# Highway Safety... It's a Team Effort

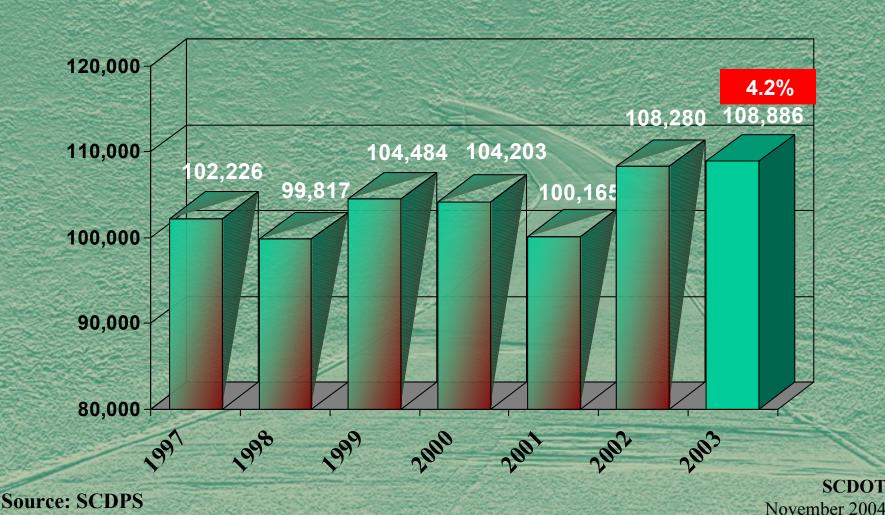
Terecia Wilson

Director of Safety

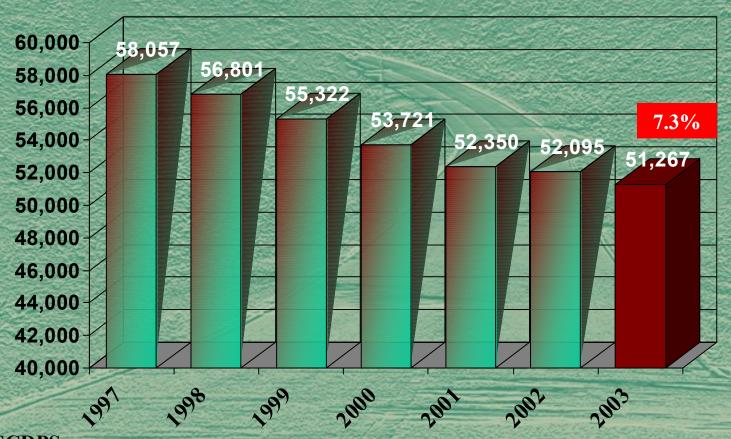
### Today's Presentation

- Review of Crash Trends
- Update on Legislation
- SCDOT Safety Programs
- Ways You Can Help

### South Carolina Traffic Trends Traffic Crashes



## South Carolina Traffic Trends Non-Fatal Traffic Injuries



Source: SCDPS
2003 data is preliminary

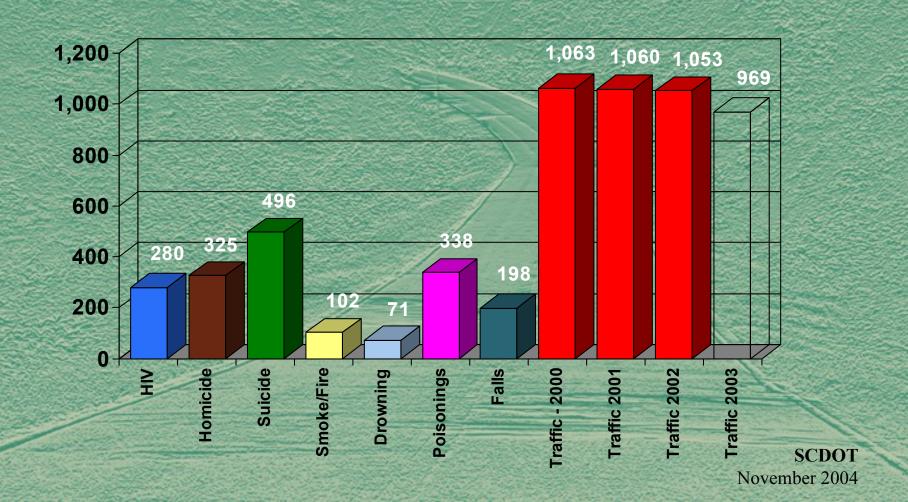
### South Carolina Traffic Trends Traffic Fatalities



