident reports submitted by citizens and law enforcement agencies for motor vehicle crashes involving death, personal injury, or property damage of $500 or more.

In 1983, 558 people were killed and 41,086 were injured in 97,371 crashes throughout the state. Over 3.5 million vehicles traveled 30.5 billion miles on our state's roadways. During 1983 2,859,965 people held Minnesota driving licenses.

The total economic loss resulting from motor vehicle accidents in Minnesota was almost four hundred million dollars. This figure is calculated from costs estimated for 1982 by the National Safety Council for fatalities, injuries, and damage resulting from fatal, personal injury and property damage crashes.

The total dollar value is determined as follows:

558	Deaths	@	$200,000	=	$111,600,000
5,995	Incapacitating Injuries	@	16,700	=	100,116,500
16,710	Non-incapacitating Injuries	@	5,100	=	85,221,000
18,385	Possible Injuries	@	1,200	=	22,062,000
68,197	Property Damage Accidents	@	1,090	=	74,334,730
			Total	=	$393,334,230

This estimate is based on the calculable costs of wage loss, medical expenses, insurance costs, and property damage.

This report is divided into eleven parts. The first examines the crashes, vehicles, and drivers; the other review pedestrians, motorcycles, holidays, and other selected features of motor vehicle crashes.

Due to changes in the way accident information was collected and analyzed this year, some results presented may differ slightly from figures available at a later date.

PART I

SUMMARY INFORMATION

Traffic fatalities, the most commonly used measure of Minnesota's success or failure in the area of traffic safety, have been declining steadily for the past five years. In 1983, the number of fatalities dropped to 558, more than 400 fewer than the 1978 high of 980. During 1983, total crashes involving motor vehicles increased nearly 9 percent over the 1982 level to 97,371. Injuries resulting from motor vehicle crashes increased 6 percent in 1983 to 41,086. To put these numbers in perspective, other factors must be considered; the number of registered vehicles increased 20 percent, the number of licensed drivers was fairly constant showing an increase of 1.8 percent, and the number of vehicular miles traveled also showed a small increase of 3.7 percent. When 1983 is compared to the average of the five previous years, improvements are shown in all three areas - injuries, fatalities and crashes.

Nationwide, a common index of a state's progress in the area of traffic safety is the fatality rate per hundred million vehicle miles traveled. In 1983, Minnesota's fatality rate was 1.83 (meaning slightly less than 2 people were killed in traffic crashes for every 100,000,000 miles traveled in the state). According to preliminary data, this is the second best fatality rate in the nation. Only Rhode Island has a lower rate.

It is impossible to isolate single factors which are responsible for the changes in Minnesota's traffic accident figures. It is possible to describe the specific areas in which changes or the lack of changes are notable in order to increase our understanding.

Winter can be associated with an increase in accidents. The four winter months (November - February) accounted for 40 percent of all crashes, 54 percent of all injuries and yet only 22 percent of all fatalities. The summer months (June - September) had the greatest percentage of fatalities with 45 percent of the total. Weekends and nights are also considered to be particularly risky in terms of traffic safety. The fatalities occurring during the night hours have been decreasing as a percentage of the total for the past two years. In 1981, 42 percent of the fatalities happened at night, in 1982 this dropped to 33 percent and in 1983, only 31 percent of the fatalities happened between 9 p.m. and 3 a.m. Weekends are still risky. The most risky time for a crash is between three and six on a Friday afternoon and for a fatal accident is between midnight and two a.m. Sunday morning.

Contributing Factors in Crashes

Approximately 50 percent of all crashes and injuries occur in clear as opposed to poor weather, in daylight as opposed to darkness and on dry as opposed to wet/icy roadways.

The four most frequently mentioned contributing factors in fatal accidents in order are: physical impairment (the most mentioned, involved in nearly 30 percent of fatal accidents), speeding, driver inattention, and failure to yield right of way. For all crashes and for crashes producing personal injuries the same four factors predominate but in a different order; driver inattention was first, followed by failure to yield right of way, speeding and physical

impairment. This latter category indicates such things as driving under the influence of alcohol or drugs, falling asleep while driving, or becoming ill while driving.

Roadways in Crashes

Nearly 66 percent of the fatal crashes in 1983 happened in rural areas where the population is under 5,000. Urban areas, where the population is 5,000 or over, had nearly 72 percent of all crashes and over 69 percent of personal injury crashes.

One type of road design, an undivided two lane-two way road, is by far the type of roadway on which accidents happen most often. Nearly 74 percent of fatal crashes and 40 percent of all accidents took place on roads with such a design.

During 1983, Minnesotans traveled 30.5 billion miles on 131 thousand miles of roadway. The trunk highway and interstate system carried 58 percent of this vehicle mileage, while constituting only 9 percent of the road mileage. This resulted in very dense traffic at times, especially in the larger metropolitan areas.

The trunk highway system contributed a higher proportion of all crashes (31 percent) than any other road system, with local streets following closely with 30 percent of all crashes. The trunk highway system also contributed the highest proportion of fatal crashes (45 percent), with county state aid highways contributing a distant second of 31 percent of fatal crashes. This pattern of heavy crashes on trunk and county state aid highways is largely due to the heavy load of vehicle miles as well as the aging construction of many of these older roadways.

People Involved in Crashes

In 1983, 178,900 drivers were involved in traffic accidents (one out of every 29 licensed drivers), and of those in which the driver's sex was stated, 66 percent of the drivers were male and 34 percent were female. There also appears to exist a difference between the sexes in the severity of the crashes. Of the males involved in crashes, only about one half of one percent of these crashes resulted in a fatality, whereas only about one fourth of one percent of the crashes women were involved in resulted in a fatality.

Examining the ages of all licensed drivers, and the ages of the driver population involved in crashes, produces an interesting pattern. As drivers mature, they are involved in less accidents. Eleven percent of the licensed drivers who were 19 and under were involved in crashes in 1983. This percentage slowly shrinks to 2.6 percent of all licensed drivers who are 65 to 69 years old, and then rises slightly to 3 percent of the license drivers over the age of 70 were involved in an accident in 1983. The same general pattern exists concerning the percentage of licensed drivers in an age group who were involved in fatal crashes. The most probable reasons for this recurring trend is that the early years are usually the most mobile for the average driver and thus the chance of accident involvement is significantly higher and younger drivers are necessarily inexperienced.

Not only are young people the drivers in a disproportionate percentage of fatal accidents, they are victims as passengers as well. Nearly 27 percent of the motor vehicle fatalities in Minneosta in 1983 were males between the ages of 15

and 24. These age groups also lost the largest percentage of women who were killed in crashes. The numbers of men and women injured in traffic accidents are approximately equal. The age groups from 15 to 24 are still disproportionately represented in the total number of those injured in accidents.

TABLE 1.01

CRASH, FATALITY AND INJURY RATES, 1974-1983

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Traffic Crashes	102,964	123,206	116,390	119,754	118,833	120,633	103,612	97,879	89,443	97,371
Traffic Fatalities	852	777	809	856	980	881	863	763	581	558
Traffic Injuries	39,537	41,931	41,580	45,200	50,332	49,604	45,227	43,739	38,692	41,086
Registered Motor Vehicles (Millions of Vehicles)	2.67	2.69	2.92	2.77	2.90	3.00	3.01	3.09	3.01	3.63
Licensed Drivers (Millions of Drivers)	2.44	2.51	2.57	2.63	2.64	2.67	2.71	2.77	2.81	2.86
Vehicular Miles Traveled (Billions of Miles)	24.6	25.6	27.0	28.1	28.8	29.0	28.5	28.6	29.4	30.5
Fatality Rate Per Hundred Million Vehicle Miles Traveled	3.47	3.03	3.00	3.05	3.40	3.04	3.03	2.67	1.98	1.83
Fatality Rate Per 100,000 Registered Vehicles	32.0	28.9	27.7	30.9	33.8	29.3	28.7	24.7	19.3	15.4
Fatality Rate Per 100,000 Population	21.8	19.8	20.4	21.6	24.5	21.7	21.2	18.6	14.2	13.5
Injury Rate Per Hundred Million Vehicle Miles Traveled	161	164	154	161	175	171	159	153	136	135
Injury Rate Per 100,000 Registered Vehicles	1,481	1,559	1,424	1,632	1,737	1,652	1,506	1,413	1,285	1,132
Injury Rate Per 100,000 Population	1,009	1,068	1,049	1,144	1,256	1,222	1,111	1,067	944	944
Crash Rate Per Hundred Million Vehicle Miles Traveled	419	481	432	426	412	417	364	342	313	319
Crash Rate Per 100,000 Registered Vehicles	3,862	4,580	3,980	4,323	4,100	4,018	3,446	3,163	2,972	2,682
Crash Rate Per 100,000 Population	2,628	3,143	2,936	3,032	2,965	2,971	2,546	2,387	2,181	2,356

TABLE 1.02

1983 TRAFFIC TOLL COMPARED WITH 1978-1982 AVERAGE

	1978-1982 Average	1983
Deaths	814	558
Injuries	45,519	41,086
Crashes	106,080	97,371
Registered Motor Vehicles (Millions)	3.00	3.63
Licensed Drivers (Millions)	2.72	2.86
Vehicle Miles Traveled (Billions)	28.9	30.5
Fatality Rate Per 100 Million Vehicle Miles Traveled	2.82	1.83

TABLE 1.03

1983 CRASHES, INJURIES, FATAL CRASHES, FATALITIES BY MONTH

	All Crashes	Injuries	Fatal Crashes	Fatalities
January	7,713	2,663	22	22
February	6,746	2,452	26	27
March	6,205	2,573	23	31
April	6,524	2,806	40	42
May	6,769	3,444	41	43
June	7,573	3,810	67	69
July	7,526	4,010	50	55
August	7,394	3,774	52	66
September	7,915	3,856	57	62
October	8,056	3,632	50	60
November	10,051	3,610	35	39
December	14,899	4,456	38	42
Total	97,371	41,086	501	558

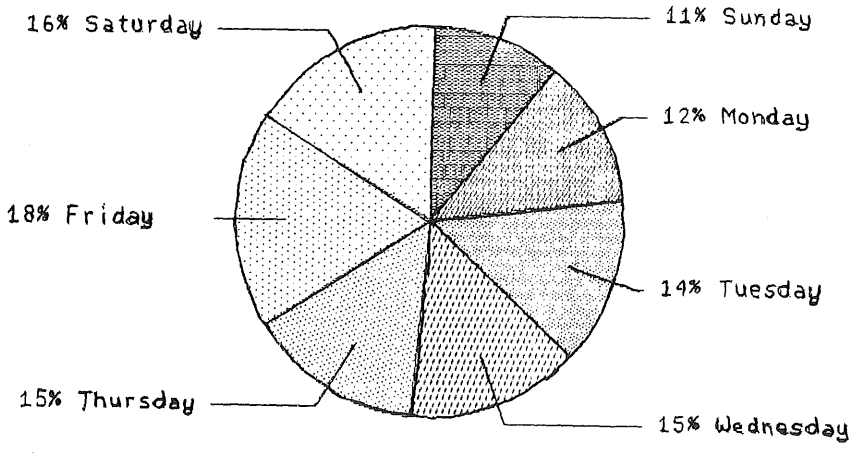
TABLE 1.04

1983 FATAL CRASHES, AND ALL CRASHES BY DAY OF WEEK

Day	Fatal Crashes	All Crashes
Sunday	83	10,523
Monday	52	11,920
Tuesday	49	13,394
Wednesday	61	14,134
Thursday	69	14,280
Friday	83	17,308
Saturday	104	15,812
Total	501	97,371

