

Florida

# TRAFFIC SAFETY FACTS

October 2010

# BICYCLISTS



Report Compiled by the  
Florida Department of  
Highway Safety and Motor Vehicles

A SAFER  
**FLORIDA**  
HIGHWAY SAFETY AND MOTOR VEHICLES

# 2009 Florida Quick Facts:

## Definitions:

**Bicycle** – A vehicle propelled solely by human power or a motorized bicycle propelled by a combination of human power and an electric helper motor rated at 200 watts or less (this term does not include a vehicle with a seat height less than 26 inches from the ground when the seat is adjusted to its highest position, or a scooter or similar device).

**Bicyclist** – A driver of a bicycle. A passenger on a bicycle is considered a vehicle passenger.

### Rate (per 100,000 Population)

- Bicyclist and Passengers Fatality Rate .....0.51
- Bicyclist and Passengers Injury Rate .....23.3

	Fatalities	Injuries
All	2,563	197,214
2009 Bicyclists	100	4,425
Percent Of All	3.9%	2.2%
2008 Bicyclists	118	4,428
Percent Change	(15.3%)	(.07)
Safety Equipment	Fatalities	Injuries
Bicyclists With Safety Helmet	12	580
Bicyclists Without Safety Helmet	87	3,764
Bicycle Passengers With Safety Helmet	0	5
Bicycle Passenger Without Safety Helmet	1	40
Percent Of Bicyclists With Safety Helmets	12%	13.1%
Percent Of Bicycle Passengers With Helmets	0	.1%



# Executive Summary

The first automobile accident in the United State involving a bicyclist occurred in New York City in 1896, (statistics first compiled on bicycle fatalities). Since then more than 53,000 bicyclists have died in traffic crashes. In 2009, Florida experienced 100 deaths and 4,425 injuries of bicyclists in traffic crashes.

According to the National Highway Traffic Safety Administration's National Center for Statistics and Analysis, in 2008, (the most recent data available) 716 bicyclists were killed in the U.S. and an additional 52,000 were injured in traffic crashes, which is approximately two percent of all traffic fatalities and two percent of all injuries during the year. Also in 2008, Florida had the highest number of fatal bicycle crashes of any state – one out of every seven fatal bicycle crashes in the country occurred in Florida. While California's population is approximately twice that of Florida's, Florida had more fatal bicycle crashes.

## What is the definition of a bicyclist fatality?

■ A traffic crash that results in one or more fatalities within thirty days of occurrence of a bicyclist which is a driver of a bicycle. A passenger on a bicycle is considered a vehicle passenger.

## Who are our bicyclist fatalities?

- In 2009, fatalities of people age 25 to 44 account for 30% of all bicyclist fatalities.
- Twenty-nine percent of bicyclists killed fall into the 55 and older category.
- Twenty-three percent of bicyclist fatalities were ages 45 to 54.
- Teenager's under the age of 19 make up 11% of bicyclist fatalities.
- Approximately 87% of all bicyclist operator and passenger fatalities were male and approximately 14% were female.

## What types of roadways are involved in bicyclist fatalities?

- Four-lane highways claim the lives of bicyclists more than any other roadway, at 35%.
- Twenty-eight percent of bicyclist fatalities take place on two-lane roadways.
- Six-lane roadways are responsible for just over 23% of bicyclist fatalities.

## What day of the week and month of the year is the most deadly for bicyclists?

- November is the deadliest month of the year for bicyclists, with 13% of all fatalities occurring in this month.
- March accounted for 12% of the bicyclist fatalities.
- Saturday is the most deadly day for bicyclists with 16% of fatalities occurring on this day.
- Bicyclist fatalities on Tuesday, Thursday & Friday were tied with 15% of all bicyclist fatalities occurring on these days.

## Are bicyclists being killed more during the day or at night?

- Forty-eight percent of bicyclists killed in a traffic crash, die in daylight.
- Thirty-three percent of bicyclists die from a traffic crash when it is dark, but the street is illuminated.
- Sixteen percent of fatalities of bicyclists die in crashes when it is dark outside.

