



OFFICE OF THE GOVERNOR FRANKFORT, KENTUCKY 40601

#### My Fellow Kentuckians:

While motor vehicle travel has become a way of life in modern times, our transportation mode is the occasion for the deaths and injuries of thousands of citizens in our Commonwealth each year. Additionally, traffic accidents result in millions of dollars in insurance costs, medical expenses, and property damage repairs.

In reviewing this 1989 "Accident Facts" report, it is encouraging to note that the number of persons killed during 1989 decreased by seven percent over 1988. Still, we experienced an overall increase in the number of accidents reported in which persons were injured.

Everyone recognizes the importance of traffic safety. This does not necessarily mean that we always exercise due caution when driving on Kentucky's highways. The information contained in this 1989 report points to excessive speed and alcohol intoxication as primary factors in fatal and serious injury accidents.



The report also demonstrates the effectiveness of seat belts and other passive restraints in reduction of the threats to life and serious injury.

I call on every Kentucky driver to exercise careful caution by observing the common sense rules for safe driving. My administration will continue to take every possible step to eliminate road hazards and improve the overall safety of our highways. Together, we can make Kentucky driving a pleasant and safe experience.

Sincerely,

Wallace G. Wilkinson Governor



Commonwealth of Kentucky KENTUCKY STATE POLICE 919 Versailles Road Frankfort 40601

WALLACE G. WILKINSON GOVERNOR

The Honorable Wallace G. Wilkinson Governor of Kentucky The Capitol Frankfort, Kentucky 40601

Dear Governor Wilkinson:

Pursuant to KRS 189.635, the Department of State Police accumulates and tabulates traffic accident reports submitted by law enforcement agencies within the Commonwealth. These responsibilities are carried out for the purpose of determining necessary improvements in traffic safety.

I am pleased to submit this 1989 "Accident Facts" report which provides statistical information, as well as comprehensive analyses of fatal, injury, and property damage accidents.

It is our hope that the data contained herein will be used for the benefit of law enforcement agencies, national, state, and local organizations concerned with safe driving and Kentucky's driving public.

Respectfully submitted,

W. Michael Troop Secretary, Justice Cabinet Acting Commissioner Kentucky State Police

W. MICHAEL TROOP ACTING COMMISSIONER BEBICACION

# This 1989 Accident Facts Report is appropriately dedicated

to

## THE SEVEN HUNDRED EIGHTY-TWO CITIZENS WHO WERE VICTIMS OF

## FATAL TRAFFIC ACCIDENTS DURING 1989

AND

то

## **THEIR FAMILIES**

All citizens of the Commonwealth of Kentucky share the sorrow brought about by senseless tragedies on our streets and highways.

# KENTUCKY TRAFFIC ACCIDENT FACTS (1989

Prepared by:

Records Section Information Services Branch Kentucky State Police 1250 Louisville Road Frankfort, Ky. 40601

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## TABLE OF CONTENTS

Message from the Governor, Commonwealth of Kentucky Transmittal letter, Commissioner, Kentucky State Police Introduction
1989 ACCIDENTS, SUMMARY
DEATHS AND INJURIES, SUMMARY
OCCURRENCE OF ACCIDENTS BY TYPE
1989 ACCIDENTS — Contributing Factors & Conditions
Pedestrians; School Age Children; School Bus; Trains; Trucks; Bicycles; Motorcycles; Mopeds; Multiple Fatal Accidents; Safety Equipment Contributing Factors (Vehicular and Environmental) — Trucks
1989 ACCIDENTS — Driver Involvement
1989 ACCIDENTS — Day & Time of Occurrence
LOCATION OF ACCIDENTS
KENTUCKY'S FATAL ACCIDENT REPORTING SYSTEM (FARS)
ABOUT CHILD RESTRAINTS
THE COST OF MOTOR VEHICLE ACCIDENTS IN KENTUCKYinside back cover

#### INTRODUCTION

KENTUCKY'S TRAFFIC ACCIDENT FACTS report for 1989 is based on accident reports submitted to the Kentucky Accident Reporting Unit housed in the Kentucky State Police Information Services Branch, Records Section. As required by Kentucky Revised Statute 189.635, "every law enforcement agency whose officers investigate a vehicle accident of which a report must be made . . . shall file a report of the accident . . . within ten days after investigation of the accident upon forms supplied by the bureau." The stated purpose of this requirement is to utilize data on traffic accidents "for such purposes as will improve the traffic safety program in the Commonwealth." Data contained in this report are based solely on the observations and judgements of the state and local police officers who investigated each accident, entering the information on Kentucky's UNIFORM POLICE TRAFFIC ACCIDENT REPORT form. Upon receipt of each report, the Accident Reporting Unit carefully screens the reports for accuracy and reasonableness before coding each item. The reports are then forwarded to Data Processing. Computer tabulations and summaries are again checked for accuracy before information is released or disseminated.

In an effort to comply more fully with the statutory purpose of Kentucky's Accident Reporting System, the 1989 TRAFFIC ACCIDENT FACTS report contains more detailed information than previously provided. It is hoped that the detailed information presented in this report will, in fact, "improve the traffic safety program in the Commonwealth." **Definitions and Terms:** the National MANUAL ON CLASSIFICATION OF MOTOR VEHICLE TRAFFIC ACCIDENTS is used to ensure uniformity and compliance with federal requirements. Standard definitions and terms used in this booklet include the following:

Motor Vehicle Traffic Accident: any motor vehicle accident that occurs on a trafficway or that occurs after the motor vehicle runs off roadway but before events are stabilized.

Accident: an unintended event that produces death, injury or damage. The word "injury" includes "fatal injury."

**Trafficway:** the entire width between property lines or other boundary lines, of every way or place, of which any part is open to the public for purposes of vehicular travel as matter of right or custom.

Fatal Accident: is any motor vehicle accident that results in fatal injuries to one or more persons.

Fatality: a person or persons killed in a fatal accident (also referred to as "persons killed").

**Nonfatal Injury Accident:** (also referred to as Personal Injury Accident) any motor vehicle accident that results in injury, other than fatal, to one or more persons.

Injured: a person or persons injured in an accident (also referred to as "persons injured").

**Property Damage Accident:** any motor vehicle accident in which there is no injury to any person, but only damage to a motor vehicle or other road vehicle or to other property, including injury to domestic animals.

Alcohol Involved Accident: any accident in which an operator was observed to have been drinking by the officer investigating the accident.

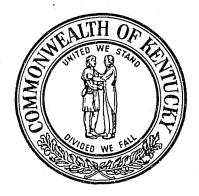
**NOTE:** KRS 189.635 requires that "any person operating a vehicle . . . who is involved in an accident resulting in any property damage exceeding \$200 in which an investigation is not conducted by a law enforcement officer shall file a written report of the accident with the state police within ten (10) days of occurrence of the accident . . . " Such reports are not included in the overall data presented in this report.

**NOTE:** Summary data on Fatal Accidents are included throughout this report. Additional data on Fatal Accidents can be found in the section titled "Kentucky's Fatal Accident Reporting System (FARS)," p.p. 38-40.

**NOTE:** Previous to 1985, Kentucky utilized a ninety day cut-off for deaths resulting from fatal accidents. As of 1986, persons who died as a result of injuries sustained in a motor vehicle accident are counted as "fatalities" only if death occurred within thirty days from the date of the accident. This change from ninety days to thirty days was made to be consistent with guidelines of the National Highways Traffic Safety Administration.

**NOTE**: Percentages are frequently used in this report and in the visual graphics. Due to rounding, aggregate percentages do not always equal 100.

**NOTE:** A graphically illustrated page of important information about Child Restraints (Safety Equipment) is on page 40 of this report. This information is suitable for reproduction and can be used as informational "hand-outs" during presentations on traffic safety.



# ACCIDENTS SUMMARY

## **1989 ACCIDENTS SUMMARY**

TYPE ACCIDENT REPORTED	1989	1988	% CHANGE
FATAL	696	719	- 3%
NON-FATAL INJURY	35,507	34,164	+ 4%
PROPERTY DAMAGE ONLY	115,240	112,704	+ 2%
TOTAL NUMBER REPORTED	151,443	147,587	+ 3%

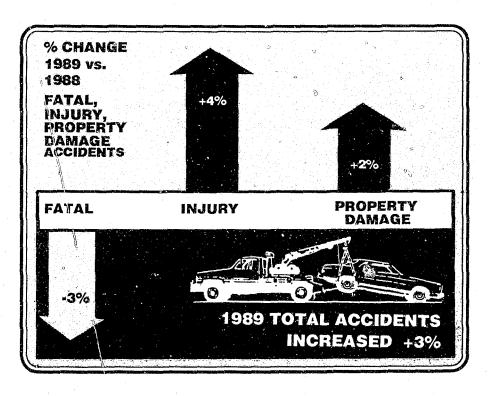
696 Fatal accidents were reported during 1989, a decrease of -3% from 1988.

There were 1,343 more injury accidents in 1989, an increase of 4% over 1988.

Property damage accidents increased by 2,536, or 2% over 1988.

Overall accidents reported reflect an increase of 3,856, or 3%.

NOTE: Four Fatal Accidents were later determined to have been caused by heart attacks based on coroners' reports received at the time of publication; one fatal accident was determined to have been a suicide; and one fatal accident occurred on private property. These accidents occurred in Allen, Floyd, Daviess, Perry, Scott, and Trimble counties, and are included in the total counts of fatal accidents and fatalities.



## DEATHS AND INJURIES – 1989 SUMMARY

	1989	1988	% Change
PERSONS KILLED	782	840	- 7%
PERSONS INJURED	54,115	52,158	+4%

FACTS: IN KENTUCKY, ONE OF EVERY 4,604 CITIZENS DIED AS A RESULT OF A FATAL TRAFFIC ACCIDENT DURING 1989.\*

IN KENTUCKY, ONE OF EVERY 5 LICENSED DRIVERS WAS INVOLVED IN A TRAFFIC ACCIDENT; ONE IN 1,200 DRIVERS WAS INVOLVED IN A FATAL ACCIDENT.\*\*

IN KENTUCKY, ONE IN 66 CITIZENS WAS INJURED IN A TRAFFIC ACCIDENT.

\*Based on 3.6 million population estimate

\*\*Based on 1,244,119 licensed drivers currently registered in Kentucky

Although the number of traffic fatalities decreased during 1989, the number of persons injured increased by 4%, or 1,957 more persons injured.

782 persons were killed; 54,115 persons were injured on Kentucky's roads and highways during 1989.

The right-hand chart compares "Death Rates" for Kentucky vs. national death rates computed by the National Safety Council.

The bottom chart plots persons injured by severity of injury. An incapacitating injury includes those injuries which required transport to a hospital.

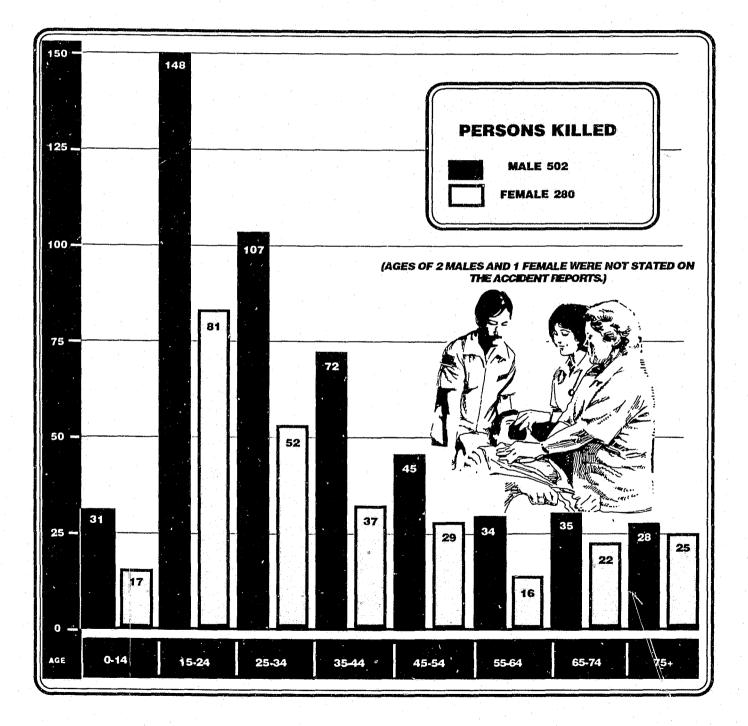
TYPE INJURY	NUMBER	%
INCAPACITATING INJURY	11,080	20%
NON-INCAPACITATING INJURY	19,981	37%
POSSIBLE INJURY	23,054	43%
TOTAL	54,115	

DEATH RATES 1975-1989							
deaths	Basis: deaths per 100 million miles travelled.*						
YEAR	KILLED		VTE				
	NSELED	KY	U.S.				
1975	882	3.6	3.5				
1976	874	3.3	3.4				
1977	958	3.5	3.3				
1978	893	3.2	3.4				
1979	905	3.3	3.5				
1980	825	3.1	3.5				
1981	830	3.3	3.3				
1982	836	3.3	3.0				
1983	790	3.0	2.7				
1984	767	2.8	2.7				
1985	715	2.6	2.8				
1986	808	2.8	2.6				
1987	849	2.9	2.6				
1988	840	2.5	2.5				
1989	782	2.4	2.3				

\*1989 miles travelled = 33 billion.

## FATALITIES BY AGE AND SEX

The 782 persons killed in 1989 Fatal Accidents are shown by age and sex in the chart below. 502 Males versus 280 Females were killed. 29% of all persons killed in traffic fatalities were in the fifteen to twenty-four year old age group, with 20% in the twenty-five to thirty-four age group. 14% of the fatalities were age 65 and older.



3

## SEVERITY OF INJURY BY TYPE OF ACCIDENT

The chart belows depicts the number of persons killed and injured, by severity of injury, within eleven categories of accidents. As shown in the right-hand percentage column, collisions with moving motor vehic/es (66%) and collisions with fixed objects (23%) account for 89% of the crashes in which persons were killed or injured during 1989.

		<u></u>			
	:		TYPE OF INJURY	н 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 — 1997 —	
TYPE OF ACCIDENT	Killed	Incapacitating Injury	Non-Incapacitating Injury	Possible Injury	% Killed /Injured
Non-Collision Overturning	26	246	517	372	2%
Other Non-Collision	36	372	596	568	3%
Collision With Pedestrian	74	560	617	425	3%
Collision With Motor Vehicle (Moving)	050	0.451	10,400	17.005	000/
In Transport	358	6,451	12,493	17,095	66%
Collision With Parked Motor Vehicle	0	Ο	1	3	Less Than 1%
Collision With Railway Train	3	19	24	18	Less Than 1%
Collision With Pedalcyclist	5	152	324	219	1%
Collision With Deer	0	20	36	49	Less Than 1%
Collision With Other Animal	0	15	34	61	Less Than 1%
Collision With Fixed Object	263	3,083	5,065	3,976	23%
Collision With Other Object	17	162	274	268	1%
TOTAL	782	11,080	19,981	23,054	
% Of All Injuries		20.5%	37%	42.6%	

## OCCURRENCE OF ACCIDENTS BY TYPE

77% of all accidents reported during 1989 involved moving vehicles.

