2007

MISSOURI

EMERGENCY SERVICE VEHICLE

CRASHES

Principal Staff Researcher:

Phyllis Emmel, Computer Information Technologist

MISSOURI STATE HIGHWAY PATROL
STATISTICAL ANALYSIS CENTER
1510 East Elm
Jefferson City, Missouri 65101
(573) 751-9000

FOREWORD

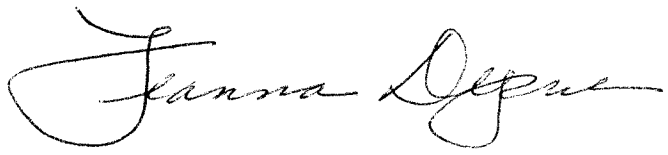
The mission of the Missouri Department of Transportation, Highway Safety Division is to reduce the number and severity of traffic crashes throughout the state. In order to develop effective traffic safety programs and countermeasures, reliable statistical planning documents are imperative.

For this reason, the 2007 Missouri Emergency Vehicle Crashes report was produced by the Statistical Analysis Center of the Missouri State Highway Patrol at the request of the Highway Safety Division.

The dedication of the individuals who compiled this report is to be commended. Without their diligence and expertise, Missouri officials would be hard-pressed to have this statistical data available in such a usable format.

It is our desire that traffic safety officials and managers of emergency vehicles would carefully review this publication to analyze local crash experience and evaluate their operations to ensure that proper precautions and training measures have been implemented.

If you require more information on traffic safety programs or need additional statistical information, please contact the Missouri Department of Transportation, Highway Safety Division at 1-800-800-2358.



Leanna Depue, Highway Safety Director
MoDOT Highway Safety Division

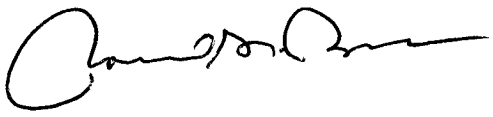
ACKNOWLEDGEMENTS

The Missouri Department of Transportation, Highway Safety Division requested publication of this report to determine the magnitude, severity, and characteristics of traffic crashes involving emergency service vehicles in the State.

The primary source of information in this report was traffic crash data obtained from the State-wide Traffic Accident Records System (STARS). The Missouri State Highway Patrol, Traffic Division, is responsible for coordinating the STARS program as well as encoding all traffic crash data being reported.

Special recognition is given to all Missouri law enforcement agencies and officers who provide traffic crash investigation services on Missouri roadways and report their findings to STARS. Because of their efforts, traffic safety authorities have the capability of conducting analysis on Missouri's emergency service vehicle traffic crash problems.

Finally, the U.S. Department of Transportation, National Highway Traffic Safety Administration, has supported the Statistical Analysis Center's efforts to provide meaningful research services and publications to Missouri traffic safety authorities. Their financial support and technical assistance is appreciated.



Ronald G. Beck, Director
Statistical Analysis Center
Missouri State Highway Patrol

CONTENTS

TABLES

PAGE

EMERGENCY SERVICE VEHICLE INVOLVEMENT OVERVIEW

POLICE VEHICLE INVOLVEMENT

FIRE VEHICLE INVOLVEMENT

TABLES

PAGE

AMBULANCE INVOLVEMENT

FIGURES

PAGE

EMERGENCY SERVICE VEHICLE INVOLVEMENT OVERVIEW

POLICE VEHICLE INVOLVEMENT

FIRE VEHICLE INVOLVEMENT

AMBULANCE INVOLVEMENT

EXECUTIVE SUMMARY

The purpose of this report is to provide the Missouri State Highway Patrol, the Missouri Department of Transportation, Highway Safety Division, and other State and local authorities with information on the problem of emergency service vehicle traffic crashes in the State of Missouri. In 2007, Missouri experienced 1,313 emergency service vehicle traffic crashes. Crashes of this nature are of special concern to traffic safety authorities because emergency service vehicles and, more importantly, their staff are critical public safety resources whose loss due to traffic crashes adversely affects the public welfare.

The primary source of data used in this study was the Missouri Statewide Traffic Accident Records System (STARS).

In 2007, there were 1,543 traffic crashes involving 1,580 emergency service vehicles in the State of Missouri. Nine persons were killed and 459 persons were injured in these traffic crashes. Of the 1,580 emergency service vehicles involved, 380 (24.1%) were on an emergency run at the time of the crash. The seriousness of these traffic crashes is compounded by the fact that the incident no doubt delayed or prevented the unit from responding to the original emergency situation.

Police vehicles account for the majority of emergency service vehicles involved in Missouri traffic crashes. Of the 1,580 emergency vehicles involved in 2007 traffic crashes, 1,218 (77.1%) were law enforcement vehicles. This finding is not surprising since there are a significantly greater number of police vehicles in operation compared to ambulances and fire vehicles. In addition, many law enforcement units patrol Missouri roadways throughout their shift, while ambulances and fire vehicles are normally stationed at fixed locations until called to respond to a situation.

Of the 1,580 emergency vehicles involved in 2007 Missouri traffic crashes, 170 (10.8%) were fire vehicles. Although no accurate count is available, the number of fire vehicles in the State is estimated to be larger than the ambulance vehicle population but much less than the police vehicle population. As with ambulances, fire vehicles made up a higher proportion of those vehicles involved in traffic crashes while on emergency runs. Of the 380 vehicles making an emergency run when involved in a traffic crash in 2007, 51 (13.4%) were vehicles of this type.

Of the 1,580 emergency service vehicles involved in 2007 Missouri traffic crashes, 156 (9.9%) were ambulances. Ambulances also made up a higher proportion of emergency service vehicles involved in traffic crashes while making emergency runs. Of the 380 emergency service vehicles involved in 2007 Missouri traffic crashes while on emergency runs, 44 (11.6%) were ambulances.

INTRODUCTION

This report is one in a series which identifies the magnitude, severity, and characteristics of emergency service vehicles involved in traffic crashes occurring in the State of Missouri. It describes Missouri's emergency service vehicle traffic crash experience in 2005 - 2007 with emphasis on the most recent year (2007).

Missouri traffic safety authorities have expressed an interest in studying these types of incidents for a number of reasons. First, in a sizable portion of these incidents, the emergency service vehicles are responding to other emergency situations. In most instances, their involvement in traffic crashes either delays or totally prevents them from providing the emergency care services being requested. The timeliness of providing their services can be a critical factor in preventing further death, serious injury, and/or property damage in emergency situations.

Second, emergency service vehicles and, more importantly, the staff who operate them are critical public safety resources which the community can ill afford to lose as a result of their involvement in traffic crashes. Costs associated with vehicle replacement or repair are high because these types of vehicles are configured for emergency response (i.e., heavy suspension systems, larger engines, improved braking systems, emergency lights, siren, etc.). Even more significant are losses resulting from qualified emergency service staff being killed or injured in these traffic crashes. The loss of technically trained emergency service manpower reduces the community's capabilities to adequately respond to future emergency situations.

Finally, emergency vehicles involved in traffic crashes can result in death and injury to not only emergency vehicle staff but to other parties involved in the traffic crash.

Data used in this study were obtained from the Missouri Statewide Traffic Accident Records System (STARS). This system is maintained by the Missouri State Highway Patrol (MSHP). In accordance with State statute, law enforcement agencies are required to investigate traffic crashes occurring on public roadways if they involve a death or personal injury or property damage over $500.00. They submit their findings on a standard traffic accident report form to the STARS system. This standard traffic accident report form contains two fields designed to identify whether the vehicles involved were emergency service vehicles, the type of emergency service vehicle (police, fire, ambulance, or other), and whether or not it was on an emergency run.

Data from the traffic accident report forms are encoded by MSHP staff in computerized files. These files were made available to the MSHP Statistical Analysis Center (SAC) staff who conducted the analysis.

Not all motor vehicle incidents involving damage to emergency service vehicles or injury to its staff were analyzed in this study due to data non-availability. Data on traffic crashes occurring on private property, such as a private driveway, were not attainable for this analysis. In addition, certain incidents are not classified as traffic crashes. For instance, cases where police establish a roadblock and a pursued person uses their vehicle to intentionally ram the blocking police vehicle are not classified as traffic crashes and are not included in this analysis.

The findings from this study are described in the following four sections. The first section provides an overview of Missouri's emergency services traffic crash problem. The second section describes the findings from an analysis which focuses on police vehicle involvement. The third section describes fire vehicle involvement and the last section covers ambulance involvement.

1.0 EMERGENCY SERVICE VEHICLE INVOLVEMENT OVERVIEW

This section presents a series of data displays which describe Missouri's emergency service vehicle traffic crash activity. Traffic crashes involving emergency service vehicles are defined as any crash in which one or more emergency service vehicles were directly involved in the incident. Emergency service vehicles include those assigned to law enforcement agencies, fire departments, and ambulance service agencies. In addition, vehicles operated by other agencies, such as public utilities and public service corporations, are considered emergency vehicles but only when they are actually performing emergency services.

SUMMARY OF ANALYSIS

- In 2007 there were 1,543 traffic crashes involving 1,580 emergency service vehicles in the State of Missouri. Nine persons were killed and 459 persons were injured in these traffic crashes. One person was killed or injured every 18.7 hours in these types of crashes in 2007.

- Police vehicles comprise the largest number of emergency service vehicles involved in Missouri's traffic crashes. Of the 1,580 emergency service vehicles involved, 1,218 (77.1%) were police vehicles. They were involved in 1,187 traffic crashes. A total of 380 emergency service vehicles were on emergency runs when the traffic crash occurred. Of these, 249 (65.5%) were police vehicles. Law enforcement officers on-duty annual miles of travel are, no doubt, much greater than other types of emergency service providers. A large proportion of law enforcement officers are assigned to patrol Missouri's roadways throughout their normal shift of operations for crime prevention purposes as well as to provide quick response to calls for services. Normally, fire and ambulance service personnel are stationed at fixed locations from which they respond to emergency situations. In addition, there are larger numbers of police vehicles working Missouri's roadways than either ambulances or fire vehicles. The fact that law enforcement officers' on-duty miles of travel are substantially greater increases their risk of being involved in traffic crashes.

- Fire vehicles were the second most common type of emergency vehicle involved in Missouri's traffic crashes in 2007. Of the 1,580 emergency vehicles involved in 2007 Missouri traffic crashes, 170 (10.8%) were fire vehicles. They were involved in 170 traffic crashes. Of the 380 emergency vehicles on emergency run at the time of the traffic crash, 51 (13.4%) were fire vehicles.

- Ambulances were the third most frequent emergency vehicle type involved in Missouri's 2007 traffic crashes. Of the 1,580 emergency vehicles involved, 156 (9.9%) were ambulances. They were involved in 155 traffic crashes. Like fire vehicles, ambulances were more likely to be involved in a traffic crash when on an emergency run. Of the 380 emergency vehicles on emergency run when the traffic crash occurred, 11.6% were ambulances.

- Emergency vehicles classified as 'Other' made up a small proportion of those involved in Missouri's 2007 traffic crashes. Of the 1,580 emergency vehicles involved, only 36 (2.3%) were emergency vehicles classified as 'Other'.

2007 MISSOURI TRAFFIC CRASHES

EMERGENCY SERVICE (ES) VEHICLE INVOLVEMENT

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
ES VEHICLE INVOLVED	7	0.8	274	0.7	1,262	1.0	1,543	0.9
NO ES VEHICLE INVOLVED	893	99.2	40,707	99.3	122,909	99.0	164,509	99.1
TOTAL	900	100.0	40,981	100.0	124,171	100.0	166,052	100.0

