*C*rash *A*nalysis, *S*tatistics & *I*nformation *Notebook 1996-2003*

Georgia Department of Motor Vehicle Safety **November 2004**

The Department of Motor Vehicle Safety is proud to present the *C***rash** *A***nalysis**, *S***tatistics** & *I***nformation (*CASI*) *Notebook 1996-2003***. DMVS developed the **CASI Notebooks** to provide straightforward, easy to understand crash information. Each page or table can be used as a stand-alone document and can be used for print dissemination. Some topics will be several pages long while other topics will be a single page. Topics will include crashes, injuries and fatalities, trends, basic demographics on population and licensed drivers, rural and urban roads, young drivers and other highway safety issues in Georgia.

The magnitude of the problem is almost beyond belief. In Georgia over the past eight years there have been 2,493,352 crashes involving 4,733,494 drivers. From 1996 to 2003 the total number of drivers, passengers and pedestrians involved in crashes is an astounding 6,664,713. In 2003, 1,610 people were killed in motor vehicle crashes in Georgia. On average each week 31 people died in motor vehicle crashes. Although injuries have declined the number of people injured in motor vehicle crashes in 2003 would fill Turner Field the home of the Atlanta Braves baseball team two times over.

The Department of Motor Vehicle Safety is committed to continuing to provide this vital information in the coming years. We are developing cost-effective means of maintaining the high quality database this information is based on and will continue to look for new ways of providing this information to highway safety advocates and the people of Georgia.

Commissioner James Davis

Note About the Crash Analysis, Statistics & Information Notebooks

This is first and foremost a data book but it is important to remember that every number represents a loss. The loss may be in expensive damage to a vehicle. The loss may be a recurring medical condition from an injury. Or it may be the loss of a human life. When you read 132,879 injuries in 2003 remember that every number represents someone actually hurt. When you read 1,610 fatalities remember that this represents 1,610 human lives lost. These are not just numbers in a database.

Highway safety data is the foundation of problem identification and essential for the design of effective solutions; it is necessary for effective deployment of law enforcement officers and for public safety education programs. The Department of Motor Vehicle Safety is committed to providing this important data and information. Understanding the many factors that combine to produce a motor vehicle crash is indispensable in learning how to prevent crashes, injuries and save lives. This is why this data is kept and why it is presented here.

Georgia's massive growth has had profound effects on the safety of the roads and highways. Increased volumes of drivers, cars and travel lead to congested roadways, which increase the risk of crashes. Because of the increased number of licensed drivers the crash rates are declining. The rate is calculated by dividing the crashes or injuries by a measurement of exposure such as the number of licensed drivers or crashes per year. This should be a measurement of risk of being in a crash. But rates can be misleading. If a dangerous road with a high number of fatalities has a fatality rate that is declining it does not necessarily mean that it is a safer road. It only means that because of all the traffic the relative risk is lower for all possible motorists. The road may still be dangerous.

This data captures only crashes that occur on a public roadway and incur at least $500 in damages. In addition to this limitation the data is captured initially by law enforcement officers, transmitted to DMVS for data entry and verification and then subjected to database logic edits. Every effort is made to ensure that the data is complete and reliable. Throughout the data recovery process of the past three years we endeavored to recover all crash reports but due to the time lapse not all reports could be located for all years. In particular not all paper crash report documents could be recovered for 1999 so these figures are assumed to be lower than the actual count. This document is based on data revised and released as of September 2004

Angelyn Rios

Dedication and Thanks

The ***C*rash *A*nalysis**, ***S*tatistics** & ***I*nformation Notebooks** are dedicated to Brenda Raines. Ms. Raines spent 34 years as the trustee of Crash Reporting and retired in September 2003 after completing the last year of the crash recovery. Her intelligence, energy and complete dedication to accuracy and quality have made this data possible. Her humor and courage in the face of almost insurmountable obstacles was awesome to watch. Brenda, you are sorely missed. Thank you for caring, thank you for your compulsive drive for accuracy and most of all thank you for the data. You did it!