FIGURE 1.01

ALL CRASHES BY DAY OF WEEK



all crashes

FIGURE 1.02

INJURY CRASHES BY DAY OF WEEK

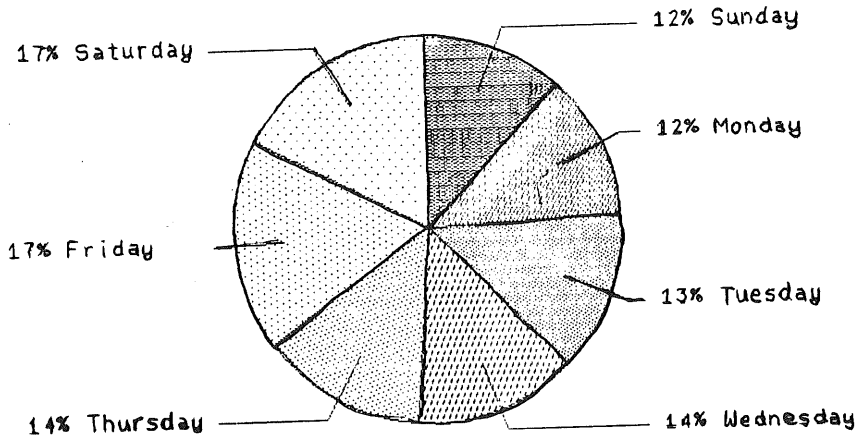


FIGURE 1.03

FATAL CRASHES BY DAY OF WEEK

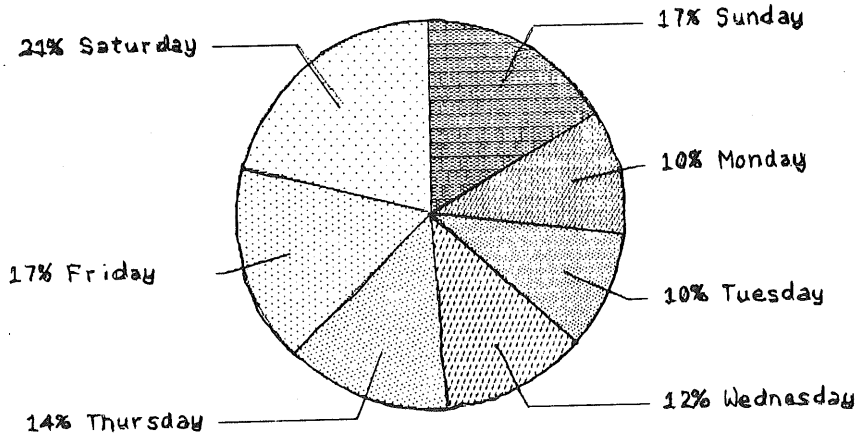


FIGURE 1.04

NUMBER OF CRASHES BY TIME OF DAY

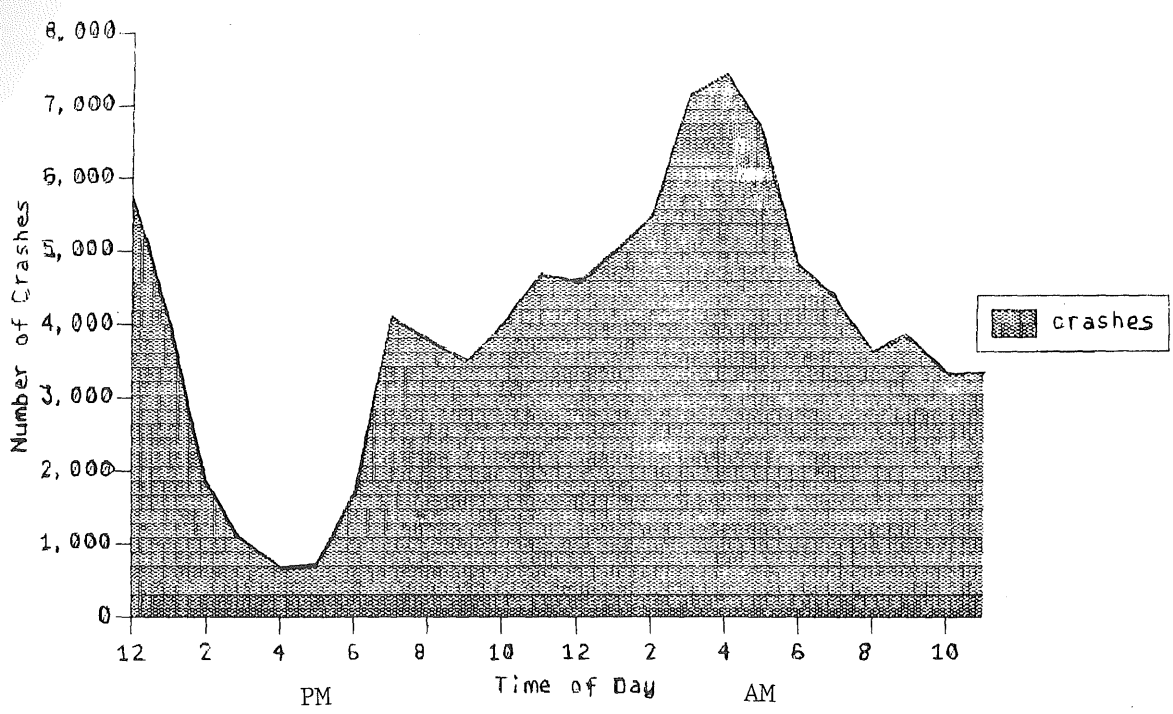


FIGURE 1.05

FATAL CRASHES BY TIME OF DAY

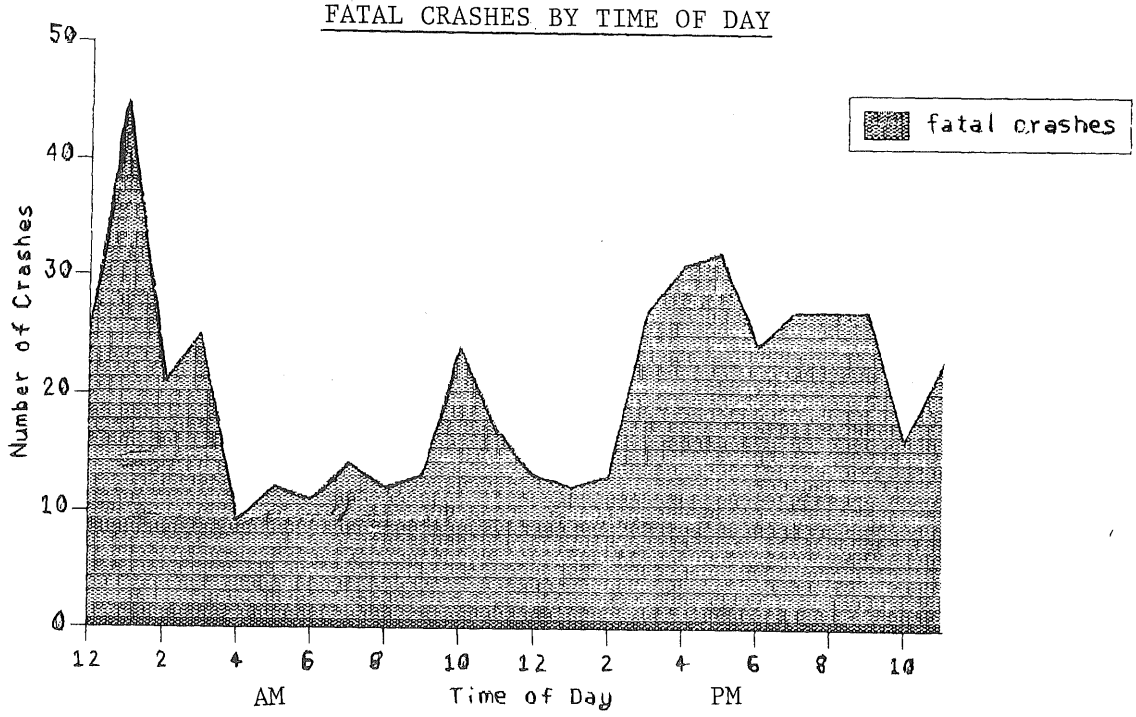


TABLE 1.05

1983 CRASHES, FATAL CRASHES BY TIME OF DAY AND DAY OF WEEK

Hour Beginning	Total Crashes All	Fatal	Monday All	Fatal	Tuesday All	Fatal	Wednesday All	Fatal	Thursday All	Fatal	Friday All	Fatal	Saturday All	Fatal	Sunday All	Fatal
Midnight	5,756	25	619	3	635	1	733	2	732	4	926	6	1,178	7	933	2
1:00	4,100	45	190	3	275	2	353	5	395	3	583	4	1,259	14	1,045	14
2:00	1,808	21	73	0	111	1	118	2	167	1	206	3	561	5	572	9
3:00	1,060	25	60	0	72	1	86	4	85	0	129	4	324	9	304	7
4:00	695	9	54	1	49	0	63	0	64	0	71	1	191	3	203	4
5:00	742	12	78	0	79	0	105	0	74	1	112	0	136	7	158	4
6:00	1,703	11	207	2	238	1	337	2	348	2	321	1	126	2	126	1
7:00	4,108	14	649	1	685	3	837	3	837	3	764	1	200	2	136	1
8:00	3,778	12	577	1	612	2	755	3	722	1	629	2	314	2	169	1
9:00	3,489	13	459	1	544	3	597	0	563	2	550	4	502	2	274	1
10:00	3,988	24	485	3	565	5	601	4	601	5	662	3	712	2	362	2
11:00	4,698	17	583	4	650	4	728	3	693	2	824	2	799	2	421	0
Noon	4,564	13	564	1	598	2	676	2	609	2	728	2	814	1	575	3
1:00	5,001	12	648	3	691	0	772	0	730	3	884	1	756	3	520	2
2:00	5,477	13	791	0	792	1	751	3	792	4	1,080	1	771	2	500	2
3:00	7,104	27	1,065	5	1,111	6	1,136	2	1,028	4	1,331	5	842	3	591	2
4:00	7,401	31	1,071	5	1,213	3	1,182	4	1,146	3	1,348	9	863	2	578	5
5:00	6,617	32	934	5	1,091	4	1,003	5	1,057	2	1,177	4	815	7	540	5
6:00	4,790	24	575	3	753	3	657	4	720	4	860	2	728	4	497	4
7:00	4,338	27	539	4	607	0	583	2	662	8	810	5	696	5	441	3
8:00	3,630	27	424	5	489	1	461	1	520	6	679	6	698	4	359	4
9:00	3,826	27	428	1	520	3	506	2	591	5	728	7	699	7	354	2
10:00	3,312	16	327	0	404	1	404	3	450	1	738	7	670	3	319	1
11:00	3,326	23	293	1	326	2	389	5	413	3	815	2	791	6	299	4
Not Stated	2,060	1	227	0	284	0	301	0	281	0	353	1	367	0	247	0
Total	97,371	501	11,920	52	13,394	49	14,134	61	14,280	69	17,308	83	15,812	104	10,523	83

TABLE 1.06

1983 FATALITIES AND INJURIES BY TYPE OF CRASH

Type of Crash	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Killed	Injured	Fatality Rate Per 1,000 Crashes
Collision With Other Motor Vehicle	60,938	223	17,450	43,265	268	27,069	4.4
Collision With Motor Vehicle In Other Roadway	205	1	46	158	1	70	4.9
Collision With Parked Motor Vehicle	12,179	9	1,077	11,093	9	1,319	0.7
Collision With Railroad Train	174	11	69	94	15	85	86.2
Collision With Bicyclist	1,220	14	1,195	11	14	1,245	11.5
Collision With Pedestrian	1,516	59	1,456	1	59	1,569	38.9
Collision With Animal	2,868	1	213	2,654	1	248	0.3
Collision With Fixed Object	11,946	104	4,034	7,808	107	5,254	9.0
Collision with Other Object	442	2	109	331	2	134	4.5
Overturn	4,639	70	2,491	2,078	75	3,451	16.2
Fire/Explosion	93	0	10	83	0	13	0.0
Submersion	49	0	19	30	0	27	0.0
Other	1,102	7	504	591	7	602	6.35
Total	97,371	501	28,673	68,197	558	41,086	5.7

TABLE 1.07

CRASHES, KILLED AND INJURED BY COUNTY

FOR 1983 COMPARED WITH 1978-1982 AVERAGE

County	All Crashes Average 1978-1982	1983	Killed Average 1978-1982	1983	Injured Average 1978-1982	1983
Aitkin	256	237	6	2	125	123
Anoka	4,427	4,286	27	22	2,264	2,133
Becker	557	483	10	3	306	325
Beltrami	659	560	8	8	283	268
Benton	637	651	10	9	324	278
Big Stone	133	109	3	5	53	49
Blue Earth	1,668	1,571	11	7	593	604
Brown	690	543	5	3	289	251
Carlton	540	461	7	6	239	194
Carver	873	881	13	7	471	419
Cass	371	362	9	8	204	221
Chippewa	280	245	6	8	119	115
Chisago	540	523	8	7	264	276
Clay	1,317	1,151	10	7	446	411
Clearwater	107	110	2	3	59	77
Cook	117	112	1	1	60	45
Cottonwood	237	185	3	1	92	65
Crow Wing	1,106	953	16	16	473	411
Dakota	4,734	4,734	36	15	2,274	2,184
Dodge	282	247	3	2	142	123
Douglas	681	691	8	7	323	293
Faribault	322	244	5	1	135	99
Fillmore	379	314	6	1	177	176
Freeborn	849	810	9	4	365	324
Goodhue	981	905	12	10	430	400
Grant	100	77	2	2	50	38
Hennepin	31,286	29,750	108	59	13,499	12,292
Houston	339	259	5	2	167	126
Hubbard	272	237	5	6	146	138
Isanti	397	382	7	3	216	202
Itasca	824	646	15	11	425	338
Jackson	264	224	3	1	109	76
Kanabec	196	184	6	1	101	82
Kandiyohi	956	1,080	10	4	394	445
Kittson	79	67	2	1	39	40
Koochiching	327	253	4	3	165	159
Lac Qui Parle	178	170	4	4	70	61
Lake	301	198	4	4	143	96
Lake Of The Woods	65	61	1	2	31	43
Le Sueur	534	443	3	2	231	197
Lincoln	119	96	2	2	54	51
Lyon	483	390	7	4	216	186
Mcleod	658	715	4	5	288	264
Mahnomen	89	52	2	2	43	35

TABLE 1.07 (CONTINUED)

CRASHES, KILLED AND INJURED BY COUNTY

FOR 1983 COMPARED WITH 1978-1982 AVERAGE

County	All Crashes Average 1978-1982	1983	Killed Average 1978-1982	1983	Injured Average 1978-1982	1983
Marshall	176	116	4	4	89	70
Martin	483	474	5	3	223	196
Meeker	426	348	6	4	181	142
Mille Lacs	405	344	7	4	204	209
Morrison	554	591	10	8	334	312
Mower	869	819	7	6	345	340
Murray	146	130	3	1	64	46
Nicollet	569	529	6	5	228	216
Nobles	482	520	4	1	184	152
Norman	126	90	3	1	47	58
Olmsted	2,505	2,302	16	14	1,033	976
Otter Tail	873	792	13	14	407	392
Pennington	333	275	3	2	158	142
Pine	366	304	10	2	168	147
Pipestone	206	211	2	0	75	49
Polk	754	595	10	5	314	232
Pope	170	151	2	3	72	49
Ramsey	16,636	14,910	51	33	5,873	5,201
Red Lake	78	79	2	4	29	21
Redwood	309	265	3	6	156	118
Renville	328	274	7	8	165	115
Rice	1,065	1,011	12	6	492	482
Rock	219	206	2	3	61	59
Roseau	165	130	4	4	63	68
St Louis	4,599	3,329	47	26	1,821	1,322
Scott	1,109	1,159	11	6	550	576
Sherburne	609	551	10	4	319	281
Sibley	257	184	3	3	123	87
Stearns	2,938	2,746	27	27	1,258	1,142
Steele	726	582	3	0	279	223
Stevens	195	193	2	0	77	71
Swift	211	150	1	3	80	53
Todd	426	322	8	2	202	169
Traverse	76	60	2	3	33	37
Wabasha	449	389	7	5	203	172
Wadena	261	282	2	2	105	125
Waseca	375	310	5	7	157	118
Washington	2,325	2,254	25	8	1,116	1,028
Watonwan	246	218	3	2	95	95
Wilkin	203	165	4	1	90	71
Winona	1,217	1,103	12	13	488	395
Wright	1,154	1,076	16	18	595	507
Yellow Medicine	203	180	5	6	98	89

TABLE 1.08

1983 COUNTY CRASH REPORT

County	All Crashes	Fatal Crashes	Number Killed	Personal Injury Crashes	Injured	Property Damage Crashes
Aitkin	237	2	2	81	123	154
Anoka	4,286	22	22	1,413	2,133	2,851
Becker	483	3	3	195	325	285
Beltrami	560	5	8	186	268	369
Benton	651	9	9	186	278	456
Big Stone	109	4	5	30	49	75
Blue Earth	1,571	4	7	442	604	1,125
Brown	543	3	3	180	251	360
Carlton	461	4	6	139	194	318
Carver	881	6	7	286	419	589
Cass	362	8	8	149	221	205
Chippewa	245	6	8	80	115	159
Chisago	523	5	7	175	276	343
Clay	1,151	7	7	283	411	861
Clearwater	110	3	3	45	77	62
Cook	112	1	1	28	45	83
Cottonwood	185	1	1	49	65	135
Crow Wing	953	13	16	286	411	654
Dakota	4,734	13	15	1,485	2,184	3,236
Dodge	247	2	2	80	123	165
Douglas	691	7	7	207	293	477
Faribault	244	1	1	63	99	180
Fillmore	314	1	1	116	176	197
Freeborn	810	4	4	236	324	570
Goodhue	905	10	10	273	400	622
Grant	77	2	2	23	38	52
Hennepin	29,750	59	59	8,802	12,292	20,888
Houston	259	2	2	86	126	171
Hubbard	237	5	6	90	138	142
Isanti	382	3	3	130	202	249
Itasca	646	9	11	228	338	409
Jackson	224	1	1	57	76	166
Kanabec	184	1	1	49	82	134
Kandiyohi	1,080	4	4	305	445	771
Kittson	67	1	1	24	40	42
Koochiching	253	3	3	94	159	156
Lac Qui Parle	170	4	4	42	61	124
Lake	198	3	4	58	96	137
Lake Of The Woods	61	2	2	20	43	39
Le Sueur	443	1	2	135	197	307
Lincoln	96	2	2	36	51	58
Lyon	390	3	4	136	186	251
Mcleod	715	4	5	186	264	525
Mahnomen	52	2	2	16	35	34

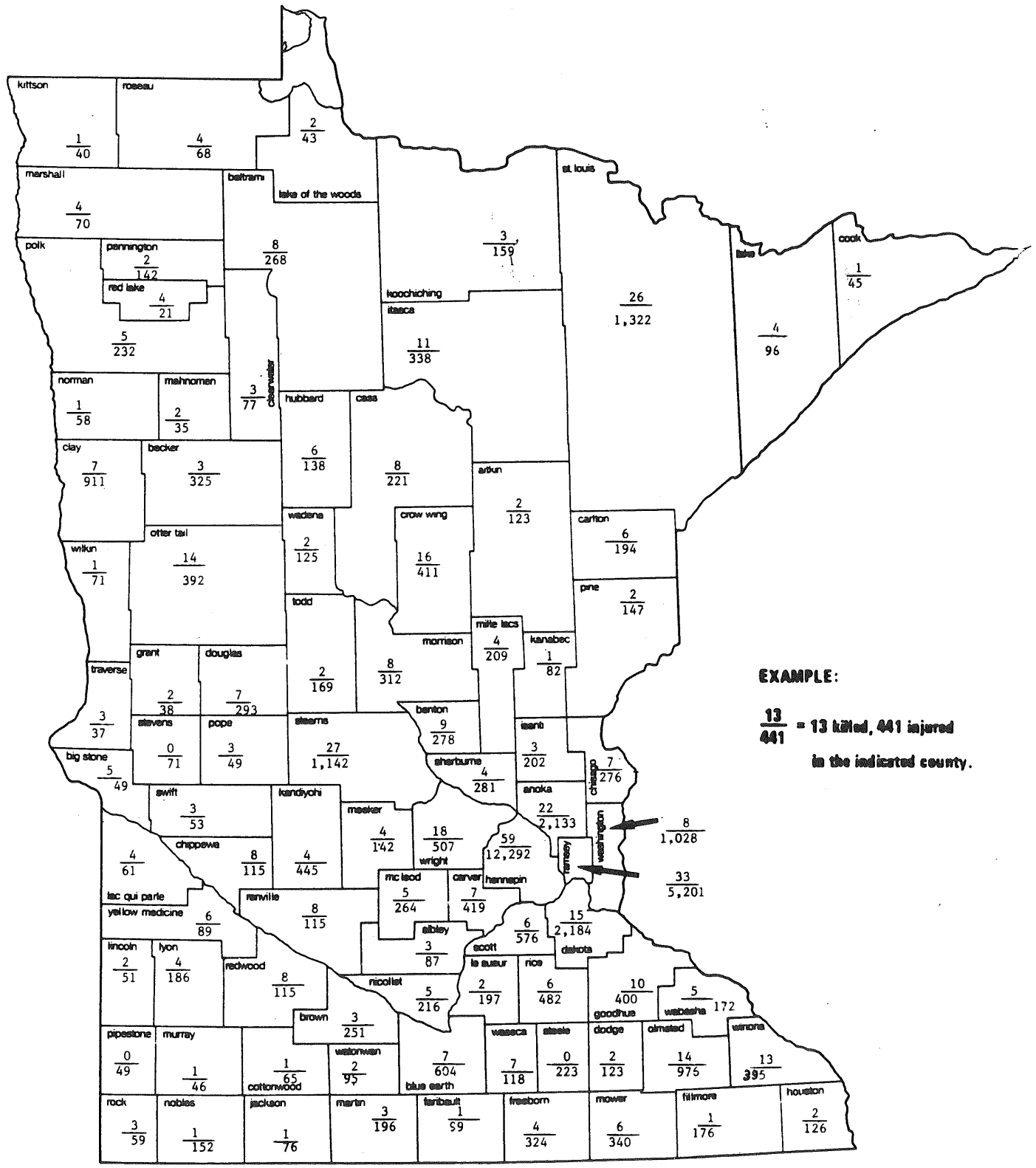
TABLE 1.08 (CONTINUED)

1983 COUNTY CRASH REPORT

County	All Crashes	Fatal Crashes	Number Killed	Personal Injury Crashes	Injured	Property Damage Crashes
Marshall	116	4	4	36	70	76
Martin	474	3	3	133	196	338
Meeker	348	3	4	101	142	244
Mille Lacs	344	4	4	124	209	216
Morrison	591	7	8	200	312	384
Mower	819	5	6	244	340	570
Murray	130	1	1	33	46	96
Nicollet	529	5	5	150	216	374
Nobles	520	1	1	107	152	412
Norman	90	1	1	36	58	53
Olmsted	2,302	13	14	669	976	1,620
Otter Tail	792	13	14	262	392	517
Pennington	275	2	2	110	142	163
Pine	304	2	2	93	147	209
Pipestone	211	0	0	41	49	170
Polk	595	3	5	168	232	424
Pope	151	2	3	30	49	119
Ramsey	14,910	32	33	3,852	5,201	11,026
Red Lake	79	4	4	15	21	60
Redwood	265	4	6	78	118	183
Renville	274	3	8	80	115	191
Rice	1,011	6	6	339	482	666
Rock	206	3	3	42	59	161
Roseau	130	4	4	40	68	86
St Louis	3,329	24	26	935	1,322	2,370
Scott	1,159	4	6	384	576	771
Sherburne	551	4	4	185	281	362
Sibley	184	3	3	56	87	125
Stearns	2,746	24	27	754	1,142	1,968
Steele	582	0	0	161	223	421
Stevens	193	0	0	48	71	145
Swift	150	3	3	40	53	107
Todd	322	2	2	100	169	220
Traverse	60	2	3	24	37	34
Wabasha	389	5	5	126	172	258
Wadena	282	2	2	81	125	199
Waseca	310	6	7	87	118	217
Washington	2,254	8	8	704	1,028	1,542
Watonwan	218	2	2	63	95	153
Wilkin	165	1	1	48	71	116
Winona	1,103	12	13	286	395	805
Wright	1,076	13	18	346	507	717
Yellow Medicine	180	6	6	51	89	123

FIGURE 1.06

COUNTY CRASH REPORT
MINNESOTANS KILLED/INJURED IN 1983



EXAMPLE:

13/441 = 13 killed, 441 injured in the indicated county.