TABLE 1.0.1

MISSOURI EMERGENCY SERVICE VEHICLE INVOLVED CRASHES

2005 - 2007

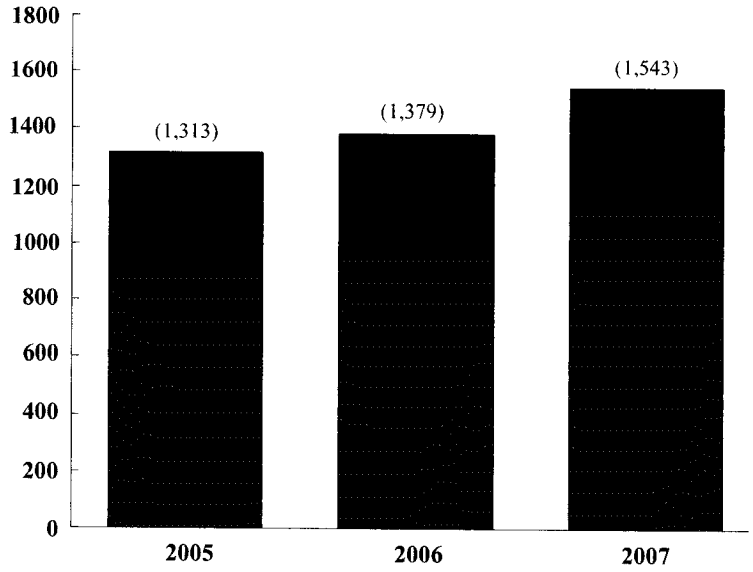


FIGURE 1.0.1

MISSOURI EMERGENCY SERVICE VEHICLE PERSONAL INJURY PROBLEM ANALYSIS CLOCK

2007

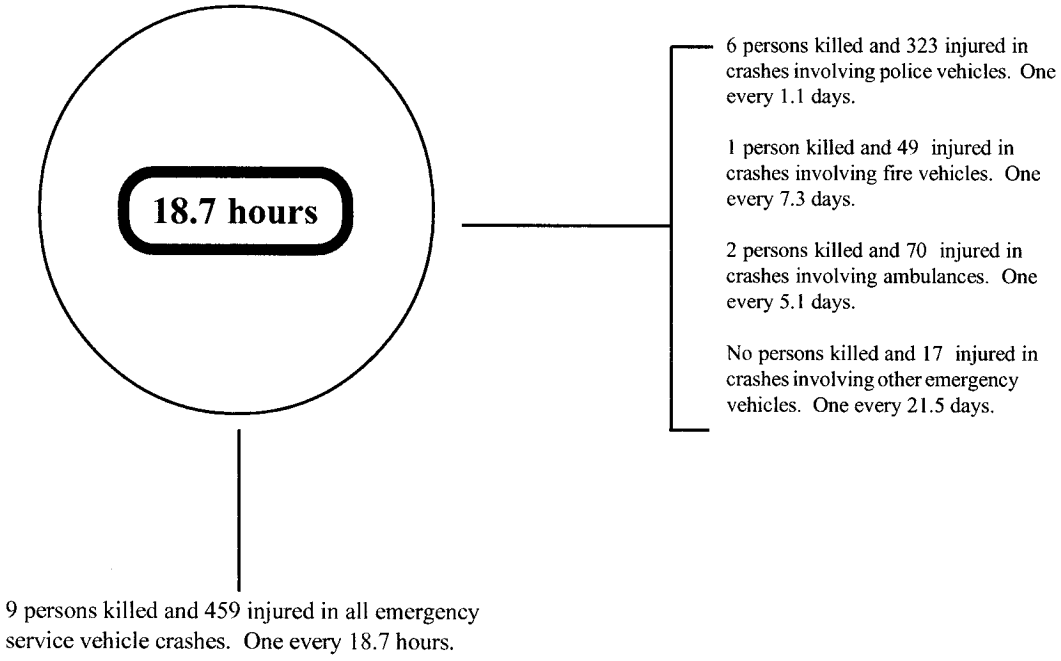


FIGURE 1.0.2

2007 MISSOURI EMERGENCY SERVICE (ES) VEHICLE CRASHES

TYPE OF EMERGENCY SERVICE VEHICLE INVOLVED

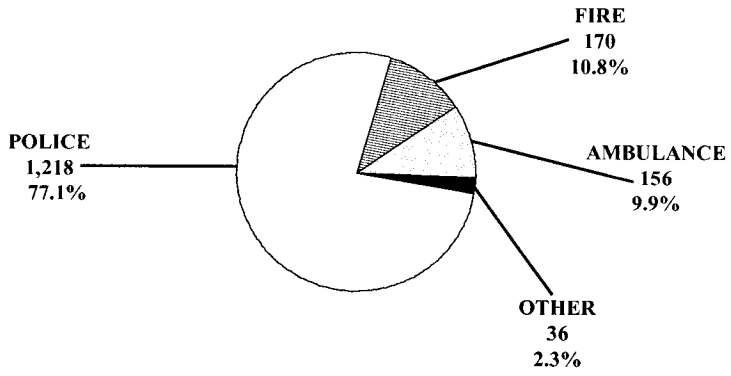
	FATAL	PERSONAL INJURY	PROPERTY DAMAGE	TOTAL	NUMBER OF ES VEHICLES INVOLVED[1]
TOTAL NUMBER OF ES VEHICLE CRASHES	**7**	**274**	**1,262**	**1,543**	**1,580**
INVOLVING					
POLICE VEHICLE	5	213	969	1,187	1,218
FIRE VEHICLE	1	25	144	170	170
AMBULANCE	2	27	126	155	156
OTHER ES VEHICLE	0	11	24	35	36

[1]The number of emergency service vehicles involved does not equal the number of emergency service traffic crashes since there are cases where more than one emergency service vehicle was involved in the same traffic crash. There were 1,543 traffic crashes involving 1,580 emergency service vehicles

TABLE 1.0.2

TYPE OF EMERGENCY SERVICE VEHICLES INVOLVED IN

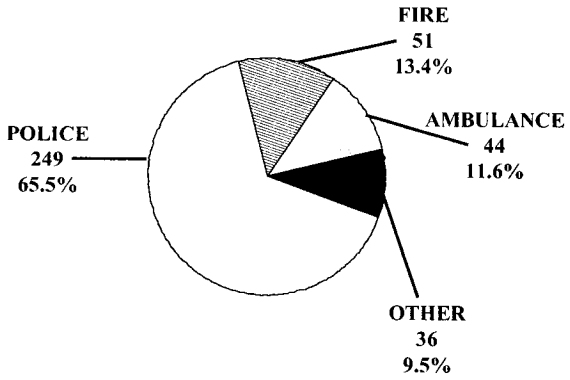
2007 MISSOURI TRAFFIC CRASHES



TOTAL = 1,580

FIGURE 1.0.3

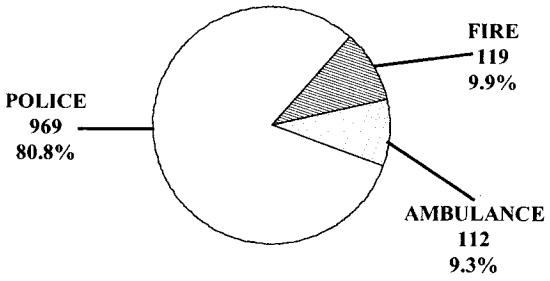
TYPE OF EMERGENCY SERVICE VEHICLES INVOLVED IN 2007 MISSOURI TRAFFIC CRASHES WHILE ON EMERGENCY RUN



TOTAL = 380

FIGURE 1.0.4

TYPE OF EMERGENCY SERVICE VEHICLES INVOLVED IN 2007 MISSOURI TRAFFIC CRASHES NOT ON EMERGENCY RUN



TOTAL = 1,200

FIGURE 1.0.5

2.0 POLICE VEHICLE INVOLVEMENT

This section presents a series of data displays identifying police vehicle involvement in Missouri's traffic crash activity. Police vehicle traffic crashes are defined as any crash in which one or more police vehicles were directly involved in the incident. Data displays also are provided which describe characteristics of the police vehicle drivers involved in these traffic crashes.

2007 SUMMARY ANALYSIS

- In 2007, there were 1,187 traffic crashes involving one or more police vehicles in the State of Missouri. Six persons were killed and 323 were injured in these crashes.
- In 20.4% of the traffic crashes involving police vehicles, the police vehicle was on an emergency run at the time of the incident.
- In 2007, one person was killed or injured in a police vehicle related crash every 1.1 days in the State of Missouri.
- Of all 2007 crashes involving police vehicles, the first harmful event in 51.1% of the cases involved one motor vehicle in transport striking another motor vehicle in transport. In 24.5% of the cases, it involved a motor vehicle striking a fixed object. In 14.8% of the cases, the vehicle struck an animal.
- Of all 2007 crashes involving police vehicles, 53.0% occurred in an urban area of the State and 47.0% occurred in a rural area.
- Of all police vehicle drivers in 2007 traffic crashes, 90.3% were male and 9.7% were female. The average age of the police vehicle driver was 34.7 years.
- There were 1,218 police vehicles in the 1,187 traffic crashes in the State. Of these, 1,092 or 90.0% were automobiles.

2007 POLICE VEHICLE INVOLVED CRASHES

EMERGENCY RUN STATUS

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%	TOTAL NUMBER[1] KILLED	TOTAL NUMBER[1] INJURED	POLICE VEHICLE DRIVERS/PASSENGERS[2] KILLED	POLICE VEHICLE DRIVERS/PASSENGERS[2] INJURED
POLICE VEHICLE ON RUN	3	60.0	68	31.9	171	17.7	242	20.4	3	107	3	51
POLICE VEHICLE NOT ON RUN	2	40.0	145	68.1	798	82.3	945	79.6	3	216	2	142
TOTAL	5	100.0	213	100.0	969	100.0	1,187	100.0	6	323	5	193

[1]This statistic indicates the total number of persons killed and injured in a crash where one or more police vehicles were involved.

[2]This statistic indicates the number of police vehicle drivers and passengers killed and injured.

TABLE 2.0.1

2006 and 2007 POLICE VEHICLE INVOLVED CRASH ANALYSIS

	2006	2007	RATE OF CHANGE
FATAL	2	5	+ 150.0
PERSONAL INJURY	173	213	+ 23.1
PROPERTY DAMAGE	872	969	+ 11.1
TOTAL	1,047	1,187	+ 13.4

TABLE 2.0.2

2007 POLICE VEHICLE INVOLVED CRASHES

CRASH TYPE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
ANIMAL	0	0.0	5	2.4	171	17.7	176	14.8
BICYCLIST	0	0.0	0	0.0	1	0.1	1	0.1
FIXED OBJECT	2	40.0	50	23.5	239	24.7	291	24.5
OTHER OBJECT	0	0.0	0	0.0	25	2.6	25	2.1
PEDESTRIAN	1	20.0	7	3.3	0	0.0	8	0.7
TRAIN	0	0.0	0	0.0	0	0.0	0	0.0
VEHICLE IN TRANSPORT	2	40.0	140	65.7	465	48.0	607	51.1
VEHICLE ON OTHER ROADWAY	0	0.0	0	0.0	1	0.1	1	0.1
PARKED VEHICLE	0	0.0	5	2.4	52	5.4	57	4.8
NON-COLLISION OVERTURN	0	0.0	4	1.9	3	0.3	7	0.6
NON-COLLISION OTHER	0	0.0	2	0.9	12	1.2	14	1.2
TOTAL	5	100.0	213	100.0	969	100.0	1,187	100.0

TABLE 2.0.3

2007 POLICE VEHICLE INVOLVED CRASHES

AREA CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
URBAN	1	20.0	127	59.6	501	51.7	629	53.0
RURAL	4	80.0	86	40.4	468	48.3	558	47.0
TOTAL	5	100.0	213	100.0	969	100.0	1,187	100.0

TABLE 2.0.4

2007 POLICE VEHICLE INVOLVED CRASHES

ROAD CURVATURE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
STRAIGHT	4	80.0	170	79.8	818	85.2	992	84.2
CURVE	1	20.0	43	20.2	142	14.8	186	15.8
UNKNOWN	0	-	0	-	9	-	9	-
TOTAL	5	100.0	213	100.0	969	100.0	1,187	100.0

TABLE 2.0.5

2007 POLICE VEHICLE INVOLVED CRASHES

ROAD INCLINE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
LEVEL	1	20.0	123	57.8	588	62.0	712	61.0
HILL	4	80.0	86	40.4	339	35.7	429	36.8
CREST	0	0.0	4	1.9	22	2.3	26	2.2
UNKNOWN	0	-	0	-	20	-	20	-
TOTAL	5	100.0	213	100.0	969	100.0	1,187	100.0

TABLE 2.0.6

2007 POLICE VEHICLE INVOLVED CRASHES

ROAD CONDITIONS BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRY	3	60.0	160	75.5	760	78.9	923	78.2
WET	1	20.0	34	16.0	146	15.2	181	15.3
SNOW	0	0.0	6	2.8	29	3.0	35	3.0
ICE	1	20.0	10	4.7	23	2.4	34	2.9
SLUSH	0	0.0	2	0.9	1	0.1	3	0.3
MUD	0	0.0	0	0.0	1	0.1	1	0.1
STANDING WATER	0	0.0	0	0.0	1	0.1	1	0.1
MOVING WATER	0	0.0	0	0.0	2	0.2	2	0.2
UNKNOWN	0	-	1	-	6	-	7	-
TOTAL	5	100.0	213	100.0	969	100.0	1,187	100.0

TABLE 2.0.7

2007 POLICE VEHICLE INVOLVED CRASHES

HIGHWAY CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
INTERSTATE	0	0.0	20	9.4	75	7.7	95	8.0
U.S. HIGHWAY	1	20.0	21	9.9	110	11.4	132	11.1
STATE NUMBERED	1	20.0	44	20.7	162	16.7	207	17.4
SINGLE STATE LETTERED	1	20.0	15	7.0	81	8.4	97	8.2
DOUBLE STATE LETTERED	1	20.0	4	1.9	20	2.1	25	2.1
OUTER ROAD	0	0.0	3	1.4	9	0.9	12	1.0
COUNTY ROAD	0	0.0	21	9.9	104	10.7	125	10.5
CITY STREET	1	20.0	80	37.6	335	34.6	416	35.1
INTERSTATE LOOP	0	0.0	1	0.5	5	0.5	6	0.5
OTHER[1]	0	0.0	4	1.9	68	7.0	72	6.1
TOTAL	5	100.0	213	100.0	969	100.0	1,187	100.0