County Level Data Tables

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And

Brenda Raines	**Retired, Department of Motor Vehicle Safety, Crash Reporting**

Before looking at trends, before looking at rates and risk take a moment to look at the counts below. The shear magnitude of the problem is difficult to grasp. Motor vehicle crashes in Georgia affect millions of people and cost billions of dollars and this data represents only crashes that are reportable to the state not crashes that occur on private property or ones not reported to the police or insurance companies.

Each year in Georgia:

- On average each year 833,089 persons are involved in motor vehicle crashes either as drivers, passengers or pedestrians out of an average population of just over eight million in Georgia.
- One in ten drivers is involved in a motor vehicle crash. Each year on average 591,687 drivers are involved in crashes out of an average 5,915,393 licensed drivers in Georgia.
- Almost one out of three drivers in crashes is in a crash serious enough to produce an injury. Each year on average 165,128 drivers in Georgia are involved in a crash that results in someone being injured.
- From 1996 to 2003, 18,211 drivers were involved in fatal motor vehicle crashes resulting in 12,606 deaths.
- Crashes are only reportable to the state of Georgia if they occur on public roadways and cost at least $500 in damages or result in an injury. At $500 per crash the very minimum average cost per year is $156 million. The total minimum cost for the eight years it is $1.25 billion. This cost does not include the medical and legal cost of injuries only the basic $500 minimum for reporting purposes.

Drivers, Crashes, Injuries and Fatalities

	1996	1997	1998	1999*	2000	2001	2002	2003	Totals 1996-2003
Total Persons	803,951	811,390	822,793	806,860	824,820	849,335	871,308	874,256	6,664,713
Crash Drivers**	565,421	572,952	584,093	573,550	585,916	603,217	621,439	626,906	4,733,494
Passengers**	234,328	234,234	234,762	229,722	235,434	242,618	246,394	243,865	1,901,357
Crashes	298,288	301,822	306,591	299,646	309,768	317,851	327,774	331,612	2,493,352
Non-Injury Crashes	208,481	213,534	219,615	219,310	224,708	230,708	230,906	243,617	1,790,879
Injury Drivers	170,342	168,274	166,533	154,950	161,218	166,050	166,504	167,151	1,321,022
Injuries	142,890	139,400	134,770	123,588	130,608	132,305	132,623	132,879	1,069,063
Fatal Drivers	2,228	2,261	2,258	2,145	2,244	2,438	2,260	2,377	18,211
Fatalities	1,582	1,584	1,580	1,514	1,549	1,656	1,531	1,610	12,606
Fetal Deaths	8	7	11	6	6	7	6	7	58

**Driver and passenger data excludes bicyclists and pedestrians

*Not all paper crash report documents could be recovered for 1999 so these figures are assumed to be lower than the actual count.
Data Source: Georgia Department of Motor Vehicle Safety, data revised and released as of September 2004

Motor vehicle crash fatalities numbered murder victims almost three to one over the past eight years. Motor vehicle crashes are not a natural cause of death. These crashes, these injuries, these deaths are preventable.

- On average 30 people were killed in crashes each week compared with 11 murders.
- On average 2,555 people were injured in motor vehicle crashes each week in 2003 compared with 402 aggravated assaults.
- Think what would have happened if there had been 1,610 people murdered and 132,879 aggravated assaults in 2003.

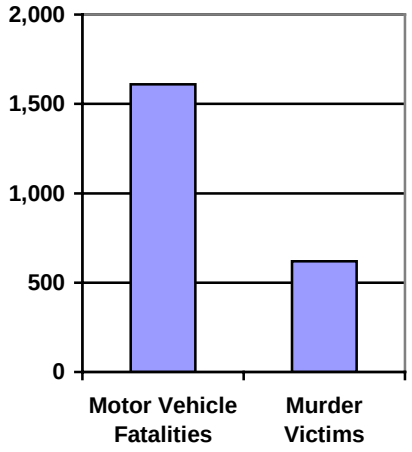
In 2003, 1,610 people were killed in crashes compared with 619 murders.