14% of all accidents involved collisions with fixed objects.

9% of all accidents were other types of collisions (one vehicle with train, pedestrian, animal, etc.)

In the "All other" category are included 1,424 non-collision accidents (1%) resulting from the vehicle overturning and 3,255 other non-collision type accidents (2%).

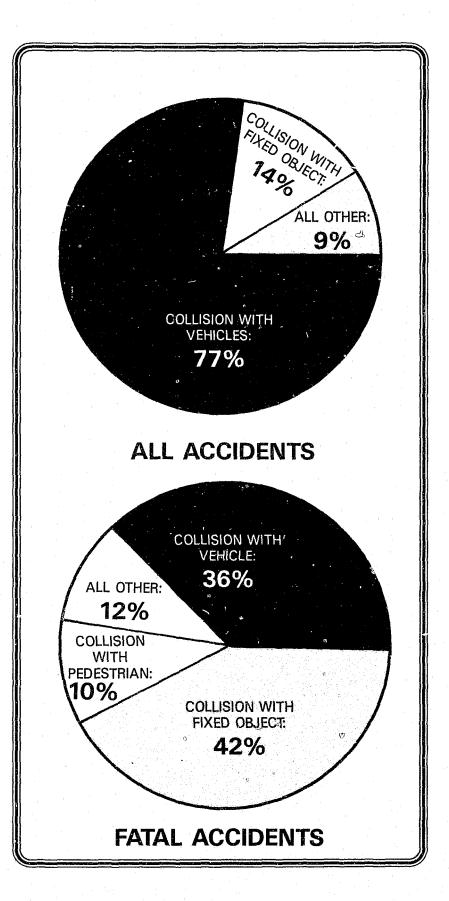
When looking at fatal accidents by themselves, the ratio between types of occurrences is different. 36% of all fatal accidents involved a collision with another vehicle.

42% of the fatal accidents reported during 1989 involved collisions with fixed objects.

10% of the 1989 fatal accidents involved collisions with pedestrians. 12% of the fatal accidents were other type collisions.

Specific types of collisions and the ratio of persons killed in each type of collision are shown on the following page.

In the "All other" category are included 26 fatal non-collisions resulting from the vehicle overturning (4%) and 34 other non-collision type accidents (5%).



## **TYPES OF COLLISIONS-1989**

Collisions with other motor vehicles were responsible for 77% of all accidents reported during 1989, and accounted for 46% of all fatalities (persons killed). Collisions with fixed objects involved 15% of all accidents, but 34% of fatalities. Types of collisions are depicted below.

VEHICLE:

OBJECT:

OBJECT:

COLLISION WITH MOTOR

% of Total:

% of Total:

**Total Accidents:** 

Persons Killed:

COLLISION WITH FIXED

Total Accidents:

Persons Killed:

% of Total:

% of Total:

COLLISION WITH OTHER

% of Total:

% of Total:

**Total Accidents:** 

Persons Killed:

116,303

77.0%

46.0%

358

21,917

15.0%

263

2.886

1.543 1.0%

> 74 9.5%

1.9%

17

2.0%

34.0%

#### **COLLISION WITH ANIMALS** (excluding deer): Total Accidents: 586 % of Total: Persons Killed: % of Total:

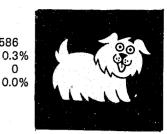
COLLISION WITH DEER:

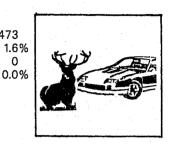
Persons Killed

% of Total:

% of Total:

Total Accidents:





COLLISION WITH PEDALCYCLIST **Total Accidents:** % of Total: Persons Killed: % of Total:

**OVERTURNING:** 

Total Accidents:

% of Total:

% of Total:

Persons Killed

808 0.5% 5 0.6%

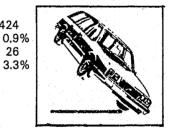
1,424

26

2.473

0

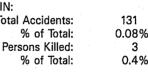


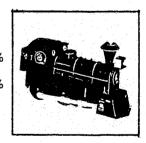




OTHER (NON-COLLISIO	N):
Total Accidents:	3,255
% of Total:	2.1%
Persons Killed:	36
% of Total:	5.0%

COLLISION WITH RAIL	WAY
TRAIN:	
Total Accidents:	13
0/ of Totals	~ ~ ~





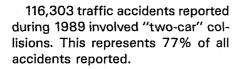


COLLISION WITH PARKED	
VEHICLE:	
Total Accidents:	117
% of Total:	0.07%
Persons Killed	0
% of Total:	0.0%



## COLLISIONS

(Vehicular Action)

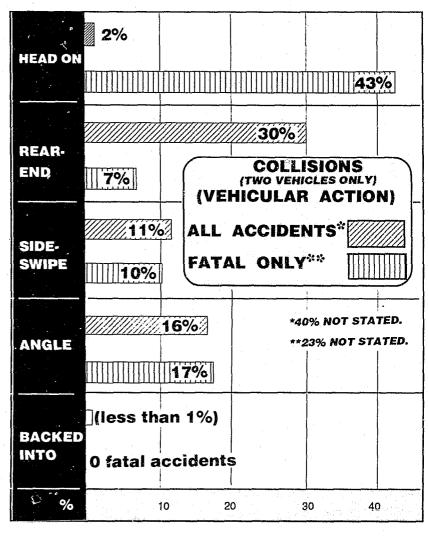


The right-hand chart depicts the manner of collision for these crashes, where known.

Head-on collisions accounted for 43% of the fatal crashes involving more than one vehicle, but only 2% of all accidents.

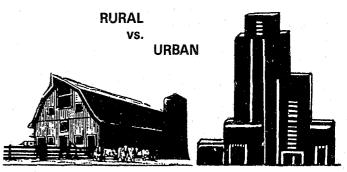
Rear-end collisions reflect 30% of all collisions, but only 7% of the Fatal Crashes.

Sideswipe collisions (both meeting and passing) reflect 11% of all crashes and 10% of the fatal crashes.



#### ACCIDENT LOCATIONS – RURAL VS. URBAN

For the purpose of tabulating accident locations, an Urban Area is an area including and adjacent to a municipality or other known place of 5,000 or more population. Rural Areas are those places which do not meet this specification. As shown in the chart below, most accidents (63%) occurred in Urban Areas. However, the majority of Fatal Accidents (75%) took place in Rural Areas of Kentucky during 1989. Although Non-Fatal Injury Accidents were fairly evenly divided between Urban and Rural Areas. 66% of the Property Damage Accidents were reported in Urban Areas.



AREA	Number of Accidents	% Total	Fatal	% Total	Non-Fatal Injury	% Total	Prop. Dam.	% Total	Killed	% Total	Injured	% Total
RURAL	56,763	37%	542	78%	17,229	49%	38,992	34%	615	79%	27,363	51%
URBAN	94,680	63%	154	22%	18,278	51%	76,248	66%	167	21%	26,752	49%
TOTAL	151,443		696	-	35,507		115,240		782		54,115	

## **TYPE VEHICLES INVOLVED IN ACCIDENTS - 1989**

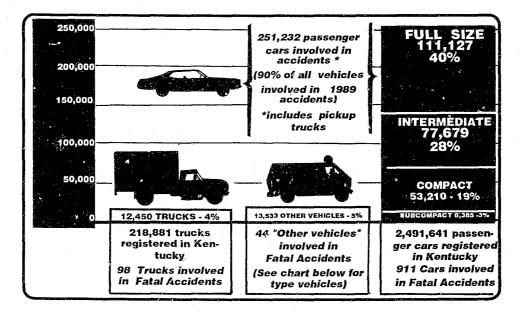
277,215 vehicles were involved in accidents during 1989.

The majority of the vehicles (90%) involved were passenger cars. 4% were semi and/or tractor trailer trucks. Other type vehicles accounted for 5% of all accidents.

\*Passenger cars include station wagons, pick-up and panel trucks under 6,000 lbs.

Trucks include Truck and Truck Tractors, Semis, and other Truck Combinations 6,000 lbs. and over.

Other vehicles include those listed below, together with Roadgraders, Paving Equipment, Construction vehicles, and other types not stated on the accident report.



NOTE: The ratio of vehicles involved in accidents to total vehicles registered in Ky. does not account for accidents involving vehicles registered in other states.

(31,212 motorcycles registered in Ky.)	236 FARM TRACTORS /FARM EQUIPMENT (5 FATAL)
824 SCHOOL BUSES (0 FATAL)	170 MOTOR SCOOTERS & MOTORBIKES (6 FATAL)
(7,685 school buses registered in Ky.)	106 TAXICABS (0 FATAL)
(2 FATAL)	1 GO-CARTS (Motorized) (0 FATAL)
545 EMERGENCY & MILITARY VEHICLES (1 FATAL)	472 OTHER PUBLICLY OWNED VEHICLE (1 FATAL)
9,615 OTHER VEHICLES - Type Not	Stated On Accident Report (9 FATAL)

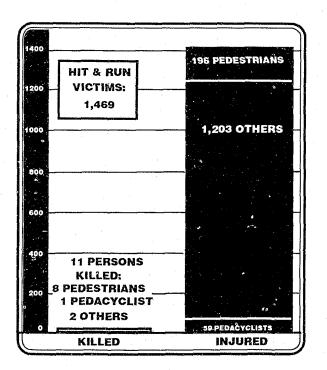
## HIT AND RUN ACCIDENTS

Hit and Run Accidents are those accidents in which the driver leaves the collision scene with the intent of evading responsibility. Hit and Run is a serious violation of law. During 1989, 13,562 incidences of Hit and Run accidents occurred, of which 11 were Fatal Accidents and 1,120 were injury accidents. As depicted in the chart below, most of Kentucky's Hit and Run Accidents were Property Damage Accidents (92%). 11 persons were killed and 1,458 were injured in 1989 Hit and Run Accidents.

TOTAL	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	PERSONS KILLED	PERSONS INJURED
13,562	11	1,120	12,431	11	1,458

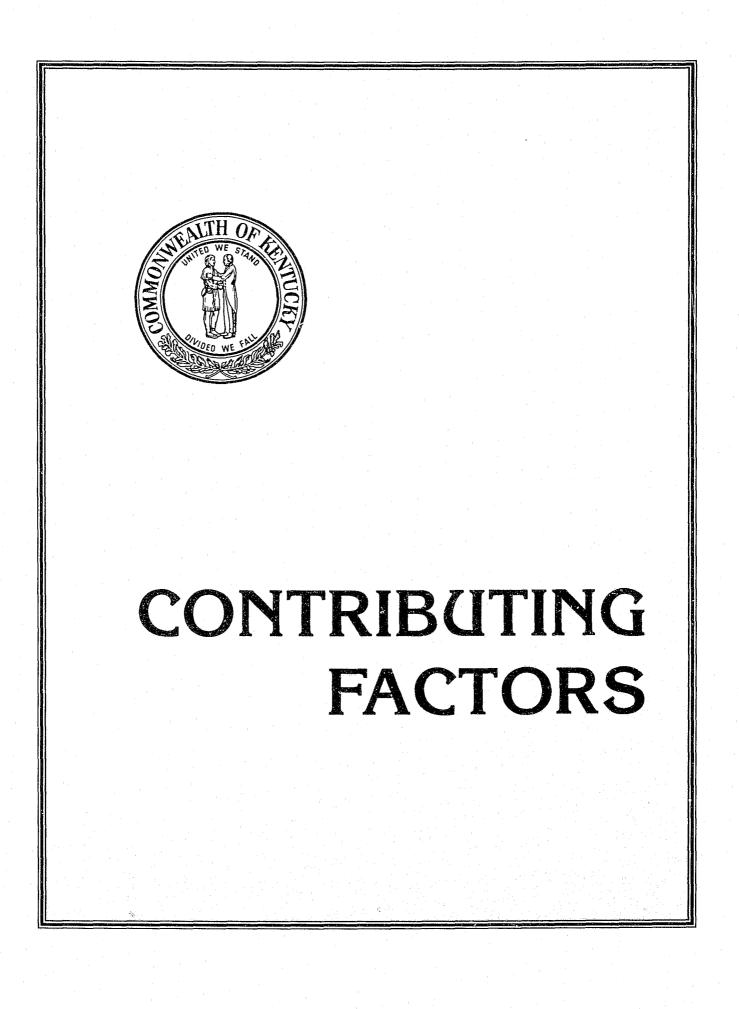
As shown in the right-hand chart, 8 of the 11 persons killed in 1989 Hit and Run Accidents were Pedestrians. 196 Pedestrians and 59 Pedalcyclists were injured in 1989 Hit and Run Accidents. Most in the "Other" category were vehicle occupants.

The types of Hit and Run Accidents, by Directional Analysis, are ranked below. As shown in the Chart, 55% of the 1989 Hit and Run Accidents involved Parked Vehicles or Vehicles in Parking Lots. 36% of the injury accidents were at an intersection and 73% of the fatal accidents involved a collision with a pedestrian.



DIRECTIONAL ANALYSIS HIT AND RUN ACCIDENTS	TOTAL	% of Total	FATAL	NON FATAL INJURY	PROPERTY DAMAGE
One Vehicle in Parked Position (not in Parking Lot)	3,034	22	0	42	2,992
Accidents in Parking Lot	4,466	33	0	20	4,446
Collision with Fixed Object (Single Vehicle)	828	6	1	71	756
Intersection Accidents	2,401	18	0	404	1,997
Sideswipe Accidents Same Direction Opposite Direction	452 556	7	0	51 81	401 474
Rear-end in Traffic Lane One Vehicle Stopped Both Vehicles Moving	287 517	6	0	72 105	215 412
Collision with Pedestrian	202	1	8	184	10
Collision with a Non-Fixed Object	190	6	0	4	186
All Other	629		1	86	542

9



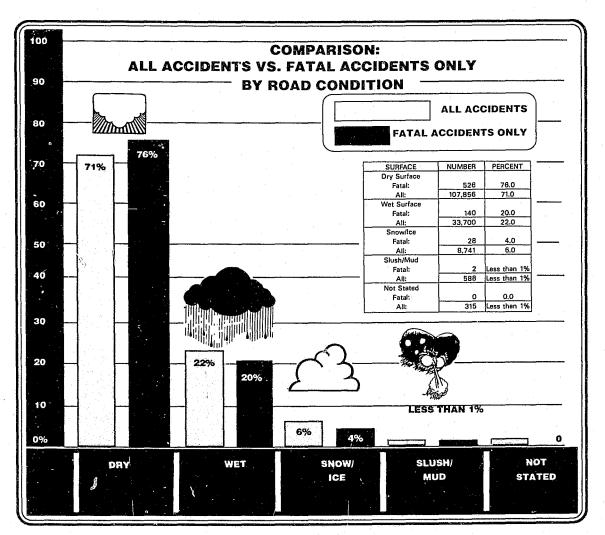
## 1989 ACCIDENTS—CONTRIBUTING FACTORS AND CONDITIONS

A variety of factors and conditions can contribute to an accident. A summary of major contributing factors is shown in the right-hand chart. Note: the percentages are based on total number of factors involved and are derived from a separate comparison of Human, Vehicular, and Environmental factors, when detected or known by the police officer. Please note that the percentages shown in no way reflect the percent of accidents reported.