[1] "Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 2.0.8

2007 POLICE VEHICLE INVOLVED CRASHES

HIGHWAY CLASSIFICATION BY AREA CLASSIFICATION AND CRASH SEVERITY

	URBAN								RURAL							
	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
INTERSTATE	0	0.0	10	7.9	39	7.8	49	7.8	0	0.0	10	11.6	36	7.7	46	8.2
U.S. HIGHWAY	0	0.0	9	7.1	32	6.4	41	6.5	1	25.0	12	14.0	78	16.7	91	16.3
STATE NUMBERED	0	0.0	18	14.2	67	13.4	85	13.5	1	25.0	26	30.2	95	20.3	122	21.9
SINGLE STATE LETTERED	0	0.0	5	3.9	12	2.4	17	2.7	1	25.0	10	11.6	69	14.7	80	14.3
DOUBLE STATE LETTERED	0	0.0	0	0.0	3	0.6	3	0.5	1	25.0	4	4.7	17	3.6	22	3.9
OUTER ROAD	0	0.0	2	1.6	4	0.8	6	1.0	0	0.0	1	1.2	5	1.1	6	1.1
COUNTY ROAD	0	0.0	8	6.3	13	2.6	21	3.3	0	0.0	13	15.1	91	19.4	104	18.6
CITY STREET	1	100.0	71	55.9	282	56.3	354	56.3	0	0.0	9	10.5	53	11.3	62	11.1
INTERSTATE LOOP	0	0.0	1	0.8	3	0.6	4	0.6	0	0.0	0	0.0	2	0.4	2	0.4
OTHER [1]	0	0.0	3	2.4	46	9.2	49	7.8	0	0.0	1	1.2	22	4.7	23	4.1
TOTAL	1	100.0	127	100.0	501	100.0	629	100.0	4	100.0	86	100.0	468	100.0	558	100.0

[1] "Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 2.0.9

2007 POLICE VEHICLE INVOLVED CRASHES
MONTH OF YEAR

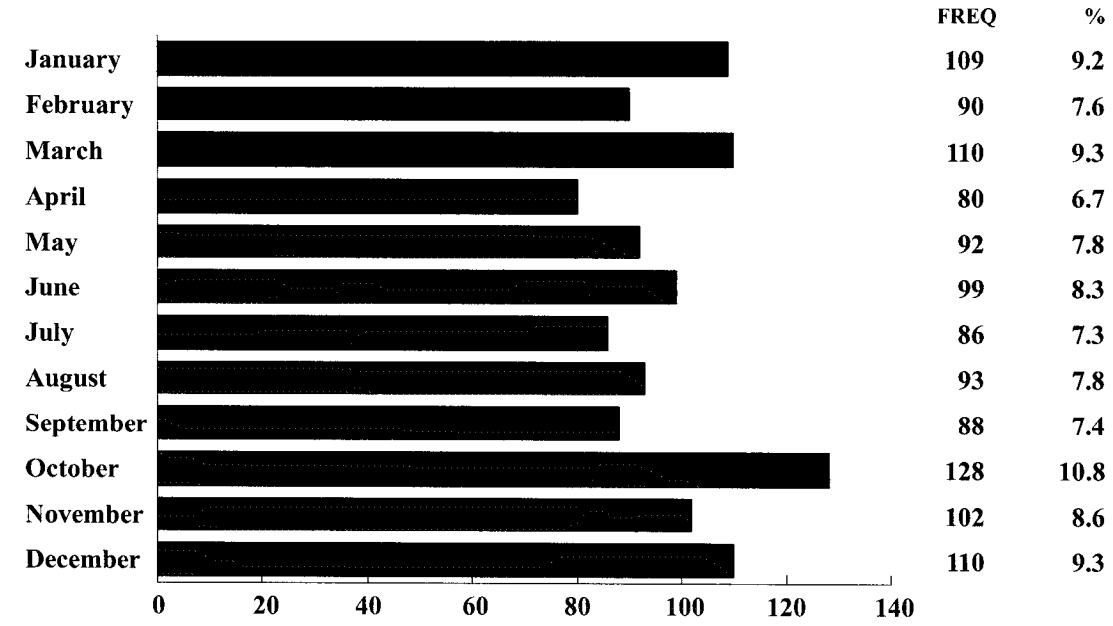


FIGURE 2.0.1

2007 POLICE VEHICLE INVOLVED CRASHES
DAY OF WEEK

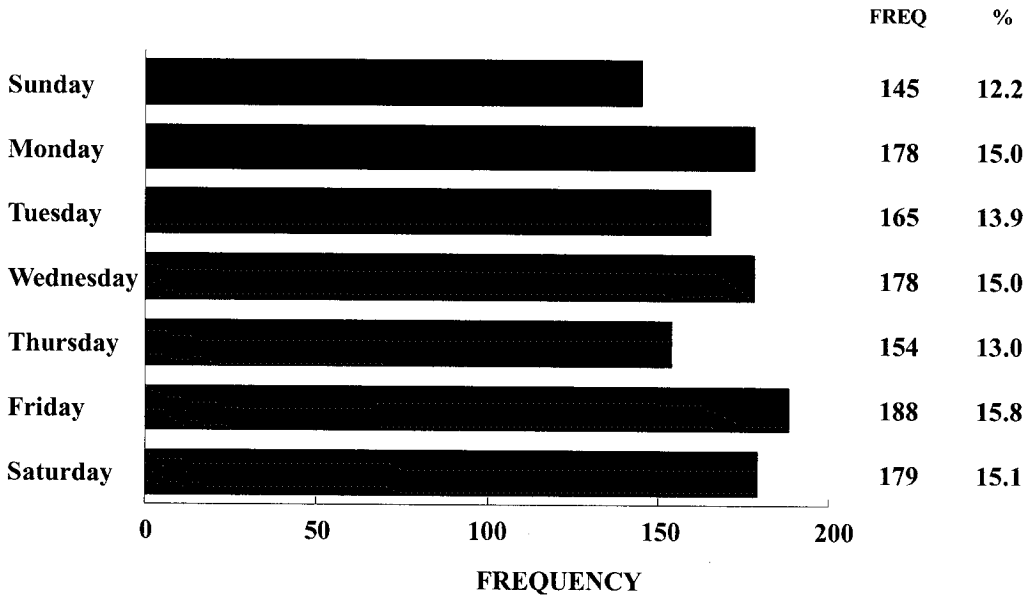


FIGURE 2.0.2

2007 POLICE VEHICLE INVOLVED CRASHES
HOUR OF DAY

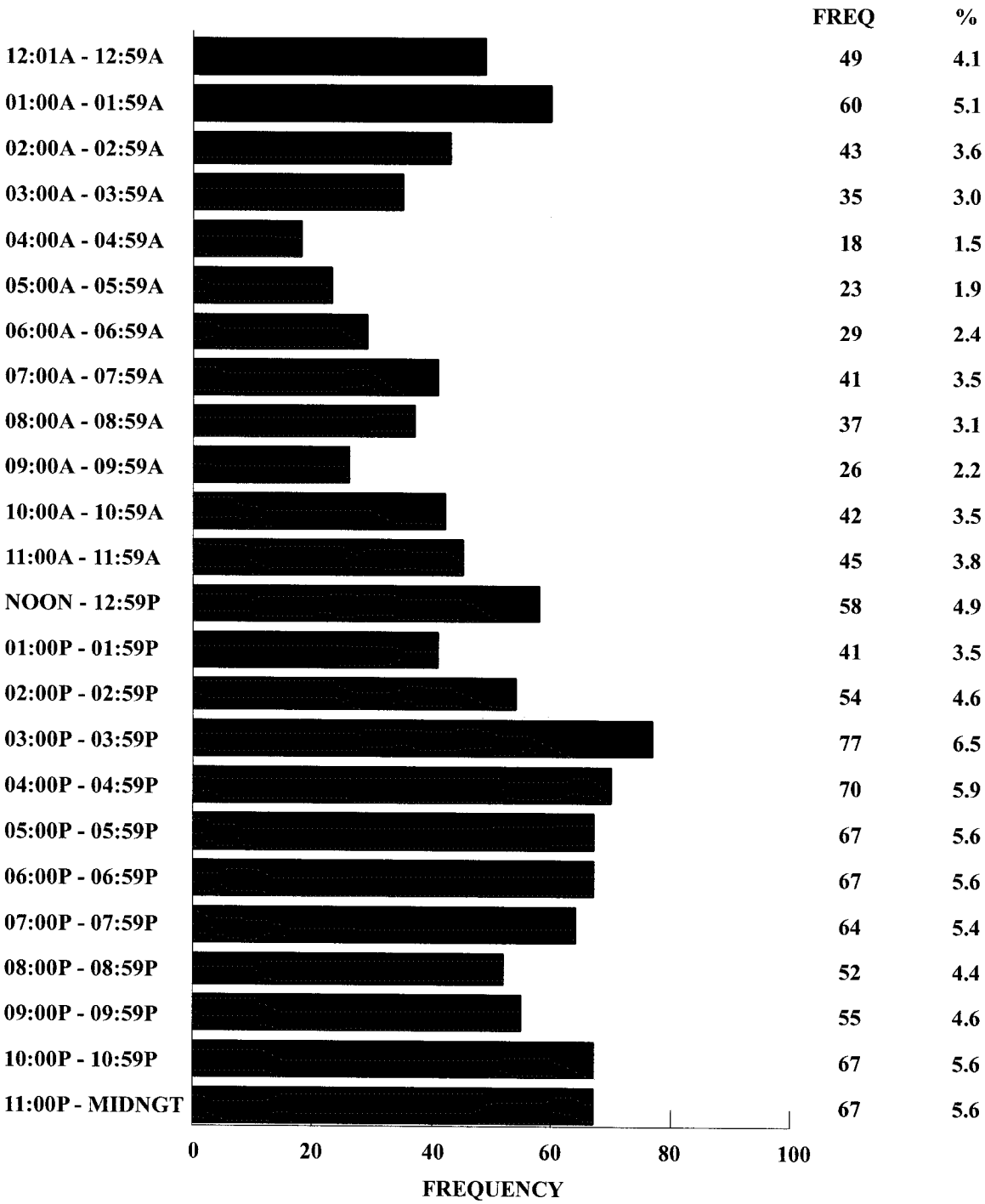


FIGURE 2.0.3

2007 MISSOURI POLICE VEHICLE CRASHES

TYPE OF CIRCUMSTANCE INVOLVED BY CRASH SEVERITY AND PERSON CLASSIFICATION[1]

	FATAL AND PERSONAL INJURY POLICE VEHICLE CRASHES = 218			TOTAL POLICE VEHICLE CRASHES = 1,187		
	DRIVER OF POLICE VEHICLE/ VEHICLE	OTHER DRIVER/ VEHICLE/ PEDESTRIAN	TOTAL F & PI	DRIVER OF POLICE VEHICLE/ VEHICLE	OTHER DRIVER/ VEHICLE/ PEDESTRIAN	TOTAL CRASHES
VEHICLE DEFECTS	0.0	0.9	0.9	0.9	1.7	2.6
TRAFFIC CONTROL INOPERATIVE / MISSING	0.5	0.5	0.5	0.2	0.1	0.2
IMPROPERLY STOPPED ON ROADWAY	0.0	0.0	0.0	0.2	0.5	0.7
EXCEEDING SPEED LIMIT / TOO FAST FOR CONDITIONS	17.9	13.8	31.7	11.2	4.6	15.8
IMPROPER PASSING	0.5	2.3	2.8	0.3	0.8	1.1
VIOLATION OF STOP SIGN	0.9	7.8	8.7	0.8	2.3	3.0
WRONG SIDE NOT PASSING	2.3	2.3	4.6	0.4	1.2	1.6
FOLLOWING TOO CLOSE	1.8	7.3	9.1	1.9	3.1	5.0
IMPROPER SIGNAL	0.0	0.9	0.9	0.1	0.2	0.3
IMPROPER BACKING	0.0	1.4	1.4	2.5	2.7	5.2
IMPROPER TURN	1.8	1.8	3.6	2.1	1.0	3.1
IMPROPER LANE USAGE / CHANGE	1.8	6.4	8.2	1.9	4.1	6.0
WRONG WAY ONE-WAY STREET	0.5	0.9	1.4	0.1	0.4	0.5
IMPROPER START FROM PARK	0.0	0.0	0.0	0.2	0.1	0.3
IMPROPERLY PARKED	0.0	0.5	0.5	0.2	0.5	0.7
FAILED TO YIELD	5.5	21.6	26.6	3.5	11.5	14.6
DRINKING	0.5	4.6	5.0	0.1	3.1	3.2
DRUGS	0.0	2.3	2.3	0.1	0.6	0.7
PHYSICAL IMPAIRMENT	0.9	0.9	1.8	0.3	0.4	0.7
INATTENTION	8.7	18.3	26.6	18.0	12.0	29.7

[1]This table identifies the percentage of crashes involving one or more police vehicles having a specific type of circumstance which contributed to the cause of the crash. This table further defines the percentage of crashes where the contributing circumstance was associated with the driver or his police vehicle as well as those attributed to other persons and vehicles in the crash. For instance, when examining speed involvement in 2007 Missouri police vehicle crashes, it was found that a police vehicle driver was speeding in 11.2% of the crashes. In 4.6% of the crashes another driver was speeding. In 15.8% of the crashes either a police vehicle driver, another driver, or both drivers were speeding.