In that single year 991 more people died in crashes than were murdered.

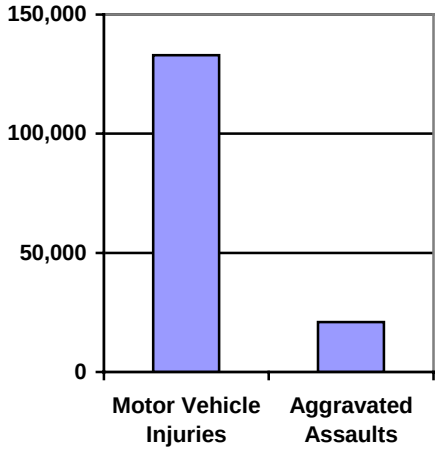
132,879 people were injured in crashes compared with 20,912 incidents of aggravated assault.

In that single year 111,967 more people were injured in crashes than by aggravated assaults.

2003 Motor Vehicle Fatalities Compared with Murder Victims



2003 Motor Vehicle Injuries Compared with Aggravated Assaults



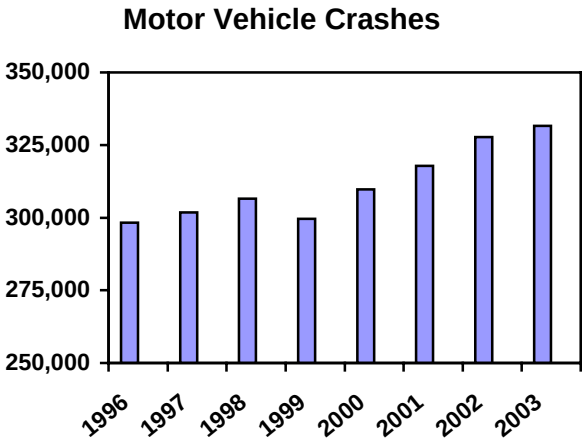
Crime versus Crashes

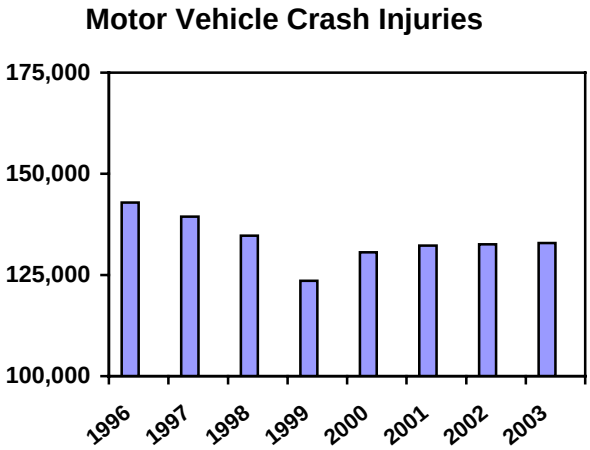
	1996	1997	1998	1999	2000	2001	2002	2003	Totals 1996-2003
Murdered Persons	619	533	590	556	496	549	521	619	4,483
Crash Fatalities	1,582	1,584	1,580	1,514	1,549	1,656	1,531	1,610	12,606
Aggravated Assaults*	27,617	24,367	25,632	24,145	21,463	22,930	21,109	20,912	188,175
Crash Injuries	142,890	139,400	134,770	123,588	130,608	132,305	132,623	132,879	1,069,063

*Aggravated Assault may or may not involve an actual physical injury to a victim.
Data Sources: Georgia Department of Motor Vehicle Safety, crime data from Georgia Bureau of Investigation

After a steady decline the number of injuries has remained relatively constant over the past four years. During the same time the seat belt usage for adult vehicle occupants in motor vehicle crashes has leveled off at about 79 percent.