CONTRIBUTING FACTOR	ALL	FATAL	NON-FATAL
Driver			
Driver Inattention	37%	14%	3%
Alcohol Involvement	6%	21%	10%
Failure to Yield	18%	13%	18%
Unsafe Speed	9%	30%	14%
<i>Vehicular</i> Brakes defective	27%	15%	30%
Tire failure/inadequate	13%	35%	20%
Environmental Slippery Surface	50%	51%	54%
View Obstructed, etc.	17%	17%	16%
Animal Action	9%	1%	5%
Water Pooling	4%	6%	7%
Glare	3%	3%	33%

#### **ROAD CONDITIONS**

The chart below compares Fatal with All Accidents for differing road conditions identified by the officer who completed the accident investigation and report. *NOTE: road conditions are tabulated for each accident reported irrespective of whether one or more vehicles were involved.* 



## CONTRIBUTING FACTORS (CONTD.) PEDESTRIAN ACCIDENTS

PEDESTRIAN ACTION		PED	ESTRI	ANS K	ILLED	AND II	JURE	DBY	AGE		······································
	Pedestrians Killed	Killed and/or Injured	0 -4	5 -9	10 -14	15 -19	20 -24	25 -44	45 -64	65 -Up	Not Stated
At Intersection	4	103	1	17	16	6	8	30	14	9	2
Crossing With Signal	0	62	0	5	3	4	4	18	12	12	4
Crossing Against Signal	6	52	1	7	12	8	3	9	10	2	0
Not at Intersection	9	210	11	38	24	17	16	52	21	26	5
Getting On or Off Vehicle	1	83	3	4	8	18	9	25	7	7	2
Emerging From Parked Vehicle	0	42	2	5	3	8	3	12	4	2	3
Walking in Roadway	20	249	5	17	17	41	22	73	28	43	3
Playing in Roadway	0	37	10	12	13	2	0	0	0	0	0
Working in Roadway	2	61	0	0	1	7	10	24	.11	- 3	5
Not in Roadway	6	170	2	10	15	34	14	47	22	19	7
Laying in Roadway	4	12	1	0	1	2	0	4	2	2	0
Darting into Roadway	12	381	58	149	78	30	14	25	8	12	7
Pedestrian Drinking	3	21	0	0	0	0	2	12	5	1	1
Pedestrian Drug Related	0	3	0	1	0	0	1	0	1	0	0
Pedestrian Jogging	0	3	0	0	0	0	0	2	· 0	0	1
Physical Impairment	0	1	0	0	0	0	1	0	0	0	0
Dark Clothing/Not Visible	1	15	0	1	1	2	3	3	2	2	1
In Crosswalk	3	45	4	1	2	7	3	9	7	11	1
Totals	71	1,550	98	267	194	186	112	346	154	151	42

PEDESTRIAN ACTION				VEHICLE	ACTION			
	Straight	Over- taking	Right Turn	Left Turn	U-Turn	Backing	Other	Total
At Intersection	51	0	16	18	1	2	25	113
Crossing With Signal	12	0	19	26	0	3	9	69
Crossing Against Signal	50	0	1	3	0	0	1	55
Not at Intersection	141	1	4	6	0	13	66	231
Getting On or Off Vehicle	43	0	0	2	0	11	60	116
Emerging From Parked Vehicle	26	2	. 0	1	0	9	20	58
Walking in Roadway	176	0	8	10	1	28	45	268
Playing in Roadway	27	0	2	2	0	5	5	41
Working in Roadway	37	2	1	0	0	12	35	87
Not in Roadway	80	1	7	1	0	25	99	213
Laying in Roadway	6	0	0	1	0	4	1	12
Darting into Roadway	362	2	2	4	0	3	28	401
Pedestrian Drinking	17	0	0	2	0	1	1	21
Pedestrian Drug Related	1		1	0	0	1	0	3
Pedestrian Jogging	1	0	0	1	0	0	2	4
Physical Impairment	1	0	0	0	0	0	1	2
Dark Clothing/Not Visible	9	0	0	1	0	4	2	16
In Crosswalk	20	0	6	9	0	1	7	43
Totals	1,060	8	67	87	2	122	407	1,753

74 Pedestrians were killed and 1,602 were injured in 1989 traffic accidents\*. The charts above depict ages of pedestrian accident victims and the "actions" of the pedestrian vs. the vehicle at the time of the accident. \* 35% of the pedestrians killed or injured were under 14 years of age. 9% were age 65 and older.

## CONTRIBUTING FACTORS (Contd.) ACCIDENTS INVOLVING PEDESTRIANS

Driver factors determined by the investigating officer are tabulated in the right-hand charts.

In accidents involving pedestrians, factors include:

Traffic rule violations*	24%
Driver inattention	36%
Alcohol/Drugs	10%

Fatal Accidents	72
Injury Accidents	1,407
Property Damage	
Accidents	64
TOTAL	1,543
KILLED	74
INJURED	1,602

#### ACCIDENTS INVOLVING SCHOOL AGE CHILDREN

In accidents involving school-age children, factors include:

Traffic rule violations* Driver inattention Alcohol/Drugs	47% 30% 6%
Fatal Accidents Injury Accidents Property Damage	75 3,525
Accidents	0
TOTAL	3,600
KILLED	87
INJURED	8,390

Driver factors contributing cidents involving school	
include: Traffic rule violations* Driver inattention	34% 39%
Fatal Accidents Injury Accidents	0 120
Property Damage Accidents TOTAL	699 819
KILLED INJURED	0 335

\*Percentages for Traffic Rule Violations include: Unsafe Speed; Failure to yield Right of Way; Following too close; Improper Passing; Disregard of Traffic Controls; & Turning Improperly.

	All	Fatal	Nonfatal Injury
CONTRIBUTING FACTORS	Accidents	Accidents	Accidents
Unsafe Speed	55	4	51
Failed To Yield Right of Way	93	2	83
Following Too Close	4	0	3
Improper Passing	5	0	5
Disregard of Traffic Controls	12	0	12
Turning Improperly	4	0	4
Alcohol Involvement	71	9	60
Drug Involvement	0	0	0
Sick	0	0	0
Fell Asleep	5	1	4
Lost Consciousness	1	0	1
Driver Inattention	260	6	245
Distraction	24	1	22
Physical Disability	6	0	6
Other	183	2	177
None Detected	950	53	855
Not Stated	139	2	132
Totals	1,812	80	1,660

SCHOOL-AGE CHILDREN						
- CONTRIBUTING FACTORS	All Accidents	Fatal Accidents	Nonfatal Injury Accidents			
Unsafe Speed	428	24	404			
Failed To Yield Right of Way	707	13	694			
Following Too Close	121	0	121			
Improper Passing	47	1	46			
Disregard of Traffic Controls	149	5	144			
Turning Improperly	51	0	51			
Alcohol Involvement	176	13	163			
Drug Involvement	4	0	4			
Sick	4	0	. 4			
Fell Asleep	29	0	29			
Lost Consciousness	5	0	5			
Driver Inattention	962	20	942			
Distraction	111	2	109			
Physical Disability	12	0	12			
Other	373	7	366			
None Detected	3,197	53	3,144			
Not Stated	128	2	126			
Totals	6,506	141	6,365			

	SCHOOL BUS ACC	CIDENTS	
CONTRIBUTING FACTORS	All Accidents	Fatal Accidents	Nonfatal Injury Accidents
Unsafe Speed	55	0	18
Failed To Yield Right of Way	120	0	27
Following Too Close	41	0	10
Improper Passing	12	0	3
Disregard of Traffic Controls	13	1	3
Turning Improperly	24	0	3
Alcohol Involvement	7	0	0
Drug Involvement	0	0	0
Sick	1	0	0
Fell Asleep	3	0	1
Lost Consciousness	0	0	0
Driver Inattention	300	0	35
Distraction	26	0	6
Physical Disability	22	0	0
Other	171	0	17
None Detected	817	0	131
Not Stated	72	0	5
Totals	1,664	0	259

## **CONTRIBUTING FACTORS (Contd.)**

Driver factors contributing to accidents involving trains include:

oldonito involving tranio i	norador
Failure to yield	
right of way:	23%
Driver inattention	36%
Disregard of traffic	
controls:	16%
Alcohol Involvement:	6%

Fatal Accidents	3
Injury Accidents	48
Property Damage	
Accidents	77
TOTAL	128
KILLED	3
INJURED	61

Driver factors where indicated contributing to accidents involving trucks include:

Driver inattention:	39%
Violations of	
traffic rules:	34%
Alcohol/drugs:	3%

Fatal Accidents	94
Injury Accidents	2,190
Property Damage	
Accidents	9,286
TOTAL	11,570
KILLED	113
INJURED	3,281

Driving factors where indicated contributing to accidents involving bicycles include:

Violation of	
traffic rules:	36%
Driver inattention:	39%

Fatal Accide	nts	5
<b>Injury Accide</b>	ints	657
Property Dar	nage	
Accidents		146
TOTAL		808
KILLED		5
INJURED		695

#### TRAINS

CONTRIBUTING FACTORS	Ali Accidents	Fatal Accidents	Nonfatal Injury Accidents
Unsafe Speed	6	0	3
Failed To Yield Right of Way	31	0	14
Following Too Close	0	0	0
Improper Passing	0	0	0
Disregard of Traffic Controls	21	2	9
Turning Improperly	1	0	0
Alcohol Involvement	8	1	5
Drug Involvement	1	0	1
Sick	0	0	0
Fell Asleep	2	0	- 2
Lost Consciousness	1	0	0
Siver Inattention	48	2	18
D,straction	1	0	0
Physical Disability	2	1	0
Other	10	0	1
None Detected	26	0	5
Not Stated	2	0	1
Totals	160	6	59

#### TRUCKS

CONTRIBUTING FACTORS	All	Fatal	Nonfatal Injury
DRIVERS	Accidents	Accidents	Accidents
Unsafe Speed	748	27	322
Failed To Yield Right of Way	1,657	26	444
Following Too Close	444	2	113
Improper Passing	162	1	33
Disregard of Traffic Controls	229	7	79
Turning Improperly	455	0	47
Alcohol Involvement	274	12	119
Drug Involvement	17	0	4
Sick	7	0	5
Fell Asleep	120	6	61
Lost Consciousness	11	1	7
Driver Inattention	4,220	20	657
Distraction	200	1	42
Physical Disability	30	0	7
Other	2,145	18	343
None Detected	10,635	92	2,148
Not Stated	1,000	5	91
Totals	22,365	220	4,527

#### BICYCLES

CONTRIBUTING FACTORS	All Accidents	Fatal Accidents	Nonfatal Injury Accidents
Unsafe Speed	14	0	13
Failed To Yield Right of Way	57	0	46
Following Too Close	0	0	0
Improper Passing	4	0	4
Disregard of Traffic Controls	9	0	8
Turning Improperly	3	0	3
Alcohol Involvement	5	0	5
Drug Involvement	0	0	0
Sick	0	0	0
Fell Asleep	2	0	2
Lost Consciousness	0	· 0	0
Driver Inattention	93	2	78
Distraction	9	0	8
Physical Disability	0	0	0
Other	43	0	34
None Detected	554	3	452
Not Stated	44	0	29
Totals	837	5	682

## **CONTRIBUTING FACTORS (Contd.)**

Driver factors where indicated, contributing to accidents involving mopeds include:

Violation of	
traffic rules:	47%
Driver inattention:	27%
Alcohol Involvement:	5%

Fatal Accidents	1
Injury Accidents	101
Property Damage	
Accidents	20
TOTAL	122
KILLED	1
INJURED	126

Driver factors where indicated, contributing to accidents involving motorcycles include:

Violation of	
traffic rules:	47%
Driver inattention	28%
Alcohol/Drugs:	10%

Fatal Accidents	21
Injury Accidents	804
Property Damage	
Accidents	260
TOTAL	1,085
KILLED	21
INJURED	965

The chart on the right shows the number of motorcycle drivers with and without helmets killed and injured in motorcycle accidents. The pie chart shows the relationship between Fatal, Injury, and Property Damage Accidents involving motorcycles.

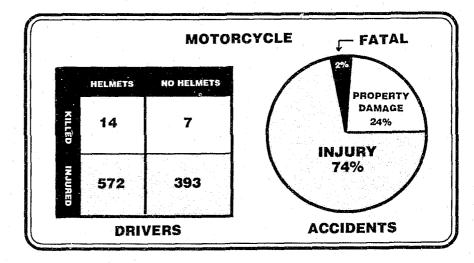
21 Motorcycle Drivers were killed; 965 Drivers were injured. Of those Drivers killed 66 were wearing helmets; 59% of the injured Motorcycle Drivers were wearing helmets.