## Are there other factors that contribute to a bicyclist being killed in Florida?

Yes, not wearing a bicycle helmet can contribute to the death of a bicyclist if involved in a traffic crash. Of the 100 bicyclists killed in 2009, 88 did not have a helmet on when the crash occurred and 12 did. Florida law requires bicycle riders less than 16 years of age to wear a bicycle helmet.

## What counties in Florida have the highest number of bicyclist fatalities?

Of course, the largest counties have the highest number of bicyclist fatalities. The statewide bicyclist fatality rate is approximately .51 fatalities per every 100,000 people. The following counties accounted for 55 bicyclist fatalities, or over half of the state's 99 bicycle operators and one passenger fatalities: Miami-Dade-12 (rate-.48), Broward-10 (rate-.57) Palm Beach-11 (rate-.85), Orange-6 (rate-.54), Hillsborough-6 (rate-.50) and Pinellas-10 (rate-1.07).

(continued)



# Executive Summary *(continued)*

## Why does Florida have a high bicyclist fatality rate?

There has been much debate over this question and most agree there are three contributing causes:

■ **Population Growth** – Florida has almost seven times as many people as in 1950, from 2.8 million to 18.5 million. The roadways were built to accommodate a lot of traffic and get cars and trucks from point A to B, and not necessarily concentrate on bicycle traffic.

■ **Tourism** – In 2009 approximately 80.3 million visitors came to Florida, according to Visit Florida, the state's official tourism marketing corporation.

■ **Climate** – Because the weather in most of Florida is balmy year-round, people tend to spend more time outside, increasing their risk.

## Over the last ten years, are bicyclist fatalities increasing or decreasing?

Between 2000 and 2009, 1,094 bicyclists and their passengers have died on Florida highways with the year 2006 having

the greatest number with 124 fatalities. Over the last ten years, Florida's population has increased by 17.7 percent; however, between the last five years, bicyclist fatalities have decreased by 16 percent. In 2009, 3.9 percent of all traffic fatalities were bicyclists for a total of 100 bicycle operators and their passengers killed.

## Why have bicyclist fatalities gone down in Florida over the last five years?

There is no clear answer; however, some bicycle advocates surmise that fatalities have decreased because of a growing driver awareness thanks to the increase in the number of people riding bikes and because of the education programs urging motorists to share the road. The addition of official bicycle lanes has also been shown to reduce fatalities. A bike lane is part of the roadway which is marked and striped and used for bicycles only and is usually 4 to 5 feet wide. Some cities have instituted bicycle safety programs, and some states have passed laws that require drivers to give bicyclists a minimum 3-foot berth as they pass. Bicycling advocates say the way to cut bicycle crashes and fatalities is to raise the awareness of motorists to the likelihood they will encounter bicyclists on the road and that the law gives the bike riders the same rights and responsibilities that motorists have. This is the law in Florida.



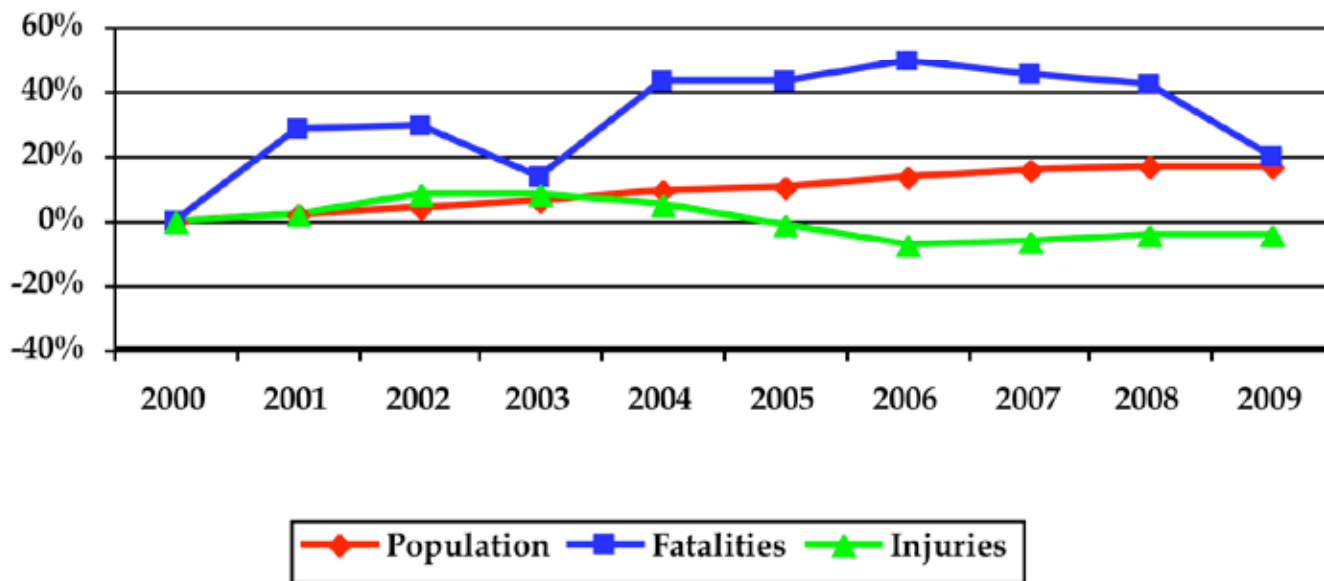
# Ten-Year History (2000-2009)