- From 1996 to 2003 motor vehicle crashes increased by 33,324 crashes yet 10,011 fewer people were injured. More drivers and vehicles contribute to more crashes but protective behaviors such as seat belt use greatly reduce the number of people injured.
- Although the number of injuries remained about the same from 2000 to 2003 the injury rate declined due to the increase in license drivers. A declining rate indicates the *relative* risk has declined and does not mean that the risk of injury is still not significant.
- The number of fatalities increased in 2001 and again in 2003 bringing the average number of fatalities per year over the past eight years to 1,576.
- Seat belts do not prevent crashes they prevent injuries. In some cases the crash is so severe that no occupant protection device will prevent an injury. Preventing the crash itself is the most effective way of preventing injuries and fatalities.





Crashes, Injuries and Fatalities

Number and Rate per 10,000 Licensed Drivers

	1996	1997	1998	1999*	2000	2001	2002	2003	Percent Change 1996-2003
Crashes	298,288	301,822	306,591	299,646	309,768	317,851	327,774	331,612	11.17
Rate	562.1	562.6	555.4	526.8	534.8	517.7	498.6	478.1	-14.94
Injuries	142,890	139,400	134,770	123,588	130,608	132,305	132,623	132,879	-7.01
Rate	269.3	259.8	244.1	217.3	225.5	215.5	201.7	191.6	-28.85
Fatalities	1,582	1,584	1,580	1,514	1,549	1,656	1,531	1,610	1.77
Rate	2.98	2.95	2.86	2.66	2.67	2.70	2.33	2.32	-22.15
Licensed Drivers	5,306,590	5,364,880	5,520,657	5,687,906	5,792,575	6,140,085	6,574,423	6,936,026	30.71

*Not all paper crash report documents could be recovered for 1999 so these figures are assumed to be lower than the actual count.
Data Source: Georgia Department of Motor Vehicle Safety, data revised and released as of September 2004

From 1996 to 2003 over one million people were injured in motor vehicle crashes in Georgia and 12,606 were killed. 47,044 people received serious, incapacitating injuries such as traumatic head injuries, paralysis, or other severe injuries.

- From 2000 to 2003 the number of minor and moderate injuries remained about the same or increased slightly. During the same time period the seat belt usage for adult vehicle occupants in motor vehicle crashes leveled off at about 79 percent.
- In 2003 there were 33,324 more crashes than in 1996. Although there was an increase in thousands of people at risk of injury, there were 10,011 fewer people injured in 2003 than in 1996 when the primary seat belt law in Georgia went into effect.
- From 1996 to 2003, the number of moderate injuries declined by 4,289 injuries and the number of serious injuries declined by 574 injuries. Motor vehicle crashes are the leading cause of traumatic head injuries, injuries that often result in death or decades of slow and incomplete recovery.

Each year the number of people injured in crashes would fill Turner Field the home of the Atlanta Braves two times over. Think of two large baseball stadiums filled to overflowing with injured men, women and children.

- On average 364 people were injured each day in 2003, compared with an average of 391 injuries in 1996.
- In Georgia crashes are the leading cause of death for persons ages 1-35. From 1996 to 2003 there has been no clear downward trend in the number of people killed in crashes.