#### MOPEDS

CONTRIBUTING FACTORS	All Accidents	Fatal Accidents	Nonfatal Injury Accidents
Unsafe Speed	6	0	8
Failed To Yield Right of Way	29	0	23
Following Too Close	8	0	6
Improper Passing	6	0	5
Disregard of Traffic Controls	10	0	8
Turning Improperly	2	0	1
Alcohol Involvement	7	0	7
Drug Involvement	0	0	0
Sick	0	0	0
Fell Asleep	2	0	1
Lost Consciousness	0	0	0
Driver Inattention	35	0	29
Distraction	0	0	0
Physical Disability	0	0	0
Other	22	2	16
None Detected	87	0	69
Not Stated	8	<u>с</u>	6
Totals	225	2	179

#### MOTORCYCLES

CONTRIBUTING FACTORS	All Accidents	Fatal Accidents	Nonfstal Injury Accidents
Unsafe Speed	182	Accidents	146
Failed To Yield Right of Way	211	6	173
Following Too Close	38	0	24
Improper Passing	36	0	25
Disregard of Traffic Controls	24	0	17
Turning Improperly	25	0	14
Alcohol Involvement	109	5	85
Drug Involvement	4	0	2
Sick	0	0	0
Fell Asleep	5	· 0	3
Lost Consciousness	· 3	0	3
Driver Inattention	309	3	206
Distraction	18	0	9
Physical Disability	0	0	0
Other	132	0	104
None Detected	782	11	553
Not Stated	65	0	24
Totals	1,944	36	1,389

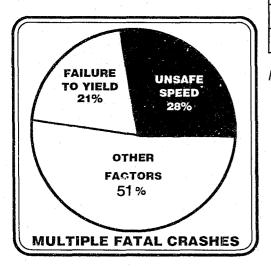


CONTRIBUTING FACTORS (Contd.) MULTIPLE FATAL ACCIDENTS

There were 70 multiple fatal crashes reported. 156 persons were killed and 114 persons injured in these multiple fatal crashes.

Driver contributing factors which were determined by the investigating officer for multiple fatal accidents are tabulated in the right-hand chart.

As depicted below, unsafe speed, failure to yield and alcohol involvement were noted in many of the multiple fatal accidents.



CONTRIBUTING FACTORS (Driver)	NUMBER
Unsafe Speed	27
Failing to Yield Right of Way	20
Following Too Close	1
Disregard of Traffic Controls	3
Alcohol/Drug Involvement	17
Driver Inattention/Distraction	11
Other	18
None Detected	61
Not Stated on Report	6
Totals	164

NOTE: 27 of 70 drivers involved in multiple fatal crashes were suspected of drinking. 1 driver was under the influence of drugs.

#### SAFETY EQUIPMENT

The numbers of accidents in which a vehicle occupant (driver or other passenger) was using safety equipment are tabulated below, together with the numbers of accidents in which none of the occupants were restrained. The "low" usage of restraints is demonstrated by the percentages indicated.

TYPE OF EQUIPMENT USED	ACCIDENT TOTAL	FATAL	INJURY	PROPERTY DAMAGE
Lap Belt	14,044	42	3,224	10,778
Harness/Lap Belt	58,479	148	13,267	45,064
Harness Only	114	1	34	79
Child Safety Seat	3,785	17	1,074	2,694
Helmets	732	11	582	139
Air Bag	77	11	38	38
Other Passive Restraints	119	0	46	73
Total Accidents Restraints Used	77,351 (51%)	220 (32%)	18,255 (51%)	58,865 (51%)
Total Accidents Restraint Not Used*	74,092 (49%)	476 (68%)	17,252 (49%)	56,375 (49%)

Note: In 2,641 accidents, no safety device was installed. 33 of these accidents were fatal accidents in which 39 persons were killed.

\*Includes accidents in which it was not known whether a restraint was used.

Note: Additional data on Safety Equipment can be found on pages 38 & 39 (for FATAL Accidents only).

## TRUCK ACCIDENTS (Contributing Factors & Alcohol Involvement)

Vehicular factors, as noted by the investigating officer on the accident report, are tabulated below for accidents involving trucks. 1,484 such factors were noted as contributing to the accident. Defective Brakes (24%) accounted for 357 of the contributing factors. Other significant factors were Tire Failure (9%) and Over or Improper Load (8%).

Vehicular Factors	All Accidents	Fatal Accidents	Non-Fatal Injury Accidents
Brakes Defective	357	5	101
Headlights Defective	6	0	1
Other Lighting Defects	60	0	19
Steering Failure	39	1	20
Tire Failure/Inadequate	132	0	44
Tow Hitch Defective	31	0	2
Over or Improper Load	126	3	18
Oversized Load on Vehicle	76	0	6
Other	657	3	97
None Detected	19,361	177	3,858
Not Stated	807	4	79
Total	21,652	193	4,245

The chart below plots accidents involving trucks by location, or type highway and street. As indicated, most truck accidents occurred on U.S. and State numbered routes (50%), with 75% of the fatal accidents and 67% of the injury accidents reported on U.S. and State numbered routes.

Location of Truck Accidents	All Accidents	Fatal Accidents	Injury Accidents
Interstates	1,516	17	390
Other U.S. Route Numbered	2,915	41	681
State Routes	2,908	34	759
Other Major Arterial	170	0	49
County Roads	774	1	86
Local Streets	3,287	1	225
TOTALS	11,570	94	2,190

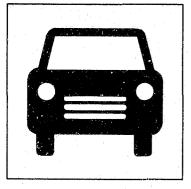
Alcohol involved truck accidents totaled 358, including 16 fatal and 154 injury accidents, where the driver was suspected to have been drinking, as shown below.

Alcohol Involved Truck Accidents	All	Fatal	Injury
	Accidents	Accidents	Accidents
Total, statewide	358	16	154

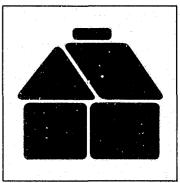
The residence of drivers involved in truck accidents are shown below. 25% of the drivers were non-residents of Kentucky, with 21% of the drivers involved in fatal accidents non-residents and 23% of the drivers involved in injury accidents non-residents.

Residence of Drivers in Truck Accidents	All Accidents	Fatal Accidents	Injury Accidents
Local resident	12,316	119	2,787
Other Kentucky Driver	1,643	27	343
Non-Resident (out-of-state) Driver	4,815	38	925
Not Stated	400	1	25
TOTALS	19,174	185	4,080

## **DRIVER INVOLVEMENT - 1989 ACCIDENTS**



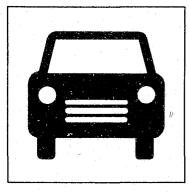
RESIDENCE OF DRIVER



250,784 drivers were involved in accidents during 1989. 1,029 drivers were involved in fatal accidents. The chart below tabulates driver involvement by residence and shows that most drivers (83%) were residents of the locality where the accident occurred. NOTE: many drivers in the "unknown" category are the result of "Hit and Run" accidents where the drivers' identities remain unknown.

#### INVOLVEMENT BY RESIDENCE

RESIDENCE OF DRIVER	Number Involved In Accidents	Percent of Total	Number Involved In Fatal Accidents	Percent of Total
Local Resident	208,446	83	837	81
Residing Elsewhere in State	10,512	4	76	7
Non-Resident*	20,448	8	110	11
Unknown	11,378	5	6	.6
TOTAL	250,784		1,029	



Sex

SEX OF DRIVER



#### SEX OF DRIVERS INVOLVED IN ACCIDENTS

As shown in the chart below, 58% of the drivers involved in accidents during 1989 were male; 37% were female. In fatal accidents 72% of the drivers were male; 27% were female. NOTE: a considerable number of drivers in the "unknown" category resulted from "Hit and Run" accidents where the drivers' identities remain unknown.

 JIAL ACCIDEN	10
👶 # IN	% IN
ACCIDENTS	ACCIDEN'
 	710010211

TOTAL ACCIDENTS

	ACCIDENTS	ACCIDENTS*
MALE	146,534	58
FEMALE	93,182	37
NOT STATED	11,014	4
TOTAL	250,784	

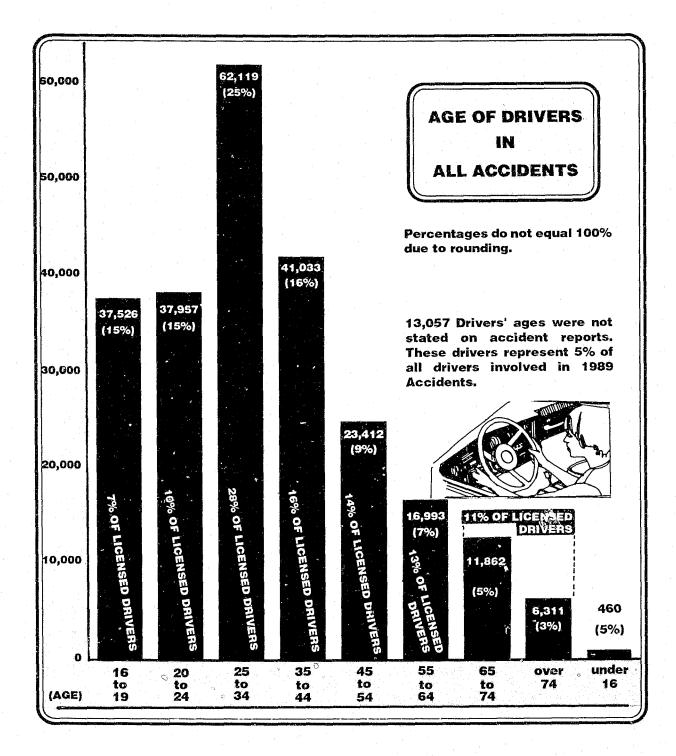
#### **FATAL ACCIDENTS**

Sex	# IN ACCIDENTS	% IN ACCIDENTS*
MALE	742	72
FEMALE	281	27
NOT STATED	6	0.5
TOTAL	1,029	

\*Percentages do not equal 100% due to rounding

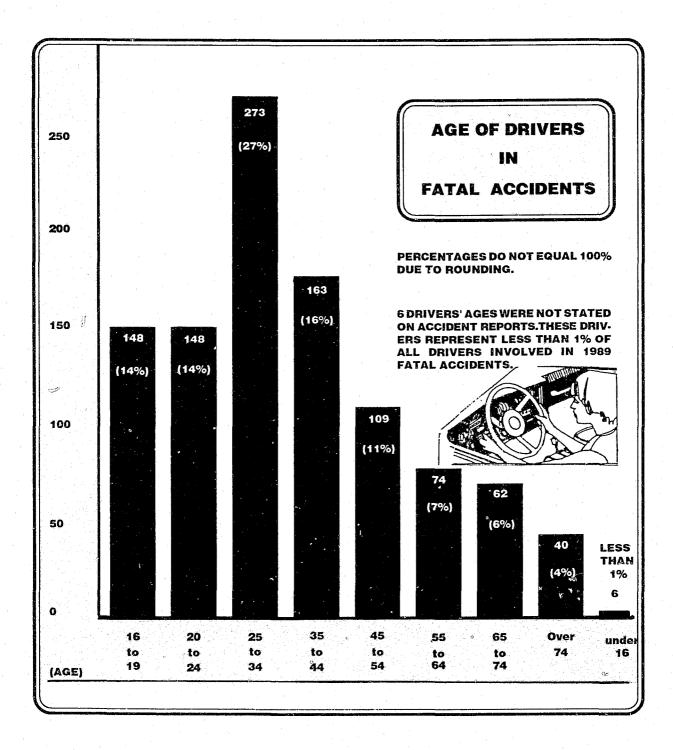
## AGE OF DRIVERS - 1989 (All Accidents)

The chart below groups the ages of 250,730 drivers involved in 1989 traffic accidents in Kentucky, showing the number of drivers involved, the percentage of accidents (in parenthesis), and the percentage of licensed drivers for each age category (shown diagonally). A comparison of the two percentage factors indicates a relatively low accident rate for the following age groups: 45-54, 55-64; and drivers over 65 years of age. Relatively high accident rates are indicated for the 16-19, and 20-24 age group. The 25-34 and 35-44 age groups are similar when comparing the two percentage factors. NOTE: This data does not differentiate drivers "at-fault" versus drivers "not-at-fault."



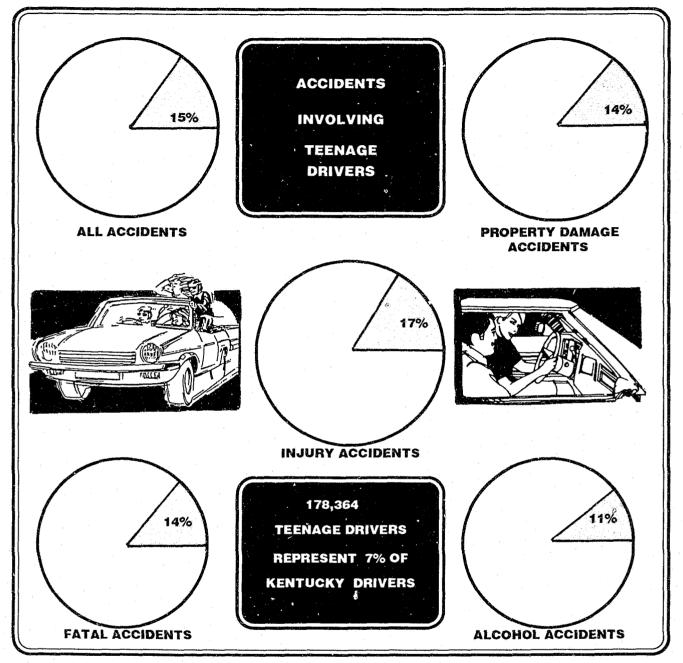
## AGE OF DRIVERS - 1989 (Fatal Accidents Only)

The chart groups the ages of 1,029 drivers involved in 1989 Fatal Accidents. Percentages are based on drivers involved in Fatal Accidents during 1989 and includes 6 drivers whose ages were not stated on the accident report.



## ACCIDENTS INVOLVING TEENAGE DRIVERS

The percentage of teenage drivers (versus other age groups) involvement in 1988 accidents (by type) are shown below, irrespective of the driver at fault in the accidents reported.



The number of teenage drivers involved in accidents, together with Alcohol Related Accidents, are shown below. It should be noted that tabulations for "Alcohol Related Accidents" were derived from the total number of suspected drinking drivers.\* As shown, 37,526 teenage drivers were involved in traffic accidents during 1989, an increase of 806 (2%) over 1988. Teenage drunk drivers decreased by 462 drivers, or 28% over the previous year.

\*Irrespective of sobriety tests subsequent to the accident.

NUMBER OF TEENAGE DRIVERS INVOLVED IN									
YEAR	ALL ACCIDENTS	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE	ALCOHOL RELATED				
1987	31,624	154	8,636	22,834	1,273				
1988	36,720	139	9,764	26,817	1,661				
1989	37,526	148	10,179	27,199	1,199				

## **ALCOHOL INVOLVED ACCIDENTS - 1989**

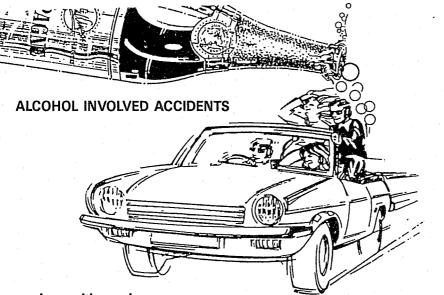
An alcohol involved accident is any accident in which the driver was determined to have been drinking. This determination is made by the officer investigating the accident - irrespective of whether or not sobriety tests later established that the driver was "legally drunk" (.10 or above blood alcohol content).