During the last ten years, 1,094 bicyclists have died on Florida highways and an additional 45,643 have been injured. Bicycle fatalities have increased 20.5 percent over the last ten

years as the state's population has increased 17.7 percent. In addition, bicycle related injuries have decreased 4.6 percent over the same ten-year period.

Year	Florida Population		Fatalities		Injuries	
	#	% Change	#	% Change	#	% Change
2000	15,982,824		83		4,585	
2001	16,330,224	2.2	107	28.9	4,476	-2.4
2002	16,674,608	4.3	108	30.1	4,970	8.4
2003	17,071,508	6.8	95	14.4	4,991	8.9
2004	17,516,732	9.6	119	43.4	4,820	5.1
2005	17,872,296	11.8	119	43.4	4,515	-1.5
2006	18,349,132	14.8	124	49.4	4,227	-7.8
2007	18,680,367	16.9	121	45.8	4,303	-6.2
2008	18,807,219	17.7	118	42.2	4,380	-4.5
2009	18,818,998	17.7	100	20.5	4,376	-4.6

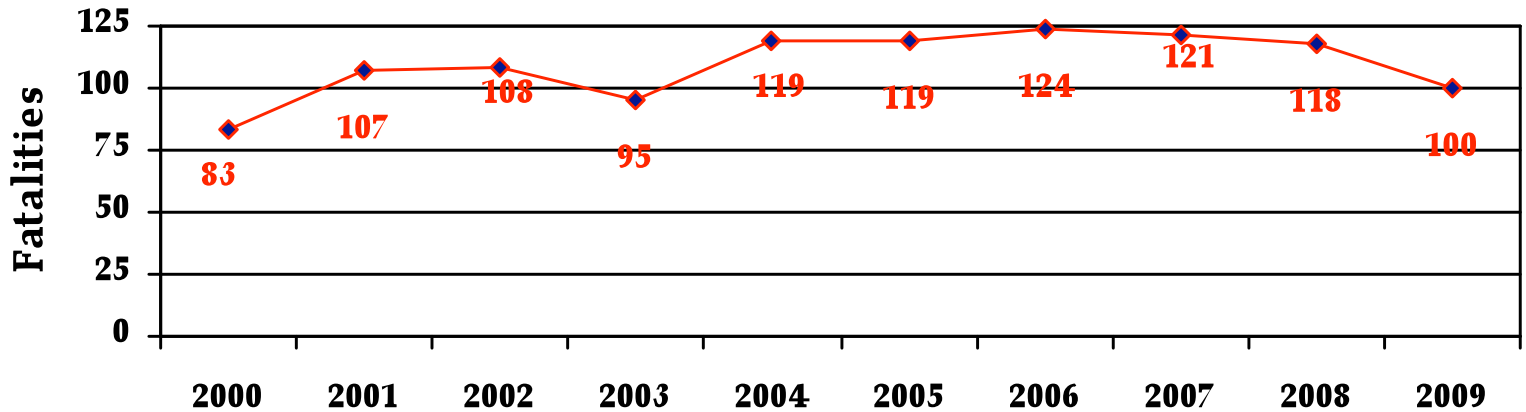
## Cumulative Percentage Change Since 2000