Motor Vehicle Crash Injuries
Number and Rate per 10,000 Licensed Drivers

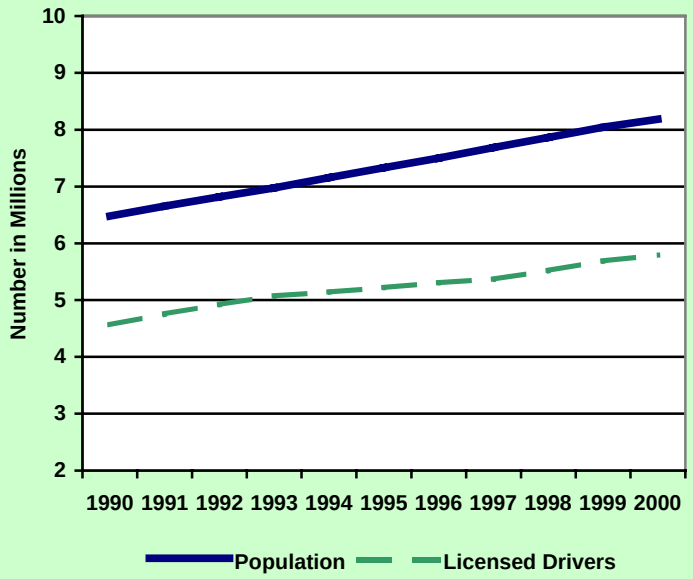
	1996	1997	1998	1999*	2000	2001	2002	2003	Percent Change 1996-2003
Minor Injuries	100,217	98,536	95,747	88,545	92,974	94,499	95,062	95,069	-5.14
Rate	188.85	183.67	173.43	155.67	160.51	153.91	144.59	137.07	-27.42
Moderate Injuries	36,249	34,848	33,116	29,610	31,882	31,873	31,832	31,960	-11.83
Rate	68.31	64.96	59.99	52.06	55.04	51.91	48.42	46.08	-32.54
Serious Injuries	6,424	6,016	5,907	5,433	5,752	5,933	5,729	5,850	-8.94
Rate	12.11	11.21	10.70	9.55	9.93	9.66	8.71	8.43	-30.33
Total Injuries	142,890	139,400	134,770	123,588	130,608	132,305	132,623	132,879	-7.01
Rate	269.27	259.84	244.12	217.28	225.47	215.48	201.73	191.58	-28.85
Fatalities	1,582	1,584	1,580	1,514	1,549	1,656	1,531	1,610	1.77
Rate	2.98	2.95	2.86	2.66	2.67	2.70	2.33	2.32	-22.14

*Not all paper crash report documents could be recovered for 1999 so these figures are assumed to be lower than the actual count.
Data Source: Georgia Department of Motor Vehicle Safety, data revised and released as of September 2004

Georgia's massive population growth and reliance on personal passenger vehicles has had profound effects on the safety of the roads and highways.

- The number of licensed drivers in Georgia increased 26.9 percent from 1990 to 2000.
- Females were in the majority in both population and licensed drivers. In 2000, females accounted for 50.8 percent of the population and 50.7 percent of the licensed drivers.
- From 1990 to 2000 Georgia's population increased 26.4 percent compared to a 13.1 increase percent for the nation.
- For persons under 18 years of age the Georgia population increased 26.5 percent compared with 9.6 percent for persons over age 65.

Growth in Georgia's Population and Licensed Drivers 1990-2000



Commuting to Work

	Georgia	United States
Mean Travel Time in Minutes	27.7	25.5
Drive Alone	77.5 %	75.7 %
Carpool	14.5	12.2
Public Transportation	2.3	4.7
Walked	1.7	2.9
Other Means	1.1	1.2
Work at Home	2.8	3.3

- The mean travel time to work in Georgia was 27.7 minutes compared to 25.5 minutes for the nation.
- More Georgians commute to work alone than nationwide, 77.5 percent in Georgia compared with 75.7 percent for the nation.
- Fewer Georgians take public transportation to work, 2.3 percent in Georgia compared to 4.7 percent for the nation.