Fatal:	274	39%
Injury:	3,643	10%
Property		
Damage:	3,854	3%
TOTAL:	7,670	5%

NOTE: The number of accidents in which a drinking driver was involved is tabulated for each county on pages 32-34.

7,670 alcohol involved accidents were reported during 1989. 39% of the fatal accidents were alcohol involved accidents, 10% of the injury accidents, and 3% of the property damage accidents were alcohol involved.

The number of persons killed and injured in alcohol involved accidents during 1989 are depicted in the righthand chart.



Killed:*	319
Injured:**	5,814
Incapacitating	
Injuries:	1,989
Non-Incapaci-	
tating Injuries:	2,342
Possible	
Injuries:	1,483

\*11 Pedestrians were killed. \*\*106 Pedestrians, 5 Bicyclists were injured.

#### Comparison with previous years

During 1989 alcohol involved accidents decreased by four percent over 1988. The 319 persons killed in 1989 reflect a decrease of eighteen percent when compared with the 389 persons killed in 1988. During 1989, 5,814 persons were injured in alcohol related accidents, a decrease of three percent over 1988 when 5,992 persons were injured.

Looking at the six year period (1984 to 1989), as depicted in the chart below, variable increases/decreases can be seen. It should be noted that most of these decreases were attributable to 1984 and 1985 data. Kentucky's "slammer bill" became effective on July 13, 1984. Fatal Accident data has been adjusted to reflect followup studies of drivers.

YEAR	TOTAL ACCIDENTS (Alcohol Involved)	% INCREASE/ DECREASE OVER PREVIOUS YEAR	TOTAL KILLED	(%) +/—	TOTAL INJURED	(%) +/—
1989	7,670	-4%	319	- 18%	5,814	-3%
1988	8,014	+4%	389	+9%	5,992	+2%
1987	7,671	- 1%	358	+4%	5,879	+ 5%
1986	7,761	+0.2%	343	+ 19%	5,606	+6%
1985	7,744	- 10%	289	-9%	5,297	- 11%
1984	8,639	- 11%	315	- 14%	5,951	- 10%

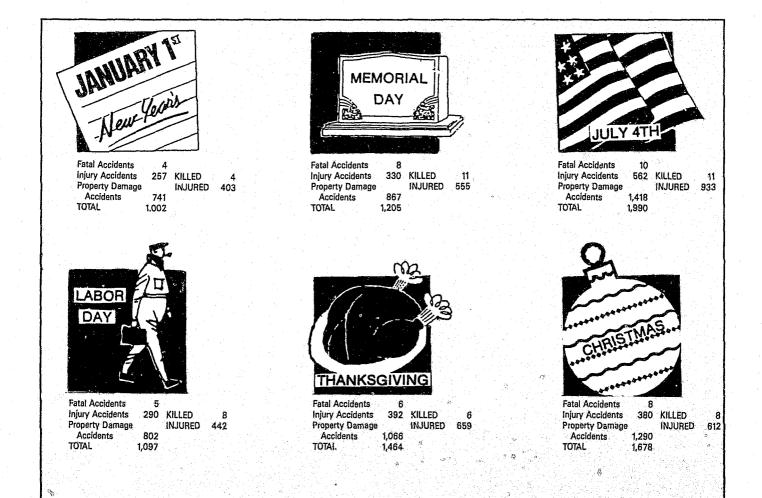
## DAY AND TIME OF OCCURRENCE - 1989 ACCIDENTS

The chart below depicts the number of deaths in fatal accidents for a ten year period, 1980 through 1989 on major holidays (inclusive of time periods established by the National Safety Council). A total of 48 persons were killed in 1989 holiday fatalities; 3,604 persons were injured.

HOLIDAY (Total Deaths)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NEW YEAR'S EVE	10	8	5	5	9	5	7	11	4	4
MEMORIAL DAY	10	10	6	7	8	3	6	12	8	11
JULY 4TH	16	18	8	8	4	11	6	7	12	11
LABOR DAY	6	4	17	6	14	6	10	12	6	8
THANKSGIVING	11	14	10	9	12	6	9	17	12	6
CHRISTMAS	12	8	11	11	8	5	4	7	8	8

Note: New Year's Eve holiday ran from 6 pm, Dec. 29, 1989 through midnight, Jan. 1, 1990.

The July 4th and Memorial Day holiday periods registered the highest number of fatalities during 1989. The lowest number of holiday fatalities occurred over New Years and Thanksgiving holidays. The chart below shows relevant accident data for each of the 1989 holidays.



### COMPARISON OF 1989 HOLIDAY FATALITIES/ACCIDENTS

### ACCIDENTS BY HOUR OF OCCURRENCE

60% of all accidents reported during 1989 occurred during "daylight" hours (7am to 4pm). 22% of all accidents occurred during "dark" hours (8pm to 6am), and 18% occurred at "dusk" (5pm to 7pm).

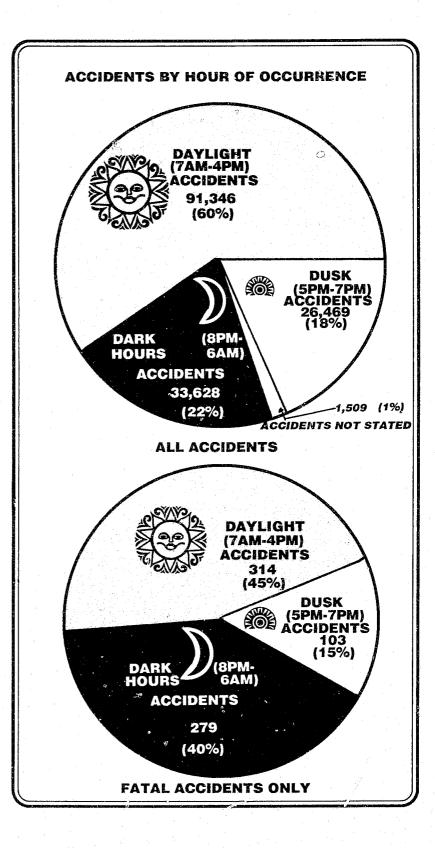
Of the 91,346 accidents reported during daylight hours, 62% occurred after 12 Noon, and 38% occurred in the morning.

57% of the accidents reported during night hours occurred before midnight.

45% of all fatal accidents occurred during "daylight" hours; 40% occurred during "dark" hours; and 15% at "dusk."

45% of the fatal accidents reported during night hours occurred before midnight.

NOTE: Time categories do not take into account variances due to season and daylight savings time changes.

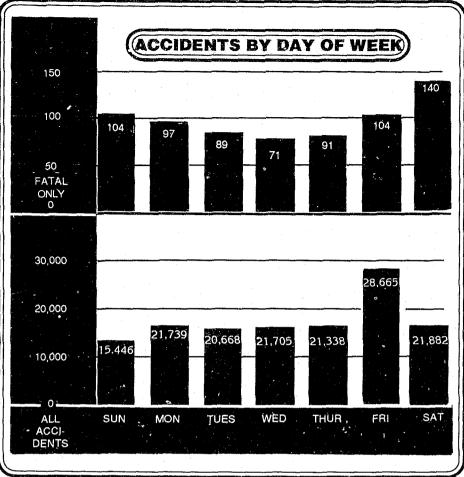


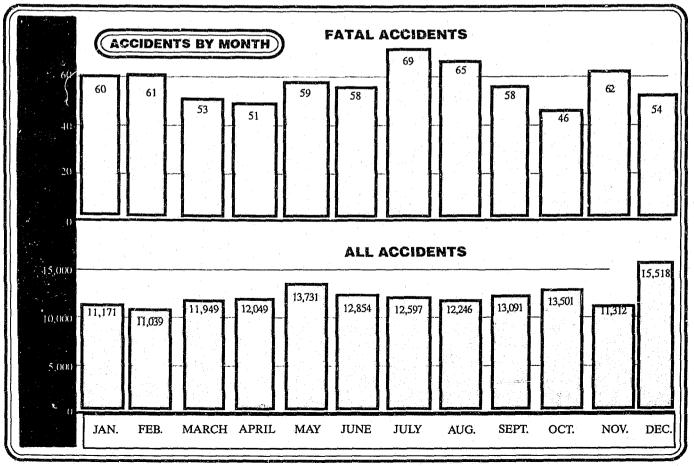
#### 1989 ACCIDENTS BY DAY AND MONTH

The right-hand graph shows Fatal vs. All Accidents by Day of occurrence.

50% of all Fatal Accidents occurred on weekends (Friday, Saturday, and Sunday combined). Friday registered the highest number of accidents; Sunday registered the lowest.

July reported the highest number of fatal accidents; December ranked highest for all accident totals. October recorded the lowest number of fatal accidents; February recorded the lowest number of all accidents.





## LOCATION OF ACCIDENTS

DOADWAV

The chart shows the number of accidents during 1989 by type of roadway, with percentages for each accident category.

As shown, relatively few accidents were reported on Interstate Highways (5%).

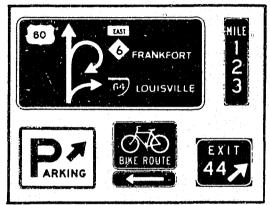
27% of all accidents occurred on Kentucky's "State Numbered" roads, with 44% of all fatal accidents reported during 1989 occurring on this type of roadway.

Although 36% of all accidents occurred on local streets, only 8% of the 1989 fatal accidents occurred on local streets.

NOTE: A breakdown of Interstate and Parkway accidents is provided on page 35.

HUADWAT	·····							
TYPE OF ROADWAY	Fatal Accidents	%	Nonfatal Accidents	%	Property Accidents	%	Total	%
Interstate	57	8	2,152	6	5,746	5	7,955	5
U.S. Route	216	31	10,220	29	26,930	23	37,366	25
State	308	44	13,337	38	27,954	24	41,599	27
Other Major Arterial	11	2	305	.9	755	.7	1,071	.7
County	48	7	2,157	.0	6,575	6	8,780	6
Local	56	8	7,336	21	47,280	41	54,672	36
TOTAL	696		35,507		115,240		151,443	

INTERSTATE HIGHWAYS are relatively safe due to built-in safety features.



		All Truck	Accidents		Trucks With Hazardous Cargo				
Type of Roadway	Fatal Accidents	Nonfatal Accidents	Property Accidents	Total	Fatal Accidents	Nonfatal Accidents	Property Accidents	Total	
Interstate	17	390	1,109	1,360	2	14	21	37	
U.S. Route	41	681	2,193	2,915	2	19	43	64	
State	34	759	2,115	2,908	0	14	38	52	
Other Major Arterial	0	49	121	170	0	0	1	- 1	
County	1	86	687	774	0	3	9	12	
Local	1	225	3,061	3,287	0	4	39	43	
TOTAL	94	2,190	9,286	11,570	4	54	151	209	

#### ACCIDENTS INVOLVING TRUCKS

The above charts show the number of truck accidents and those truck accidents with hazardous cargo by type of roadway. 28% of the truck accidents occurred on local streets; 12% on Interstates; 50% on U.S. and State numbered routes. 18% of the hazardous cargo accidents occurred on Interstates, and 41% on U.S. and State numbered routes.

## ACCIDENTS BY ROADWAY SURFACE

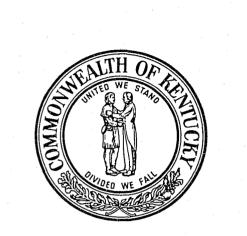
The charts below depict percentages of all accidents and fatal accidents according to the surface and character of the roadway on which the accident occurred.

While 93% of all accidents occurred on asphalt surfaced roadways, it should be noted that most of Kentucky's high-volume-traffic roadways are asphalt surfaced roads.

As depicted in the bottom chart, 82% of all accidents occurred on straight roads and 18% on curved roads. 41% of the Fatal Accidents during 1989 occurred on curved roads, 59% on straight roads.

ASPHALT					•• •			93	470
			· ·					93	5%0
	5%		· · · · · · · · · · · · · · · · · · ·	· · ·					
CON- CRETE	5%	,					Y ROAD		URFACE
GRAVEL	2%				Ē.	ATAL	ACCIDE	ŇTS	
	.7%	· ·					- - 		
OTHER	1%	: '	· · · · · · · · · · · · · · · · · · ·	· · ·				<u></u>	
	1%								
%	10	20	30	40	50	60	70	80	90

Straight & level			36%	62%	
Straight & grade		<b>17%</b> 19%			
Straight & hillcrest Curve &	3% 4%			ACCIDENTS BY ROADWAY CHARACTER ALL ACCIDENTS FATAL ACCIDENTS	R
level	8%	19%			J
Curve & grade	8%	19%			:
Curve & hillcrest	1% 3%		-		
Un- known	.8%				
%	10	20	30.	40 50 60 70 80 90	