TABLE 2.0.10

POLICE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

TYPE OF VEHICLE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
AUTOMOBILE	4	80.0	196	90.3	892	90.0	1,092	90.0
SPORT UTILITY VEHICLE	1	20.0	6	2.8	35	3.5	42	3.5
VAN	0	0.0	0	0.0	15	1.5	15	1.2
MOTORCYCLE	0	0.0	7	3.2	4	0.4	11	0.9
OTHER TRANSPORT DEVICE	0	0.0	1	0.5	0	0.0	1	0.1
PICK-UP TRUCK	0	0.0	7	3.2	40	4.0	47	3.9
OTHER TRUCK	0	0.0	0	0.0	5	0.5	5	0.4
UNKNOWN	0	-	1	-	4	-	5	-
TOTAL	5	100.0	218	100.0	995	100.0	1,218	100.0

TABLE 2.0.11

POLICE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

DRIVER INVOLVEMENT BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRIVERLESS	0	0.0	0	0.0	0	0.0	0	0.0
KNOWN DRIVER INVOLVED	5	100.0	218	100.0	991	99.6	1,214	99.7
UNKNOWN DRIVER INVOLVED	0	0.0	0	0.0	4	0.4	4	0.3
TOTAL	5	100.0	218	100.0	995	100.0	1,218	100.0

TABLE 2.0.12

DRIVERS OF POLICE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

SEX OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
MALE	5	100.0	204	93.6	887	89.5	1,096	90.3
FEMALE	0	0.0	14	6.4	104	10.5	118	9.7
UNKNOWN	0	-	0	-	4	-	4	-
TOTAL	5	100.0	218	100.0	995	100.0	1,218	100.0

TABLE 2.0.13

DRIVERS OF POLICE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

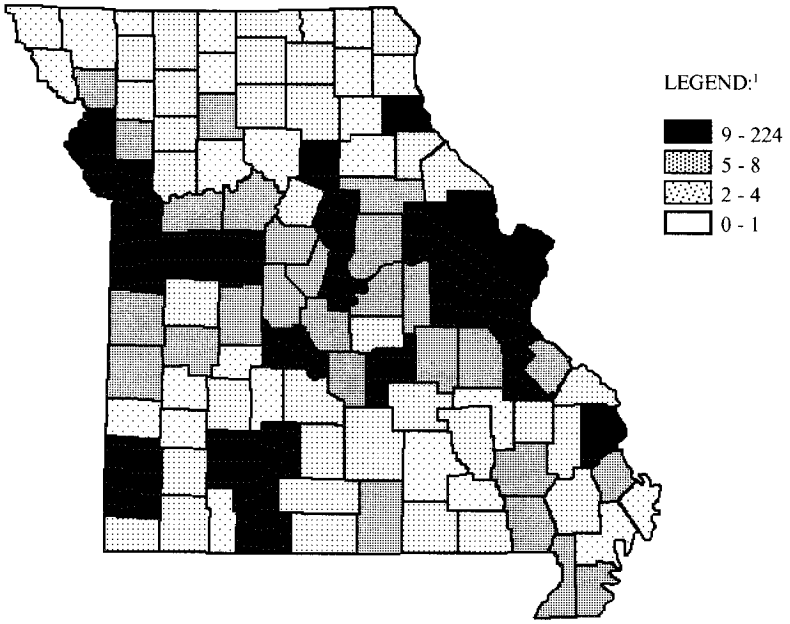
AGE OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
AVERAGE AGE OF DRIVER	42.2	-	34.4	-	34.8	-	34.7	-
14 YEARS AND UNDER	0	0.0	0	0.0	0	0.0	0	0.0
15 - 20 YEARS	0	0.0	1	0.5	11	1.1	12	1.0
21 - 25 YEARS	0	0.0	38	17.7	154	15.8	192	16.1
26 - 30 YEARS	1	20.0	53	24.7	222	22.8	276	23.1
31 - 35 YEARS	1	20.0	44	20.5	204	20.9	249	20.9
36 - 40 YEARS	0	0.0	25	11.6	166	17.0	191	16.0
41 - 45 YEARS	0	0.0	27	12.6	78	8.0	105	8.8
46 - 50 YEARS	2	40.0	10	4.7	48	4.9	60	5.0
51 - 55 YEARS	1	20.0	11	5.1	48	4.9	60	5.0
56 - 60 YEARS	0	0.0	3	1.4	32	3.3	35	2.9
61 - 65 YEARS	0	0.0	3	1.4	6	0.6	9	0.8
66 YEARS AND OVER	0	0.0	0	0.0	5	0.5	5	00.4
UNKNOWN	0	-	3	-	21	-	24	-
TOTAL	5	100.0	218	100.0	995	100.0	1,218	100.0

TABLE 2.0.14

2007 POLICE VEHICLE INVOLVED CRASHES

COUNTY QUARTILE ANALYSIS



[1] LEGEND CATEGORIES ARE BASED ON QUARTILES OF COUNTIES.

RANK	COUNTY	FREQUENCY	PERCENT	RANK	COUNTY	FREQUENCY	PERCENT
1.0	ST. LOUIS	224	18.9	21.5	MONTGOMERY	12	1.0
2.0	JACKSON	109	9.2	23.5	PETTIS	11	0.9
3.0	ST. LOUIS CITY	72	6.1	23.5	PLATTE	11	0.9
4.0	ST. CHARLES	70	5.9	25.0	WARREN	10	0.8
5.0	GREENE	41	3.5	27.5	CAPE GIRARDEAU	9	0.8
6.0	JEFFERSON	33	2.8	27.5	MARION	9	0.8
7.0	CLAY	32	2.7	27.5	RANDOLPH	9	0.8
8.0	BOONE	29	2.4	27.5	WEBSTER	9	0.8
9.0	PHELPS	22	1.9				First Quartile
10.0	COLE	19	1.6				
11.5	JASPER	17	1.4				Second Quartile
11.5	LINCOLN	17	1.4	32.5	BATES	8	0.7
13.0	FRANKLIN	16	1.3	32.5	CALLAWAY	8	0.7
16.0	BUCHANAN	15	1.3	32.5	CLINTON	8	0.7
16.0	CAMDEN	15	1.3	32.5	LAFAYETTE	8	0.7
16.0	CHRISTIAN	15	1.3	32.5	PULASKI	8	0.7
16.0	JOHNSON	15	1.3	32.5	SCOTT	8	0.7
16.0	ST. FRANCOIS	15	1.3	40.5	AUDRAIN	7	0.6
19.0	NEWTON	14	1.2	40.5	BUTLER	7	0.6
20.0	TANEY	13	1.1	40.5	COOPER	7	0.6
21.5	CASS	12	1.0	40.5	CRAWFORD	7	0.6

RANK	COUNTY	FREQUENCY	PERCENT
40.5	DUNKLIN	7	0.6
40.5	HOWELL	7	0.6
40.5	OSAGE	7	0.6
40.5	ST. CLAIR	7	0.6
40.5	STE. GENEVIEVE	7	0.6
40.5	VERNON	7	0.6
49.0	BENTON	6	0.5
49.0	LIVINGSTON	6	0.5
49.0	MILLER	6	0.5
49.0	MORGAN	6	0.5
49.0	SALINE	6	0.5
49.0	WASHINGTON	6	0.5
49.0	WAYNE	6	0.5
54.5	ANDREW	5	0.4
54.5	GASCONADE	5	0.4
54.5	MONITEAU	5	0.4
54.5	PEMISCOT	5	0.4
			Second Quartile
			Third Quartile
60.5	DAVIESS	4	0.3
60.5	DE KALB	4	0.3
60.5	DENT	4	0.3
60.5	LAWRENCE	4	0.3
60.5	LINN	4	0.3
60.5	MACON	4	0.3
60.5	OREGON	4	0.3
60.5	TEXAS	4	0.3
71.0	ADAIR	3	0.3
71.0	BARRY	3	0.3
71.0	CALDWELL	3	0.3
71.0	CLARK	3	0.3
71.0	HENRY	3	0.3
71.0	LACLEDE	3	0.3
71.0	OZARK	3	0.3
71.0	PERRY	3	0.3
71.0	POLK	3	0.3
71.0	REYNOLDS	3	0.3
71.0	RIPLEY	3	0.3
71.0	SULLIVAN	3	0.3
71.0	WRIGHT	3	0.3
84.0	BOLLINGER	2	0.2
84.0	DOUGLAS	2	0.2
84.0	GENTRY	2	0.2
84.0	HARRISON	2	0.2
84.0	HOWARD	2	0.2
84.0	MC DONALD	2	0.2
84.0	MADISON	2	0.2
84.0	MARIES	2	0.2
84.0	PIKE	2	0.2
84.0	PUTNAM	2	0.2
84.0	RALLS	2	0.2
84.0	RAY	2	0.2
84.0	STODDARD	2	0.2
			Third Quartile
			Fourth Quartile
98.0	ATCHISON	1	0.1
98.0	BARTON	1	0.1
98.0	CARROLL	1	0.1
98.0	CARTER	1	0.1
98.0	CEDAR	1	0.1
98.0	CHARITON	1	0.1
98.0	DADE	1	0.1
98.0	DALLAS	1	0.1
98.0	GRUNDY	1	0.1
98.0	HOLT	1	0.1
98.0	MONROE	1	0.1
98.0	NEW MADRID	1	0.1
98.0	NODAWAY	1	0.1
98.0	SHANNON	1	0.1
98.0	SHELBY	1	0.1
110.5	HICKORY	0	0.0
110.5	IRON	0	0.0
110.5	KNOX	0	0.0
110.5	LEWIS	0	0.0
110.5	MERCER	0	0.0
110.5	MISSISSIPPI	0	0.0
110.5	SCHUYLER	0	0.0
110.5	SCOTLAND	0	0.0
110.5	STONE	0	0.0
110.5	WORTH	0	0.0

TABLE 2.0.15

3.0 FIRE VEHICLE INVOLVEMENT

This section presents a series of data displays which identify fire vehicle involvement in Missouri's traffic crash activity. Fire vehicle traffic crashes are defined as any crash in which one or more fire vehicles were directly involved in the incident. Data displays also are provided which describe characteristics of the fire vehicle drivers involved in these traffic crashes.

2007 SUMMARY ANALYSIS

- In 2007, there were 170 traffic crashes involving one or more fire vehicles in the State of Missouri. One person was killed and 49 were injured in these crashes.
- In 30.0% of the traffic crashes involving fire vehicles, the fire vehicle was on an emergency run at the time of the incident.
- In 2007, one person was injured in a fire vehicle related crash every 7.3 days in the State of Missouri.
- Of all 2007 crashes involving fire vehicles, the first harmful event in 55.9% of the cases involved one motor vehicle in transport striking another motor vehicle in transport. In 26.5% of the cases, it involved a motor vehicle striking a parked vehicle. In 13.5% of the cases, the vehicle struck a fixed object.
- Of all 2007 crashes involving fire vehicles, 65.9% occurred in an urban area of the State and 34.1% occurred in a rural area.
- Of all fire vehicle drivers in 2007 traffic crashes, 97.1% were male and 2.9% were female. The average age of the fire vehicle driver was 39.7 years.

2007 FIRE VEHICLE INVOLVED CRASHES

EMERGENCY RUN STATUS

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%	TOTAL NUMBER[1] KILLED	TOTAL NUMBER[1] INJURED	FIRE VEHICLE DRIVERS/PASSENGERS[2] KILLED	FIRE VEHICLE DRIVERS/PASSENGERS[2] INJURED
FIRE VEHICLE ON RUN	1	100.0	13	52.0	37	25.7	51	30.0	1	29	0	18
FIRE VEHICLE NOT ON RUN	0	0.0	12	48.0	107	74.3	119	70.0	0	20	0	8
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0	1	49	0	26

[1]This statistic indicates the total number of persons killed and injured in a crash where one or more fire vehicles were involved.

[2]This statistic indicates the number of fire vehicle drivers and passengers killed and injured.

TABLE 3.0.1

2006 and 2007 FIRE VEHICLE INVOLVED CRASH ANALYSIS

	2006	2007	RATE OF CHANGE
FATAL	3	1	- 66.7
PERSONAL INJURY	17	25	+ 47.1
PROPERTY DAMAGE	154	144	- 6.5
TOTAL	174	170	- 2.3

TABLE 3.0.2

2007 FIRE VEHICLE INVOLVED CRASHES

CRASH TYPE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
ANIMAL	0	0.0	0	0.0	3	2.1	3	1.8
BICYCLIST	0	0.0	0	0.0	0	0.0	0	0.0
FIXED OBJECT	0	0.0	3	12.0	20	13.9	23	13.5
OTHER OBJECT	0	0.0	0	0.0	2	1.4	2	1.2
PEDESTRIAN	0	0.0	0	0.0	0	0.0	0	0.0
TRAIN	0	0.0	0	0.0	0	0.0	0	0.0
VEHICLE IN TRANSPORT	1	100.0	22	88.0	72	50.0	95	55.9
VEHICLE ON OTHER ROADWAY	0	0.0	0	0.0	0	0.0	0	0.0
PARKED VEHICLE	0	0.0	0	0.0	45	31.3	45	26.5
NON-COLLISION OVERTURN	0	0.0	0	0.0	1	0.7	1	0.6
NON-COLLISION OTHER	0	0.0	0	0.0	1	0.7	1	0.6
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.3

2007 FIRE VEHICLE INVOLVED CRASHES

AREA CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
URBAN	0	0.0	14	56.0	98	68.1	112	65.9
RURAL	1	100.0	11	44.0	46	31.9	58	34.1
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.4

2007 FIRE VEHICLE INVOLVED CRASHES

ROAD CURVATURE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
STRAIGHT	1	100.0	19	76.0	123	86.6	143	85.1
CURVE	0	0.0	6	24.0	19	13.4	25	14.9
UNKNOWN	0	-	0	-	2	-	2	-
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.5

2007 FIRE VEHICLE INVOLVED CRASHES

ROAD INCLINE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
LEVEL	1	100.0	17	68.0	96	68.6	114	68.7
HILL	0	0.0	8	32.0	41	29.3	49	29.5
CREST	0	0.0	0	0.0	3	2.1	3	1.8
UNKNOWN	0	-	0	-	4	-	4	-
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.6