Data Sources: U.S. Census Bureau, Georgia Department of Motor Vehicle Safety

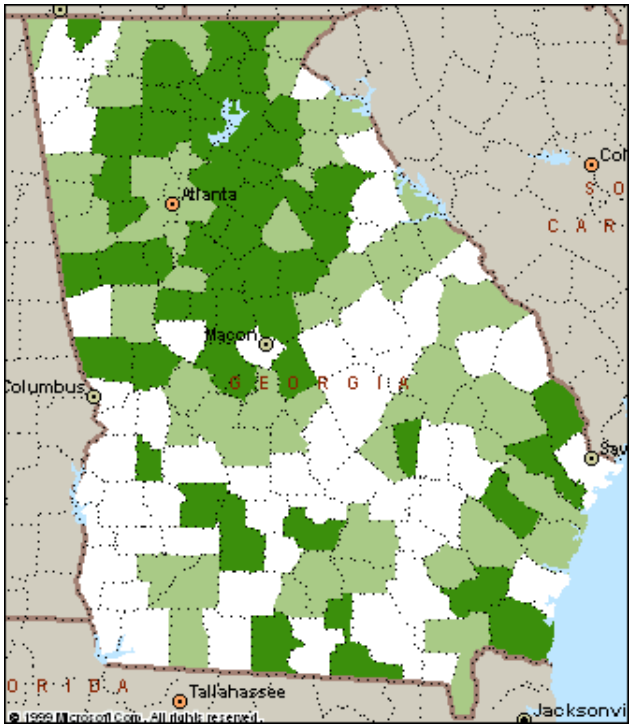
Georgia's population has grown dramatically and with the growth in population has come an increase in drivers, vehicles, the miles they travel and of course crashes. Increased drivers, cars and travel lead to congested roadways, which increase the risk of property damage and minor injury crashes.

- From 1996 to 2003 the population in Georgia increased 15.8 percent and the number of vehicle miles traveled increased 22.0 percent. The number of licensed drivers in Georgia increased 30.7 percent.

- From 1996 to 2003 the increase in population, vehicle miles traveled and licensed drivers was greater than the increase in motor vehicle crashes. From 1996 to 2003 the number of motor vehicle crashes increased 11.2 percent, from 298,288 in 1996 to 331,612 in 2003.

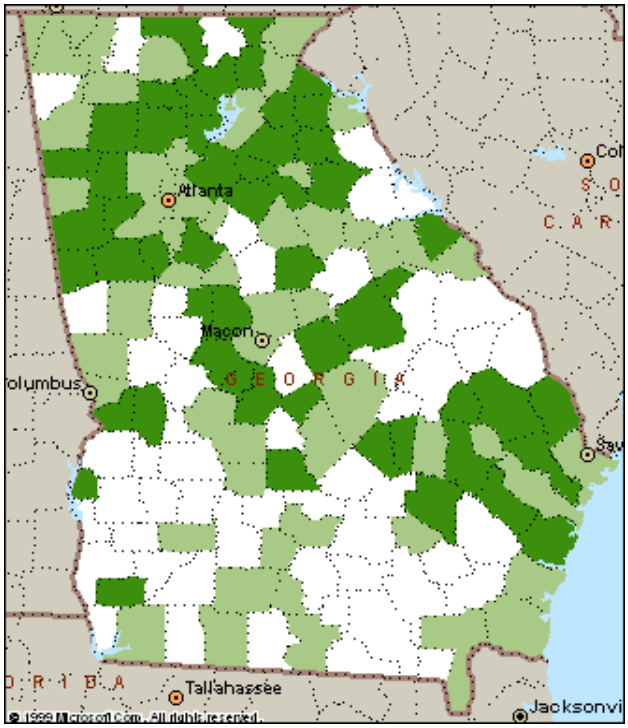
Growth in Licensed Drivers

1996 to 2003



Growth in Motor Vehicle Crashes

1996 to 2003



Counties with the Highest Increase – Darkest
Counties with the Next Highest Increase – Medium
Counties with the Lowest Increase – Lightest