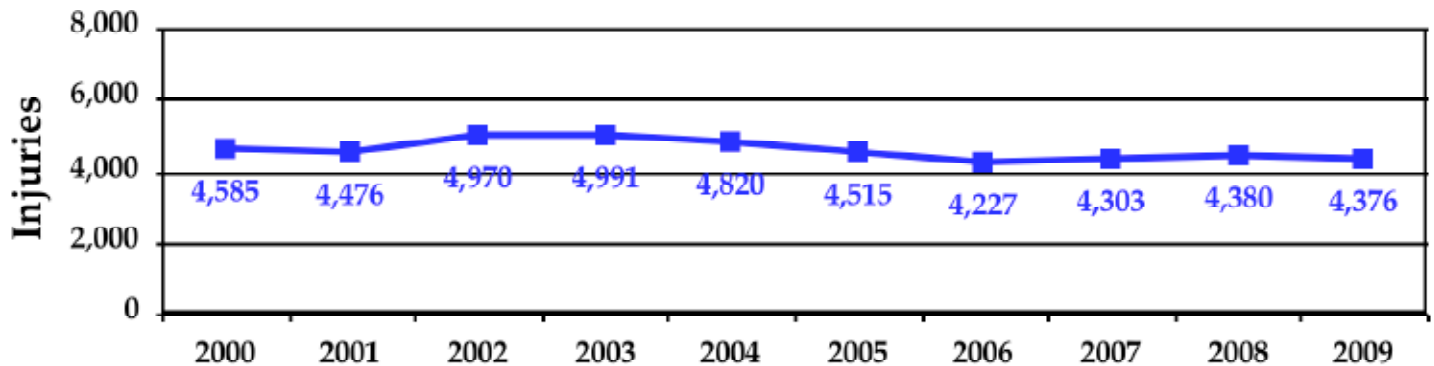
**Bicycle Fatalities and Injuries:** During this ten-year period, bicycle fatalities have increased slightly. Year 2000 had the lowest number of fatalities (83) and 2006 had the highest

(124). During this same period, the injuries have decreased with 2003 having the highest number of injuries, (4,991) and 2009 having the lowest (4,376).

## Bicycle Fatalities (2000 - 2009)



## Bicycle Injuries (2000 - 2009)



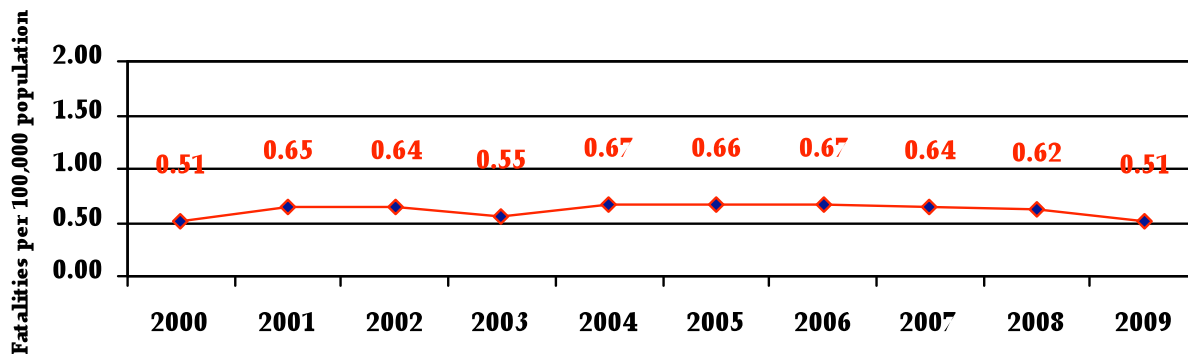
## Bicycle Fatality and Injury Rates:

During this ten-year period, bicycle fatality rates ranged from 0.51 to 0.67 fatalities per 100,000 population. During this