2007 FIRE VEHICLE INVOLVED CRASHES

ROAD CONDITIONS BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRY	1	100.0	15	60.0	109	76.8	125	74.4
WET	0	0.0	4	16.0	21	14.8	25	14.9
SNOW	0	0.0	3	12.0	8	5.6	11	6.6
ICE	0	0.0	3	12.0	3	2.1	6	3.6
SLUSH	0	0.0	0	0.0	0	0.0	0	0.0
MUD	0	0.0	0	0.0	0	0.0	0	0.0
STANDING WATER	0	0.0	0	0.0	0	0.0	0	0.0
MOVING WATER	0	0.0	0	0.0	1	0.7	1	0.6
UNKNOWN	0	-	0	-	2	-	2	-
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.7

2007 FIRE VEHICLE INVOLVED CRASHES

HIGHWAY CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
INTERSTATE	0	0.0	6	24.0	7	4.9	13	7.7
U.S. HIGHWAY	0	0.0	4	16.0	7	4.9	11	6.5
STATE NUMBERED	0	0.0	4	16.0	14	9.7	18	10.6
SINGLE STATE LETTERED	0	0.0	3	12.0	5	3.5	8	4.7
DOUBLE STATE LETTERED	1	100.0	0	0.0	3	2.1	4	2.4
OUTER ROAD	0	0.0	0	0.0	1	0.7	1	0.6
COUNTY ROAD	0	0.0	3	12.0	13	9.0	16	9.4
CITY STREET	0	0.0	5	20.0	84	58.3	89	52.4
INTERSTATE LOOP	0	0.0	0	0.0	0	0.0	0	0.0
OTHER[1]	0	0.0	0	0.0	10	6.9	10	5.9
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

[1] "Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 3.0.8

2007 FIRE VEHICLE INVOLVED CRASHES

HIGHWAY CLASSIFICATION BY AREA CLASSIFICATION AND CRASH SEVERITY

	URBAN								RURAL							
	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
INTERSTATE	0	0.0	4	28.6	2	2.0	6	5.4	0	0.0	2	18.2	5	10.9	7	12.1
U.S. HIGHWAY	0	0.0	2	14.3	4	4.1	6	5.4	0	0.0	2	18.2	3	6.5	5	8.6
STATE NUMBERED	0	0.0	3	21.4	4	4.1	7	6.3	0	0.0	1	9.1	10	21.7	11	19.0
SINGLE STATE LETTERED	0	0.0	1	7.1	2	2.0	3	2.7	0	0.0	2	18.2	3	6.5	5	8.6
DOUBLE STATE LETTERED	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	3	6.5	4	6.9
OUTER ROAD	0	0.0	0	0.0	1	1.0	1	0.9	0	0.0	0	0.0	0	0.0	0	0.0
COUNTY ROAD	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	27.3	13	28.3	16	27.6
CITY STREET	0	0.0	4	28.6	78	79.6	82	73.2	0	0.0	1	9.1	6	13.0	7	12.1
INTERSTATE LOOP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
OTHER [1]	0	0.0	0	0.0	7	7.1	7	6.3	0	0.0	0	0.0	3	6.5	3	5.2
TOTAL	0	0.0	14	100.0	98	100.0	112	100.0	1	100.0	11	100.0	46	100.0	58	100.0

[1] "Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 3.0.9

2007 FIRE VEHICLE INVOLVED CRASHES
MONTH OF YEAR

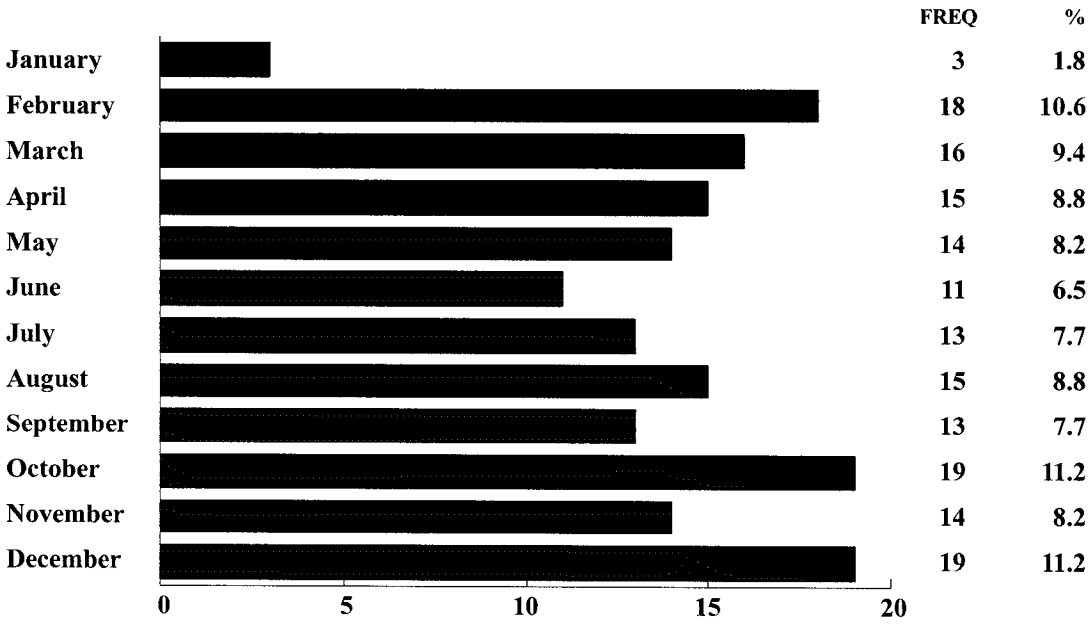


FIGURE 3.0.1

2007 FIRE VEHICLE INVOLVED CRASHES
DAY OF WEEK

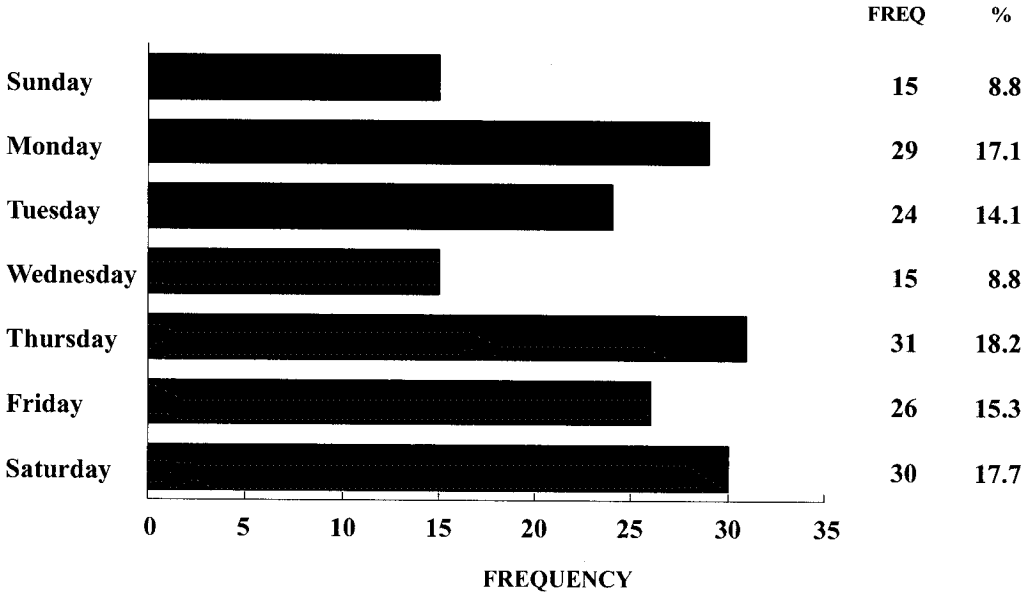


FIGURE 3.0.2

2007 FIRE VEHICLE INVOLVED CRASHES
HOUR OF DAY

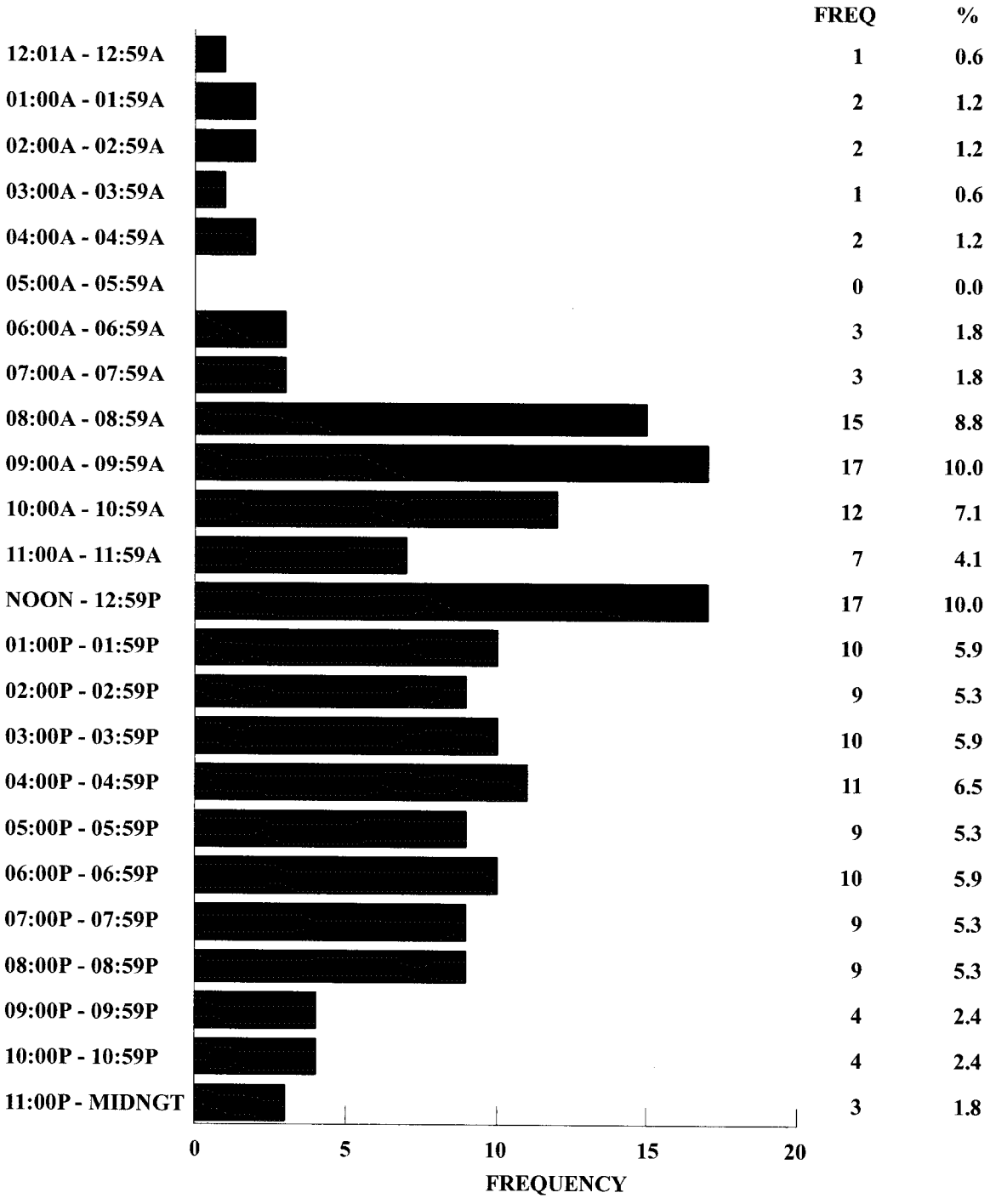


FIGURE 3.0.3

2007 MISSOURI FIRE VEHICLE CRASHES

TYPE OF CIRCUMSTANCE INVOLVED BY CRASH SEVERITY AND PERSON CLASSIFICATION[1]

	FATAL AND PERSONAL INJURY FIRE VEHICLE CRASHES = 26			TOTAL FIRE VEHICLE CRASHES = 170		
	DRIVER OF FIRE VEHICLE/ VEHICLE	OTHER DRIVER/ VEHICLE/ PEDESTRIAN	TOTAL F & PI	DRIVER OF FIRE VEHICLE/ VEHICLE	OTHER DRIVER/ VEHICLE/ PEDESTRIAN	TOTAL CRASHES
VEHICLE DEFECTS	3.8	3.8	7.6	1.8	1.2	2.9
TRAFFIC CONTROL INOPERATIVE / MISSING	0.0	0.0	0.0	0.0	0.0	0.0
IMPROPERLY STOPPED ON ROADWAY	0.0	0.0	0.0	0.0	1.8	1.8
EXCEEDING SPEED LIMIT / TOO FAST FOR CONDITIONS	11.5	15.4	26.9	7.6	5.9	13.5
IMPROPER PASSING	0.0	7.7	7.7	0.0	1.8	1.8
VIOLATION OF STOP SIGN	3.8	3.8	7.6	0.6	1.8	2.4
WRONG SIDE NOT PASSING	0.0	3.8	3.8	0.6	1.2	1.8
FOLLOWING TOO CLOSE	3.8	0.0	3.8	2.4	1.8	4.1
IMPROPER SIGNAL	0.0	0.0	0.0	0.0	0.0	0.0
IMPROPER BACKING	0.0	0.0	0.0	8.8	0.0	8.8
IMPROPER TURN	0.0	0.0	0.0	4.1	0.0	4.1
IMPROPER LANE USAGE / CHANGE	3.8	7.7	11.5	2.9	3.5	6.4
WRONG WAY ONE-WAY STREET	0.0	0.0	0.0	0.0	0.0	0.0
IMPROPER START FROM PARK	0.0	0.0	0.0	0.0	0.0	0.0
IMPROPERLY PARKED	0.0	0.0	0.0	0.0	6.5	6.5
FAILED TO YIELD	11.5	30.8	38.5	5.9	9.4	14.7
DRINKING	0.0	3.8	3.8	0.6	1.2	1.8
DRUGS	0.0	0.0	0.0	0.0	0.0	0.0
PHYSICAL IMPAIRMENT	0.0	0.0	0.0	0.0	0.0	0.0
INATTENTION	7.7	19.2	23.1	21.8	7.1	27.6

[1]This table identifies the percentage of crashes involving one or more fire vehicles having a specific type of circumstance which contributed to the cause of the crash. This table further defines the percentage of crashes where the contributing circumstance was associated with the driver or his fire vehicle as well as those attributed to other persons and vehicles in the crash. For instance, when examining speed involvement in 2007 Missouri fire vehicle crashes, it was found that a fire vehicle driver was speeding in 7.6% of the crashes. In 5.9% of the crashes another driver was speeding. In 13.5% of the crashes either a fire vehicle driver, another driver, or both drivers were speeding.