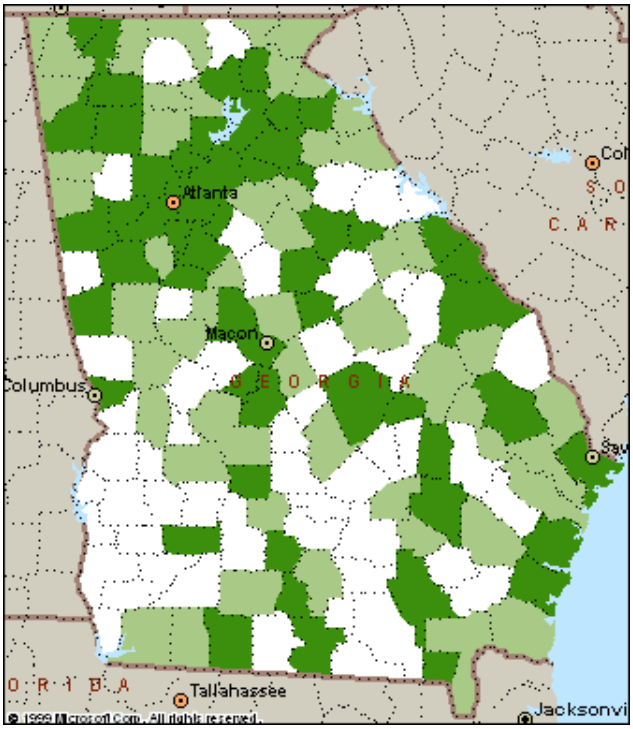
Data Sources: Georgia Department of Motor Vehicle Safety, data revised and released as of September 2004, U.S. Census Bureau

Rural roads are fatal because they are often narrow, two-lane roads with no physical barrier or division separating oncoming traffic and have frequent entering and exiting traffic. This greatly increases the risk of a fatal crash compared to limited access roadways.

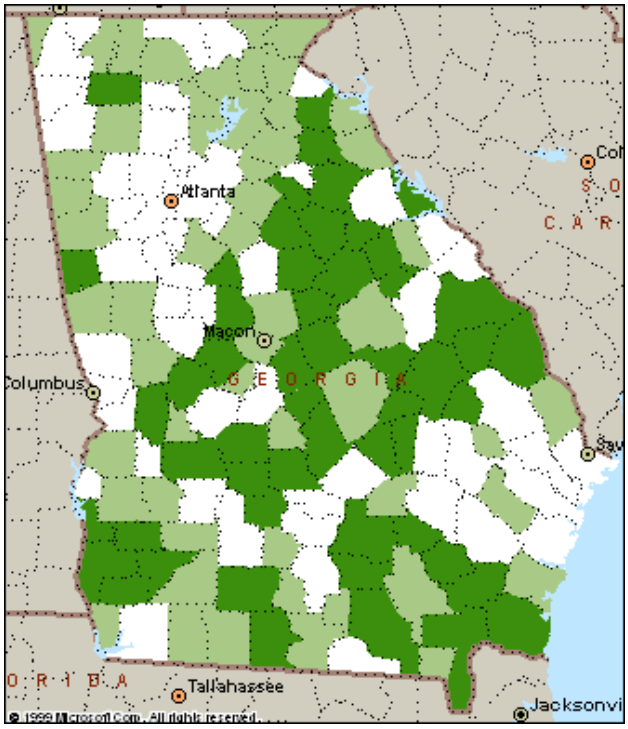
- In addition rural EMS and emergency rooms are seriously underfunded increasing the possibility of fatal injury. Georgia does not have an optimal statewide trauma network. Much of the southeastern region does not have access to a Level I Trauma Center. More than twenty rural counties in Georgia do not even have 911 Service.

- In July 1996, the speed limit was increased to 70 mph on rural interstates. Three years later the number of fatalities on rural interstate roads increased 67.5 percent when compared to the three-year period before the speed limit was raised.