# ACCIDENTS BY COUNTY

## ACCIDENTS BY COUNTY - 1989

· · · · · · · · · · · · · · · · · · ·					ACCID	ENTS				PERS	ONS		A	LCOHOL	INVOLV	'ED
	тот	AL	FAT	AL	NON-F	ATAL	PRO. D	AMAGE	KIL	LED	INJU	IRED	ACCI	DENTS	DRI	VERS
COUNTY	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988
ADAIR	506	498	2	5	98	121	406	372	2	5	152	191	22	33	22	34
ALLEN	592	511	5	7	167	137	420	367	6	7	254	209	28	41	28	41
ANDERSON	498	492	2	3	113	114	383	375	2	3	157	184	25	28	25	28
BALLARD	217	218	6	3	64	59	147	156	6	3	97	90	15	10	15	10
BARREN	1,428	1,344	6	9	342	358	1,080	977	7	10	525	608	55	54	55	54
BATH	379	327	4	0	108	87	267	240	6	0	178	139	20	22	20	22
BELL	1,034	1,033	5	7	272	283	757	743	7	10	438	428	60	70	62	70
BOONE	3,574	3,297	8	7	798	740	2,768	2,550	11	8	1,219	1,128	175	162	178	168
BOURBON	937	804	6	2	222	192	709	610	7	2	319	322	63	44	64	45
BOYD	2,614	2,424	6	8	522	494	2,086	1,922	7	8	761	703	93	103	92	104
BOYLE	1,149	1,123	4	8	242	248	903	867	4	8	412	347	36	39	36	39
BRACKEN	203	192	4	2	52	32	147	158	5	3	82	58	10	8	10	8
BREATHITT	450	410	2	3	175	133	273	274	2	4	275	229	26	24	26	24
BRECKINRIDGE	328	357	3	7	106	121	219	229	3	8	172	213	13	22	13	22
BULLITT	1,266	1,205	7	8	418	351	841	846	7	8	687	555	48	67	48	68
BUTLER	410	369	4	3	117	108	289	2: ,	4	3	179	157	16	20	16	20
CALDWELL	450	453	5	3	106	124	339	326	5	- 3	175	184	26	41	25	41
CALLOWAY	1,089	1,128	3	7	317	332	769	789	3	10	487	492	57	47	57	47
CAMPBELL	3,351	3,255	11	7	752	721	2,588	2,527	11	8	1,028	1,011	189	165	189	165
CARLISLE	61	57	1	2	28	28	32	27	1	2	37	39	4	6	4	6
CARROLL	447	422	6	5	120	108	321	309	8	32	185	210	37	37	37	37
CARTER	714	673	3	5	165	190	546	478	4	5	269	317	44	47	45	47
CASEY	218	143	3	3	71	70	144	70	5	3	113	136	17	20	17	20
CHRISTIAN	2,329	2,295	11	13	496	518	1,822	1,764	14	13	753	770	149	164	149	164
CLARK	1,320	1,321	7	6	258	326	1,055	989	. 7	6	372	499	73	76	75	76
CLAY	524	529	9	7	169	151	346	371	12	13	280	256	-58	52	58	52
CLINTON	239	253	2	3	50	54	187	196	2	3	79	72	. 21	7	20	7
CRITTENDEN	262	305	2	4	75	78	185	223	2	6	122	122	10	16	10	16
CUMBERLAND	99	113	1	2	22	23	76	88	1	2	39	33	9	8	9	8
DAVIESS	4,383	4,046	9	13	1,029	899	3,345	3,134	11	15	1,569	1,315	209	188	206	191
EDMONSON	232	253	4	4	61	71	167	178	4	4	102	114	12	13	12	13
ELLIOTT	107	125	0	2	49	53	58	70	0	2	72	75	19	15	19	15
ESTILL	387	407	4	6	107	100	276	301	4	7	169	156	22	30	22	29
FAYETTE	13,149	13,086	25	35	2,380	2,382	10,744	10,669	29	38	3,439	3,418	602	617	609	623
FLEMING	365	363	7	3	108	113	250		7	5	183	178	27	19	27	20
FLOYD	1,459	1,375	15	12	505	461	939	902	16	13	815	743	115	128	115	127
FRANKLIN	2,150	2,056	5	6	404	390	1,741	1,660	5	6	606	597	118	129	119	129
FULTON	349	345	1	3	77	74	271	268	1	5	111	110	23	14	23	15
GALLATIN	230	214	2	1	56	88	172	125	3	1	102	137	16	23	16	23
GARRARD	289	253	1	1	63	69	225	183	1	1	99	105	7		7	
GRANT	829	719	3	11	217	193	609	515	5	12	324	325	42	46	41	46
GRAVES	1,297	1,193	6	5	325	277	966	911	8	5	510	424	71	-57	71	57
GRAYSON	685	667	6	6	177	202	502	459	7	9	278	317	28	36	28	36
GREEN	272	293	3	1	66	79	203	213	3	1	99	114	7	6	7	6
GREENUP	1,038	991	5	10		268	760		5	11	419	439	56		57	60

## ACCIDENTS BY COUNTY (cont.) - 1989

			ACCIDENTS						PERS	ONS		A	LCOHOL	INVOLV	ED	
	TOT	AL	FAT	AL	NON-F	ATAL	PRO. D	AMAGE	KIL	LED	INJU	IRED	ACCI	DENTS	DRI	VERS
COUNTY	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988
HANCOCK	196	173	1	1	50	52	145	120	1	1	65	71	11	10	11	10
HARDIN	3,324	3,399	13	10	672	667	2,639	2,722	14	13	1,013	1,072	129	130	130	130
HARLAN	940	962	9	8	269	272	662	682	9	10	445	447	67	60	67	60
HARRISON	696	.623	4	7	156	114	536	502	5	7	221	161	43	32	43	32
HART	471	390	4	5	130	112	337	273	4	5	212	204	22	16	22	16
HENDERSON	2,303	2,190	7	7	579	519	1,717	1,664	8	10	842	758	124	100	126	99
HENRY	497	507	3	5	107	125	387	377	3	6	171	196	48	36	48	36
HICKMAN	90	93	3	1	40	36	47	56	3	1	57	57	5	3	5	3
HOPKINS	2,210	2,162	8	12	413	441	1,789	1,709	8	12	634	702	81	72	83	73
JACKSON	193	171	3	1	57	58	133	112	3	1	87	93	8	13	8	13
JEFFERSON	32,846	34,314	60	48	6,776	6,923	26,010	27,343	66	48	9,775	10,038	1,355	1,353	1,367	1,364
JESSAMINE	1,156	990	4	9	289	261	863	720	4	9	450	418	57	36	58	36
JOHNSON	641	624	7	2	170	176	464	446	9	2	269	280	24	31	24	31
KENTON	6,705	6,703	19	14	1,510	1,430	5,176	5,259	19	15	2,228	2,066	360	408	351	411
KNOTT	318	310	3	4	138	116	177	190	3	4	199	179	14	29	14	30
KNOX	777	837	9	7	210	237	558	593	10	7	365	393	51	64	50	64
LARUE	333	349	4	4	76	89	253	256	4	4	116	130	12	28	12	28
LAUREL	1,467	1,449	11	7	382	342	1,074	1,100	12	7	718	573	58	91	58	91
LAWHENCE	354	311	5	5	128	91	221	215	5	5	198	161	26	17	26	17
LEE	154	139	0	3	29	34	125	102	0	4	43	54	12	7	12	7
LESLIE	189	158	6	1	73	75	110	82	6	1	112	123	21	21	21	21
LETCHER	572	591	4	6	191	168	377	417	5	8	338	277	39	40	39	40
LEWIS	368	365	. 5 F	4	117	104	246	257	6	4	203	152	20	28	20	29
LINCOLN	512	458	5	5	146	121	361	332	6	5	241	213	33	46	33	46
LIVINGSTON	222	210	1	3	85	71	136	136	1	4	127	119	21	16	22 34	16
LOGAN LYON	853 106	827	4	2	189 32	195	660 74	627	5	6 2	289 54	276 60	34	40 10	5	40 10
McCRACKEN	3,302	150 3,303	9	2		42		106 2,489	10	2 14		1,263	209	216	213	216
McCREARY	162	3,303	2	0	849 50	801 55	2,444	106	4	0	1,244 84	1,203	209	210	213	210
MCLEAN	209	207	2	4		61	110	142	4	4	112	83	 	19	12	19
MADISON	3,089	2.827	23	15	618	563	2,448	2.249	26	20	1.012	875	171	203	173	203
MAGOFFIN	269	2,027	23	5	115	112	2,440	155	- 6	- 20	192	196	24	31	24	32
MARION	538	592	3	5	120	145	415	442	4	6	192	218	42	61	42	61
MARSHALL	833	795	10	8	238	255	585		12	13	380	428	36	43	36	43
MARTIN	352	222	5	3	110	86	237	133	5	3	179	-147	10	43	10	<del>43</del> 11
MASON	1.044	927	2	5	214	189	828	733	2	7	329	286	51	54	51	54
MEADE	575	545	4	4	177	183	394	358	5	4	277	306	53	55	52	56
MENIFEE	88	84	0	1	36	31	52	52	0	1	50		2	12	2	12
MERCER	762	722	3	1	217	177	542	544	3	1	334	282	47	45	47	45
METCALFE	253	240	5	2	83	61	165	177	6	2	137	100	6	9	6	9
MONROE	205	211	2	2	52	51	151	158	2	3	92	73	7	10	7	10
MONTGOMERY	883	829	5	5	208	208	670	616		5	334	332	45	44	45	. 44
MORGAN	303	212	4	3	105	102	194	107	4	3	175	168	33	20	33	20
MUHLENBERG	1,155	1,062	6	. 7	303	284	846	771	6	9	466	455	66	72	66	72
NELSON	1,165	1,099	9	8	312	293	844	798	10	8	485	441	59	82	59	83

# ACCIDENTS BY COUNTY (cont.) - 1989

1				ACCID	ENTS				PERS	ONS		A	LCOHOL	INVOLV	ED	
	TOT	AL	FAT	AL	NON-F	ATAL	PRO. D	AMAGE	KILI	.ED	INJU	IRED	ACCI	DENTS	DRI	VERS
COUNTY	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988
NICHOLAS	111	105	1	5	29	19	81	81	1	5	46	27	13	8	12	8
оню	619	601	2	7	202	183	415	411	2	7	345	281	36	40	36	40
OLDHAM	1,034	994	8	6	271	260	755	728	8	7	396	368	63	55	63	55
OWEN	262	202	1	2	78	77	183	123	1	2	136	119	15	11	15	11
OWSLEY	108	99	1	1	42	33	65	65	1	1	61	51	16	15	16	15
PENDLETON	353	355	1	7	95	98	257	250	1	8	132	160	19	18	19	18
PERRY	1,213	1,101	14	9	334	317	865	775	16	11	527	512	67	66	67	66
PIKE	2,579	2,279	19	16	841	761	1,719	1,502	20	18	1,355	1,213	154	142	154	142
POWELL	395	353	5	8	124	101	266	244	5	9	202	158	36	24	36	24_
PULASKI	1,945	1,762	11	12	446	397	1,488	1,353	13	14	732	600	108	82	108	82
ROBERTSON	21	19	1	0	8	6	12	13	1	0	17	14	2	2	2	2
ROCKCASTLE	488	493	4	7	158	132	336	354	4	8	253	245	32	36	32	37
ROWAN	978	871	4	2	255	215	719	654	4	2	397	350	48	54	48	55
RUSSELL	432	369	4	2	110	109	318	258	5	5	201	169	14	35	14	36
SCOTT	1,204	1,181	6	5	299	281	899	895	9	5	434	443	42	51	42	51
SHELBY	1,150	1,134	10	7	261	250	879	877	10	7	417	391	70	86	69	86
SIMPSON	701	594	5	5	159	159	537	430	5	5	287	250	31	30	31	30
SPENCER	146	151	4	1	49	54	93	96	4	1	85	80	13	17	13	17
TAYLOR	765	691	2	3	132	112	631	576	2	3	189	180	32	31	32	31_
TODD	225	215	7	4	56	62	162	149	7	5	107	108	15	16	15	16_
TRIGG	380	370	3	4	104	97	273	269	4	5	149	160	18	19	18	19
TRIMBLE	192	146	3	3	66	41	123	102	3	3	95	69	8	5	8	5
UNION	529	531	4	5	162	143	363	383	5	5	228	220	35	23	35	23
WARREN	4,603	4,073	12	18	1,115	909	3,476	3,146	13	19	1,719	1,378	225	213	226	213
WASHINGTON	278	253	4	3	55	72	219	178	6	3	85	119	13	15	13	15
WAYNE	441	431	4	1	95	98	342	332	4	3	169	153	25	26	25	26
WEBSTER	457	433	2	3	115	114	340	316	5	6	158	180	21	31	21	32
WHITLEY	1,108	1,010	11	.17	298	273	799	720	13	17	478	439	61	66	61	66
WOLFE	244	241	5	5	96	91	143	145	5	6	154	142	22	19	22	19
WOODFORD	893	828	3	6	209	152	681	670	3	8	270	212	67	54	66	54
TOTALS (State)	151,443	147,587	696	719	35,507	34,164	115,240	112,704	782	840	54,115	52,158	7,670	7,860	10,553	10,814

## 1988 vs. 1989 ACCIDENTS INVOLVING DRINKING DRIVERS

7,670 accidents in which a driver was known to have been drinking were reported during 1989. A breakdown of accidents (fatal, non-fatal injury, and property damage), by county, for 1988 vs. 1989, is shown below and on the following pages. The number of persons killed and injured in these accidents is also shown. Please note that these figures are tabulated based on the investigating officer's determination that a driver was known to have been drinking, and are also based on blood alcohol test results.

				ACCID	ENTS				· · · · · · · · · · · · ·	PERS	ONS	
					NON-I		PROP					
COUNTY	ТОТ		FAT		INJU		DAM		KILI		INJU	
	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988
Adair	22	33	1	2	9	12	12	20	1	2	16	24
Allen	28	41	1	3	17	22	10	16	1	3	24	36
Anderson	25	28_	1	2	16	14	9	13	1	2	23	22
Ballard	15	10	3	1	9	10	6	0	3	1	16	19
Barren	55	54	5	4	24	31	28	22	6	5	34	54
Bath	20	22	1	0	11	11	8	11	1	0	17	18
Bell	60	70	2	2	30	34	28	35	3	4	53	52
Boone	175	162	3	3	78	66	94	93	6	4	111	92
Bourbon	63	44	3	° 0	28	20	33	24	3	0	42	28
Boyd	93	103	3	5	44	50	47	50	4	5	69	79
Boyle	36	39	2	4	17	20	18	17	2	4	39	39
Bracken	10	8	2	2	5	3	4	3	2	3	9	7
Breathitt	26	24	1	1	18	13	-7	11	1	2	24	24
Breckinridge	13	22	1	- 1	8	. 8	4	13	1	1	14	13
Bullitt	48	67	3	4	19	35	27	29	3	4	31	57
Butler	16	20	2	0	4	12	10	.8	2	Ó	6	20
Caldwell	26	41	1	2	9	25	17	15	1	2	12	41
Calloway	57	47	3	1	30	29	26	17	3	1	55	45
Campbell	189	165	5	. 2	80	75	106	89	5	2	123	118
Carlisle	4	6	0	. 1	4	6	0	0	0	1	4	8
Carroll	37	37	5	4	10	19	23	15	7	30	17	70
Carter	44	47	3	3	23	32	21	12	4	3	46	64
Casey	17	20	· • • 0	1	14	14	3	5	0	1	18	29
Christian	149	164	5	6	66	75	. 81	86	6	6	101	116
Clark	.73	76	2	.4	28	29	44	45	2	4	39	42
Clay	58	52	5	5	36	26	19	22	8	7	65	38
Clinton	21	7	1	· · 1	5	2	15	5	1	1	11	3
Crittenden	10	16	0	4	6	5	4	3	0	6	8	21
Cumberland	9	8	0	0	4	5	5	3	0	0	7	11
Daviess	209	188	2	7	105	74	102	110	2	7	159	125
Edmonson	12	13	1	3	7	8	4	3	1	3	11	20
Elliott	19	15	0	0	12	7	7	8	0	0	18	9
Estill	22	30	1	4	14	16	7	10	1	4	21	28
Fayette	602	617	8	14	219	216	377	394	10	15	340	348
Fleming	27	19	2	2	15	14	10	3	2	4	29	27
Floyd	115	128	4	6	65	67	47	57	5	7	103	119
Franklin	118	129	1	4	58	50	59	77	1	4	81	81
Fulton	23	14	0	1	9	3	14	11	0	1	13	3
Gallatin	16	23	1	1	8	16	7	7	1	1	15	28
Garrard	7	11	0	. 0	2	5	5		0	0	3	5