TABLE 1.09

LOCATION OF 1983 CRASHES BY POPULATION

Population City or Township	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
100,000 & Over	24,546	42	6,621	17,883
50,000- 99,999	5,825	17	1,584	4,224
25,000- 49,999	16,880	44	5,024	11,812
10,000- 24,999	15,610	42	4,478	11,090
5,000- 9,999	7,183	26	2,108	5,049
2,500- 4,999	5,149	16	1,356	3,777
1,000- 2,499	3,114	11	734	2,369
Under 1,000	19,064	303	6,768	11,993
Total	97,371	501	28,673	68,197

TABLE 1.10

LOCATION OF 1983 CRASHES BY URBAN OR RURAL AREA*

	All Crashes		Fatal Crashes		Personal Injury Crashes		Property Damage Crashes	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Urban	70,044	71.9	171	34.1	19,815	69.1	50,058	73.4
Rural	27,327	28.1	330	65.9	8,858	30.9	18,139	26.6

*AN URBAN AREA IS ANY CITY OR TOWNSHIP WITH A POPULATION OF 5,000 OR MORE

TABLE 1.11

1983 CRASHES BY CITY

City	All Crashes	Fatal Crashes	Number Killed	Personal Injury Crashes	Number Injured	Property Damage Crashes
Albert Lea	517	1	1	119	169	397
Alexandria	368	0	0	104	149	264
Andover	109	2	2	29	38	78
Anoka	464	0	0	155	224	309
Apple Valley	354	0	0	99	146	255
Arden Hills	325	3	3	93	122	229
Austin	546	1	1	173	215	372
Bemidji	319	0	0	88	128	231
Blaine	742	2	2	274	453	466
Bloomington	2,817	5	5	753	1,035	2,059
Brainerd	459	1	1	126	166	332
Brooklyn Center	923	1	1	327	461	595
Brooklyn Park	896	3	3	315	437	578
Burnsville	948	1	1	291	432	656
Champlin	179	0	0	63	90	116
Chanhassen	219	3	3	73	110	143
Chaska	191	2	3	57	78	132
Chisholm	65	0	0	14	21	51
Cloquet	225	2	2	52	74	171
Columbia Heights	427	1	1	130	177	296
Coon Rapids	779	4	4	215	316	560
Cottage Grove	270	0	0	74	112	196
Crookston	141	0	0	30	37	111
Crystal	464	0	0	176	252	288
Detroit Lakes	170	3	3	65	106	102
Duluth	1,365	6	6	384	519	975
Eagan	472	0	0	149	220	323
East Bethel	90	0	0	26	41	64
East Grand Forks	226	0	0	57	79	169
Eden Prairie	647	6	6	185	257	456
Edina	898	0	0	265	349	633
Elk River	180	1	1	57	81	122
Eveleth	91	0	0	15	19	76
Fairmont	293	2	2	76	99	215
Falcon Heights	162	0	0	44	56	118
Faribault	418	2	2	132	177	284
Fergus Falls	255	0	0	69	90	186
Fridley	896	2	2	320	464	574
Golden Valley	905	1	1	278	358	626
Grand Rapids	203	1	1	56	81	146
Ham Lake	157	2	2	56	90	99
Hastings	317	1	1	90	135	226
Hibbing	445	3	3	106	152	336
Hopkins	467	0	0	140	184	327
Hutchinson	302	0	0	54	70	248
International Falls	132	0	0	45	72	87

TABLE 1.11 (CONTINUED)

1983 CRASHES BY CITY

City	All Crashes	Fatal Crashes	Number Killed	Personal Injury Crashes	Number Injured	Property Damage Crashes
Inver Grove Heights	431	2	2	173	246	256
Lake Elmo	100	1	1	41	60	58
Litchfield	116	0	0	35	46	81
Little Canada	353	2	2	106	143	245
Little Falls	223	0	0	63	91	160
Mankato	1,110	2	2	278	370	830
Maple Grove	270	0	0	89	115	181
Maplewood	911	4	4	269	375	638
Marshall	156	0	0	61	75	95
Mendota Heights	258	0	0	77	117	181
Minneapolis	14,503	23	23	4,109	5,848	10,371
Minnetonka	998	3	3	323	438	672
Montevideo	123	0	0	32	40	91
Moorhead	889	0	0	184	262	705
Morris	129	0	0	25	32	104
Mounds View	206	1	1	64	95	141
New Brighton	340	0	0	90	130	250
New Hope	334	0	0	94	122	240
New Ulm	286	1	1	85	115	200
Northfield	225	1	1	73	87	151
North Mankato	152	1	1	36	44	115
North St. Paul	253	0	0	54	73	199
Oakdale	147	1	1	40	54	106
Orono	189	1	1	66	93	122
Owatonna	342	0	0	89	109	253
Plymouth	686	1	1	186	247	499
Prior Lake	175	0	0	71	110	104
Ramsey	102	3	3	42	70	57
Red Wing	411	2	2	118	165	291
Redwood Falls	115	0	0	28	38	87
Richfield	1,018	2	2	320	423	696
Robbinsdale	361	1	1	118	160	242
Rochester	1,643	6	6	447	623	1,190
Rosemount	184	0	0	61	93	123
Roseville	1,023	3	3	249	324	771
St. Cloud	1,730	6	6	449	649	1,275
St. Louis Park	1,299	4	4	428	567	867
St. Paul	10,042	19	20	2,512	3,349	7,511
St. Peter	153	0	0	44	60	109
Sauk Rapids	115	0	0	32	42	83
Shakopee	349	0	0	103	144	246
Shoreview	299	0	0	81	114	218
South St. Paul	408	0	0	107	145	301
Spring Lake Park	140	1	1	43	61	96
Stillwater	282	0	0	79	105	203

TABLE 1.11 (CONTINUED)

1983 CRASHES BY CITY

City	All Crashes	Fatal Crashes	Number Killed	Personal Injury Crashes	Number Injured	Property Damage Crashes
Thief River Falls	215	1	1	82	101	132
Vandais Heights	201	0	0	60	90	141
Virginia	239	2	2	42	56	195
Waseca	144	1	1	29	39	114
West St. Paul	504	1	1	155	229	348
White Bear Lake	583	0	0	169	226	414
Willmar	678	1	1	168	241	509
Winona	670	6	7	155	200	509
Woodbury	251	2	2	64	98	185
Worthington	351	0	0	67	93	284

TABLE 1.12

1983 CRASHES BY WEATHER CONDITION

Weather Condition	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Clear	45,556	277	14,310	30,969
Cloudy	27,607	150	8,452	19,005
Rain	8,379	30	2,701	5,648
Snow/Sleet	10,401	25	2,354	8,022
Fog	1,040	13	326	701
Other	721	2	158	561
Not Stated/ Unknown	3,667	4	372	3,291
Total	97,371	501	28,673	68,197

TABLE 1.13

1983 CRASHES BY LIGHT CONDITION

Light Condition	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Daylight	55,283	227	16,862	38,194
Dawn/Dusk	6,665	28	1,782	4,855
Darkness	31,371	241	9,647	21,483
Other/ Unknown	4,052	5	382	3,665
Total	97,371	501	28,673	68,197

TABLE 1.14

1983 CRASHES BY ROAD SURFACE CONDITION

Road Surface Condition	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Dry	50,340	372	17,255	32,713
Wet	16,313	66	5,258	10,989
Snow/Slush	5,923	19	1,349	4,555
Ice/Packed Snow	19,679	35	3,995	15,649
Other	914	5	326	583
Not Stated/ Unknown	4,202	4	490	3,708
Total	97,371	501	28,673	68,197

TABLE 1.15

1983 CRASHES BY ROAD DESIGN

Road Design	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Freeway	7,095	29	1,999	5,067
Other Divided Highway	8,522	54	3,272	5,196
One-Way Street	2,019	3	789	1,227
4-6 Lanes Undivided - Two-Way	13,490	31	5,229	8,230
3 Lanes Undivided	435	1	149	285
2 Lanes Undivided - Two-Way	38,404	369	13,344	24,691
Alley/Driveway	1,345	1	273	1,071
Other	3,429	9	551	2,869
Not Stated/Unknown	22,632	4	3,067	19,561
Total	97,371	501	28,673	68,197

TABLE 1.16

1983 MINNESOTA ROAD MILEAGE SUMMARY

Type Of Roadway	Miles Of Roadway	Percent of Total Roadway Miles
Interstates	873	.7
Trunk Highways	11,246	8.6
County State Aid Highways	30,004	22.9
County Roads	15,269	11.6
Township Roads	55,367	42.2
Local Streets	15,490	11.8
Other Roads	2,978	2.3
Total	131,227	100.1

TABLE 1.17

1983 CRASHES BY TYPE OF ROADWAY

Type Of Roadway	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Interstate	6,863	24	1,736	5,103
Trunk Highway	30,623	227	10,192	20,204
County State Aid Highway	20,584	158	7,295	13,131
County Road	1,961	21	716	1,224
Township Road	1,758	19	694	1,045
Local Street	29,132	48	7,293	21,791
Other Road	6,450	4	747	5,699
Total	97,371	501	28,673	68,197

TABLE 1.18

1983 MILEAGE AND CRASH DISTRIBUTION BY TYPE OF ROADWAY

Type of Roadway	Percent of Road Mileage	Percent of Vehicle Mileage	Percent of All Crashes	Percent of Fatal Crashes
Interstates	.7	17.5	7.0	4.8
Trunk Highways	8.6	41.1	31.4	45.3
County State Aid Highways	22.9	21.8	21.1	31.5
County Roads	11.6	2.7	2.0	4.2
Township Roads	42.2	2.4	1.8	3.8
Local Streets	11.8	14.5	29.9	9.6
Other Roads	2.3	.0	6.6	0.8

FIGURE 1.07

INJURIES AND FATALITIES BY AGE GROUP AND SEX

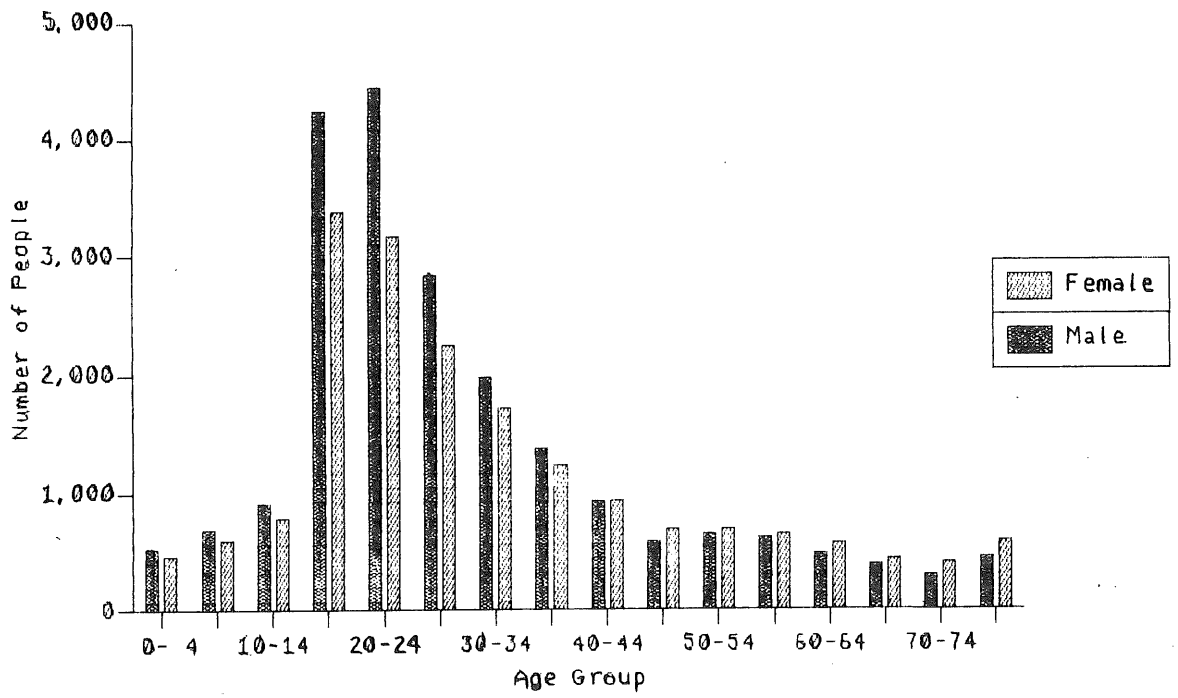


TABLE 1.19

AGE AND SEX OF 1983 FATALITIES

Age Group	Male	Female	Total
0- 4	5	8	13
5- 9	6	11	17
10-14	7	4	11
15-19	72	29	101
20-24	78	19	97
25-29	54	12	66
30-34	25	11	36
35-39	19	7	26
40-44	18	8	26
45-49	12	8	20
50-54	12	4	16
55-59	10	3	13
60-64	14	9	23
65-69	14	6	20
70-74	7	7	14
75 & Over	29	26	55
Not Stated	3	1	4
Total	385	173	558

TABLE 1.20

AGE AND SEX OF PERSONS INJURED IN 1983 CRASHES

Age Group	Male	Female	Not Stated	Total
0- 4	512	450	1	963
5- 9	677	592	1	1,270
10-14	902	776	1	1,679
15-19	4,163	3,352	2	7,517
20-24	4,348	3,161	2	7,511
25-29	2,784	2,232	0	5,016
30-34	1,949	1,704	0	3,653
35-39	1,357	1,233	1	2,591
40-44	898	931	0	1,829
45-49	575	683	0	1,258
50-54	626	685	0	1,311
55-59	606	641	0	1,247
60-64	469	555	0	1,024
65-69	370	419	0	789
70-74	283	390	0	673
75 & Over	422	553	0	975
Not Stated	703	1,013	64	1,780
Total	21,644	19,370	72	41,086

TABLE 1.21

AGE DISTRIBUTION OF LICENSED DRIVERS*

AND THEIR INVOLVEMENT IN 1983 CRASHES

Age Group	Percent of all Licensed Drivers	Percent of all Drivers involved in Fatal Crashes	Percent of Drivers in All Crashes
19 & under	7.4	11.1	13.2
20-24	13.6	14.1	16.1
25-29	13.3	10.9	12.0
30-34	12.0	7.2	9.0
35-39	9.8	4.8	6.8
40-44	7.8	4.0	4.8
45-49	6.4	3.4	3.7
50-54	5.9	3.2	3.3
55-59	5.9	2.7	3.1
60-64	5.4	2.3	2.5
65-69	4.7	1.7	1.9
70-74	3.6	1.6	1.5
75 & Over	4.1	5.6	2.0
Not Stated	0.0	27.5	20.2
Total	99.9	100.1	100.1

* Includes drivers with instruction permits.

TABLE 1.22

PERCENTAGE OF LICENSED DRIVERS* INVOLVED IN 1983 CRASHES BY AGE GROUP

Age Group	Percentage of the Licensed Drivers Within an Age Group Who Were Involved In Crashes	Percentage of the Licensed Drivers Within an Age Group Who Were Involved In Fatal Crashes
19 & under	11.14	.04
20 - 24	7.41	.03
25 - 29	5.64	.02
30 - 34	4.68	.02
35 - 39	4.34	.01
40 - 44	3.85	.01
45 - 49	3.59	.01
50 - 54	3.49	.01
55 - 59	3.32	.01
60 - 64	2.85	.01
65 - 69	2.56	.01
70 - 74	2.56	.01
75 & Older	2.95	.03
Total*	6.26	.02

These rates are calculated by comparing the number of drivers who were involved in crashes in each age category to the total number of licensed drivers in that same age group.

* Includes drivers with instruction permits.

** The total indicates the percentage of licensed drivers who were involved in crashes, regardless of age group.

TABLE 1.23

AGE AND SEX OF DRIVERS IN ALL 1983 CRASHES*

Age Group	Male	Female	Not Stated	Total
19 & under	15,762	7,794	20	23,576
20-24	19,009	9,756	34	28,799
25-29	14,202	7,248	24	21,474
30-34	10,442	5,642	12	16,096
35-39	7,735	4,460	20	12,215
40-44	5,498	3,119	19	8,636
45-49	4,221	2,305	6	6,532
50-54	3,965	1,921	7	5,893
55-59	3,939	1,683	4	5,626
60-64	3,063	1,349	2	4,414
65-69	2,292	1,118	8	3,418
70-74	1,701	894	3	2,598
75 & Over	2,427	1,041	28	3,496
Not Stated	11,293	5,252	19,582	36,127
Total	105,549	53,582	19,769	178,900

*Most crashes involve more than one driver. For that reason, the total number of drivers involved in crashes and listed here will be greater than the total number of all crashes (which was 97,371 in 1983).

TABLE 1.24

AGE AND SEX OF DRIVERS IN FATAL 1983 CRASHES*

Age Group	Male	Female	Not Stated	Total
19 & under	62	24	0	86
20-24	86	23	0	109
25-29	71	13	0	84
30-34	43	13	0	56
35-39	29	8	0	37
40-44	29	2	0	31
45-49	20	6	0	26
50-54	18	7	0	25
55-59	16	5	0	21
60-64	14	4	0	18
65-59	10	3	0	13
70-74	10	2	0	12
75 & Over	31	12	0	43
Not Stated	164	31	18	213
Total	603	153	18	774

*Most crashes involve more than one driver. For that reason, the total number of drivers involved in fatal crashes and listed here will be greater than the total number of fatal crashes (which was 501 in 1983).

TABLE 1.25

DRIVER LICENSE* SUMMARY BY AGE, 1974-1983

Age	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983		
										Male	Female	Total
15-19	290,620	300,906	307,481	315,138	304,021	290,570	281,750	269,577	257,151	110,286	101,298	211,584
20-24	356,806	366,037	373,524	381,161	381,377	385,831	391,310	395,496	392,548	199,128	189,445	388,573
25-29	309,647	326,743	341,678	347,358	343,112	350,879	360,167	369,236	376,034	195,039	186,037	381,076
30-34	243,925	249,022	263,080	278,622	285,395	299,790	317,137	329,488	336,185	175,727	168,147	343,874
35-39	196,270	202,558	209,903	221,252	229,247	235,994	240,789	257,450	270,169	144,165	137,319	281,484
40-44	179,361	178,964	181,150	183,921	186,793	190,213	196,020	204,317	215,529	115,554	108,923	224,477
45-49	181,799	181,586	180,661	178,614	173,818	173,194	172,813	175,196	177,343	94,450	87,672	182,122
50-54	177,473	178,987	178,916	179,266	176,922	174,754	173,760	173,361	171,348	88,589	80,360	168,949
55-59	160,332	161,616	155,747	166,771	165,288	167,712	168,986	169,120	169,761	89,376	80,144	169,520
60-64	138,223	141,978	145,464	146,736	147,428	147,381	148,512	152,104	154,268	82,051	72,886	154,937
65-69	109,932	113,363	115,327	117,955	118,899	121,295	124,469	128,310	130,611	70,816	62,634	133,450
70-74	79,335	82,527	85,428	86,494	87,833	90,064	92,061	95,385	99,435	54,648	46,900	101,548
75 & Older	86,548	95,318	94,665	93,383	96,487	97,741	98,499	106,857	115,664	69,999	48,372	118,371
Total	2,510,271	2,579,605	2,633,024	2,696,671	2,696,620	2,725,418	2,766,273	2,825,897	2,866,046	1,489,828	1,370,137	2,859,965

*Includes Learner's Permits

TABLE 1.26

APPARENT CONTRIBUTING FACTORS IN 1983 CRASHES

Apparent Contributing Factors	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Failure to Yield Right of Way	15,796	89	6,152	9,555
Illegal/Unsafe Speed	15,760	137	5,954	9,669
Following Too Closely	5,203	4	1,992	3,207
Disregard For Traffic Control Device	3,949	35	2,025	1,889
Driving Left of Roadway Center--Not Passing	2,455	88	1,003	1,364
Improper Passing/ Overtaking	2,044	9	518	1,517
Improper/Unsafe Lane Use	5,314	34	1,319	3,961
Improper Parking/ Starting/Stopping	1,873	10	480	1,383
Improper Turn	3,257	8	837	2,412
Unsafe Backing	2,577	1	218	2,358
No/Improper Signal	455	0	136	319
Impeding Traffic	496	3	184	309
Driver Inattention/ Distraction	26,923	117	10,343	16,463
Driver Inexperience	5,359	34	2,010	3,315
Physical Impairment	7,713	150	3,891	3,672
Vision Obscured	4,306	11	1,546	2,749
Defective Equipment	2,787	16	990	1,781
Pedestrian Violation/ Error	822	27	770	25
Other	2,265	15	905	1,345