2003 Crash Rate per 10,000 Licensed Drivers



2003 Fatality Rate per 10,000 Licensed Drivers



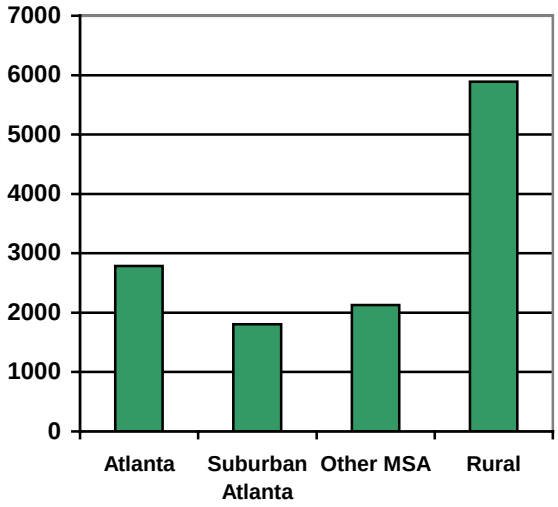
Counties with the Highest Rate – Darkest
Counties with the Next Highest Rate – Medium
Counties with the Lowest Rate – Lightest

Data Source: Georgia Department of Motor Vehicle Safety, data revised and released as of September 2004

Over the past eight years more people have died in crashes in rural counties than in any one urban area.

- 730 people died in rural counties compared with 366 in the five Atlanta counties in 2003. Crashes in rural counties have increased 7.5 percent from 1996 to 2003 but injuries have declined 6.0 percent and fatalities declined 1.5 percent.
- The suburban Atlanta counties with their rural roads have seen a 53.4 percent increase in licensed drivers from 1996 to 2003. During the same time the number of crashes increased 34.3 percent, injuries went up 12.3 percent and fatalities increased 17.5 percent.

Total Fatalities by Region, 1996-2003



Georgia Crashes, Injuries and Fatalities by Region, 1996 to 2003

Number and Rate per 10,000 Licensed Drivers

	1996 Number	1996 Rate	2003 Number	2003 Rate	Percent Change in Number	Percent Change in Rate
Crashes						
Atlanta	135,241	712.1	145,641	576.4	7.69	-19.06
Suburban Atlanta	34,005	452.7	45,673	396.3	34.31	-12.46
Other MSA	60,696	588.7	66,824	543.4	10.10	-7.70
Rural Counties	68,346	420.5	73,474	362.5	7.50	-13.80
Injuries						
Atlanta	59,021	310.8	50,396	199.4	-14.61	-35.82
Suburban Atlanta	17,097	227.6	19,195	166.6	12.27	-26.83
Other MSA	28,009	271.7	26,827	218.1	-4.22	-19.71
Rural Counties	38,763	238.5	36,461	179.9	-5.94	-24.58
Fatalities						
Atlanta	352	1.85	366	1.45	3.98	-21.85
Suburban Atlanta	212	2.82	249	2.16	17.45	-23.45
Other MSA	277	2.69	265	2.15	-4.33	-19.80
Rural Counties	741	4.56	730	3.60	-1.48	-21.01

*Pre-2003 census definition was used. Five Atlanta Metropolitan Counties: Clayton, Cobb, DeKalb, Fulton, Gwinnett; Atlanta Suburban Counties: Barrow, Bartow, Carroll, Cherokee, Coweta, Douglas, Fayette, Forsyth, Henry, Newton, Paulding, Pickens, Rockdale, Spalding, Walton; Other Metropolitan Statistical Area (MSA) Counties: Bibb, Bryan, Catoosa, Chatham, Chattahoochee, Clarke, Columbia, Dade, Dougherty, Effingham, Harris, Houston, Jones, Lee, Madison, McDuffie, Muscogee, Oconee, Peach, Richmond, Twiggs, Walker; Rural Counties: All other counties

Data Source: Georgia Department of Motor Vehicle Safety, data revised and released as of September 2004