TABLE 3.0.10

FIRE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

TYPE OF VEHICLE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
AUTOMOBILE	0	0.0	1	4.2	11	7.8	12	7.2
SPORT UTILITY VEHICLE	0	0.0	0	0.0	9	6.4	9	5.4
VAN	0	0.0	0	0.0	1	0.7	1	0.6
CONSTRUCTION EQUIPMENT	0	0.0	1	4.2	0	0.0	1	0.6
OTHER TRANSPORT DEVICE	0	0.0	2	8.3	23	16.3	25	15.1
PICK-UP TRUCK	1	100.0	4	16.7	16	11.4	21	12.7
OTHER TRUCK	0	0.0	16	66.7	81	57.5	97	58.4
UNKNOWN	0	-	1	-	3	-	4	-
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.11

FIRE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

DRIVER INVOLVEMENT BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRIVERLESS	0	0.0	0	0.0	0	0.0	0	0.0
KNOWN DRIVER INVOLVED	1	100.0	25	100.0	144	100.0	170	100.0
UNKNOWN DRIVER INVOLVED	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.12

DRIVERS OF FIRE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

SEX OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
MALE	1	100.0	24	96.0	140	97.2	165	97.1
FEMALE	0	0.0	1	4.0	4	2.8	5	2.9
UNKNOWN	0	-	0	-	0	-	0	-
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.13

DRIVERS OF FIRE VEHICLES INVOLVED IN 2007 MISSOURI CRASHES

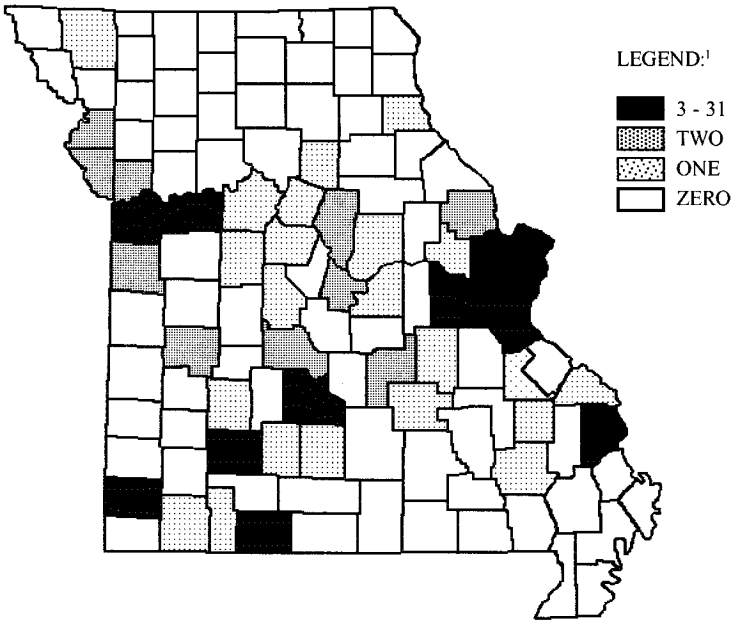
AGE OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
AVERAGE AGE OF DRIVER	25.0	-	37.7	-	40.2	-	39.7	-
14 YEARS AND UNDER	0	0.0	0	0.0	0	0.0	0	0.0
15 - 20 YEARS	0	0.0	2	8.0	6	4.2	8	4.7
21 - 25 YEARS	1	100.0	3	12.0	10	7.0	14	8.3
26 - 30 YEARS	0	0.0	2	8.0	16	11.2	18	10.7
31 - 35 YEARS	0	0.0	5	20.0	22	15.4	27	16.0
36 - 40 YEARS	0	0.0	4	16.0	24	16.8	28	16.6
41 - 45 YEARS	0	0.0	4	16.0	21	14.7	25	14.8
46 - 50 YEARS	0	0.0	1	4.0	22	15.4	23	13.6
51 - 55 YEARS	0	0.0	2	8.0	9	6.3	11	6.5
56 - 60 YEARS	0	0.0	1	4.0	6	4.2	7	4.1
61 - 65 YEARS	0	0.0	0	0.0	2	1.4	2	1.2
66 YEARS AND OVER	0	0.0	1	4.0	5	3.5	6	3.6
UNKNOWN	0	-	0	-	1	-	1	-
TOTAL	1	100.0	25	100.0	144	100.0	170	100.0

TABLE 3.0.14

2007 FIRE VEHICLE INVOLVED CRASHES

COUNTY QUARTILE ANALYSIS



[1] LEGEND CATEGORIES ARE BASED ON QUARTILES OF COUNTIES.

RANK	COUNTY	FREQUENCY	PERCENT
1.5	JACKSON	31	18.2
1.5	ST. LOUIS	31	18.2
3.0	ST. LOUIS CITY	28	16.5
4.0	ST. CHARLES	7	4.1
5.0	GREENE	6	3.5
6.0	JEFFERSON	5	2.9
7.5	FRANKLIN	4	2.4
7.5	NEWTON	4	2.4
10.5	CAPE GIRARDEAU	3	1.8
10.5	LACLEDE	3	1.8
10.5	LAFAYETTE	3	1.8
10.5	TANEY	3	1.8
			First Quartile
			Second Quartile
17.5	BOONE	2	1.2
17.5	BUCHANAN	2	1.2
17.5	CAMDEN	2	1.2
17.5	CASS	2	1.2
17.5	CLAY	2	1.2
17.5	COLE	2	1.2
17.5	LINCOLN	2	1.2
17.5	PHELPS	2	1.2
17.5	PLATTE	2	1.2
17.5	ST. CLAIR	2	1.2
			Second Quartile
			Third Quartile
33.5	BARRY	1	0.6
33.5	CALLAWAY	1	0.6
33.5	COOPER	1	0.6
33.5	CRAWFORD	1	0.6
33.5	DENT	1	0.6
33.5	HOWARD	1	0.6
33.5	MADISON	1	0.6
33.5	MARION	1	0.6
33.5	MORGAN	1	0.6
33.5	NODAWAY	1	0.6
33.5	OSAGE	1	0.6
33.5	PERRY	1	0.6
33.5	PETTIS	1	0.6
33.5	POLK	1	0.6

RANK	COUNTY	FREQUENCY	PERCENT
33.5	RANDOLPH	1	0.6
33.5	ST. FRANCOIS	1	0.6
33.5	SALINE	1	0.6
33.5	STONE	1	0.6
33.5	WARREN	1	0.6
33.5	WAYNE	1	0.6
33.5	WEBSTER	1	0.6
33.5	WRIGHT	1	0.6
		Third Quartile	
		Fourth Quartile	
80.0	ADAIR	0	0.0
80.0	ANDREW	0	0.0
80.0	ATCHISON	0	0.0
80.0	AUDRAIN	0	0.0
80.0	BARTON	0	0.0
80.0	BATES	0	0.0
80.0	BENTON	0	0.0
80.0	BOLLINGER	0	0.0
80.0	BUTLER	0	0.0
80.0	CALDWELL	0	0.0
80.0	CARROLL	0	0.0
80.0	CARTER	0	0.0
80.0	CEDAR	0	0.0
80.0	CHARITON	0	0.0
80.0	CHRISTIAN	0	0.0
80.0	CLARK	0	0.0
80.0	CLINTON	0	0.0
80.0	DADE	0	0.0
80.0	DALLAS	0	0.0
80.0	DAVIESS	0	0.0
80.0	DE KALB	0	0.0
80.0	DOUGLAS	0	0.0
80.0	DUNKLIN	0	0.0
80.0	GASCONADE	0	0.0
80.0	GENTRY	0	0.0
80.0	GRUNDY	0	0.0
80.0	HARRISON	0	0.0
80.0	HENRY	0	0.0
80.0	HICKORY	0	0.0
80.0	HOLT	0	0.0
80.0	HOWELL	0	0.0
80.0	IRON	0	0.0
80.0	JASPER	0	0.0
80.0	JOHNSON	0	0.0
80.0	KNOX	0	0.0
80.0	LAWRENCE	0	0.0
80.0	LEWIS	0	0.0
80.0	LINN	0	0.0
80.0	LIVINGSTON	0	0.0
80.0	MC DONALD	0	0.0
80.0	MACON	0	0.0
80.0	MARIES	0	0.0
80.0	MERCER	0	0.0
80.0	MILLER	0	0.0
80.0	MISSISSIPPI	0	0.0
80.0	MONITEAU	0	0.0
80.0	MONROE	0	0.0
80.0	MONTGOMERY	0	0.0
80.0	NEW MADRID	0	0.0
80.0	OREGON	0	0.0
80.0	OZARK	0	0.0
80.0	PEMISCOT	0	0.0
80.0	PIKE	0	0.0
80.0	PULASKI	0	0.0
80.0	PUTNAM	0	0.0
80.0	RALLS	0	0.0
80.0	RAY	0	0.0
80.0	REYNOLDS	0	0.0
80.0	RIPLEY	0	0.0
80.0	STE. GENEVIEVE	0	0.0
80.0	SCHUYLER	0	0.0
80.0	SCOTLAND	0	0.0
80.0	SCOTT	0	0.0
80.0	SHANNON	0	0.0
80.0	SHELBY	0	0.0
80.0	STODDARD	0	0.0
80.0	SULLIVAN	0	0.0
80.0	TEXAS	0	0.0
80.0	VERNON	0	0.0
80.0	WASHINGTON	0	0.0
80.0	WORTH	0	0.0

TABLE 3.0.15

4.0 AMBULANCE INVOLVEMENT

This section presents a series of data displays which identify ambulance involvement in Missouri's traffic crash activity. Ambulance traffic crashes are defined as any crash in which one or more ambulances were directly involved in the incident. Data displays also are provided which describe characteristics of the ambulance drivers involved in these traffic crashes.

2007 SUMMARY ANALYSIS

- In 2007, there were 155 traffic crashes involving one or more ambulances in the State of Missouri. Two people were killed and 70 were injured in these crashes.
- In 28.4% of the traffic crashes involving ambulances, the ambulance was on an emergency run at the time of the incident.
- In 2007, one person was killed or injured in an ambulance related crash every 5.1 days in the State of Missouri.
- Of all 2007 crashes involving ambulances, the first harmful event in 61.3% of the cases involved one motor vehicle in transport striking another motor vehicle in transport. In 13.6% of the cases a motor vehicle struck an animal, and in 12.9% of the cases, a motor vehicle struck a fixed object.
- Of all 2007 crashes involving ambulances, 61.3% occurred in an urban area of the State and 38.7% occurred in a rural area.
- Of all ambulance drivers involved in 2007 traffic crashes, 67.1% were male and 32.9% were female. The average age of the ambulance driver was 34.6 years.

2007 AMBULANCE INVOLVED CRASHES

EMERGENCY RUN STATUS

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%	TOTAL NUMBER[1] KILLED	TOTAL NUMBER[1] INJURED	AMBULANCE DRIVERS/PASSENGERS[2] KILLED	AMBULANCE DRIVERS/PASSENGERS[2] INJURED
AMBULANCE ON RUN	2	100.0	13	48.2	29	23.0	44	28.4	2	40	1	26
AMBULANCE NOT ON RUN	0	0.0	14	51.8	97	77.0	111	71.6	0	30	0	22
TOTAL	2	100.0	27	100.0	126	100.0	155	100.0	2	70	1	48

[1]This statistic indicates the total number of persons killed and injured in a crash where one or more ambulances were involved.

[2]This statistic indicates the number of ambulance drivers and passengers killed and injured.