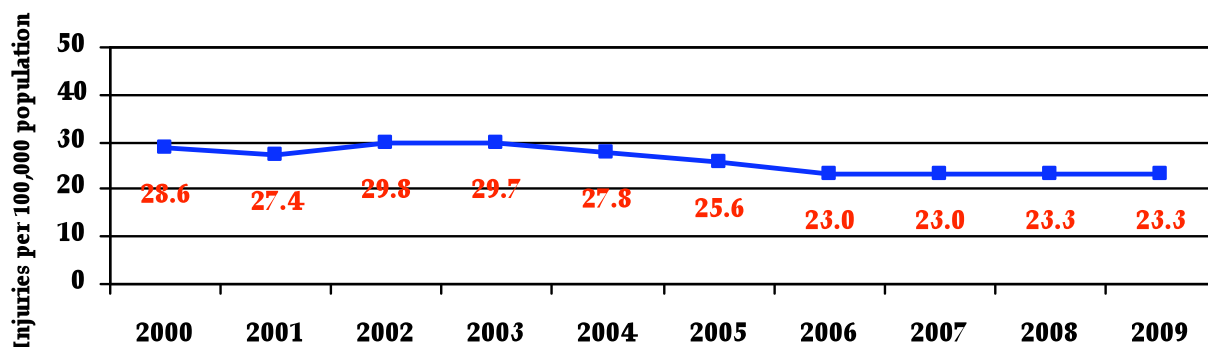
same time, the bicycle injury rate has decreased 28.6 injuries per 100,000 population in 2000 to 23.3 injuries per 100,000 population in 2009.

Year	Population	Fatalities		Injuries	
		#	Rate	#	Rate
2000	15,982,824	83	0.51	4,585	28.6
2001	16,330,224	107	0.65	4,476	27.4
2002	16,674,608	108	0.64	4,970	29.8
2003	17,071,508	95	0.55	4,991	29.7
2004	17,516,732	119	0.67	4,820	27.8
2005	17,872,296	119	0.66	4,515	25.6
2006	18,349,132	124	0.67	4,227	23.0
2007	18,680,367	121	0.64	4,303	23.0
2008	18,807,219	118	0.62	4,380	23.3
2009	18,818,998	100	0.53	4,376	23.3

## Bicycle Fatality Rate (per 100,000 Population)



## Bicycle Injury Rate (per 100,000 Population)



# Operator Characteristics

## Alcohol - Under Influence Involvement

Of the 99 bicycle operator fatalities in 2009, none had been drinking prior to fatal crash.

Fatalities	2009
Drinking Bicycle Operators	0
Bicycle Operators	99
% Drinking Bicycle Operators	0%

## Operator's Age

During the time-period of 2005 through 2009:

- Eleven percent of bicyclists' fatalities were under the age of 19.
- Thirteen percent of bicyclists' fatalities were ages 15 to 24 years old.

- Thirty percent of bicyclists' fatalities were ages 25 to 44 years old.
- Twenty-three percent of bicyclists' fatalities were ages 45 to 54 years old.
- Twenty-nine percent of bicyclists' fatalities were over 55 years old.

## Bicyclists (Operator Only) Fatalities by Age Group

Age Group	Year					% of 5 Yr. Total
	2005	2006	2007	2008	2009	
0-4	1	0	0	0	0	0%
5-9	2	4	4	1	1	2%
10-14	5	3	1	2	1	2%
15-19	11	4	6	10	8	7%
20-24	7	9	9	7	2	6%
25-34	14	13	14	18	10	12%
35-44	21	28	22	15	20	18%
45-54	30	24	27	31	23	23%
55-64	13	19	22	20	17	16%
65-74	7	9	10	9	11	8%
75-84	4	7	5	3	5	4%
85-89	1	1	0	1	0	1%
90+	0	0	0	0	0	0%
Unknown	3	3	1	1	1	*

\* Unknowns are not included in % of 5 Yr. Total.

## Bicyclist Fatalities by Gender

During 2009, of the 100 bicyclists killed in fatal crashes, 86 (86%) were males and 14 (14%) were females.





# Operator Characteristics: *(continued)*

## Safety Equipment – Helmets

In 2009, of the 100 bicycle fatalities, 12 (12%) were using helmets, 88 (88%) were not using helmets.