TABLE 1.27

VEHICLE MOVEMENT IN 1983 MULTI-VEHICLE INTERSECTION CRASHES

Vehicle Movement	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Entering at Angle	14,106	79	5,342	8,685
Same Direction--Both Going Straight	2,459	1	870	1,588
Sideswipe--Passing	979	2	203	774
Same Direction--One Turning, One Straight	2,022	2	564	1,456
Same Direction--One Stopped	4,084	4	1,755	2,325
Same Direction--All Others	969	0	162	807
Head On	339	5	167	167
Sideswipe--Meeting	242	1	55	186
Opposite Direction--One Left Turn, One Straight	4,616	15	1,787	2,814
Opposite Direction--All Others	262	1	58	203
Backed Into	240	0	10	230
Not Stated	19	0	4	15
Total	30,337	110	10,977	19,250

TABLE 1.28

VEHICLE MOVEMENT IN 1983 MULTI-VEHICLE NON-INTERSECTION CRASHES

Vehicle Movement	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Head On	1,035	83	577	375
Same Direction--Both Going Straight	3,078	3	970	2,105
Sideswipe--Passing	2,753	5	655	2,093
One Car Parked	9,921	9	1,014	8,898
One Car Stopped In Traffic	1,925	4	801	1,120
One Car Entering Parked Position	75	0	15	60
One Car Leaving Parked Position	707	0	69	638
One Car Entering Driveway Alley	1,603	3	500	1,100
One Car Leaving Driveway Alley	1,535	2	323	1,210
Backed Into	486	2	45	439
All Others	846	12	257	577
Not Stated	22	0	2	20
Total	23,986	123	5,228	18,635

TABLE 1.29

MOTOR VEHICLE REGISTRATIONS, 1979-1983

Type of Vehicle	1979	1980	1981	1982	1983
Passenger Cars	2,028,324	2,017,865	2,092,170	2,157,922	2,185,457
Pickup Trucks			410,349	464,801	469,116
Commercial Station Wagons	5,930	5,481	4,408	0	0
Farm Trucks	123,421	123,261	72,234	50,303	45,147
Gross Weight Trucks	565,855	573,472	216,965	51,926	48,269
Urban Zone Trucks	7,119	7,280	7,111	5,720	4,306
Commercial Zone Trucks			2	348	484
Minnesota Based Prorate Trucks	22,486	21,330	21,426	20,951	22,484
Recreational Vehicles	33,640	34,827	35,187	31,926	31,791
Motorcycles	156,552	157,815	166,151	159,345	155,502
Mopeds	7,877	12,056	13,955	14,725	14,516
School Buses	4,259	4,123	4,031	4,002	4,113
Buses	2,785	3,026	3,256	3,459	3,490
Tax Exempt Vehicles	43,919	46,169	47,694	48,732	49,811
Motor Vehicle Subtotal	3,002,167	3,006,705	3,094,939	3,014,160	3,034,486
Trailers	540,432	552,558	565,914	614,631	565,046
Collector's Items	20,165	23,092	26,579	30,569	35,048
Grand Total	3,562,764	3,582,355	3,687,432	3,659,360	3,634,580

TABLE 1.30

TYPES OF MOTOR VEHICLES IN 1983 CRASHES*

Motor Vehicle Type	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Passenger Car	135,975	481	39,103	96,391
Passenger Car & Trailer	149	1	20	128
Truck Or Truck Tractor	21,740	127	5,893	15,720
Truck Tractor and Semi-Trailer	3,304	48	786	2,470
Truck Tractor and Twin Trailer	3	0	0	3
Truck With Other Trailer	154	4	36	114
Motorcycle	2,890	73	2,444	373
Motorscooter/Motorbike	26	0	20	6
Motorized Bike/Moped	83	2	76	5
School Bus	697	7	164	526
Bus	532	2	152	378
Motorhome/Camper	332	3	98	231
Snowmobile	161	4	120	37
Farm Tractor or Equipment	248	5	89	154
Taxicab	246	0	58	188
Police Vehicle	420	2	164	254
Fire Department Vehicle	24	0	7	17
Ambulance	34	1	7	26
Military Vehicle	10	0	0	10
Road Maintenance Vehicle	233	0	48	185
Hit-And-Run Vehicle	10,517	12	1,152	9,353
Other	1,122	2	238	882
Total	178,900	774	50,675	127,451

*Most crashes involve more than one vehicle. For that reason, the total number of vehicles involved in crashes and listed here is greater than the actual 1983 total number of crashes (which was 97,371) or fatal crashes (which was 501).

PART II

PEDESTRIAN INFORMATION

Pedestrians must be considered to be among the most vulnerable of potential traffic crash victims. This is confirmed by comparing the 1983 pedestrian rate of 40.9 fatalities per 1,000 pedestrian crashes to the overall 1983 rate of 5.7 fatalities per 1,000 crashes of all types. This means that pedestrians are 7.2 times more likely to be killed than are persons involved in traffic crashes of all types.

Despite the fact that pedestrian crashes comprised only 1.6 percent of all 1983 traffic crashes, 4.0 percent of all persons injured and 11.1 percent of all traffic fatalities were pedestrians. 1983's fatality figure of 62 is, however, the lowest in more than a decade and, although the total of 1,625 pedestrians injured is slightly higher than the 1982 figure, it is lower than that of any other year in the preceding decade.

The age distribution of pedestrians killed in 1983 is broad, with 25-34 year olds being the largest group, followed closely by those 65 and older and those in the 5-9 and 15-19 age categories. The 25-34 age category also has the largest number of injuries, with 5-24 year olds being strongly represented. Unlike the fatality distribution, however, the elderly were not as prominent among those injured.

Knowing when fatalities and injuries occur is an important feature of accident reporting. More pedestrians were killed on weekend days than weekdays and 44 percent were killed between 3 p.m. and 9 p.m. A second peak occurs between midnight and 3 p.m. The time distribution of persons injured followed a similar pattern, but more injuries occurred Tuesday thorugh Friday than on weekends or Mondays. More fatalities took place in September than in any other month; October and November were the most common months for pedestrians to be injured.

Many pedestrians were killed or injured while crossing a roadway without a traffic control device, and the vehicles which hit them were most often proceeding straight along the roadway.

Almost half of all pedestrian fatalities were killed in rural areas with populations of fewer than 1,000 persons per city or township while pedestrian injuries primarily occurred in cities with populations over 100,000. This is possibly due to the relatively higher proportion of high speed roadways in rural areas.

TABLE 2.01

PEDESTRIAN CRASHES, INJURIES, FATALITIES, 1974-1983

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Pedestrian Crashes*	1,750	1,925	1,723	**	1,731	1,700	1,629	1,648	1,374	1,516
Pedestrians Injured	1,753	1,918	1,726	**	1,723	1,678	1,636	1,658	1,438	1,625
Pedestrians Killed	106	121	120	140	115	117	114	100	76	62

*A "PEDESTRIAN CRASH" IS A CRASH IN WHICH THE FIRST OBJECT THAT WAS STRUCK BY A MOTOR VEHICLE WAS A PEDESTRIAN.

**PEDESTRIAN INJURY INFORMATION IS NOT AVAILABLE FOR 1977.

TABLE 2.02

1983 PEDESTRIAN CRASHES, INJURIES, FATAL CRASHES, FATALITIES BY MONTH

Month	All Crashes	Injuries	Fatal Crashes	Fatalities
January	115	127	1	1
February	110	109	6	6
March	89	87	3	3
April	129	136	8	8
May	123	134	2	2
June	115	120	6	6
July	129	141	1	1
August	120	125	7	8
September	146	138	11	11
October	150	178	5	6
November	156	178	2	2
December	134	156	7	8
Total	1516	1629	59	62

TABLE 2.03

1983 Pedestrian Crashes, Fatalities, and Injuries by Time of Day

	Fatal Crashes	Pedestrian Fatalities	Injury Crashes	Pedestrians Injured
Midnight - 2:59 am	10	11	168	231
3:00 am - 5:59 am	5	6	11	12
6:00 am - 8:59 am	5	5	138	145
9:00 am - 11:59 am	5	5	140	155
Noon - 2:59 pm	2	2	193	208
3:00 pm - 5:59 pm	14	15	381	395
6:00 pm - 8:59 pm	12	12	240	266
9:00 pm - 11:59 pm	6	6	170	200
Unknown -	0	0	15	17
Total	59	62	1456	1629

FIGURE 2.01

PEDESTRIAN INJURIES AND FATALITIES
BY TIME OF DAY

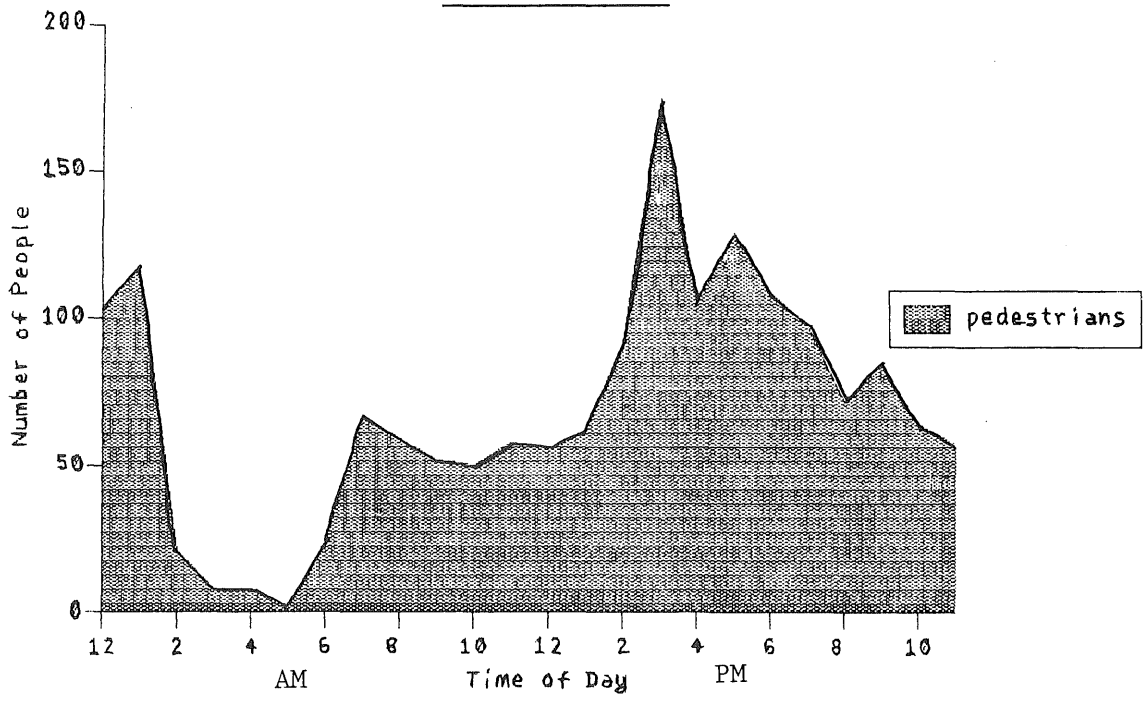


TABLE 2.04

1983 Pedestrian Crashes, Fatalities & Injuries by Day of Week

	Fatal Crashes	Pedestrian Fatalities	Injury Crashes	Pedestrians Injured
Sunday	11	11	120	148
Monday	9	9	195	210
Tuesday	8	8	213	231
Wednesday	6	6	209	231
Thursday	6	6	233	253
Friday	6	8	261	285
Saturday	13	14	225	211
Total	59	62	1456	1569

TABLE 2.05

VEHICLE MOVEMENT IN 1983 PEDESTRIAN CRASHES

Vehicle Movement	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Vehicle Going Straight	1,025	48	977	0
Vehicle Turning Left	100	2	98	0
Vehicle Turning Right	76	0	76	0
Vehicle Backing	87	0	87	0
All Others	165	7	158	0
Not Stated	63	2	60	1
Total	1,516	59	1,456	1

TABLE 2.06

AGE AND SEX OF 1983 PEDESTRIAN FATALITIES

Age Group	Male	Female	Total
0- 4	2	1	3
5- 9	2	5	7
10-14	2	1	3
15-19	4	2	6
20-24	3	0	3
25-34	9	3	12
35-44	1	0	1
45-54	1	1	2
55-64	1	3	4
65-74	6	4	10
75 & Over	1	9	10
Not Stated	1	0	1
Total	33	29	62

FIGURE 2.02

PEDESTRIAN INJURIES AND FATALITIES
BY AGE GROUP AND SEX

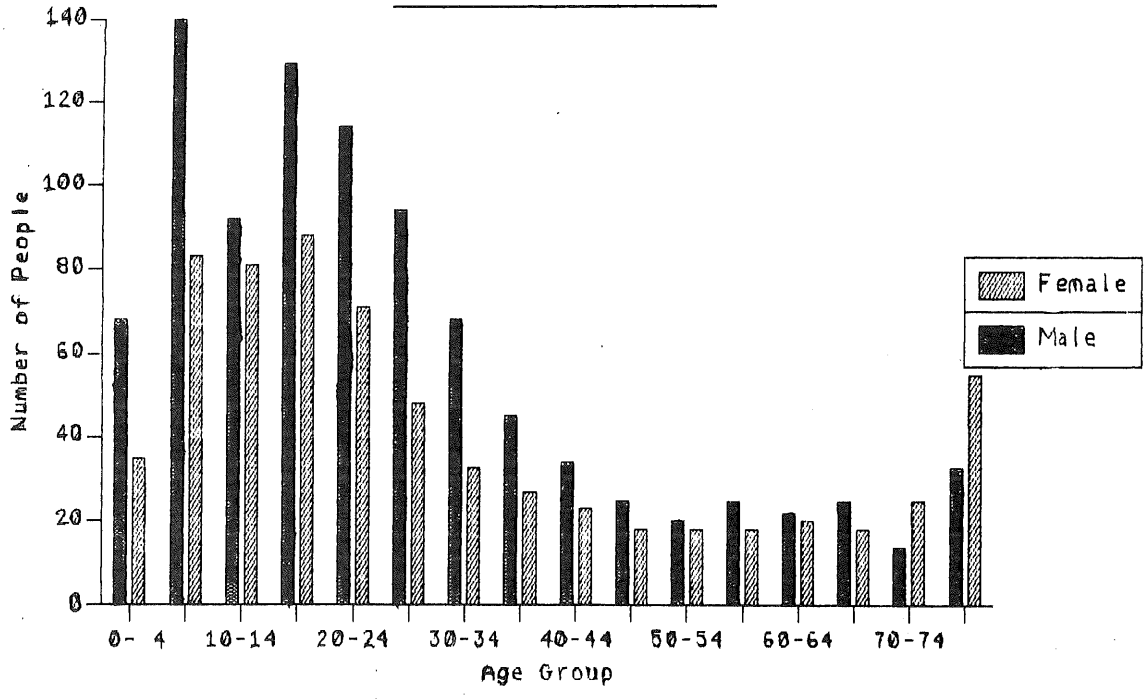


TABLE 2.07

AGE AND SEX OF PEDESTRIANS INJURED IN 1983

Age Group	Male	Female	Not Stated	Total
0- 4	66	34	0	100
5- 9	138	78	1	217
10-14	90	80	0	170
15-19	125	86	0	211
20-24	111	71	1	183
25-34	153	78	0	231
35-44	78	50	0	128
45-54	44	35	0	79
55-64	46	38	0	84
65-74	33	39	0	72
75 & Over	32	46	0	78
Not Stated	42	32	2	76
Total	958	667	4	1629

TABLE 2.08

PRIOR ACTION OF PEDESTRIANS KILLED AND INJURED IN 1983

Action	Number Killed	Number Injured
Crossing With Signal	3	194
Crossing Against Signal	2	93
Crossing In Crosswalk No Signal	1	62
Crossing No Crosswalk No Signal	16	414
Walking In Road With Traffic	6	69
Walking In Road Against Traffic	3	43
Standing In Road	8	82
Emerging From Front/Behind Parked Car	1	90
Child Getting On/Off School Bus	1	9
Getting On/Off Vehicle	2	21
Pushing/Working On Vehicle	1	20
Working In Road	0	14
Playing In Road	0	41
Not In Road	3	66
Other Pedestrian Action	26	418
Unknown	0	28
Total	73	1664

TABLE 2.09

POPULATION OF LOCATION WHERE 1983 PEDESTRIAN CRASHES OCCURRED

Population City or Township	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
100,000 and Over	620	12	607	1
50,000 - 99,999	93	4	89	0
25,000 - 49,999	206	9	197	0
10,000 - 24,999	240	5	235	0
5,000 - 9,999	94	4	90	0
2,500 - 4,999	74	0	74	0
1,000 - 2,499	53	3	50	0
Under 1,000	136	22	114	0
Total	1516	59	1456	1

PART III

BICYCLE INFORMATION

After recent low figures, annual bicycle-motor vehicle crash statistics are again rising, though hopefully more slowly than the biking population is increasing. Bicycle crashes (crashes in which the first object struck by a moving motor vehicle was a bicycle) reached a recent low of 1,067 in 1979, the number of bicyclists injured also hit a low of 993 in 1979, and the number of bicyclists killed dropped to 10 in 1981.

The records of bicycle-motor vehicle crashes for the past 20 years indicate that the number of crashes peaked in 1974 at 1,350, which is 11 percent above the 1983 figure of 1,220; the number of bicyclists injured in motor vehicle crashes peaked in 1980 at 1,295, which is 8 percent above the 1983 figure of 1,194; and the number of bicyclist fatalities peaked in 1972 at 27, 93 percent higher than the 1983 figure of 14.

Males injured or killed outnumbered females by more than two to one and the most vulnerable age category of bicyclists appeared to be the 10-14 year olds, which comprised 36 percent of all fatalities and 31 percent of all bicyclists injured.

As might be expected, most fatalities and injuries occurred during the summer months. Perhaps less predictably, Thursday was the worst day for bicyclist fatalities and Monday was the worst day for injuries. Most fatalities took place between 6. p.m. and 9 p.m. and most injuries occurred earlier, from 3 p.m. to 6 p.m.

Since most bicyclists ride with instead of against the flow of traffic, it is not surprising to find that forty-one percent of bicyclists killed or injured were riding with traffic. Another substantial fraction (21 percent) were riding across the roadway when they were struck.

As in the case of 1983 pedestrian crashes most fatal bicycle crashes occurred in rural areas with populations of fewer than 1,000 persons per city or township, while injury crashes occurred in cities with populations over 100,000. This is probably due to the larger proportion of high speed roadways in rural areas.

It should be noted that this publication covers only those bicycle accidents which involve a motor vehicle. Collisions with other bicycles or with pedestrians are not included in this report.

TABLE 3.01

BICYCLE-INVOLVED CRASHES, INJURIES, FATALITIES, 1974-1983

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Bicycle Crashes*	1,350	1,302	1,217	**	1,154	1,067	1,276	1,255	1,130	1,220
Bicyclists Injured	1,246	1,202	1,114	**	1,105	993	1,295	1,213	1,105	1,194
Bicyclists Killed	16	23	21	24	23	14	19	10	12	14

*A "BICYCLE CRASH" IS A CRASH IN WHICH THE FIRST OBJECT THAT WAS STRUCK BY A MOTOR VEHICLE WAS A BICYCLIST.