## 1988 vs. 1989 ACCIDENTS INVOLVING DRINKING DRIVERS

			<u>.</u>	ACCID	ENTS					PERS	ONS	. 1
		- 1		- 4 1	NON-I		PROP					
COUNTY	1989	AL 1988	FAT 1989	AL 1988	INJU 1989	1988	DAM 1989	AGE 1988	KILI 1989	.ED 1988	INJU 1989	1988
Grant	42	46	1969	1900	1909	1988	28	<u>1966</u> 24	1969	1966	22	34
Graves	71	57	2	4	47	25	20	30	4	4	74	37
	28	36	0	4	20	23	8			6	27	
Grayson	20		2				3	13				32
Greenup	56	60 60	2	0 1	3 28	4 37	3	2 22	<u>2</u> 1	0	10 60	9 69
Hancock	11	10	1	0	<u>20</u> 6	5	<u>20</u> 5	5	1	0	00	
Hardin	129	130	7	2	57	68	67	60	8	2	99	<u>6</u> 92
Harlan	67	60	0	2 5	33	27	34	32	0		<del>99</del> 54	43
Harrison	43	32	3		19	12	22	20	4		26	16
Hart	22	16	2	1	13	8	8	- 20	2	1	25	17
Henderson	124	100	2	4	55	52	69	46	2	5	72	77
Henry	48	36	0	2	21	22	27	12	0	3	34	37
Hickman	5	3	2	0	2	3	3	0	2	0	4	8
Hopkins	81	72	2	4	43	26	36	44	2	4	72	38
Jackson	8	13	0	0	7	8	1	5	0	0	11	18
Jefferson	1,355	1,353	8	21	626	628	710	711	30	21	968	1,000
Jessamine	57	36	2	3	33	18	23	16	2	3	61	22
Johnson	24	31	2	0	13	19	10	12	2	0	17	25
Kenton	360	408	8	7	131	152	224	250		8	214	230
Knott	14	29	0	1	7	18	7	11	0	1	9	29
Knox	51	64	3	3	22	35	28	28	4	3	38	52
Larue	12	28	1	2	4	18	7	8	1	2	6	27
Laurel	58	91	4	5	32	49	25	40	4	5	60	88
Lawrence	26	17	3	1	14	. 9	10	7.	3	1	23	13
Lee	12	7	0	2	6	5	6	0	0	2	10	7
Leslie	21	21	3	0	12	17	7	4	3	0	18	28
Letcher	39	40	2	2	- 23	24	16	14	3	2	44	36
Lewis	20	28	2	. 1	8	18	11	9	2	1	11	26
Lincoln	33	46	2	3	17	23	15	21	2	3	31	36
Livingston	21	16	0	1	13	10	8	6	0	2	19	11
Logan	34	40	3	3	17	19	15	19	4	4	24	27
Lyon	5	10	0	1	3	4	2	5	0	1	4	6
McCracken	209	216	3	6	103	99	104	111	4	7	140	165
McCreary	23	21	1	0	12	11	10	10	3	0	23	24
McLean	12	19	1	4	9	2	3	11	1	4	15	15
Madison	171	203	9	9	60	77	104	118	10	12	102	120
Magoffin	24	31	3	1	15	16	7	14	4	1	30	25
Marion	42	61	3	3	21	27	21	31	4	3	36	44
Marshall	36	43	1	3	16	22	19	21	2	6	22	43
Martin	10	11	1	0	4	7	5	4	1	. 0	15	11

## 1988 vs. 1989 ACCIDENTS INVOLVING DRINKING DRIVERS (continued)

				ACCID	ENTS				PERSONS			
COUNTY	тот	TAL.	FAT	AL	NON-F		PROP DAM		KILI	FD	INJU	RED
COONTI	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988
Mason	51	54	1	4	23	20	27	32	1	6	37	30
Meade	53	55	2	3	26	30	26	24	2	3	40	46
Menifee	2	12	0	1	0	8	2	3	0	1	0	10
Mercer	47	45	1	1	28	25	18	19	1	1	44	41
Metcalfe	6	9	1	1	1	6	5	3	1	1	1	13
Monroe	7	10	1	2	5	5	2	4	1	3	7	12
Montgomery	45	44	1	4	18	21	27	21	2	4	25	38
Morgan	33	20	0	1	19	12	14	8	0	1	31	16
Muhlenberg	66	72	2	2	38	39	27	32	2	3	62	55
Nelson	59	82	5	6	33	39	23	- 39	5	6	58	69
Nicholas	13	8	1	4	6	2	6	5	1	4	8	2
Ohio	36	40	2	. 1	26	21	8	18	2	1	53	27
Oldham	63	55	5	4	30	32	28	21	5	5	47	53
Owen	15	11	0	1	10	2	5	8	0	1	19	3
Owsley	16	15	0	0	10	9	6	6	0	0	12	15
Pendleton	19	18	1	2	6	6	12	12	1	2	8	7
Perry	67	66	2	6	42	43	24	19	2	8	71	69
Pike	154	142	7	7	85	84	65	56	8	8	135	130
Powell	36	24	3	4	16	13	17	9	3	4	30	22
Pulaski	108	82	3	5	51	40	55	38	5	- 7	82	64
Robertson	2	2	1	0	1	1	1	1	1	0	4	1
Rockcastle	32	36	1	0	24	18	7	.18	1	0	43	35
Rowan	48	54	3	0	28	30	17	24	3	0	48	43
Russell	14	35	2	2	11	22	3	12	2	5	- 20	40
Scott	42	51	1	1	19	33	23	18	1	. 1	32	59
Shelby	70	86	6	3	35	37	29	47	6	3	58	64
Simpson	31	30	5	3	14	16	14	14	5	3	37	25
Spencer	13	- 17	2	1	10	9	2	7	2	1	19	18
Taylor	32	31	0	1	13	12	19	18	0	1	. 14	14
Todd	15	16	3	3	6	10	7	3	3	3	10.	17
Trigg	18	19	2	0	11	12	6	7	2	. 0	19	14
Trimble	8	5	1	0	5	. 4	3	1	1	0	8	6
Union	35	23	3	0	26	15	9	8	4	0	33	19
Warren	225	213	3	7	115	88	108	121	4	7	175	129
Washington	12	15	0	3	3	8	10	7	0	3	5	10
Wayne	<u> </u>	26	3	1	11	7	12	18	3	3	23	20
Webster	21	31	1	. 1	13	15	8	15	4	1	20	20
Whitley	61	66	6	6	29	36	27	24	7	6	55	61
Wolfe	22	19	0	3	11	12	11	5	0	3	13	17
Woodford	67	54	0	1	32	18	35	36	0	1	44	22
TOTALS	7,670	7,860	274	318	3,643	3,703	3,854	3,952	319	389	5,814	5,978

## DRIVERS UNDER INFLUENCE OF DRUGS INVOLVED IN TRAFFIC ACCIDENTS

The following chart shows the number of drivers suspected of being under the influence of drugs involved in accidents, together with the number of persons killed and injured in those accidents. A total of 380 drivers were suspected of being under the influence of drugs based on preliminary investigation of the officer investigating the accident. 10 drivers were involved in fatal accidents (12 persons killed) and 176 drivers were involved in injury accidents (295 persons injured).

COUNTY	ALL ACCIDENTS	FATAL ACCIDENTS	INJURY ACCIDENTS	PERSONS KILLED	PERSONS
ADAIR	2	-	2	J	5
ALLEN	2		1	-	1
ANDERSON	3		2	1	3
BALLARD	1		1		2
BARREN	4		2	—	3
BATH	2	1		1	2
BELL	6	1	1	1	4
BOONE	8		4		8
BOURBON			·		
BOYD	7		4		7
BOYLE	2		2	_	3
BRACKEN	_	_	_	_	_
BREATHITT			_		
BRECKINRIDGE	1		_		_
BULLITT	1		_		
BUTLER					
CALDWELL	2			_	
CALLOWAY	3		2		5
CAMPBELL	10		6	-	12
CARLISLE			_	_	
CARROLL	3	1	2	3	8
CARTER	1		1		2
CASEY	1				
CHRISTIAN	3		1	· ·	2
CLARK	5	1	1	1	2
CLAY	15		7	· _	14
CLINTON			_	—	
CRITTENDEN	1		_	_	_
CUMBERLAND			-	_	
DAVIESS	10		6		8
EDMONSON				_	_
ELLIOTT					_
ESTILL	1		1		3
FAYETTE	33	·	6		10
FLEMING	2		2	_	5
FLOYD	5		3 .	<u> </u>	3
FRANKLIN	5		2	_	4
FULTON	2				
GALLATIN	1	1	_	1	—
GARRARD	1		1		1
GRANT	- ·	-	—		
GRAVES	2	·	1	-	3
GRAYSON		_	_		—
GREEN	-			_	_
GREENUP	5	_	2		7

COUNTY	ALL ACCIDENTS	FATAL ACCIDENTS	INJURY ACCIDENTS	PERSONS KILLED	PERSONS
HANCOCK				_	_
HARDIN	4	-	3		3
HARLAN	4				~
HARRISON	1		1		1
HART	3		2	· · · · · ·	3
HENDERSON	4		2		2
HENRY	1		1		2
HICKMAN	3		3		6
HOPKINS	6		3		3
JACKSON					<u> </u>
JEFFERSON	47	1	20	1	29
	47	····	- 20		23
JESSAMINE			2		
JOHNSON	4		2	└ <u>─</u> ──	2
KENTON	20		4		5
KNOTT	<u> </u>	<u> </u>			<u> </u>
KNOX	9		4		10
LARUE	1		1		1
LAUREL	6		4		8
LAWRENCE	2	1	1	1	1
LEE	2		1		1
LESLIE	2	1	1	1	5
LETCHER	2		1		2
LEWIS					
LINCOLN	1	·	1		1
LIVINGSTON	1		1		1
LOGAN	2	·	1		1
LYON			-	-	
McCRACKEN	8		4	-	4
McCREARY	1		1	_	2
McLEAN	_	-	_	·	
MADISON	8		5	_	6
MAGOFFIN	1		-		_
MARION			-		_
MARSHALL	1		1		1
MARTIN			_	_	·
MASON	2	_	1	_	1
MEADE	1			_	
MENIFEE					
MERCER	5	·	4		11
METCALFE					<u> </u>
MONROE					
MONTGOMERY			2	<del>, .</del>	2
	2		<u> </u>		<u> </u>
MORGAN	1				
MUHLENBERG	1				
NELSON	1	—	-		-

COUNTY	ALL ACCIDENTS	FATAL ACCIDENTS	INJURY ACCIDENTS	PERSONS KILLED	FERSONS
NICHOLAS		· _ ·	_	-	
OHIO	1	·			-
OLDHAM	2	· `	2		2
OWEN	_	`	_	_	
OWSLEY	2	_	1		1
PENDLETON	-	·	-	-	_
PERRY	5	·	4	—	6
PIKE	7		3	-	7
POWELL	1	1	-	1	1
PULASKI	6	-	5		- 9
ROBERTSON		_		_	
ROCKCASTLE	1	_			_
ROWAN	7	1	5	1	5
RUSSELL	-	—			_
SCOTT	5	-	1		2
SHELBY	3	—	1		1
SIMPSON	3		2	-	2
SPENCER	_		-	-	_
TAYLOR	1	; <b></b>	1	-	1
TODD	_	_ ·			_
TRIGG	1	. —	1		1
TRIMBLE		—	<u> </u>	-	
UNION	5		3	_	3
WARREN	14	-	4	_	5
WASHINGTON	_			_	_
WAYNE	1		1		.3
WEBSTER	1	. —	1		2
WHITLEY	4		1		1
WOLFE	_	-		_	
WOODFORD	3		2		2
TOTAL	380	10	176	12	295

## DRUG INVOLVED ACCIDENTS BY AREA DEVELOPMENT DISTRICT

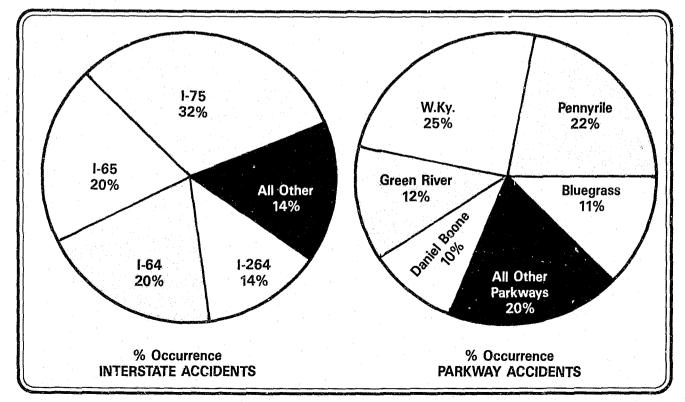
	TOTAL	TYPE ACCIE	DENT REPORTED	PERSONS		
AREA DEVELOPMENT DISTRICT	NUMBER REPORTED	FATAL	INJURY	KILLED	ہ INJURED	
Purchase	20	0	12	0	21	
Pennyrile	15	0	6	0	7	
Green River	21	0	12	0	15	
Barren River	28	0	12	0	15	
Lincoln Trail	8	0	4	0	4	
Jefferson KIPDA	53	1	24	1	34	
Northern Kentucky	42	2	16	4	33	
Buffalo Trace	4	0	3	0	6	
Gateway	12	2	7	2	9	
FIVCO	15	1	8	1	17	
Big Sandy	17	0	8	0	12	
Kentucky River	13	1	8	1	15	
Cumberland Valley	41	1	17	1	37	
Lake Cumberland	12	0	10	0	20	
Bluegrass	74	2	50	2	50	
State Totals	380	10	176	12	295	

## INTERSTATES AND PARKWAYS 1989

The chart below depicts the incidence of accidents on Kentucky's Interstates and Parkways. Interstate Accidents represent 5% of all 1989 accidents. Parkway Accidents represent .7% of 1989 Accidents.