## Comparative Safety Equipment Use by Bicyclists and Their Passengers – Fatalities

Year	Using Helmets			Not Using Helmets			% Using Helmet
	Operators	Passengers	Total	Operators	Passengers	Total	
2000	8	0	8	75	1	75	11%
2001	4	0	4	103	3	106	1%
2002	5	0	5	103	1	104	5%
2003	6	0	6	88	0	88	7%
2004	12	0	12	107	0	107	11%
2005	12	0	11	107	0	104	11%
2006	14	1	14	110	1	111	13%
2007	23	0	23	96	0	96	24%
2008	31	0	31	85	0	85	36%
2009	12	0	12	87	1	88	12%

In 2009, of the 4,389 bicycle injuries, 585 (13%) were using helmets, 3,804 (86%) were not using helmets and 35 (1%) were not stated.

## Comparative Safety Equipment Use by Bicyclists and Their Passengers – Injuries

Year	Using Helmets			Not Using Helmets			% Using Helmet
	Operators	Passengers	Total	Operators	Passengers	Total	
2000	559	4	563	4,414	149	4,563	12%
2001	519	7	526	4,292	102	4,394	11%
2002	526	8	534	4,792	101	4,893	10%
2003	676	13	689	4,880	124	5,004	13%
2004	628	9	637	4,493	100	4,593	12%
2005	637	13	650	4,274	118	3,949	13%
2006	531	2	533	3,975	71	4,046	13%
2007	674	4	678	3,952	60	4,012	17%
2008	645	2	647	3,688	31	3,719	17%
2009	580	5	585	3,764	40	4,389	13%

In 2009, of the 4,389 bicycle injuries, 5 passengers (.1%) were using safety helmets, and 40 passengers (.9%) were not using safety helmets.



# Crash Characteristics

## Lighting Condition

Thirty-five percent of fatal bicycle crashes occurred while lighting conditions (dawn, dusk and dark) required bicycles to have proper lighting.

	Light Condition						Total
	Dawn	Daylight	Dusk	Dark (Street Light)	Dark (No Light)	Unknown	
Fatal Crashes	0	48	2	33	16	0	99
% of Total	0%	48%	2%	33%	16%	0%	

## Day of Fatalities

Forty-six percent of fatal bicycle crashes occurred on Thursdays, Fridays and Saturdays.

	Days of Week							Total
	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	
Fatal Crashes	14	15	14	15	15	16	10	99
% of Total	14%	15%	14%	15%	15%	16%	10%	

## Month of Fatalities

Forty-seven percent of fatal bicycle crashes occurred in March, August, October and November.

	Months of Year												Total
	J	F	M	A	M	J	J	A	S	O	N	D	
Fatal Crashes	8	5	12	7	1	7	8	11	8	11	13	8	99
% of Total	8%	5%	12%	7%	1%	7%	8%	11%	8%	11%	13%	8%	

## Number of Roadway Lanes

Twenty-eight percent of fatal bicycle crashes occurred on two-lane roadways and thirty-five percent occurred on four-lane roadways.

	# of Roadway Lane								Total
	1	2	3	4	5	6	7	8	
Fatalities	1	28	4	35	3	23	0	2	99*
% of Total	1%	28%	4%	35%	3%	23%	0%	2%	

\*Three Unknown



# Crash Fatalities Characteristics: *(continued)*

## Bicycle Fatalities by County

The largest counties have the highest number of bicyclist fatalities. The statewide bicyclist fatality rate is approximately

.51 fatalities per every 100,000 people. The following counties accounted for 55 bicyclist fatalities, or over half of the state's 99 bicycle operators and one passenger fatalities: Miami-Dade-12 (rate-.48), Broward-10 (rate-.57) Palm Beach-11 (rate-.85), Orange-6 (rate-.54), Hillsborough-6 (rate-.50) and Pinellas-10 (rate-1.07).