**BICYCLIST INJURY INFORMATION IS NOT AVAILABLE FOR 1977.

TABLE 3.02

1983 BICYCLE CRASHES, INJURIES, FATAL CRASHES, FATALITIES BY MONTH

Month	All Crashes	Injuries	Fatal Crashes	Fatalities
January	1	0	1	1
February	12	12	0	0
March	33	32	0	0
April	65	62	0	0
May	173	169	0	0
June	231	231	4	4
July	221	219	3	3
August	251	238	5	5
September	122	121	1	1
October	75	74	0	0
November	34	34	0	0
December	2	2	0	0
Total	1,220	1,194	14	14

FIGURE 3.01

BICYCLIST INJURIES AND FATALITIES
BY TIME OF DAY

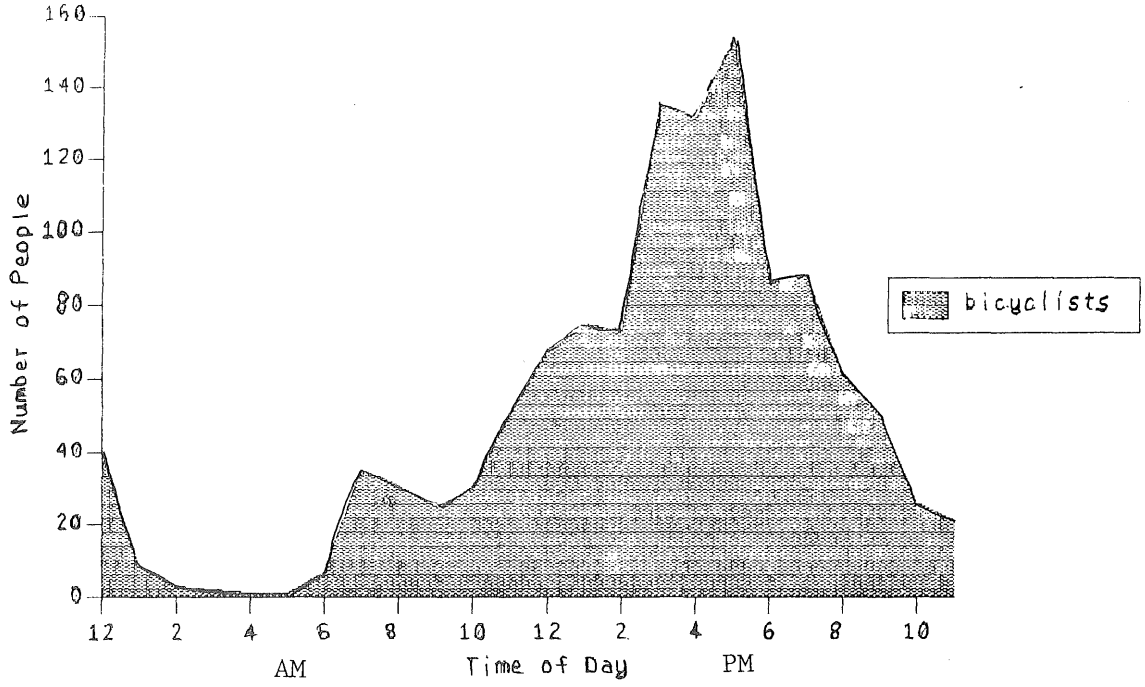


TABLE 3.03

1983 BICYCLE CRASHES, FATALITIES, & INJURIES BY TIME OF DAY

	All Crashes	Fatal Crashes	Bicyclist Fatalities	Injury Crashes	Bicyclists Injured	Property Damage Crashes
Midnight - 2:59 pm	54	1	1	53	51	0
3:00 am - 5:59 am	4	0	0	4	4	0
6:00 am - 8:59 am	75	0	0	74	73	1
9:00 am - 11:59 am	103	1	1	102	104	0
Noon - 2:59 pm	210	2	2	207	213	1
3:00 pm - 5:59 pm	427	3	3	421	416	3
6:00 pm - 8:59 pm	239	4	4	233	231	2
9:00 pm - 11:59 pm	98	3	3	93	94	2
Unknown	10	0	0	8	8	2
Total	1,220	14	14	1,195	1,194	11

TABLE 3.04
1983 BICYCLE CRASHES, FATALITIES & INJURIES BY DAY OF WEEK

	All Crashes	Fatal Crashes	Bicyclist Fatalities	Personal Injury Crashes	Bicyclist Injured	Property Damage Crashes
Sunday	88	2	2	86	86	0
Monday	222	0	0	219	221	3
Tuesday	194	0	0	193	188	1
Wednesday	182	4	4	175	177	3
Thursday	199	6	6	193	191	0
Friday	203	2	2	199	203	2
Saturday	132	0	0	130	128	2
Total	1,220	14	14	1,195	1,194	11

TABLE 3.05

AGE AND SEX OF BICYCLISTS INJURED IN 1983 CRASHES

Age Group	Male	Female	Total
0- 4	12	4	16
5- 9	128	36	164
10-14	254	115	369
15-19	179	81	260
20-24	96	43	139
25-34	86	47	133
35 & Over	55	22	77
Unknown	28	8	36
Total	838	356	1,194

TABLE 3.06

AGE AND SEX OF 1983 BICYCLISTS FATALITIES

Age Group	Male	Female	Total
0- 4	0	0	0
5- 9	1	1	2
10-14	2	3	5
15-19	2	0	2
20-24	2	1	3
25-34	1	0	1
35 & Over	1	0	1
Unknown	0	0	0
Total	9	5	14

FIGURE 3.02

BICYCLIST INJURIES AND FATALITIES
BY AGE GROUP AND SEX

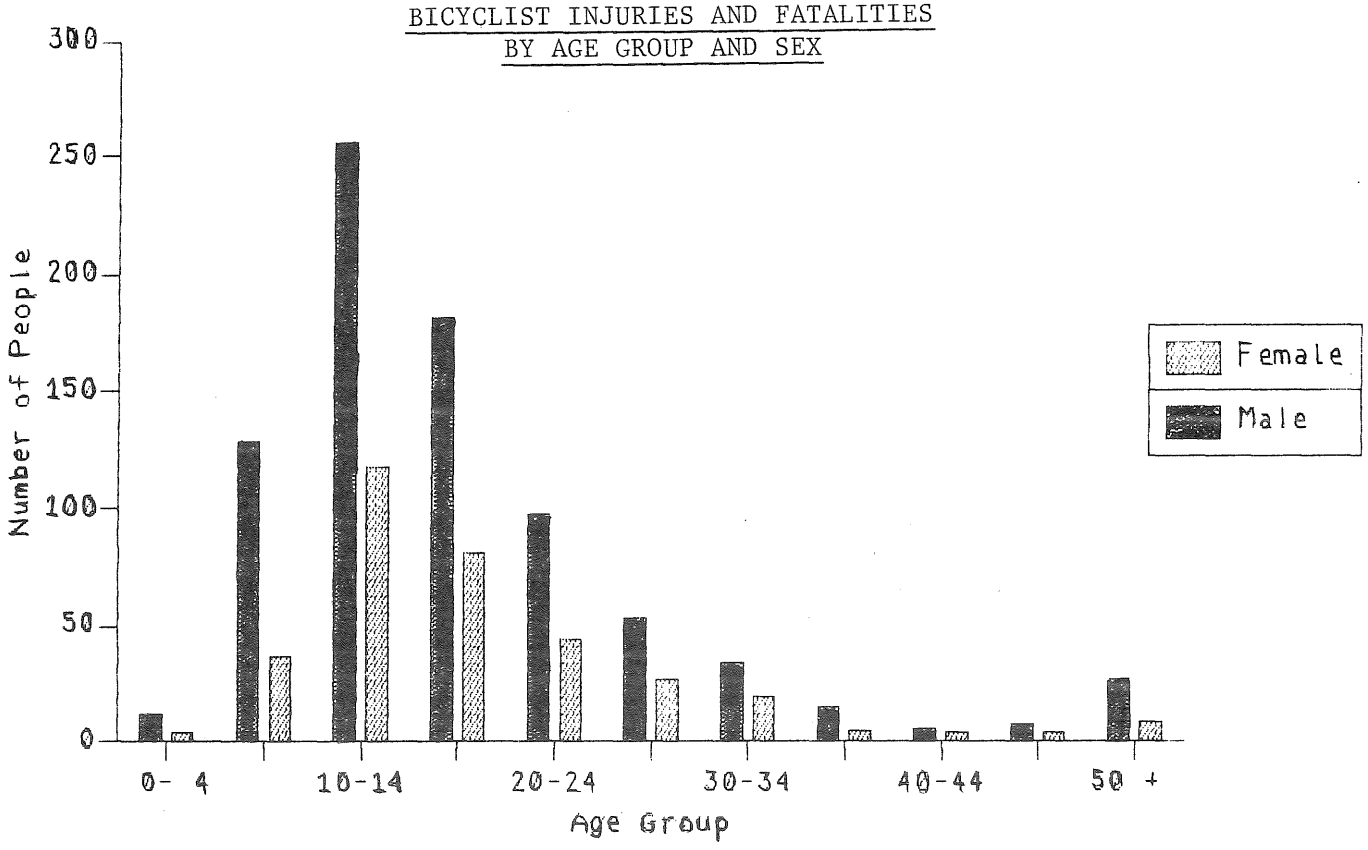


TABLE 3.07

PRIOR ACTION OF BICYCLISTS INVOLVED IN FATAL CRASHES AND INJURY CRASHES IN 1983

Action	Fatal Crashes	Injury Crashes
Riding With Traffic	2	518
Riding Against Traffic	0	88
Making Left Turn	2	75
Making Right Turn	0	20
Making U Turn	0	4
Riding Across Road	2	271
Other	9	289
Total	15	1,265

TABLE 3.08

POPULATION OF LOCATION WHERE 1983 BICYCLE CRASHES OCCURRED

Population City or Township	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
100,000 and Over	379	1	372	6
50,000 - 99,999	78	1	76	1
25,000 - 49,999	247	2	244	1
10,000 - 24,999	236	3	232	1
5,000 - 9,999	89	0	89	0
2,500 - 4,999	58	1	55	2
1,000 - 2,499	36	0	36	0
Under 1,000	97	6	91	0
Total	1,220	14	1,195	11

PART IV

MOTORCYCLE INFORMATION

On April 7, 1977, Minnesota revised its motorcycle helmet law so that only persons who are under age 18 or who are operating a motorcycle with a learner's permit are required to wear a helmet. At that time, and as a result of significantly reduced helmet usage, motorcyclist fatalities increased significantly.

In the five years prior to the change in the helmet law, Minnesota had an average of 58 motorcyclist fatalities each year. Since repeal, however, Minnesota has had an average of 94 fatalities a year. In 1983 only 18 percent of the 73 motorcyclists killed and 27 percent of the 2,678 motorcyclists injured were known to be wearing helmets.

Motorcyclist fatalities for 1983 increased by one from 1977's post helmet law repeal low of 72. Both figures are considerably lower than 1980's high of 121, but they are substantially higher than those before the repeal on the helmet law.

Sixty percent of all property damage crashes involving motorcycles were collisions with other motor vehicles, while only 48 percent of fatal or injury crashes were of that type. Injury crashes involved a higher proportion of overturns than did either fatal or property crashes, suggesting that motorcycle overturns were dangerous enough to cause injuries to riders, though the injuries were most often not fatal.

Male motorcyclists killed in traffic crashes outnumbered females by eleven to one and injured male motorcyclists outnumbered females seven to one. In both the injury and fatality categories, the 15-24 year olds were the most commonly involved (49 percent of motorcyclists killed and 56 percent of those injured).

Since motorcycle use is usually restricted to the snow free months of the year, it is not surprising to find that 90 percent of all motorcycle crashes and 94 percent of all fatal motorcycle crashes took place between April 1 and September 30. Weekends were particularly hazardous for motorcyclists; more injury and property damage crashes took place on Saturdays and almost half of fatal motorcycle crashes took place on Sundays. On an hourly basis more property damage and injury crashes took place from 3 p.m. to 6 p.m. and 41 percent of fatal crashes took place from 9 p.m. to 3 a.m.

Almost half of all fatal crashes and 29 percent of injury crashes took place in rural areas with populations of fewer than 1,000 persons per city or township, probably due to the higher proportion of high speed roadways in rural areas. Only 16 percent each of fatal and injury crashes took place in cities with populations over 100,000. This is unlike bicycle and pedestrian crashes in which most injuries occurred in the largest cities.

TABLE 4.01

1983 MOTORCYCLE-INVOLVED CRASHES BY ACCIDENT TYPE

Accident Type	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Collision With Other Motor Vehicle	1,403	31	1,152	220
Collision With Motor Vehicle In Other Road-Way	3	0	3	0
Collision With Parked Motor Vehicle	127	2	53	72
Collision With Railroad Train	1	1	0	0
Collision With Bicyclist	34	0	34	0
Collision With Pedestrian	29	0	29	0
Collision With Animal	84	1	76	7
Collision With Fixed Object	363	23	317	23
Collision With Other Object	20	2	16	2
Overturn	628	8	590	30
Fire/Explosion	1	0	1	0
Submersion	0	0	0	0
Other/Unknown	118	2	106	10
Total	2,811	70	2,377	364

TABLE 4.02

1983 MOTORCYCLIST CRASHES, INJURIES, AND FATALITIES BY MONTH*

Month	All Crashes	Motorcyclist Injuries	Fatal Crashes	Motorcyclist Fatalities	Property Damage Crashes
January	1	1	0	0	0
February	10	9	0	0	2
March	41	38	0	0	5
April	218	191	5	5	34
May	326	306	9	9	41
June	473	449	17	17	54
July	595	605	17	17	70
August	538	522	6	6	71
September	382	355	12	15	45
October	181	161	4	4	32
November	40	38	0	0	9
December	6	3	0	0	1
Total	2,811	2,678	70	73	364

*This table does not include injuries or fatalities occurring in the accident other than those to the motorcyclists.

TABLE 4.03

1983 MOTORCYCLIST CRASHES, FATALITIES, AND INJURIES BY DAY OF WEEK

Month	All Crashes	Fatal Crashes	Motorcyclist Fatalities	Injury Crashes	Motorcyclists Injured	Property Damage Crashes
Sunday	427	23	26	352	434	52
Monday	328	4	4	277	308	47
Tuesday	321	4	4	278	296	39
Wednesday	343	5	6	289	312	49
Thursday	349	10	10	292	306	47
Friday	494	9	8	423	484	62
Saturday	549	15	15	466	538	68
Total	2,811	70	73	2,377	2,678	364

TABLE 4.04

1983 MOTORCYCLE CRASHES, FATALITIES, & INJURIES BY TIME OF DAY

	All Crashes	Fatal Crashes	Cyclists Fatalities	Injury Crashes	Cyclists Injured	Property Damage Crashes
Midnight - 2:59 pm	385	13	12	323	375	49
3:00 am - 5:59 am	73	5	5	63	73	5
6:00 am - 8:59 am	165	4	4	132	137	29
9:00 am - 11:59 am	203	4	5	168	185	31
Noon - 2:59 pm	400	4	4	336	362	60
3:00 pm - 5:59 pm	633	11	11	542	594	80
6:00 pm - 8:59 pm	527	13	16	454	521	60
9:00 pm - 11:59 pm	409	16	16	346	416	47
Unknown	16	0	0	13	15	3
Total	2,811	70	73	2,377	2,678	364

FIGURE 4.01

MOTORCYCLIST INJURIES AND FATALITIES
BY TIME OF DAY

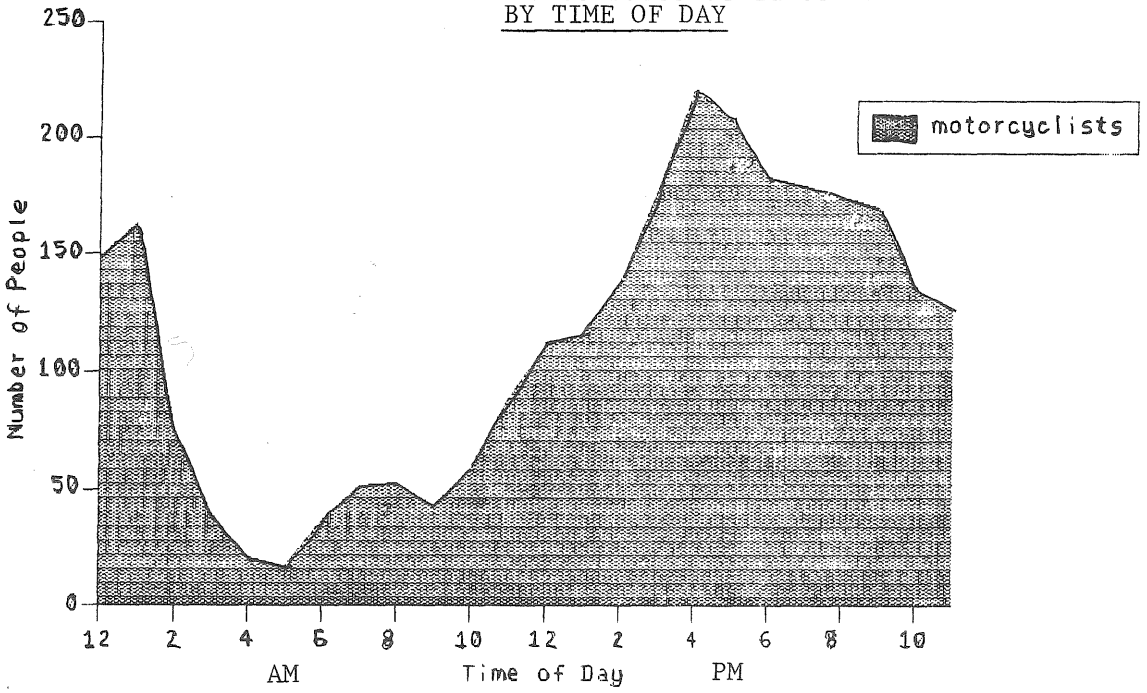


TABLE 4.05

MOTORCYCLE ACCIDENT SUMMARY, 1974-1983

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Total Motorcycle-Involved Accidents	2,400	2,400	2,460	2,718	2,827	2,872	3,308	3,063	2,518	2,811
Fatal Motorcycle-Involved Accidents	51	62	61	88	103	95	112	92	72	70
Personal Injury Motorcycle Involved Accidents	1,865	1,818	1,862	2,120	2,345	2,391	2,728	2,516	2,115	2,377
Persons Killed In Motorcycle Accidents:	54	72	62	94	107	98	122	96	76	73
Motorcyclists	51	63	57	94	106	97	121	96	72	76
Others	3	9	5	0	1	1	1	0	4	0
Persons Injured In Motorcycle Accidents:	2,245	2,247	2,266	2,564	2,907	2,904	3,393	3,070	2,570	2,869
Motorcyclists	2,184	2,205	2,223	2,522	2,860	2,833	3,359	2,874	2,381	2,678
Others	61	42	43	42	47	71	34	196	189	191
Number of Licensed Operators	91,024	127,081	152,138	172,223	184,545	201,075	222,330	238,926	246,134	251,508
Number of Registered Motorcycles	138,193	136,256	143,237	151,763	151,016	156,552	157,815	166,151	159,345	155,502
Rates:										
Motorcyclist Fatalities Per 100 Motorcyclist Injuries and Fatalities	2.3	1.0	2.5	3.6	3.6	3.3	3.5	3.2	2.9	2.7
Total Fatalities Per 100 Injuries and Fatalities (All Vehicles)	2.1	1.8	1.9	1.9	1.9	1.7	1.9	1.7	1.5	1.3
Fatal Motorcycle Crashes Per 100 Motorcycle Crashes	2.1	2.6	2.5	3.2	3.6	3.3	3.4	3.0	2.9	2.5
Fatal Crashes Per 100 Crashes (All Vehicles)	0.7	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.5
Motorcyclist Fatalities Per 10,000 Motorcycle Registrations	3.7	4.6	4.0	6.2	7.0	6.2	7.7	5.8	4.5	4.7
Motorcyclist Injuries Per 10,000 Motorcycle Registrations	158.0	161.8	155.2	166.2	189.4	181.0	212.8	173.0	149.4	172.8
Total Motorcycle Crashes Per 10,000 Motorcycle Registrations	173.7	176.1	171.7	179.1	187.2	183.5	209.6	184.4	158.0	180.8