TABLE 4.0.1

2006 and 2007 AMBULANCE INVOLVED CRASH ANALYSIS

	2006	2007	RATE OF CHANGE
FATAL	0	2	(+ 2)
PERSONAL INJURY	27	27	= 0.0
PROPERTY DAMAGE	110	126	+ 14.5
TOTAL	137	155	+ 13.1

TABLE 4.0.2

2007 AMBULANCE INVOLVED CRASHES

CRASH TYPE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
ANIMAL	0	0.0	1	3.7	20	15.9	21	13.6
BICYCLIST	0	0.0	0	0.0	0	0.0	0	0.0
FIXED OBJECT	0	0.0	4	14.8	16	12.7	20	12.9
OTHER OBJECT	0	0.0	0	0.0	1	0.8	1	0.7
PEDESTRIAN	0	0.0	0	0.0	0	0.0	0	0.0
TRAIN	0	0.0	0	0.0	0	0.0	0	0.0
VEHICLE IN TRANSPORT	2	100.0	22	81.5	71	56.4	95	61.3
VEHICLE ON OTHER ROADWAY	0	0.0	0	0.0	0	0.0	0	0.0
PARKED VEHICLE	0	0.0	0	0.0	18	14.3	18	11.6
NON-COLLISION OVERTURN	0	0.0	0	0.0	0	0.0	0	0.0
NON-COLLISION OTHER	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	2	100.0	27	100.0	126	100.0	155	100.0

TABLE 4.0.3

2007 AMBULANCE INVOLVED CRASHES

AREA CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
URBAN	1	50.0	13	48.2	81	64.3	95	61.3
RURAL	1	50.0	14	51.8	45	35.7	60	38.7
TOTAL	2	100.0	27	100.0	126	100.0	155	100.0

TABLE 4.0.4

2007 AMBULANCE INVOLVED CRASHES

ROAD CURVATURE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
STRAIGHT	1	50.0	23	85.2	113	90.4	137	89.0
CURVE	1	50.0	4	14.8	12	9.6	17	11.0
UNKNOWN	0	-	0	-	1	-	1	-
TOTAL	2	100.0	27	100.0	126	100.0	155	100.0

TABLE 4.0.5

2007 AMBULANCE INVOLVED CRASHES

ROAD INCLINE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
LEVEL	0	0.0	20	74.1	89	72.4	109	71.7
HILL	2	100.0	7	25.9	33	26.8	42	27.6
CREST	0	0.0	0	0.0	1	0.8	1	0.7
UNKNOWN	0	-	0	-	3	-	3	-
TOTAL	2	100.0	27	100.0	126	100.0	155	100.0

TABLE 4.0.6

2007 AMBULANCE INVOLVED CRASHES

ROAD CONDITIONS BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRY	2	100.0	24	88.9	99	79.2	125	81.2
WET	0	0.0	1	3.7	18	14.4	19	12.3
SNOW	0	0.0	1	3.7	6	4.8	7	4.6
ICE	0	0.0	1	3.7	1	0.8	2	1.3
SLUSH	0	0.0	0	0.0	0	0.0	0	0.0
MUD	0	0.0	0	0.0	0	0.0	0	0.0
STANDING WATER	0	0.0	0	0.0	1	0.8	1	0.7
MOVING WATER	0	0.0	0	0.0	0	0.0	0	0.0
UNKNOWN	0	-	0	-	1	-	1	-
TOTAL	2	100.0	27	100.0	126	100.0	155	100.0

TABLE 4.0.7

2007 AMBULANCE INVOLVED CRASHES

HIGHWAY CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
INTERSTATE	0	0.0	3	11.1	12	9.5	15	9.7
U.S. HIGHWAY	0	0.0	3	11.1	17	13.5	20	12.9
STATE NUMBERED	0	0.0	5	18.5	18	14.3	23	14.8
SINGLE STATE LETTERED	0	0.0	1	3.7	11	8.7	12	7.7
DOUBLE STATE LETTERED	0	0.0	0	0.0	7	5.6	7	4.5
OUTER ROAD	0	0.0	1	3.7	0	0.0	1	0.7
COUNTY ROAD	1	50.0	2	7.4	6	4.8	9	5.8
CITY STREET	1	50.0	10	37.0	50	39.7	61	39.4
INTERSTATE LOOP	0	0.0	1	3.7	0	0.0	1	0.7
OTHER[1]	0	0.0	1	3.7	5	4.0	6	3.9
TOTAL	2	100.0	27	100.0	126	100.0	155	100.0

[1] "Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 4.0.8

2007 AMBULANCE INVOLVED CRASHES

HIGHWAY CLASSIFICATION BY AREA CLASSIFICATION AND CRASH SEVERITY

	URBAN								RURAL							
	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
INTERSTATE	0	0.0	1	7.7	9	11.1	10	10.5	0	0.0	2	14.3	3	6.7	5	8.3
U.S. HIGHWAY	0	0.0	0	0.0	8	9.9	8	8.4	0	0.0	3	21.4	9	20.0	12	20.0
STATE NUMBERED	0	0.0	1	7.7	7	8.6	8	8.4	0	0.0	4	28.6	11	24.4	15	25.0
SINGLE STATE LETTERED	0	0.0	0	0.0	1	1.2	1	1.1	0	0.0	1	7.1	10	22.2	11	18.3
DOUBLE STATE LETTERED	0	0.0	0	0.0	2	2.5	2	2.1	0	0.0	0	0.0	5	11.1	5	8.3
OUTER ROAD	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	7.1	0	0.0	1	1.7
COUNTY ROAD	0	0.0	1	7.7	3	3.7	4	4.2	1	100.0	1	7.1	3	6.7	5	8.3
CITY STREET	1	100.0	10	76.9	48	59.3	59	62.1	0	0.0	0	0.0	2	4.4	2	3.3
INTERSTATE LOOP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	7.1	0	0.0	1	1.7
OTHER [1]	0	0.0	0	0.0	3	3.7	3	3.2	0	0.0	1	7.1	2	4.4	3	5.0
TOTAL	1	100.0	13	100.0	81	100.0	95	100.0	1	100.0	14	100.0	45	100.0	60	100.0

[1] "Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 4.0.9

2007 AMBULANCE INVOLVED CRASHES
MONTH OF YEAR

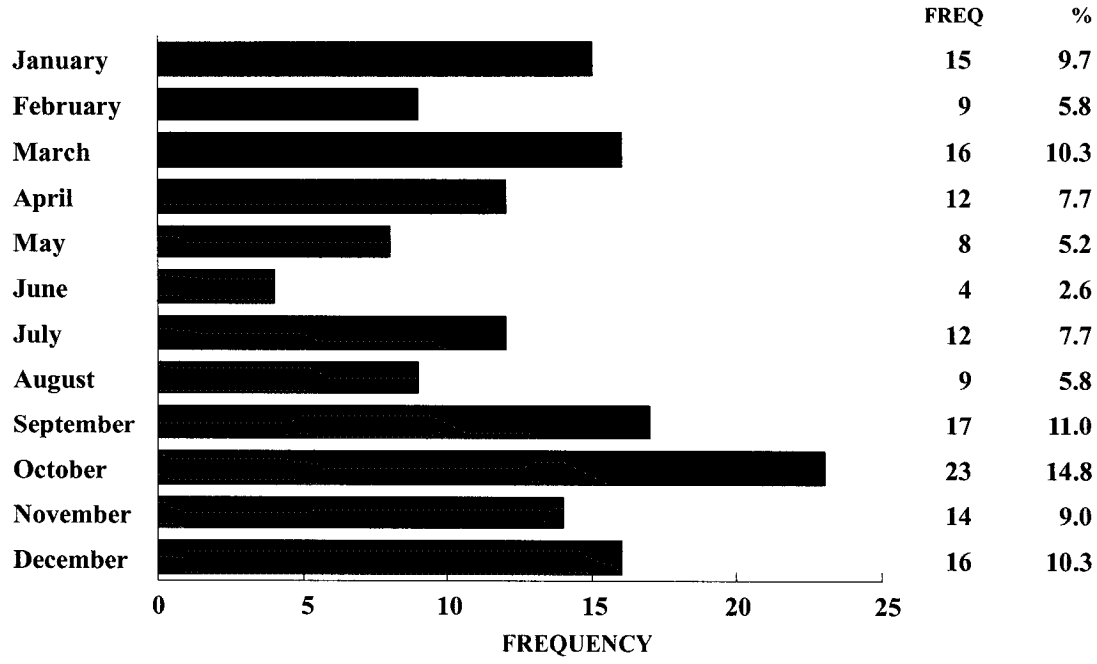


FIGURE 4.0.1

2007 AMBULANCE INVOLVED CRASHES
DAY OF WEEK

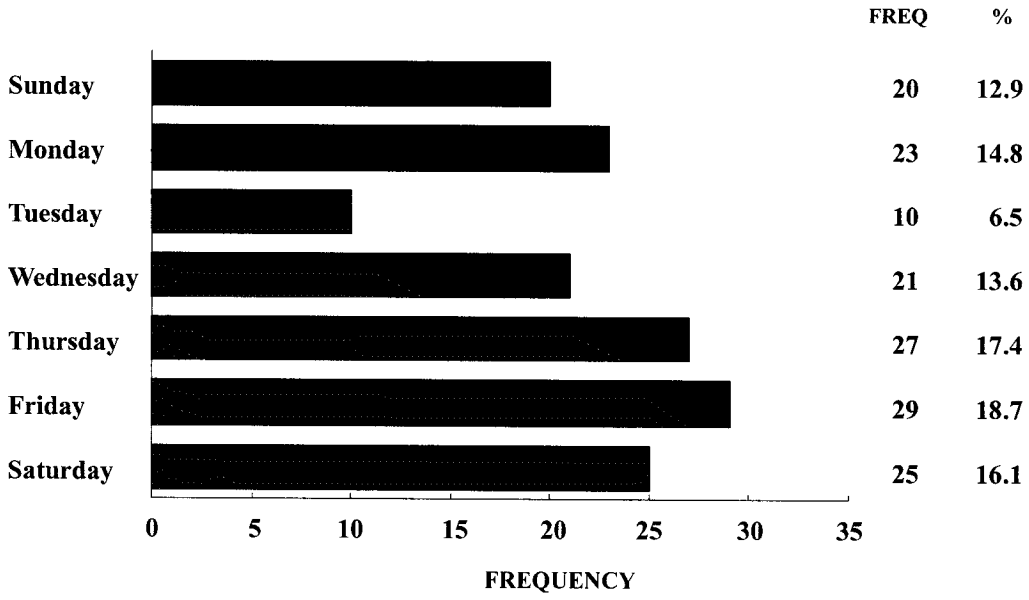


FIGURE 4.0.2

2007 AMBULANCE INVOLVED CRASHES
HOUR OF DAY

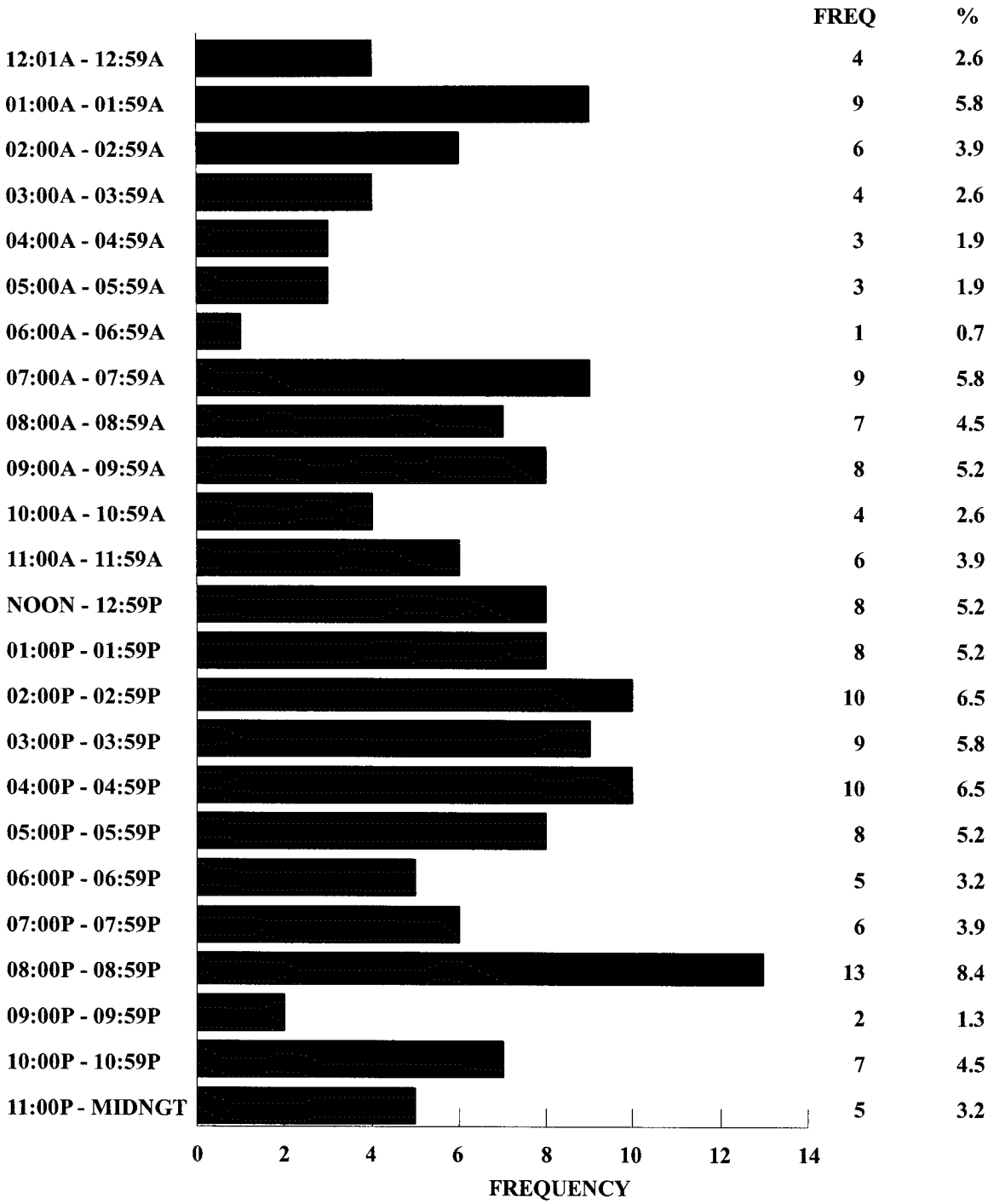


FIGURE 4.0.3

2007 MISSOURI AMBULANCE CRASHES

TYPE OF CIRCUMSTANCE INVOLVED BY CRASH SEVERITY AND PERSON CLASSIFICATION[1]