Source: SCDPS

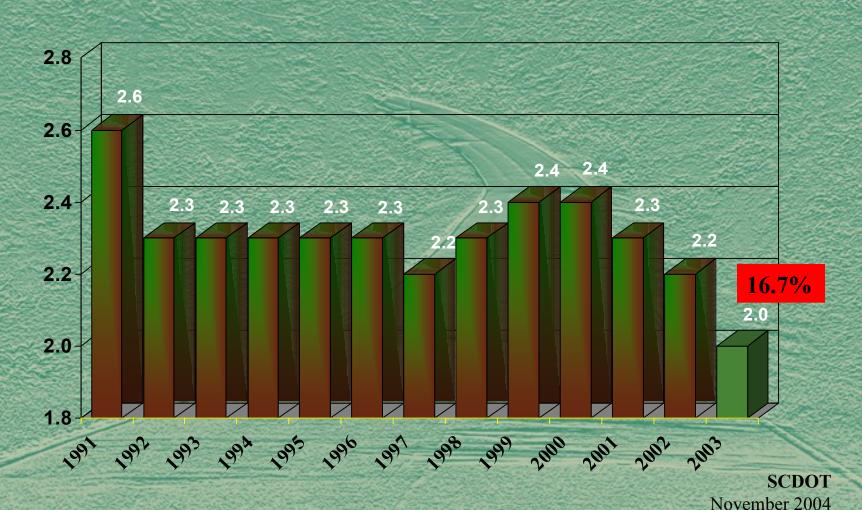
#### Traffic Deaths vs. Deaths from Other Causes

(Deaths from Other Causes are 2003 Figures as provided by SCDHEC)

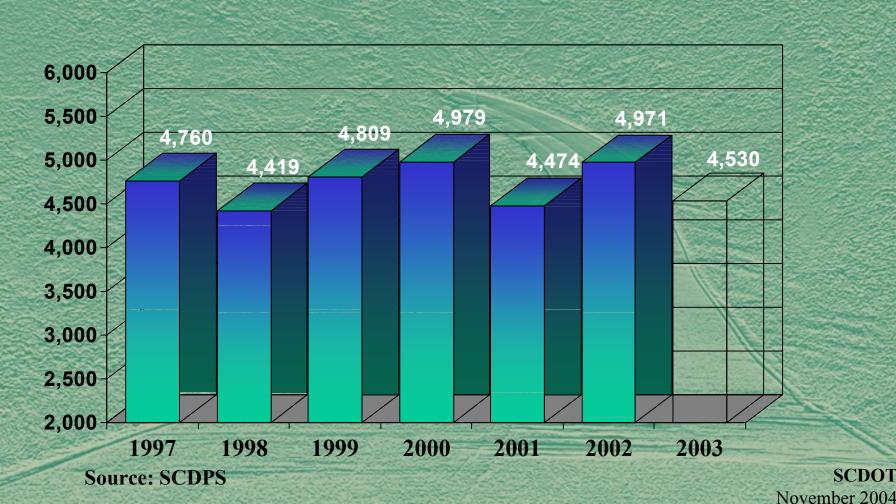


### South Carolina Traffic Trends Mileage Death Rate

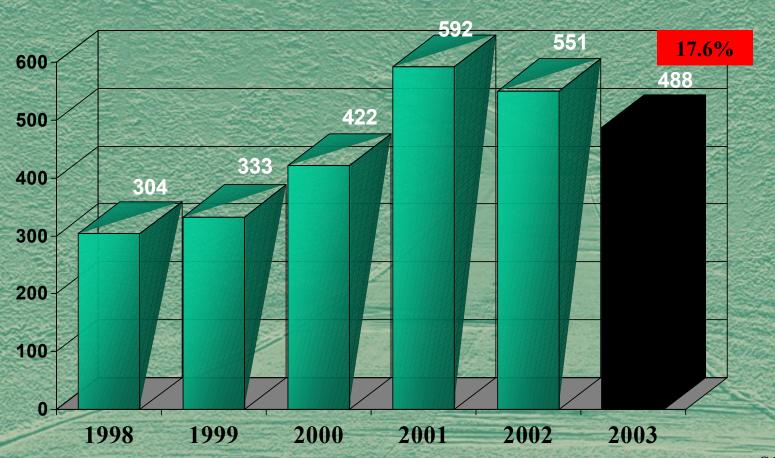
(Traffic Deaths per 100 million vehicle miles traveled)