Helmet Law May 1, 1968
Eye Protection and Lights On Law August 1, 1975
Helmet Law Repeal April 7, 1977

TABLE 4.06

AGE AND SEX OF 1983 MOTORCYCLIST FATALITIES

Age Group	Male	Female	Total
0- 4	1	0	1
5- 9	1	1	2
10-14	1	0	1
15-19	13	2	15
20-24	19	2	21
25-29	8	1	9
30-34	9	0	9
35-39	4	0	4
40-44	5	0	5
45 & Over	6	0	6
Not Stated	0	0	0
Total	67	6	73

TABLE 4.07

AGE AND SEX OF MOTORCYCLIST INJURED IN 1983 CRASHES

Age Group	Male	Female	Not Stated	Total
0- 4	4	2	0	6
5- 9	5	1	0	6
10-14	55	15	0	70
15-19	510	87	0	597
20-24	822	83	0	905
25-29	431	57	0	488
30-34	228	27	0	255
35-39	116	23	0	139
40-44	65	10	0	75
45 & Over	83	8	0	91
Not Stated	25	23	2	50
Total	2,344	336	2	2,682

FIGURE 4.02

MOTORCYCLIST INJURIES AND FATALITIES
BY AGE GROUP AND SEX

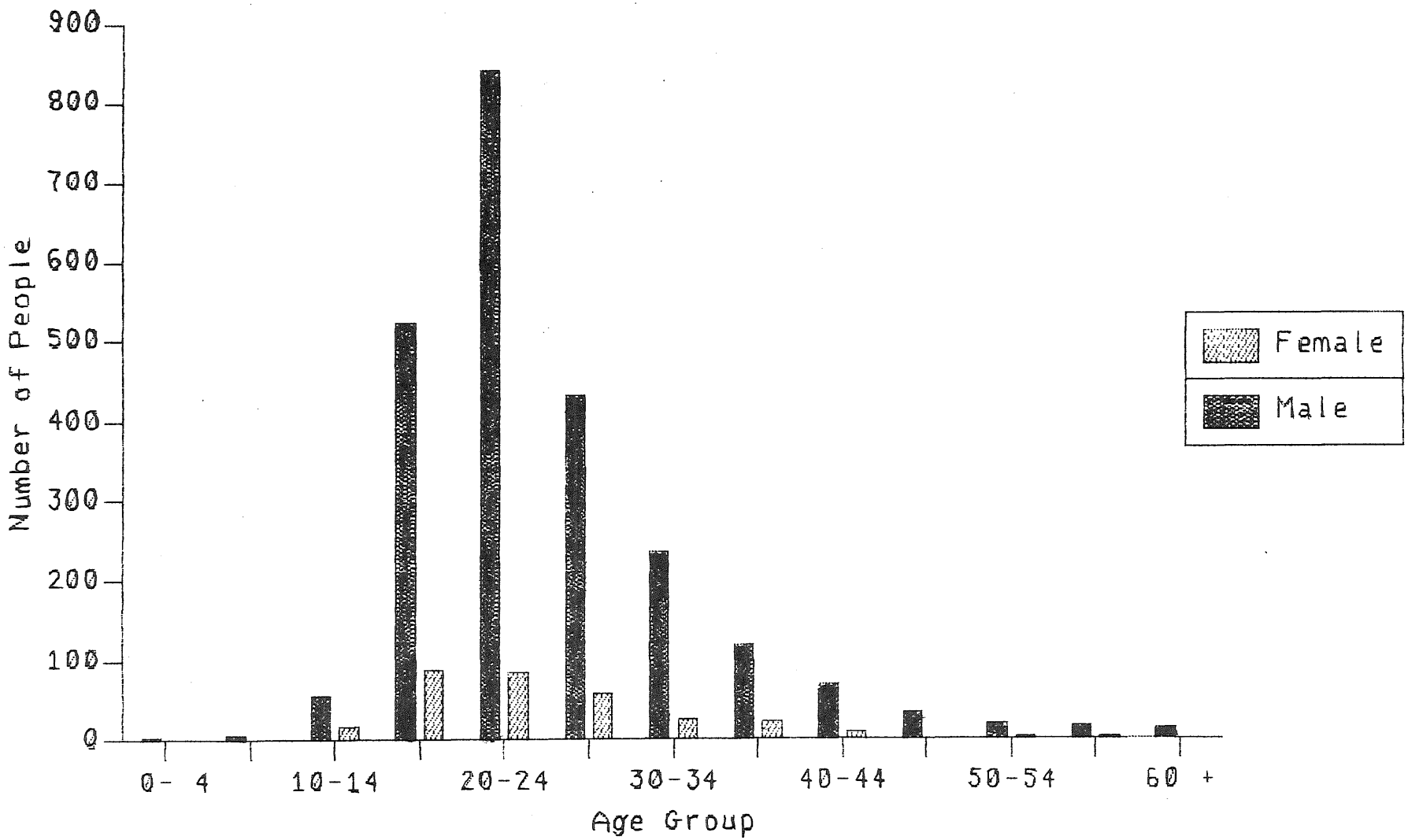


TABLE 4.08

HELMET USAGE BY MOTORCYCLISTS KILLED AND INJURED IN 1983 CRASHES

Helmet Usage	Number Killed	Number Injured
Used	13	711
Not Used	58	1,143
Unknown	2	824
Total	73	2,678

TABLE 4.09

POPULATION OF LOCATION WHERE 1983 MOTORCYCLE ACCIDENTS OCCURRED

Population of City or Township	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
100,000 and Over	486	11	378	97
50,000 - 99,999	138	3	115	20
25,000 - 49,999	431	8	376	47
10,000 - 24,999	476	6	407	63
5,000 - 9,999	252	3	214	35
2,500 - 4,999	159	3	133	23
1,000 - 2,499	77	2	63	12
Under 1,000	792	34	691	67
Total	2,811	70	2,377	364

PART V

RAILROAD INFORMATION

1983 did not follow the trend of 1982's dramatic decrease in railroad grade crossing fatalities. Fatalities more than doubled, from seven to fifteen, which brings fatalities back to the level of 1980 and 1981.

Total crashes increased 6 percent, from 164 to 174, over the previous year, but injuries decreased 8 percent, from 92 to 85, over the same period. One encouraging trend in the last three years is the continuing drop in the number of injuries, a 44 percent decrease from 152 in 1980 to 85 in 1983. Property damage crashes have likewise decreased; 1981, 1982, and 1983 are all substantially lower than the 1980 figure of 204.

On a hourly basis, 23 percent of injury crashes took place from noon to 3 p.m., followed by 22 percent from midnight to 3 p.m. Forty-five percent of all fatal crashes took place fom 3 p.m. to 9 p.m. A perhaps unexpected monthly pattern emerges, in that almost half of all crashes took place during the four month period from October through January.

A breakdown of crashes by counties shows that the densely populated counties of Hennepin and Ramsey top the list with 21 percent of all railroad grade crossing crashes, but neither county recorded a fatal crash. No county in the state recorded more than one fatal crash in 1983.

As in 1982, failure to yield and driver inattention were the most commonly cited contributing factors to railroad crossing crashes.

TABLE 5.01

RAILROAD CROSSING FATAL CRASHES, FATALITIES, 1974-1983

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Fatal Crashes	26	19	12	22	25	23	12	13	5	11
Fatalities	29	21	14	26	34	32	15	15	7	15

TABLE 5.02

1983 RAILROAD CRASHES, INJURIES, FATAL CRASHES, FATALITIES BY MONTH

Month	All Crashes	Injuries	Fatal Crashes	Fatalities
January	16	5	1	1
February	13	7	0	0
March	11	3	2	3
April	11	5	1	1
May	11	5	0	0
June	12	6	0	0
July	5	3	0	0
August	12	9	0	0
September	13	7	2	4
October	17	10	1	1
November	23	8	3	3
December	30	17	1	2
Total	174	85	11	15

TABLE 5.03

AGE AND SEX OF PERSONS KILLED AND INJURED IN 1983 RAILROAD CROSSING CRASHES

Age Group	Fatalities			Injuries		
	Male	Female	Total	Male	Female	Total
0- 4	1	0	1	0	2	2
5- 9	1	0	1	0	2	2
10-14	0	0	0	1	0	1
15-19	1	1	2	12	4	16
20-24	1	1	2	10	0	10
25-34	3	1	4	22	7	29
35-44	1	1	2	6	3	9
45-54	0	2	2	3	2	5
55-64	0	0	0	1	0	1
65-74	1	0	1	4	1	5
75 & Over	0	0	0	1	0	1
Not Stated	0	0	0	4	0	4
Total	9	6	15	64	21	85

TABLE 5.04

1983 RAILROAD CRASHES
BY TIME OF DAY

Time	All Crashes	Fatal Crashes	Injury Crashes
Midnight-2:59 AM	30	1	15
3:00 AM-5:59 AM	9	1	3
6:00 AM-8:59 AM	11	0	8
9:00 AM-11:59 AM	27	2	9
Noon-2:59 PM	34	1	16
3:00 PM-5:59 PM	19	2	6
6:00 PM-8:59 PM	21	3	7
9:00 PM-11:59 PM	21	1	4
Unknown	2	0	1
Total	174	11	69

TABLE 5.05

1983 RAILROAD CRASHES BY COUNTY*

County	All Crashes	Fatal Crashes	Injury Crashes
Hennepin	25	0	13
Ramsey	11	0	3
Dakota	10	0	5
Carver	9	1	5
Washington	7	0	2
Clay	6	0	1
Olmsted	6	1	2
Winona	6	0	1
Morrison	5	0	1
St. Louis	5	0	2
All Others	84	9	34
Total	174	11	69

* Counties listed individually are those with 5 or more crashes in 1982.

TABLE 5.06

RAILROAD CROSSING CRASHES, 1980 - 1983

	1980	1981	1982	1983
Total Crashes	271	192	164	174
Fatal Crashes	12	13	5	11
Property Damage Crashes	204	124	86	94
Fatalities	15	15	7	15
Injuries	152	102	92	85

TABLE 5.07

CONTRIBUTING FACTORS IN 1983 RAILROAD CROSSING CRASHES

CONTRIBUTING FACTOR	NUMBER	PERCENT
No Improper Driving	21	5.8
Failure to Yield	42	11.7
Illegal/Unsafe Speed	15	4.2
Disregard for Traffic Control Device	29	8.1
Improper Parking	7	1.9
Unsafe Backing	1	0.3
Inattention	65	18.1
Inexperience	5	1.4
Physical Impairment	17	4.7
Vision Obscured	15	4.2
Defective Equipment	6	1.7
Other Human Factor	9	2.5
Unknown	128	35.6
Total	360	100.2

PART VI

SCHOOL BUS INFORMATION

1983 was not a good year for school bus crashes in Minnesota. The total of seven school buses involved in fatal crashes is the highest number since 1976 and fatalities were up from two in 1982 to eight in 1983. The number of persons injured also increased, from 282 in 1982 to 321 in 1983.

Three of the eight killed were pedestrians and the five others were killed as a result of collisions with other motor vehicles; no school bus occupants were killed. Only three of the fatalities were of school age (5-9 year olds), the remainder were 25 or older. Forty-one percent of those injured were of school age (5-19 years old).

It is sometimes confusing to see persons of up to 65 years of age and even older listed as school bus crash casualties. This confusion stems from not realizing that many of the injured persons, and all of the fatalities for 1983, were not school bus occupants, they were pedestrians or occupants of other vehicles involved in crashes with school buses.

In 1983, fatal school bus crashes all occurred during the school year, from January through April and September through December, with three in December alone. January and December were the most common months for injury crashes though others were spread throughout the year.

On an hourly basis, 71 percent of all fatal crashes took place between 3 p.m. and 6 p.m., with the other 29 percent occurring from 6 a.m. to noon. Injury crashes occurred around the clock, with one-third between 6 a.m. and 9 a.m. and another one-third between 3 p.m. and 6 p.m.

Forty-three percent of school bus fatalities occurred in rural areas with populations of fewer than 1,000 persons per city or township, with only 14 percent in cities with populations over 100,000. Injury crashes show the opposite pattern, 35 percent occurred in the largest cities and 17 percent in the rural area. Again, this is most probably due to the high proportion of high speed roadways in rural areas.

TABLE 6.01

SCHOOL BUSES INVOLVED IN CRASHES, 1974-1983

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
School Buses Involved In All Crashes	539	708	599	724	698	866	678	692	737	694
School Buses Involved In Personal Injury Crashes	148	154	119	162	166	187	171	161	163	162
School Buses Involved In Fatal Crashes	6	2	9	1	2	6	1	2	2	7

TABLE 6.02

1983 SCHOOL BUS INVOLVED CRASHES BY ACCIDENT TYPE

Accident Type	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Collision With Other Motor Vehicle	575	4	128	443
Collision With Motor Vehicle In Other Road-Way	6	0	1	5
Collision With Parked Motor Vehicle	60	0	7	53
Collision With Railroad Train	0	0	0	0
Collision With Bicyclist	2	0	2	0
Collision With Pedestrian	15	3	12	0
Collision With Animal	2	0	0	2
Collision With Fixed Object	22	0	7	15
Collision With Other Object	1	0	1	0
Overturn	2	0	1	1
Other	2	0	2	0
Total	687	7	161	519

TABLE 6.03

AGE AND SEX OF PERSONS KILLED & INJURED IN 1983 SCHOOL BUS CRASHES

Age	Fatalities			Injuries			
	Male	Female	Total	Male	Female	Not Stated	Total
0- 4	0	0	0	0	6	0	6
5- 9	1	2	3	14	15	0	29
10-14	0	0	0	24	29	0	53
15-19	0	0	0	28	23	0	51
20-24	0	0	0	9	12	0	21
25-34	1	2	3	27	16	0	43
35-44	0	0	0	16	17	0	33
45-54	0	0	0	6	14	0	20
55-64	1	0	1	11	8	0	19
65 & Over	0	1	1	5	10	0	15
Unknown	0	0	0	6	24	1	31
Total	3	5	8	146	174	1	321

TABLE 6.04

1983 SCHOOL BUS CRASHES, INJURIES, FATAL CRASHES, FATALITIES BY MONTH

Month	All Crashes	Injuries	Fatal Crashes	Fatalities
January	100	40	1	1
February	95	57	0	0
March	51	11	0	0
April	63	14	1	1
May	43	41	0	0
June	12	8	0	0
July	11	1	0	0
August	13	9	0	0
September	56	28	1	2
October	42	19	1	1
November	62	41	0	0
December	139	47	3	3
Total	687	316	7	8

TABLE 6.05

POPULATION OF LOCATION WHERE 1983 SCHOOL BUS CRASHES OCCURRED

Population City or Township	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
100,000 and Over	215	1	56	158
50,000 - 99,999	18	1	3	14
25,000 - 49,999	120	1	34	85
10,000 - 24,999	121	1	20	100
5,000 - 9,999	44	0	11	33
2,500 - 4,999	37	0	6	31
1,000 - 2,499	19	0	3	16
Under 1,000	113	3	28	82
Total	687	7	161	519

TABLE 6.06

1983 SCHOOL BUS CRASHES BY TIME OF DAY

Time of Day	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Midnight - 2:59 AM	19	0	3	16
3:00 AM - 5:59 AM	1	0	0	1
6:00 AM - 8:59 AM	219	1	53	165
9:00 AM - 11:59 AM	88	1	17	70
Noon - 2:59 PM	99	0	18	81
3:00 PM - 5:59 PM	213	5	57	151
6:00 PM - 8:59 PM	25	0	8	17
9:00 PM - 11:59 PM	10	0	2	8
Unknown	13	0	3	10
Total	687	7	161	519

PART VII

HOLIDAY INFORMATION

Because many people travel long distances during holiday periods, the number of accidents which occur during those periods continues to be of particular interest. Although not legal holidays, we have this year also included information on the opening weekends of fishing and deer hunting seasons, since increased travel can be expected to occur during those weekends as well.

In 1983, four of the eight holidays; Memorial Day, Thanksgiving, Christmas and the deer hunting opener, showed greater than the expected number of crashes (the expected number is the figure calculated for equivalent non-holiday periods in 1983). At least two of those periods, Thanksgiving and Christmas, were marked by exceptionally bad weather in portions or all of Minnesota, and yet both holidays showed fewer than the expected number of fatalities.

Memorial Day and the fishing season opener were the only two periods with higher than the expected number of fatal crashes. Memorial Day's 1983 figure of nine fatal crashes was 80 percent higher than the expected number of five and the fishing opener figure of eight fatal crashes was double the expected value of four.

Although six of the eight holiday periods show fewer than the expected number of fatalities, five of the eight show higher than the expected number of injuries. Only New Years, Thanksgiving, and the deer hunting season opener show fewer than the expected number of injuries.