	FATAL AND PERSONAL INJURY AMBULANCE CRASHES = 29			TOTAL AMBULANCE CRASHES = 155		
	DRIVER OF AMBULANCE/ VEHICLE	OTHER DRIVER/ VEHICLE/ PEDESTRIAN	TOTAL F & PI	DRIVER OF AMBULANCE/ VEHICLE	OTHER DRIVER/ VEHICLE/ PEDESTRIAN	TOTAL CRASHES
VEHICLE DEFECTS	0.0	0.0	0.0	0.0	1.9	1.9
TRAFFIC CONTROL INOPERATIVE / MISSING	0.0	0.0	0.0	0.0	0.0	0.0
IMPROPERLY STOPPED ON ROADWAY	0.0	0.0	0.0	0.0	0.6	0.6
EXCEEDING SPEED LIMIT / TOO FAST FOR CONDITIONS	6.9	20.7	27.6	3.9	7.7	11.6
IMPROPER PASSING	3.4	0.0	3.4	1.9	1.3	3.2
VIOLATION OF STOP SIGN	0.0	6.9	6.9	0.6	2.6	3.2
WRONG SIDE NOT PASSING	3.4	6.9	10.3	1.3	2.6	3.9
FOLLOWING TOO CLOSE	0.0	3.4	3.4	1.3	5.2	6.5
IMPROPER SIGNAL	0.0	0.0	0.0	0.0	0.0	0.0
IMPROPER BACKING	0.0	0.0	0.0	2.6	1.9	4.5
IMPROPER TURN	3.4	3.4	6.8	2.6	0.6	3.2
IMPROPER LANE USAGE / CHANGE	6.9	0.0	6.9	8.4	7.1	15.5
WRONG WAY ONE-WAY STREET	0.0	0.0	0.0	0.0	0.0	0.0
IMPROPER START FROM PARK	0.0	0.0	0.0	0.0	0.6	0.6
IMPROPERLY PARKED	0.0	0.0	0.0	0.0	0.6	0.6
FAILED TO YIELD	13.8	27.6	37.9	2.6	11.0	12.9
DRINKING	0.0	6.9	6.9	0.0	3.2	3.2
DRUGS	0.0	0.0	0.0	0.0	0.0	0.0
PHYSICAL IMPAIRMENT	0.0	3.4	3.4	1.3	1.3	2.6
INATTENTION	3.4	17.2	17.2	12.3	10.3	21.9

[1]This table identifies the percentage of crashes involving one or more ambulances having a specific type of circumstance which contributed to the cause of the crash. This table further defines the percentage of crashes where the contributing circumstance was associated with the driver or his ambulance as well as those attributed to other persons and vehicles in the crash. For instance, when examining speed involvement in 2007 Missouri ambulance crashes, it was found that an ambulance driver was speeding in 3.9% of the crashes. In 7.7% of the crashes another driver was speeding. In 11.6% of the crashes either an ambulance driver, another driver, or both drivers were speeding.

TABLE 4.0.10

AMBULANCES INVOLVED IN 2007 MISSOURI CRASHES

DRIVER INVOLVEMENT BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRIVERLESS	0	0.0	0	0.0	0	0.0	0	0.0
KNOWN DRIVER INVOLVED	2	100.0	28	100.0	125	99.2	155	99.4
UNKNOWN DRIVER INVOLVED	0	0.0	0	0.0	1	0.8	1	0.6
TOTAL	2	100.0	28	100.0	126	100.0	156	100.0

TABLE 4.0.11

DRIVERS OF AMBULANCES INVOLVED IN 2007 MISSOURI CRASHES

SEX OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
MALE	1	50.0	19	67.9	84	67.2	104	67.1
FEMALE	1	50.0	9	32.1	41	32.8	51	32.9
UNKNOWN	0	-	0	-	1	-	1	-
TOTAL	2	100.0	28	100.0	126	100.0	156	100.0

TABLE 4.0.12

DRIVERS OF AMBULANCES INVOLVED IN 2007 MISSOURI CRASHES

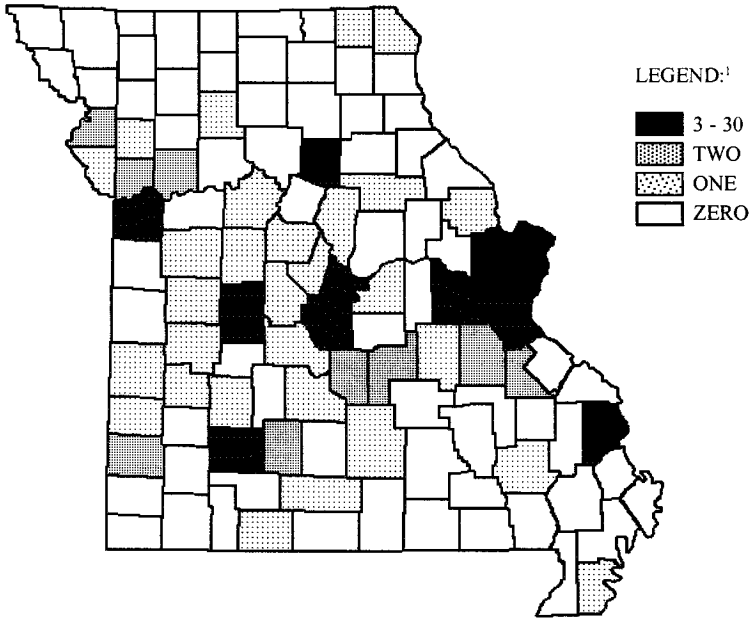
AGE OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
AVERAGE AGE OF DRIVER	32.5	-	37.0	-	34.1	-	34.6	-
14 YEARS AND UNDER	0	0.0	0	0.0	0	0.0	0	0.0
15 - 20 YEARS	0	0.0	2	7.1	2	1.6	4	2.6
21 - 25 YEARS	0	0.0	3	10.7	29	23.2	32	20.7
26 - 30 YEARS	1	50.0	7	25.0	26	20.8	34	21.9
31 - 35 YEARS	1	50.0	5	17.9	21	16.8	27	17.4
36 - 40 YEARS	0	0.0	1	3.6	14	11.2	15	9.7
41 - 45 YEARS	0	0.0	3	10.7	12	9.6	15	9.7
46 - 50 YEARS	0	0.0	0	0.0	10	8.0	10	6.5
51 - 55 YEARS	0	0.0	3	10.7	5	4.0	8	5.2
56 - 60 YEARS	0	0.0	2	7.1	4	3.2	6	3.9
61 - 65 YEARS	0	0.0	1	3.6	1	0.8	2	1.3
66 YEARS AND OVER	0	0.0	1	3.6	1	0.8	2	1.3
UNKNOWN	0	-	0	-	1	-	1	-
TOTAL	2	100.0	28	100.0	126	100.0	156	100.0

TABLE 4.0.13

2007 AMBULANCE INVOLVED CRASHES

COUNTY QUARTILE ANALYSIS



[1] LEGEND CATEGORIES ARE BASED ON QUARTILES OF COUNTIES.

RANK	COUNTY	FREQUENCY	PERCENT
1.0	ST. LOUIS	30	19.4
2.0	ST. LOUIS CITY	25	16.1
3.0	JACKSON	19	12.3
4.0	ST. CHARLES	7	4.5
6.0	FRANKLIN	4	2.6
6.0	JEFFERSON	4	2.6
6.0	RANDOLPH	4	2.6
10.0	BENTON	3	1.9
10.0	CAPE GIRARDEAU	3	1.9
10.0	COLE	3	1.9
10.0	GREENE	3	1.9
10.0	MILLER	3	1.9
			First Quartile
			Second Quartile
17.0	BUCHANAN	2	1.3
17.0	CLAY	2	1.3
17.0	JASPER	2	1.3
17.0	PHELPS	2	1.3
17.0	PULASKI	2	1.3
17.0	RAY	2	1.3
17.0	ST. FRANCOIS	2	1.3
17.0	WASHINGTON	2	1.3
17.0	WEBSTER	2	1.3
			Second Quartile
			Third Quartile
36.0	AUDRAIN	1	0.6
36.0	BARTON	1	0.6
36.0	BOONE	1	0.6
36.0	CAMDEN	1	0.6
36.0	CEDAR	1	0.6
36.0	CLARK	1	0.6
36.0	CLINTON	1	0.6
36.0	COOPER	1	0.6
36.0	CRAWFORD	1	0.6
36.0	DOUGLAS	1	0.6
36.0	HENRY	1	0.6
36.0	JOHNSON	1	0.6
36.0	LACLEDE	1	0.6
36.0	LINCOLN	1	0.6
36.0	LIVINGSTON	1	0.6

RANK	COUNTY	FREQUENCY	PERCENT	RANK	COUNTY	FREQUENCY	PERCENT
36.0	MONITEAU	1	0.6	83.0	HICKORY	0	0.0
36.0	MORGAN	1	0.6	83.0	HOLT	0	0.0
36.0	OSAGE	1	0.6	83.0	HOWARD	0	0.0
36.0	PEMISCOT	1	0.6	83.0	HOWELL	0	0.0
36.0	PETTIS	1	0.6	83.0	IRON	0	0.0
36.0	PLATTE	1	0.6	83.0	KNOX	0	0.0
36.0	POLK	1	0.6	83.0	LAFAYETTE	0	0.0
36.0	ST. CLAIR	1	0.6	83.0	LAWRENCE	0	0.0
36.0	SALINE	1	0.6	83.0	LEWIS	0	0.0
36.0	SCOTLAND	1	0.6	83.0	LINN	0	0.0
36.0	TANEY	1	0.6	83.0	MC DONALD	0	0.0
36.0	TEXAS	1	0.6	83.0	MACON	0	0.0
36.0	VERNON	1	0.6	83.0	MADISON	0	0.0
36.0	WAYNE	1	0.6	83.0	MARIES	0	0.0
			Third Quartile	83.0	MARION	0	0.0
				83.0	MERCER	0	0.0
			Fourth Quartile	83.0	MISSISSIPPI	0	0.0
83.0	ADAIR	0	0.0	83.0	MONROE	0	0.0
83.0	ANDREW	0	0.0	83.0	MONTGOMERY	0	0.0
83.0	ATCHISON	0	0.0	83.0	NEW MADRID	0	0.0
83.0	BARRY	0	0.0	83.0	NEWTON	0	0.0
83.0	BATES	0	0.0	83.0	NODAWAY	0	0.0
83.0	BOLLINGER	0	0.0	83.0	OREGON	0	0.0
83.0	BUTLER	0	0.0	83.0	OZARK	0	0.0
83.0	CALDWELL	0	0.0	83.0	PERRY	0	0.0
83.0	CALLAWAY	0	0.0	83.0	PIKE	0	0.0
83.0	CARROLL	0	0.0	83.0	PUTNAM	0	0.0
83.0	CARTER	0	0.0	83.0	RALLS	0	0.0
83.0	CASS	0	0.0	83.0	REYNOLDS	0	0.0
83.0	CHARITON	0	0.0	83.0	RIPLEY	0	0.0
83.0	CHRISTIAN	0	0.0	83.0	STE. GENEVIEVE	0	0.0
83.0	DADE	0	0.0	83.0	SCHUYLER	0	0.0
83.0	DALLAS	0	0.0	83.0	SCOTT	0	0.0
83.0	DAVIESS	0	0.0	83.0	SHANNON	0	0.0
83.0	DE KALB	0	0.0	83.0	SHELBY	0	0.0
83.0	DENT	0	0.0	83.0	STODDARD	0	0.0
83.0	DUNKLIN	0	0.0	83.0	STONE	0	0.0
83.0	GASCONADE	0	0.0	83.0	SULLIVAN	0	0.0
83.0	GENTRY	0	0.0	83.0	WARREN	0	0.0
83.0	GRUNDY	0	0.0	83.0	WORTH	0	0.0
83.0	HARRISON	0	0.0	83.0	WRIGHT	0	0.0

TABLE 4.0.14

GLOSSARY

AMBULANCE INVOLVED TRAFFIC CRASH: Any crash in which one or more ambulances were directly involved in the incident.

EMERGENCY SERVICE VEHICLE INVOLVED TRAFFIC CRASH: Any crash in which one or more emergency service vehicles (i.e., police, fire, ambulance, and 'other' emergency service vehicle) were directly involved in the incident.

FATAL TRAFFIC CRASH: A crash in which one or more persons were killed as a result of the crash and their death(s) occurred within 30 days of the incident.

FIRE VEHICLE INVOLVED TRAFFIC CRASH: Any crash in which one or more fire vehicles were directly involved in the incident.

PERSONAL INJURY TRAFFIC CRASH: Any crash in which no person was killed but one or more persons were injured in the incident.

POLICE VEHICLE INVOLVED TRAFFIC CRASH: Any crash in which one or more police vehicles were directly involved in the incident.

PROPERTY DAMAGE TRAFFIC CRASH: Any crash in which no person was killed or injured but property was damaged in the incident.

QUARTILE: The value that marks the boundary between two consecutive intervals in a frequency distribution of four intervals with each containing one quarter of the total population.

RATE OF CHANGE: The formula is:

$$\frac{\text{Value in Current Period - Value in Base Period}}{\text{Value in Base Period}} \times 100$$

RURAL AREA: Any community of less than 5,000 population or an unincorporated area of the State.

URBAN AREA: Any community in the State having a population of 5,000 or more.