Highway	Total	Fatal	Non-Fatal	Property Damage	Killed	Injured
1-275	334	2	84	248	2	128
1-471	149	0	43	106	0	54
1-264	1,074	3	236	835	3	303
1-75	2,545	25	759	1,761	33	1,272
1-71	481	3	135	323	4	198
1-65	1,578	11	420	1,147	14	660
1-64	1,550	10	414	1,126	12	597
1-24	264	3	61	200	4	108
Total	7,955	57	2,152	5,746	72	3,320

Parkway	Total	Fatal	Non-Fatal	Property Damage	Killed	Injured
Daniel Boone	108	5	46	57	8	143
Cumberland	81	0	28	53	0	43
Audubon	46	0	10	36	0	15
Pennyrile	238	1	67	170	1	109
Purchase	76	0	27	49	0	37
Green River	128	0	26	102	0	36
Western Kentucky	272	5	72	195	5	106
Bluegrass	122	0	29	93	0	38
Total	1,071	11	305	755	14	527





FATAL ACCIDENT REPORTING SYSTEM

The Fatal Accident Reporting System (FARS) is a computerized file containing data on all fatal accidents occurring each year in the fifty states, the District of Columbia, and Puerto Rico. The system is operated by the National Highway Traffic Safety Administration for the purpose of identifying safety problems, suggesting solutions, and helping to provide an objective basis to evaluate the effectiveness of motor vehicle safety standards and highway safety countermeasures.

*FARS* has a contract with a government agency in each state for the purpose of fatal accident data acquisition. In Kentucky, this contract is with the Kentucky State Police Records Section.

For reasons of timeliness in reporting and continuity among the states, *FARS* counts only those fatalities that occur within 30 days of the accident date. *FARS* differs from Kentucky data in that it collects data not only from the accident reports submitted from across the state, but contacts many other sources to obtain additional data pertinent to the accident, vehicles, drivers, etc. Examples of additional sources contacted by *FARS* are vehicle registration files, Driver Licensing, Vital Statistics, EMS reports, labs, coroners, and medical examiners.

A 15 minute audio/slide presentation (also available on VHS) more fully explaining the Fatal Accident Reporting System is available by contacting the FARS Unit of the Kentucky State Police Records Section.

#### DRIVERS INVOLVED IN FATAL ACCIDENTS-AGE AND ALCOHOL INVOLVEMENT

The chart depicts the ages of all drivers in fatal accidents vs. alcohol involved drivers in Fatal Accidents and the percentages of involvement for various ages and age-groups. The alcohol involved teenage driver (ages 13 through 19) represents almost 13% of the total number of alcohol involved drivers and 25% of all teenage drivers in fatal accidents.

NOTE: Data is derived from the Fatal Accident Reporting System (FARS). The number of alcohol related drivers differs from those reported through the Kentucky Accident Reporting System because FARS follows up on alcohol test results.

NOTE: In accord with Federal Guidelines, the FARS System does not include fatalities resulting from deaths resulting from natural causes, suicides and accidents which occured on private property. Six fatal accidents have been deleted from this section of the report based on coroners' reports received at the time of publication (see NOTE, page 1).

AGE	Number of Drivers	Alcohol Involved	% Alcohol Involved
Under 16	5	1	20
16	31	2	6
17	40	10	25
18	45	15	33
19	32	10	31
20	29	10	34
21	32	14	44
22-24	85	33	39
25-34	272	102	37
35-44	160	50	31
45-54	109	31	28
55-64	71	6	8
65-74	63	3	5
Over 74	38	1	3
UNKNOWN	2	0	0
TOTALS	1,014	288	28

### ALCOHOL INVOLVEMENT BY AGE AND TEST RESULTS FOR

#### **DRIVERS INVOLVED IN 1989 FATAL ACCIDENTS**

#### DURING 1989, 319 PERSONS WERE KILLED IN FATAL ACCIDENTS INVOLVING A DRINKING DRIVER. THIS REPRESENTS 41% OF ALL PERSONS KILLED IN TRAFFIC ACCIDENTS IN KENTUCKY DURING 1989.

The chart below shows drinking drivers by age and alcohol test result. 67% of the drinking drivers were found to have been legally intoxicated (0.10% or above) at the time of the accident.

	NUMBER	TEST RESULTS							
AGE	OF DRINKING DRIVERS*	.00	.0105	.0609	.1019	.20+	TEST REFUSED	NOT TESTED	RESULTS OF TEST UNKNOWN
Under 16	1	0	1	0	0	0	0	0	0
16	2	1	1	0	0	0	0	0	0
17	10	1	3	2	2	2	0	0	0
18	15	1	0	7	5	1	0	1	0
19	10	0	2	1	7	0	0	0	0
20	10	1	3	1	3	2	0	0	0
21	14	1	1	2	8	1	1	0	0
22-24	33	0	2	6	10	11	0	2	2
25-34	102	6	10	6	34	34	1	6	5
35-44	50	2	2	3	19	20	0	2	2
45-54	31	2	2	1	10	15	0	0	1
55-64	6	1	1	0	1	3	0	0	0
65-74	3	0	0	0	0	3	0	0	0
75+	1	0	1	0	0	0	0	0	0
TOTAL	288	16	29	29	99	92	2	11	9

\*Drinking Driver refers to a Driver suspected by the police to be drinking, and/or a driver who tested positive for alcohol in a subsequent test result.
FATALLY INJURED PEDESTRIANS

Another traffic hazard is the drinking pedestrian. The right-hand chart shows the number of fatally injured pedestrians by age and alcohol involvement.

AGE	TOTAL	NUMBER DRINKING	AVERAGE TEST RESULTS OF THOSE DRINKING
0-5	1	0	
6-10	6	0	0.0%
11-15	4	0	0.0%
16-20	8	3	0.16%
21-25	4	3	0.16%
26-30	4	3	0.16%
31-40	7	2	0.26%
41-50	6	1	0.30%
51-60	. 7	2	0.20%
61-70	6	1	0.08%
71-80	12	2	0.21%
81 +	7	0	0%
TOTAL	72	16	20%

### DURING 1989, 26% OF THE FATALLY INJURED PEDESTRIANS OVER THE AGE OF 15 WERE DRINKING, THEIR AVERAGE ALCOHOL TEST WAS 0.20%.

## ACTIVE RESTRAINTS AND EJECTION IN FATAL ACCIDENTS

The chart belows plots overall results in fatal accidents when active restraints (safety belts, harnesses, child restraints) are used. A comparison of "used" versus "not used" for 1989 FARS data strongly confirms both the life-saving advantage as well as the reduction of serious injury when restraints are in place. 86 PERCENT OF THE VEHICLE OCCUPANTS KILLED DURING 1989 WERE NOT RESTRAINED. 86 PERCENT OF THE VEHICLE OC-CUPANTS SUFFERING INCAPACITATING INJURY WERE NOT RESTRAINED. 77 PERCENT OF THE OCCUPANTS SUFFERING NON-INCAPACITATING INJURY WERE NOT RESTRAINED.

Result	Restraint Used	Restraint Not Used	Unknown If Used	TOTAL
Fatal Injury	83	576	12	671
Incapacitating Injury	50	334	4	388
Non-Incapacitating Injury	54	187	1	242
Possible Injury	21	55	0	76
No Injury	94	201	11	306
Unknown If Injured	0	0	2	2
Injured, Severity Unknown	0	0	0	0
TOTAL	302	1,353	30	1,685

Of the 1,685 vehicle occupants involved in fatal accidents in 1989, only 302 were using safety restraints - an overall usage rate of 18% in fatal accidents.

## **EJECTION**

The right-hand chart shows overall injuries in fatal accidents according to whether the vehicle occupant was ejected from the vehicle, partially ejected, or not ejected. 22% of the persons killed were ejected. 67 PER-CENT OF THOSE VEHICLE OC-CUPANTS WHO WERE EJECTED WERE KILLED. This data also reaffirms the life-saving advantage of using an active restraint, since the possibility of being ejected upon impact is significantly reduced.

Result	Total Ejection	Partial Ejection	No Ejection	Unknown	TOTAL
Fatal Injury	147	59	464	1	671
Incapacitating Injury	57	15	315	1	388
Non-Incapacitating Inj.	11	2	229	0	242
Possible Injury	3	4	68	1	76
No Injury	3	0	303	0	306
Unknown If Injured	0	0	2	0	2
Injured, Severity Unk.	· 0 ·	0	0	0	0
TOTAL	221	80	1,381	3	1,685

## **CHILD RESTRAINTS**

Kentucky's "child restraint law" (KRS 189.125) became effective July 15, 1982, and requires that any parent or legal guardian of a child "forty inches in height or less, when transporting the child in a motor vehicle owned by that parent or guardian operated on the roadways, streets and highways of this state, shall have such child properly secured in a child restraint system of a type meeting federal motor vehicle safety standards."

In order to qualify, the child restraint system must be certified as having been federally approved. (Federal approval of a child restraint system is based on its having withstood dynamic crash tests - 30 mph crash into a fixed barrier.)

The data on child restraint depicted in the chart below reflects "age" (four years and under) rather than the height of the child. Other states with child restraint laws have adopted the "four years and under" standard in their statutes.

Result	Age 4 & under Total	Child Restraint Used	Lap Belt &/or Harness Used	None Used	Unknown
Killed	12	1	1	9	11
Injured (incapacitating)	7	0	0	7	0
Injured (non-incapacitating)	10	7	1	1	1
Injured (possible)	5	2	1	2	0
Not Injured	21	9	3	9	0
TOTAL	55	19	6	28	2

Of the 55 child occupants (4 & under) in 1989 fatal accidents only 19 children were secured in a child restraint. Of the 12 children killed, 9 had no restraint and only 1 was using child safety seats. This information confirms what other studies have suggested regarding the effectiveness of child restraints. An infant or small child's survival can depend on whether the child was properly secured.

# CHILD RESTRAINTS BABY ALWAYS RIDES FACING REAR

Infant (Birth to sits up alone)							
Type of Seat	infant only	convertible					
How to Use	<ul> <li>Face backward in car (baby faces padded vehicle seat back)</li> <li>Harness baby snugly before putting on blanket</li> <li>Secure vehicle safety belt where shown in instructions</li> <li>Use semi-reclined position</li> </ul>						

#### The "best" car seat ...

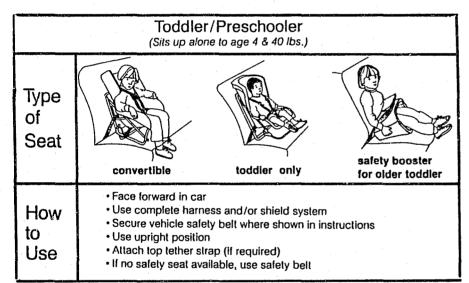
Fits your child.

Some seats fit only infants; others work only with toddlers who can sit up well. "Convertible" models adjust for use from birth to 4 years.

Fits your car.

*Try before you buy.* Follow manufacturer's instructions exactly; fasten safety belt tightly in position shown. Try in both back and front seats, although back seat is usually safer. Try convertible seats in infant and toddler positions. Fits your needs.

Choose a seat that is easy for you to install in your car(s) and use on every ride. Some seats are easier to move from car to car. For a seat which requires the use of a top tether strap, you must install a special bolt in your car for rear seat use; some cars have pre-drilled holes or hardware for these bolts. For front seat use, fasten tether strap to an unused rear safety belt.



# Support baby's head and body



Rolled diapers, blankets

#### Bin How can I keep my child in the car seat? Start a lifelong habit with baby's first ride.

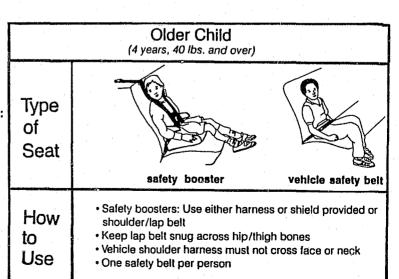
Strengthen the habit by *never* making an exception. Always wear your own safety belt.

#### Before you buy a used car seat, be sure you can answer "yes" to all of the questions on this checklist: Is it crash-tested?

- Do you have all the parts? (Harness, shield, tether)
- Is it free from signs of a crash? (Cracks or twisting)
- Will you get manufacturer's instruction booklet?

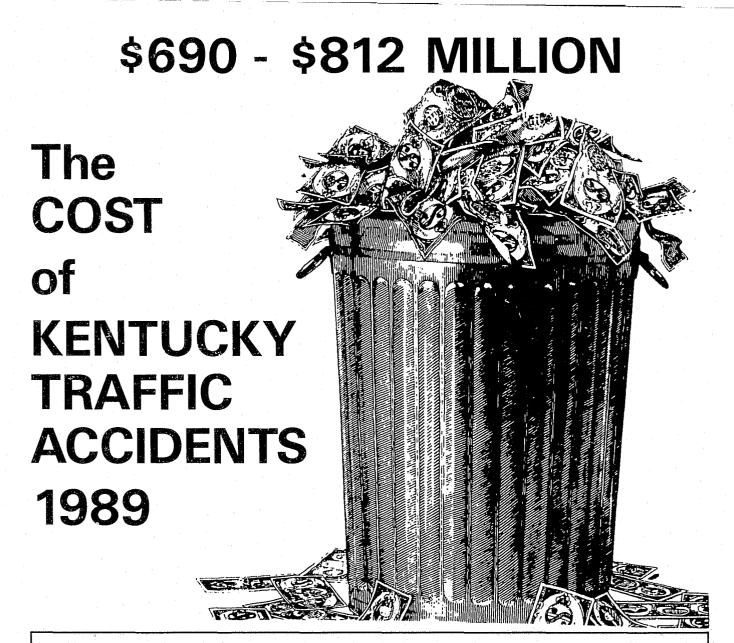
Four Rules for Safety

- 1. Never hold a child on your lap
- 2. Use a crash-tested seat
- ${\it 3}$ . Always use the harness/shield
- 4. Attach the car safety belt correctly



## NOTES

1.1



The calculable costs of motor vehicle accidents include wage loss, medical expense, and property damage. Two formulas provided by the National Safety Council were used to arrive at a "cost range" for traffic accidents in Kentucky during 1989.

The <b>high</b> range (\$812 million) was derived from the following formula:		The <b>low</b> range (\$690 million) was derived from the following formula	
Cost per Number accident X Reported =	Estimated Cost	Urban Average Estir Accident X Cost = Cost Deaths	nated t
Fatalities @ \$220,000 X 782 =	\$172,040,000	167 X \$1,560,000 = \$26	0,052,000
Non Fatal Injuries @ \$9,300 X 54,115 =	\$503,269,500	Rural Accident Deaths	
Property Damage @ \$1,190 X 115,240 = TOTAL, HIGH ESTIMATE:	<u>\$137,135,600</u> \$812,445,100	a	<u>3,500,000</u> 0,552,000