TABLE 7.01

HOLIDAY ACCIDENT SUMMARY, 1976-1983

	Year	Hours	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Killed	Injured
New Year's	1976	78	932	4	206	722	4	318
	1977	78	1,568	6	312	1,250	6	500
	1978	78	1,196	5	292	899	5	453
	1979	30	609	4	175	417	4	274
	1980	30	698	6	218	474	6	355
	1981	78	1,360	4	298	1,058	5	454
	1982	54	640	0	159	414	0	243
	1983	54	577	1	160	416	1	241
Memorial Day	1976	78	875	7	281	587	7	471
	1977	78	854	8	258	588	8	406
	1978	78	1,030	13	343	674	14	616
	1979	78	775	8	307	440	9	469
	1980	78	693	8	316	369	9	465
	1981	78	876	9	298	569	9	470
	1982	78	548	6	215	327	6	333
	1983	78	826	9	304	513	11	488
July 4th	1976	78	942	11	293	638	11	505
	1977	78	941	18	274	649	19	453
	1978	30	348	7	154	187	7	258
	1979	30	346	2	148	196	2	233
	1980	78	827	16	339	472	18	548
	1981	78	788	13	328	447	13	502
	1982	78	606	12	242	355	14	389
	1983	78	750	5	293	452	5	484
Labor Day	1976	78	899	9	285	605	10	480
	1977	78	765	7	293	465	10	496
	1978	78	906	9	335	562	11	511
	1979	78	857	10	296	551	11	473
	1980	78	899	11	310	578	12	499
	1981	78	736	7	273	456	10	403
	1982	78	667	7	237	423	8	381
	1983	78	793	5	299	489	5	437
Thanksgiving	1976	102	1,508	9	342	1,157	11	545
	1977	102	2,017	7	370	1,640	7	598
	1978	102	1,746	7	407	1,332	8	653
	1979	102	1,423	9	397	1,017	9	622
	1980	102	2,121	8	486	1,627	10	751
	1981	102	961	7	260	694	7	384
	1982	102	1,035	10	289	736	11	456
	1983	102	1,350	5	290	1,055	6	443
Christmas	1976	78	619	5	136	478	6	232
	1977	78	882	3	212	667	3	373
	1978	78	982	6	225	751	7	371
	1979	30	204	2	46	161	2	70
	1980	30	206	5	46	155	5	82
	1981	78	893	7	211	675	8	323
	1982	54	471	1	112	358	1	177
	1983	78	1,435	3	313	1,119	3	483

TABLE 7.02

1983 HOLIDAY CRASHES COMPARED WITH NON-HOLIDAY PERIODS

Holiday	Hours	Total Crashes		Fatal Crashes		Personal Injury Crashes		Injuries		Fatalities	
		Holiday	Average	Holiday	Average	Holiday	Average	Holiday	Average	Holiday	Average
New Year's 6:00 PM Friday, Dec. 31, 1982 to Midnight Sunday, Jan. 2, 1983	54	577	588	1	4	160	188	241	282	1	5
Memorial Day 6:00 PM Friday, May 27 to Midnight Monday, May 30	78	826	813	9	5	304	254	488	372	11	6
July 4 6:00 PM Friday, July 1 to Midnight Monday, July 4	78	750	813	5	5	293	254	484	372	5	6
Labor Day 6:00 PM Friday, September 2 to Midnight Monday, September 5	78	793	813	5	5	299	254	437	372	5	6
Thanksgiving 6:00 PM Wednesday, November 23 to Midnight Sunday, November 27	102	1,350	1,164	5	7	290	354	443	511	6	8
Christmas 6:00 PM Friday, December 23 to Midnight Monday, December 26	78	1,435	813	3	5	313	254	483	372	3	6
Fishing Season Opening Weekend 6:00 PM Friday, May 13 to Midnight Sunday, May 15	54	475	588	8	4	171	188	283	282	8	5
Deer Hunting Season Opening Weekend 6:00 PM Friday, Nov. 4 to Midnight Sunday, Nov. 6	54	630	588	4	4	177	188	265	282	5	5

The average consists of the average number of accidents occurring in 1983 during non-holiday periods of equal length on the same days of the week.

PART VIII

YOUNG DRIVER INFORMATION

Because of their relative inexperience in handling a motor vehicle, the accident experience of young drivers in Minnesota is an area of continuing interest. The percentage of the licensed driving population in Minnesota which is made up of young drivers (age 15-19) has been declining, from its 1978 peak of 11.9 percent to the 1983 figure of 7.4 percent.

In total crashes, as might be expected, driver inexperience was cited as a contributing factor for young drivers almost five times more often than for drivers 20 years and older. In fatal crashes, it was cited almost seven times more often.

Other factors of particular note in fatal crashes are failure to yield, which was cited twice as often for older drivers, and speeding and improper turns, which were cited more often for young drivers.

For more information on young drivers' accident experience, see Tables 1.21 through 1.25, 10.04, and 10.05.

TABLE 8.01

NUMBER AND PERCENT OF LICENSED TEENAGE DRIVERS, 1974-1983

Year	Drivers 15-19	Drivers Over 19	Percent Of Drivers Who Are 15-19
1974	290,620	2,219,757	11.6
1975	300,906	2,251,699	11.9
1976	307,481	2,334,543	11.6
1977	315,138	2,381,533	11.9
1978	304,021	2,392,599	11.3
1979	290,570	2,434,848	10.7
1980	281,750	2,484,282	10.2
1981	269,577	2,556,320	9.5
1982	257,151	2,608,895	9.0
1983	211,584	2,859,965	7.4

TABLE 8.02

COMPARISON OF CONTRIBUTING FACTORS CITED IN 1983 CRASHES

BASED ON AGE OF DRIVER INVOLVED

CONTRIBUTING FACTOR	ALL DRIVERS		DRIVERS 19 AND YOUNGER		DRIVERS 20 AND OLDER	
	ALL CRASHES (%)	FATAL CRASHES (%)	ALL CRASHES (%)	FATAL CRASHES (%)	ALL CRASHES (%)	FATAL CRASHES (%)
Failure to Yield Right of Way	14.4	11.3	12.4	7.3	15.7	14.5
Illegal/Unsafe Speed	14.4	17.4	16.6	22.0	13.7	14.7
Following Too Closely	4.8	.5	3.9	.0	5.1	.7
Disregard for Traffic Control Device	3.6	4.4	2.9	5.5	3.8	4.7
Driving Left of Center-- Not Passing	2.2	11.2	2.4	8.3	2.0	11.0
Improper Passing/ Overtaking	1.9	1.1	1.5	.0	1.8	.9
Improper/Unsafe Lane Use	4.9	4.3	3.8	1.8	4.6	4.2
Improper Parking/ Starting/Stopping	1.7	1.3	1.2	.0	1.6	1.9
Improper Turn	3.0	1.0	2.6	.9	3.0	.9
Unsafe Backing	2.4	.1	1.2	.0	2.0	.0
No/Improper Signal	.4	.0	.4	.0	.5	.0
Impeding Traffic	.5	.4	.3	.0	.5	.2
Driver Inattention/ Distraction	24.6	14.8	22.7	15.6	25.6	16.3
Driver Inexperience	4.9	4.3	12.8	13.8	2.8	2.1
Physical Impairment	7.1	19.0	5.9	17.4	7.8	19.6
Vision Obscured	3.9	1.4	3.3	.9	4.4	1.9
Defective Equipment	2.5	2.0	2.5	.0	2.7	2.5
Pedestrian Violation/ Error	.8	3.6	1.6	3.7	.4	2.1
Other	2.1	1.9	1.8	2.8	2.0	1.9
Total	100.1	100.0	99.8	100.0	100.0	100.1

Percentages are based on all contributing factors cited.

PART IX

HIT-AND-RUN ACCIDENT INFORMATION

Hit-and-run accidents continue to be a problem in Minnesota. In 1983, 11 percent of all accidents involved a vehicle which left the scene. While only two percent of all fatal and four percent of all injury crashes involved a hit-and-run vehicle, 14 percent of all property damage crashes involved a vehicle of that type.

By category of crash types, hit-and-run accidents were also not evenly distributed. Hit-and-run vehicles were involved in 50 percent of all collisions with parked vehicles, 10 percent of all bicycle collisions, and 14 percent of all pedestrian collisions.

Not surprisingly, more hit-and-run crashes occur at night. On an hourly basis, 24 percent of all hit-and-run involved crashes occurred between midnight and 3 a.m., but 50 percent of all hit-and-run fatal crashes occurred in that same period.

TABLE 9.01

1983 HIT-AND-RUN CRASHES BY ACCIDENT TYPE

Accident Type	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Collision With Other Motor Vehicle	3,185	1	682	2,502
Collision With Motor Vehicle In Other Road-Way	7	0	2	5
Collision With Parked Motor Vehicle	6,219	0	118	6,101
Collision With Railroad Train	1	0	0	1
Collision With Bicyclist	113	2	108	3
Collision With Pedestrian	211	8	202	1
Collision With Animal	3	0	0	3
Collision with Fixed Object	1,186	0	106	1,080
Collision With Other Object	29	0	1	28
Overturn	42	0	10	32
Other/Unknown	29	1	16	12
Total	11,025	12	1,245	9,768

TABLE 9.02

1983 HIT-AND-RUN CRASHES BY TIME OF DAY

Time of Day	All Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes
Midnight - 2:59 AM	2,633	6	277	2,350
3:00 AM - 5:59 AM	394	1	43	350
6:00 AM - 8:59 AM	624	1	54	569
9:00 AM - 11:59 AM	730	0	64	666
Noon - 2:59 PM	1,076	1	137	938
3:00 PM - 5:59 PM	1,505	0	225	1,280
6:00 PM - 8:59 PM	1,436	1	189	1,246
9:00 PM - 11:59 PM	1,848	2	243	1,603
Unknown	779	0	13	766
Total	11,025	12	1,245	9,768

PART X

ALCOHOL INFORMATION

Even though the Minnesota laws dealing with drunk driving are considered among the best in the nation, the problem of drinking and driving continues to be a most serious safety obstacle.

1983 was another year of activity in terms of the drunken driver problem in Minnesota. The 1983 Minnesota legislature further tightened the state's drunken driving laws and increased the severity of the penalties for certain offenses related to drunken driving. In 1983, a record number of drunken driving arrsts were made (32,155, a 15% increase from 1982), and a record number of driver license revocations were made for alcohol-related reasons (34,903, a 6% increase form 1982).

Since 1968, a Minnesota law has been in effect that requires blood alcohol concentration (BAC) tests be taken on drivers 16 years of age or older who die within four hours of a motor vehicle crash. There were 345 drivers killed in motor vehicle collisisons in 1983. BAC tests were taken for 258 (75%) of these drivers, with 145 (56%) testing positive and 117 (45%) of these at or above the .10 level declared illegal by Minnesota statutes.

Pedestrians 16 years of age or older who die within four hours of a motor vehicle crash are also tested under the law. Forty-nine pedestrians in this category died in 1983. Twenty-one of them (43%) had been drinking and 18 of them (37%) were legally drunk.

Thus, of the 250 persons killed in 1983 alcohol-related traffic crashes, 166 (66%) had themselves been drinking as a driver or pedestrian and 178 (54%) of them were legally drunk. The remaining 84 alcohol-related traffic deaths were of passengers whose drinking status is unknown or non-drinking drivers or pedestrians involved in a collision with a drinking driver.

The largest number of positive-testing fatal cases occurred in May through August (60%). The hours of midnight to 3 a.m. accounted for 31% of the alcohol-positive driver fatalities, while the hours of 9 p.m. to midnight contributed the next highest proportion (21%).

Eighty-nine percent of the positive cases were males. The age-group covering those from 21 to 25 had by far the highest percentage of positive tests with 32% of the total.

TABLE 10.01

DRUNKEN DRIVING IN MINNESOTA - 1976-1983

	1976	1977	1978	1979	1980	1981	1982	1983
Drunken Driving Arrests	19,419	16,976	18,078	18,092	22,788	27,034	28,048	32,155
State Patrol Only	4,689	3,593	3,716	3,879	5,282	7,116	7,174	7,921
Alcohol-Related License Rev.	14,251	17,741	24,357	24,966	30,481	32,043	36,024	41,311
For Conviction of DWI	NA	NA	15,512	14,797	17,406	19,009	9,400	5,462
For Refusing Test	NA	NA	3,344	3,427	3,863	4,427	8,456	11,155
For Failing Test (.10)	NA	NA	5,501	6,742	9,212	8,607	18,168	24,694
Drivers Killed	478	476	576	523	519	437	321	345
Tested (died in 4 hours)	61%	58%	66%	63%	65%	66%	72%	75%
Positive (drinking)	64%	60%	63%	58%	69%	62%	54%	56%
Drunk (.10 or higher)	53%	54%	51%	45%	58%	52%	48%	45%

TABLE 10.02

ACCIDENT TYPES OF 1983 FATAL CRASHES COMPARED WITH FATAL CRASHES INVOLVING AN ALCOHOL-POSITIVE DRIVER FATALITY

Type of Accident	Percent of Fatal Crashes	Percent of Fatal Crashes With An Alcohol-Positive Driver Fatality*
Collision With Other Motor Vehicle	44.8	35.9
Collision With Parked Motor Vehicle	1.8	0.7
Collision With Railroad Train	2.2	1.4
Collision With Bicyclist	2.8	0.0
Collision With Pedestrian	11.8	0.0
Collision With Animal	0.2	0.0
Collision With Fixed Object	20.8	38.6
Collision With Other Object	0.4	0.0
Overturn	14.0	22.8
Fire/Explosion	0.0	0.0
Submersion	0.0	0.0
Other	1.4	0.7
Total	100.2	100.1

*These figures are based on the 145 cases in which a fatally injured driver was tested for blood alcohol concentration and was found to have been drinking.

TABLE 10.03

AGE OF PERSONS KILLED AND INJURED IN 1983 ACCIDENTS

WHERE A DRIVER HAD BEEN DRINKING*

AGE	PERSONS KILLED	PERSONS INJURED
0 - 4	4	93
5 - 9	2	98
10 - 14	0	134
15 - 19	60	2,146
20 - 24	61	2,534
25 - 29	36	1,374
30 - 34	21	829
35 - 39	16	480
40 - 44	8	286
45 - 49	12	184
50 - 54	8	162
55 - 59	4	143
60 - 64	7	125
65 - 69	5	66
70 - 74	2	45
75 & Older	2	39
Not Stated	2	369
Total	250	9,107

*Drivers in this category were listed on the traffic accident report as "under the influence" or "had been drinking".

FIGURE 10.01
ALCOHOL RELATED CRASHES
BY DAY OF WEEK

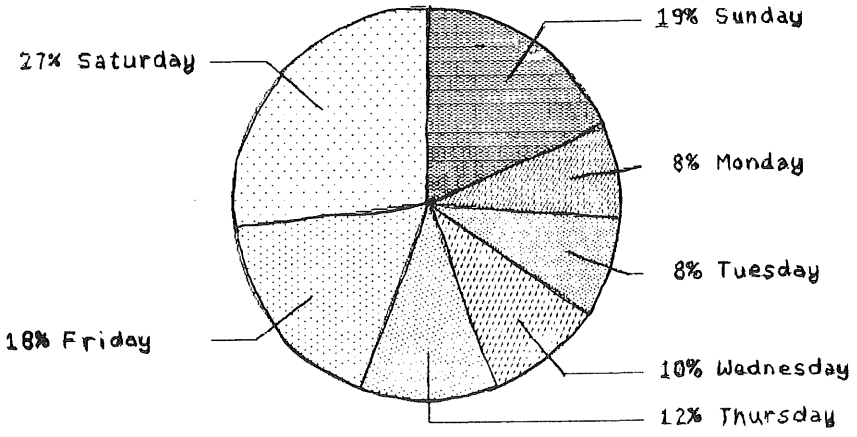


FIGURE 10.02
ALCOHOL RELATED* INJURY CRASHES
BY DAY OF WEEK

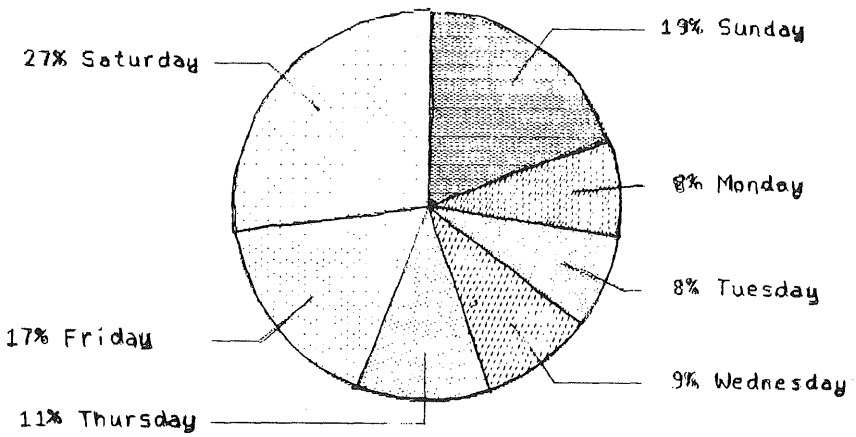
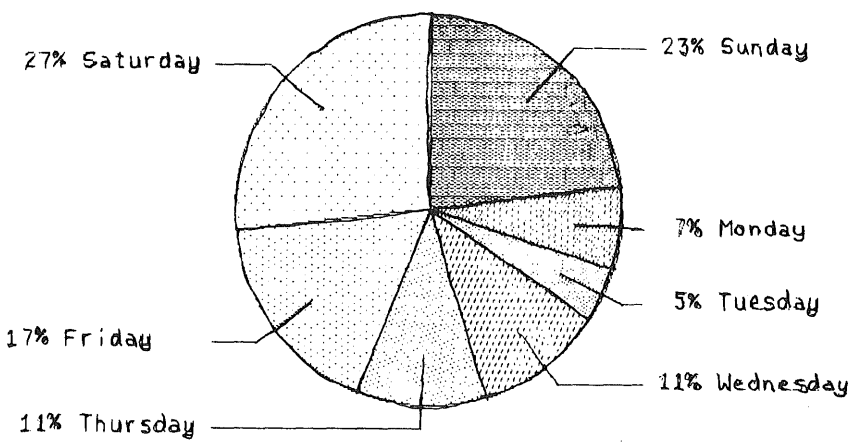


FIGURE 10.03
ALCOHOL RELATED* FATAL CRASHES
BY DAY OF WEEK



*Alcohol related crashes are ones in which the investigating officer indicated on the accident report that at least one of the drivers had been drinking prior to the crash.

TABLE 10.04

DRINKING DRIVER FATALITY SUMMARY, 1974-1983

1974	(%)	1975	(%)	1976	(%)	1977	(%)	1978	(%)	1979	(%)	1980	(%)	1981	(%)	1982	(%)	1983	(%)	
852		777		809		856		980		881		863		763		581		558		People were killed in motor vehicle crashes
501	58.8	431	55.5	478	59.1	476	55.6	576	58.8	523	59.4	519	60.1	437	57.3	321	55.2	345	61.8	Drivers were killed
337	67.3	230	53.4	289	60.5	276	58.0	381	66.1	329	62.9	337	64.9	288	65.9	232	72.3	258	74.8	Fatally injured drivers were tested for alcohol
202	59.9	142	61.7	185	64.0	166	60.1	241	63.3	190	57.8	232	68.8	178	61.8	126	54.3	145	56.2	Of those tested had alcohol in their systems (called positive cases)
171	50.7	114	49.6	154	53.3	148	53.6	196	51.4	147	44.7	195	57.9	150	52.1	112	48.3	117	45.3	Of those tested were at or above the .100 level of intoxication
171	84.7	114	80.3	154	83.2	148	89.2	196	81.3	147	77.4	195	84.1	150	84.3	112	88.9	117	80.7	Of the positive cases were at or bove the .100 level of intoxication
187	92.6	124	87.3	173	93.5	148	89.2	222	92.1	169	88.9	211	90.9	162	91.0	116	92.1	129	89.0	Of the positive cases were male
15	7.4	18	12.7	12	6.5	18	10.8	19	7.9	21	11.1	21	9.1	16	9.0	10	7.9	16	11.0	Of the positive cases were female
68	39.8	41	36.0	56	36.4	48	32.4	78	39.8	57	30.0	68	34.9	61	40.7	41	36.6	38	32.5	Of the positive which tested at .100 or higher occurred between midnight and 3:00 am
50	20.8	42	29.6	51	27.6	44	26.8	61	25.6	64	33.9	72	31.0	35	19.7	21	16.7	32	22.1	Of the positive cases were below the age of 21.
36	72.0	31	73.8	42	82.4	37	84.1	44	72.1	43	67.2	54	75.0	30	85.7	19	90.5	24	75.0	Of the below 21 year olds testing positive were at or above .100
9	4.5	9	6.3	26	14.1	14	8.4	32	13.3	27	14.2	23	9.9	17	9.6	9	7.1	13	9.0	Of the positive cases were under the legal drinking age

The age of majority was legally lowered to 18 years of age on June 1, 1973.