## FIVE-YEAR BICYCLE FATALITY HISTORY BY COUNTY\* (Florida, 2005-2009)

COUNTY	2005	2006	2007	2008	2009	COUNTY	2005	2006	2007	2008	2009
ALACHUA	0	2	5	4	3	LEE	9	7	4	6	4
BAKER	0	0	0	0	0	LEON	2	0	0	0	0
BAY	1	3	1	0	3	LEVY	0	0	0	0	0
BRADFORD	0	0	0	1	1	LIBERTY	0	0	0	0	0
BREVARD	3	5	7	1	1	MADISON	0	0	0	0	0
BROWARD	7	12	6	12	10	MANATEE	4	6	1	1	1
CALHOUN	0	0	0	0	0	MARION	0	2	4	6	1
CHARLOTTE	0	0	2	0	0	MARTIN	2	2	0	6	1
CITRUS	1	0	0	0	1	MIAMI-DADE	8	8	12	5	12
CLAY	0	0	0	1	1	MONROE	1	2	2	1	1
COLLIER	5	3	3	4	1	NASSAU	0	0	0	0	1
COLUMBIA	1	1	0	0	0	OKALOOSA	0	3	3	1	0
DE SOTO	1	1	0	1	0	OKEECHOBEE	0	1	0	1	0
DIXIE	0	0	0	0	0	ORANGE	10	10	14	9	6
DUVAL	3	7	10	4	4	OSCEOLA	2	2	1	1	0
ESCAMBIA	2	1	2	2	4	PALM BEACH	8	9	10	8	11
FLAGLER	1	1	0	1	0	PASCO	1	2	4	2	4
FRANKLIN	0	0	0	0	0	PINELLAS	7	5	4	10	10
GADSDEN	0	0	0	0	0	POLK	6	3	3	3	3
GILCHRIST	0	0	0	0	0	PUTNAM	0	0	0	2	1
GLADES	0	0	0	0	0	ST. JOHNS	3	0	1	2	0
GULF	0	0	0	0	0	ST. LUCIE	2	2	1	2	1
HAMILTON	0	0	0	0	0	SANTA ROSA	0	0	1	0	1
HARDEE	0	0	0	0	0	SARASOTA	3	5	5	3	1
HENDRY	1	1	1	2	0	SEMINOLE	3	2	0	2	0
HERNANDO	1	0	1	2	2	SUMTER	1	0	1	0	0
HIGHLANDS	0	2	0	0	0	SUWANNEE	0	0	0	0	0
HILLSBOROUGH	10	7	6	4	6	TAYLOR	1	0	1	0	0
HOLMES	0	0	0	0	0	UNION	0	0	0	0	0
INDIAN RIVER	0	2	0	0	1	VOLUSIA	1	2	3	3	1
JACKSON	0	0	0	0	0	WAKULLA	0	0	0	0	0
JEFFERSON	0	1	0	0	0	WALTON	1	0	0	1	0
LAFAYETTE	0	0	0	0	0	WASHINGTON	0	0	0	0	0
LAKE	3	1	2	0	1	<b>STATEWIDE</b>	<b>119</b>	<b>124</b>	<b>121</b>	<b>118</b>	<b>*100</b>

\*Operators and Passengers



# Florida Five-Year Trend Data

	2005	2006	2007	2008	2009	% 5-Yr Change
<b>Fatalities:</b>						
Motor Vehicle	3,533	3,365	3,221	2,983	2,563	-27%
Bicyclists	119	124	121	118	99	-17%
<b>Injuries:</b>						
Motor Vehicle	233,930	214,914	212,149	199,658	197,214	-16%
Bicyclists	4,515	4,227	4,303	4,380	4376	-0.3%
<b>Crashes:</b>						
Motor Vehicle	268,605	256,200	256,206	243,342	235,778	-12%
Bicyclists	4,895	4,611	4,847	4,775	4774	-2%
<b>Roadway Miles:</b>						
All Public (Centerline)	120,556	121,995	121,526	121,386	121,446	1%
State System (Centerline)	12,040	12,067	12,062	12,084	12,088	0.4%
State System (Lane)	41,473	41,916	42,082	42,432	42,633	3%
<b>Licensed Drivers:</b>	15,272,680	15,491,878	15,579,603	15,556,658	15,553,387	2%
<b>Vehicles/ Registrations</b>	15,062,993	15,612,161	14,858,332	15,966,287	14,983,437	-1%
Vehicle Miles Traveled (millions)	200,974	203,783	205,421	198,494	196,402	-2%
<b>Population</b>	17,872,296	18,349,132	18,680,367	18,807,219	18,818,998	5%
<b>Tourists</b>	83,600,000	83,900,000	84,500,000	84,200,000	80,900,000	-3%