The legal drinking age was raised to 19 years of age on September 1, 1976.

TABLE 10.05

1983 DRIVER FATALITIES' LEVEL OF INTOXICATION BY AGE

Age	Total Killed	Total Tested	Total Positive	Total Intoxicated	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Positive Of Total Tested In Age Group	Percent Intoxicated Of Total Tested In Age Group	Percent Of Total Positive By Age Group
15 And Below	4	3	0	0						0.0	0.0	0.0
16	8	6	1	1			1			16.7	16.7	0.7
17	13	6	5	3	1	1	1	2		83.3	50.0	3.5
18	16	10	7	4	1	2	1	3		70.0	40.0	4.8
19	20	16	11	9	1	1	5	3	1	68.8	56.3	7.6
20	13	10	8	7	1		3	3	1	80.0	70.0	5.5
21 - 25	73	60	46	37	4	5	7	22	8	76.7	61.7	31.7
26 - 30	36	28	21	18	1	2	2	11	5	75.0	64.3	14.5
31 - 35	25	19	9	8		1	2	5	1	47.4	42.1	6.2
36 - 40	21	17	10	9	1			5	4	58.8	52.9	6.9
41 - 45	20	18	8	8			1	6	1	44.4	44.4	5.5
46 - 50	16	12	7	6		1	1	3	2	58.3	50.0	4.8
51 - 55	11	11	6	4	1	1		4		54.5	36.4	4.1
56 - 60	9	6	2	2				1	1	33.3	33.3	1.4
61 - 65	13	11	2	1	1		1			18.2	9.1	1.4
66 And Above	47	25	2	0		2				8.0	0.0	1.4
Total	345	258	145	117	12	16	25	68	24	56.2	45.3	100.0

TABLE 10.06

1983 DRIVER FATALITIES' LEVEL OF INTOXICATION BY MONTH

Time	Total Killed	Total Tested	Total Positive	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Of All Positive
January	17	14	7	2	1	1	2	1	4.8
February	16	13	6		2	1	2	1	4.1
March	15	12	8			1	6	1	5.5
April	27	14	7	1	2	1	3		4.8
May	32	21	16			4	8	4	11.0
June	44	32	21	1	2	6	7	5	14.5
July	34	27	18	2	2	3	9	2	12.4
August	36	28	18	2	3	3	7	3	12.4
September	34	25	15	1	1	2	11		10.3
October	38	31	13	2	2	2	3	4	9.0
November	25	24	12	1	1		8	2	8.3
December	27	17	4			1	2	1	2.8
Total	345	258	145	12	16	25	68	24	99.9

TABLE 10.07

1983 DRIVER FATALITIES' LEVEL OF INTOXICATION BY ROAD TYPE

Road Type	Total Killed	Total Tested	Total Positive	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Of All Positive
Interstate	15	11	9				5	4	6.2
Trunk Highway	162	119	60	5	8	9	29	9	41.4
County State Aid Highway	73	52	30	4	2	5	15	4	20.7
County Road	51	44	27	2	2	7	11	5	18.6
City Street	30	22	16	1	4	3	6	2	11.0
Township Road	13	9	2			1	1		1.4
Other Road	1	1	1				1		0.7
Total	345	258	145	12	16	25	68	24	100.0

TABLE 10.08

1983 DRIVER FATALITIES' LEVEL OF INTOXICATION BY TIME OF DAY

Time	Total Killed	Total Tested	Total Positive	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Of All Positive
Midnight-2:59 AM	63	49	45	4	3	7	19	12	31.0
3:00 AM-5:59 AM	37	28	23	1	2	6	13	1	15.9
6:00 AM-8:59 AM	28	22	6	1	1	2	2		4.1
9:00 AM-11:59 AM	39	27	3		1		2		2.1
Noon-2:59 PM	25	17	4	1		2	1		2.8
3:00 PM-5:59 PM	59	36	12	2	3		5	2	8.3
6:00 PM-8:59 PM	44	35	21	3	2	2	10	4	14.5
9:00 PM-11:59 PM	49	43	30		4	6	15	5	20.7
Unknown	1	1	1				1		0.7
Total	345	258	145	12	16	25	68	24	100.1

FIGURE 10.04
ALCOHOL RELATED* CRASHES
BY TIME OF DAY

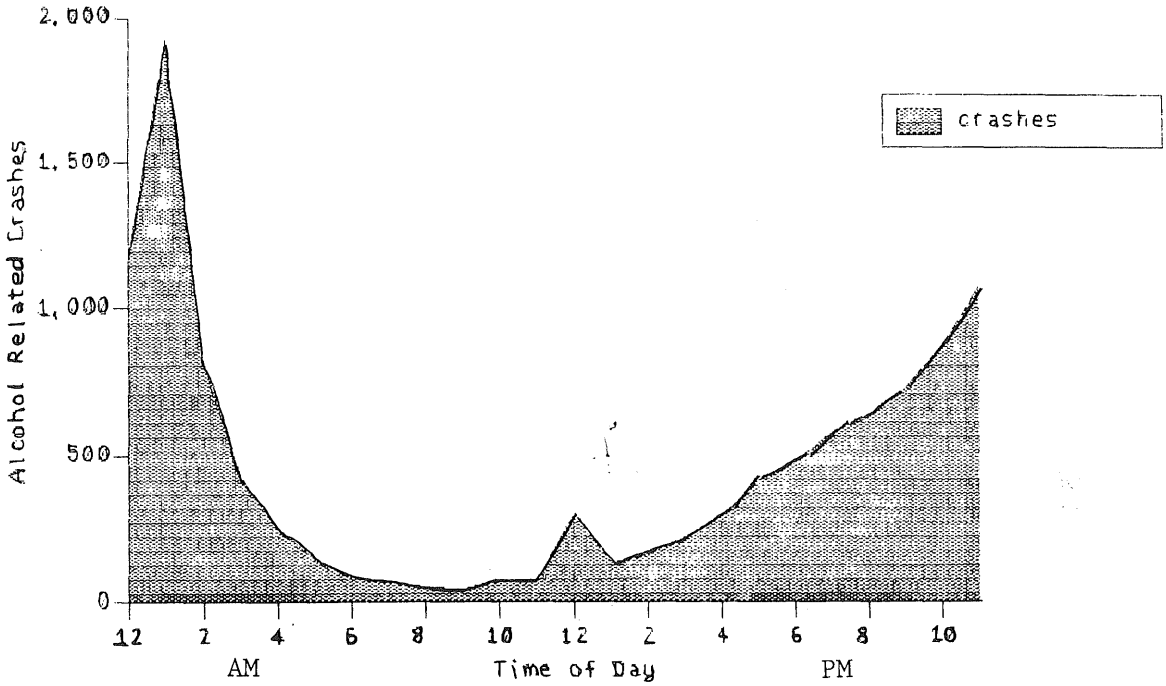
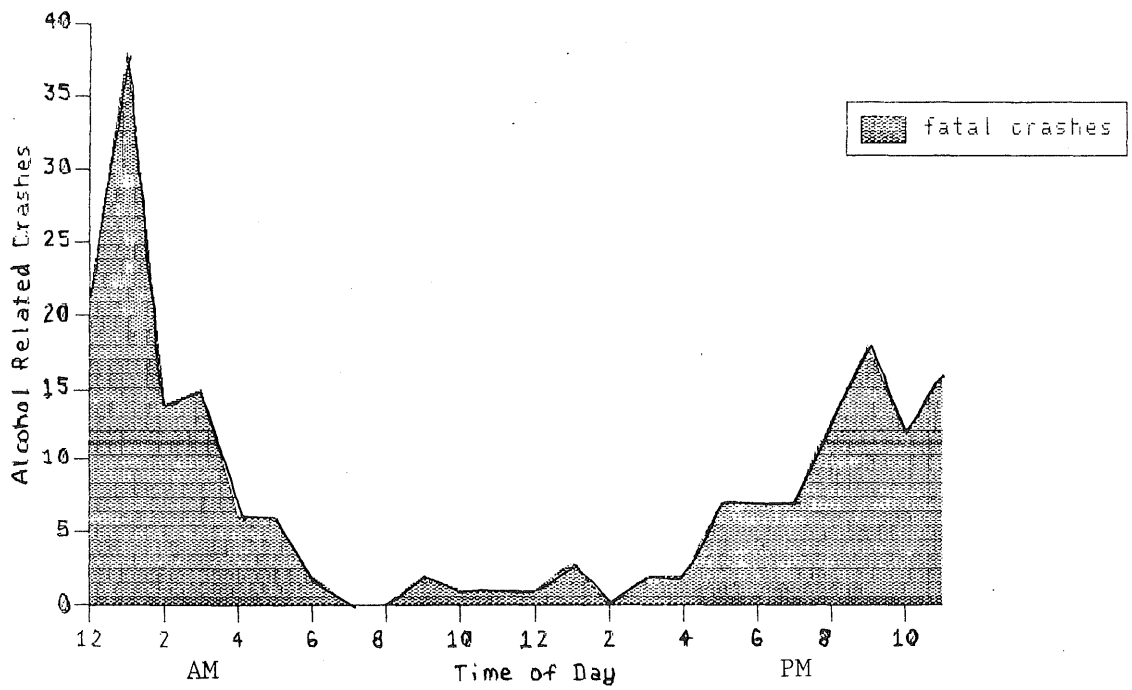


FIGURE 10.05
ALCOHOL RELATED* FATAL CRASHES
BY TIME OF DAY



*Alcohol related crashes are ones in which the investigating officer indicated on the accident report that at least one of the drivers had been drinking prior to the crash.

TABLE 10.09

DRINKING PEDESTRIAN FATALITY SUMMARY, 1974-1983

1974	(%)	1975	(%)	1976	(%)	1977	(%)	1978	(%)	1979	(%)	1980	(%)	1981	(%)	1982	(%)	1983	(%)	
105		121		120		140		115		117		114		100		76		62		Pedestrians Killed In Motor Vehicle Crashes
46	43.8	45	37.2	58	48.3	62	44.3	54	47.0	56	47.9	48	42.1	53	53.0	40	52.6	38	61.3	Fatally Injured Pedestrians Tested For Alcohol
28	60.9	26	57.8	25	43.1	32	51.6	33	61.1	29	51.8	28	58.3	26	26.0	18	45.0	21	55.3	Those Tested Who Had Alcohol In Their Systems (Called Positive Cases)
25	54.3	22	48.9	22	37.9	32	51.6	22	40.7	26	46.4	26	54.2	23	23.0	17	42.5	18	47.4	Those Tested At Or Above The .100 Level Of Intoxication
25	89.3	22	84.6	22	88.0	32	100.0	22	66.7	26	89.7	26	92.9	23	88.5	17	94.4	18	85.7	Positive Cases At Or Above The .100 Level Of Intoxication
5	17.9	2	7.7	4	16.0	6	18.8	3	9.1	4	13.8	2	7.1	1	3.8	1	2.5	3	14.3	Positive Cases 66 Or Older
3	10.7	1	3.8	7	28.0	15	46.9	3	9.1	5	17.2	2	7.1	3	11.5	2	10.0	1	4.8	Positive Cases Under The Legal Drinking Age

The age of majority was legally lowered to 18 years of age on June 1, 1973.

The legal drinking age was raised to 19 years of age on September 1, 1976.

Only pedestrians 16 years of age or older are required to be tested for alcohol. Thus, although the percentages given reflect the total number of pedestrians killed, those under age 16 would not have been tested in any case.

TABLE 10.10

1983 PEDESTRIAN FATALITIES' LEVEL OF INTOXICATION BY AGE

Age	Total Killed	Total Tested	Total Positive	Total Intoxicated	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Positive Of Total Tested In Age Group	Percent Intoxicated Of Total Tested In Age Group	Percent Of Total Positive By Age Group
15 & Below	13	4	0	0						0.0	0.0	0.0
16	0	0	0	0						0.0	0.0	0.0
17	0	0	0	0						0.0	0.0	0.0
18	1	1	1	1				1		100.0	100.0	4.8
19	5	4	3	3				3		75.0	75.0	14.3
20	2	1	1	0	1					100.0	0.0	4.8
21 - 25	3	3	3	2		1		2		100.0	66.7	14.3
26 - 30	6	4	4	3		1		1	2	100.0	75.0	19.0
31 - 35	4	4	3	3			1	2		75.0	75.0	14.3
36 - 40	0	0	0	0						0.0	0.0	0.0
41 - 45	1	1	1	1				1		100.0	100.0	4.8
46 - 50	1	1	1	1					1	100.0	100.0	4.8
51 - 55	1	0	0	0						0.0	0.0	0.0
56 - 60	3	3	0	0						0.0	0.0	0.0
61 - 65	1	0	0	0						0.0	0.0	0.0
66 - 70	7	7	4	4			1	1	2	57.0	57.0	19.0
71 & Above	13	5	0	0						0.0	0.0	0.0
Unknown	1	0	0	0						0.0	0.0	0.0
Total	62	38	21	18	1	2	2	11	5	55.3	47.4	100.1

TABLE 10.11

1983 PEDESTRIAN FATALITIES' LEVEL OF INTOXICATION BY MONTH

Month	Total Killed	Total Tested	Total Positive	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Of All Positive
January	1	1	1				1		4.8
February	6	4	3				1	2	14.9
March	3	2	1					1	4.8
April	8	3	2		1		1		9.5
May	2	1	1				1		4.8
June	6	4	2		1		1		9.5
July	1	1	0						0.0
August	8	6	4			1	1	2	19.0
September	11	7	3			1	2		14.3
October	6	5	4	1			3		19.0
November	2	1	0						0.0
December	8	3	0						0.0
Total	62	38	21	1	2	2	11	5	100.6

TABLE 10.12

1983 PEDESTRIAN FATALITIES' LEVEL OF INTOXICATION BY ROAD TYPE

Road Type	Total Killed	Total Tested	Total Positive	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Of All Positive
Interstate	1	1	0						0.0
Trunk Highway	27	17	11	1	1		6	3	52.4
County State Aid Highway	11	6	5				4	1	23.8
County Road	5	4	2		1		1		9.5
City Street	16	10	3			2		1	14.3
Township Road	0	0	0						0.0
Other Road	2	0	0						0.0
Total	62	38	21	1	2	2	11	5	100.0

TABLE 10.13

1983 PEDESTRIAN FATALITIES' LEVEL OF INTOXICATION BY TIME OF DAY

Time	Total Killed	Total Tested	Total Positive	Blood Alcohol Concentration .010-.049	.050-.099	.100-.149	.150-.249	.250 & Over	Percent Of All Positive
Midnight-2:59 AM	10	9	8			1	7		38.1
3:00 AM-5:59 AM	7	6	6	1			4	1	28.6
6:00 AM-8:59 AM	6	2	1		1				4.8
9:00 AM-11:59 AM	5	2	0						0.0
Noon-2:59 PM	2	1	0						0.0
3:00 PM-5:59 PM	15	7	0						0.0
6:00 PM-8:59 PM	11	5	1					1	4.8
9:00 PM-11:59 PM	6	6	5		1	1		3	23.8
Total	62	38	21	1	2	2	11	5	100.1

PART XI

SEAT BELT INFORMATION

The latest government observation study of safety belt use indicated that, nationwide, only 12% of the motoring public use their safety belts. Observation studies conducted by the state of Minnesota indicate that statewide, 14% of the people observed who were 10 years of age or older were wearing their seat belts and 12% of the children who were at least four but less than ten years old were correctly restrained in automobiles. Accident data for 1983 indicates that 85% of the people injured and 94% of the people killed in motor vehicle accidents were not wearing seat belts at the time of the crash.

The Minnesota Child Passenger Protection Act, which was put into effect on January 1, 1982, requires parents to have properly installed a federally approved child restraint in their car when transporting children younger than the age of four. This law was amended to require that these children be secured in these seats effective August 1, 1983. Statewide observations indicated that 35% of the infants and 24% of the children at least one year old but less than four years old were protected by child safety seats when riding in automobiles. Of all children less than four years old who died as a result of a motor vehicle accident in 1983, 85% were not in child safety seats. Of those in this age group who were injured in 1983, 88% were not riding in the required restraints.

The effects of safety restraints in reducing injuries and deaths caused by motor vehicle accidents is dramatic. A conservative estimate by the National Highway Traffic Safety Administration states that the use of safety restraints can reduce overall motor vehicle fatalities by 50% and disabling injuries by 60%. Clearly, a very low percentage of motorists presently make use of the known protection provided by safety belts and child seats.

TABLE 11.01

1983 SEAT BELT USAGE OF FATALITIES AND INJURIES

	Fatalities		Injuries	
	Number	Percent	Number	Percent
Restraining Device Installed And Used	20	6.3	2,765	15.2
Restraining Device Installed But Not Used	283	88.7	14,473	79.8
Restraining Device Not Installed	16	5.0	909	5.0
Total	319	100.0	18,147	100.0

TABLE 11.02

1983 INJURY SEVERITY OF CHILDREN UNDER AGE 4*

Severity of Injury	Child Restraint Used
"K"--Fatal Injury	2
"A"--Incapacitating Injury	7
"B"--Non-Incapacitating Injury	45
"C"--Possible Injury	65
Total	119

* Based on cases in which child restraint usage was known.

TABLE 11.03

EJECTION OF KILLED AND INJURED OCCUPANTS OF STANDARD 4-WHEELED VEHICLES

	Fatalities		Persons Injured	
	Number	Percent	Number	Percent
Not Ejected from Vehicle	183	46.0	27,526	83.5
Partially Ejected	25	6.3	186	0.6
Totally Ejected	106	26.6	606	1.8
Trapped/Extricated	74	18.6	357	1.1
Unknown/Inapplicable	10	2.5	4,303	13.0
Total	398	100.0	32,978	100.0

TABLE 11.04

RESTRAINT USE AND EJECTION OF PEOPLE KILLED IN 1983 CRASHES*

	Restraint Used	Restraint Not Used	Total
Ejected from Vehicle	3	121	124
Not Ejected from Vehicle	17	181	198
Total	20	302	322

TABLE 11.05

RESTRAINT USE AND EJECTION OF PEOPLE INJURED IN 1983 CRASHES*

	Restraint Used	Restraint Not Used	Total
Ejected from Vehicle	205	1,042	1,247
Not Ejected from Vehicle	2,520	14,137	16,657
Total	2,725	15,179	17,904

* Based on cases in which restraint use is known.

Minnesota Department of Public Safety
Office of Public Information
318 Transportation Building
St. Paul, MN 55155

Bulk Rate
U. S. Postage
P A I D
Permit No. 171
St. Paul, MN