### South Carolina Traffic Trends Alcohol/Drug Related Collisions

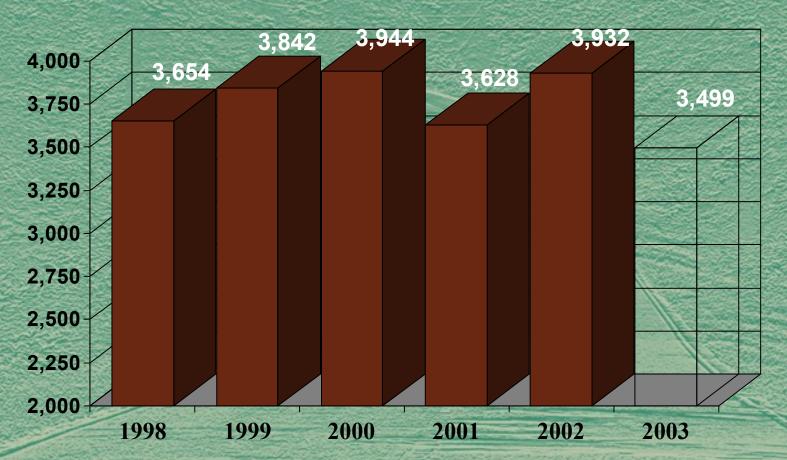


## South Carolina Traffic Trends Alcohol/Drug Related Fatalities



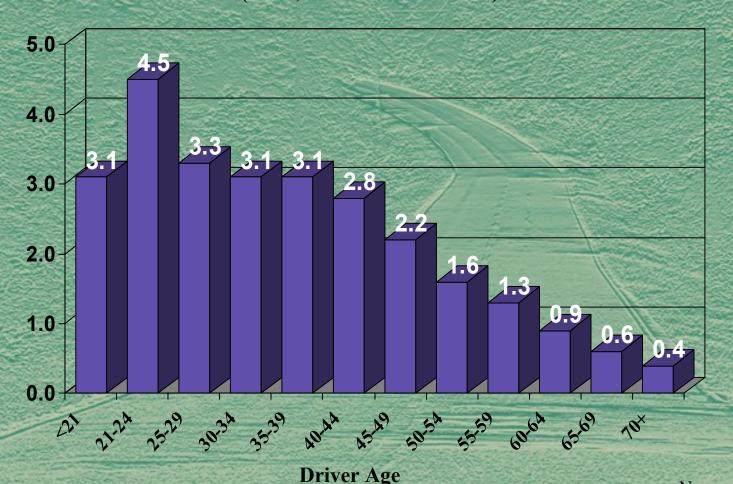
Source: FARS

### South Carolina Traffic Trends Non-Fatal Injuries in Alcohol Involved Collisions



Source: SCDPS

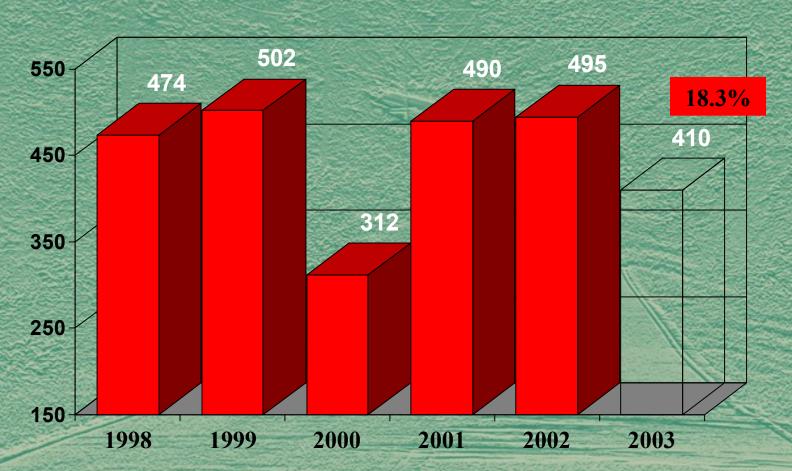
Drivers Involved in Traffic Collisions Where the Probable Cause was Alcohol or Drugs - 2002
(Per 1,000 Licensed Drivers)



SCDOT

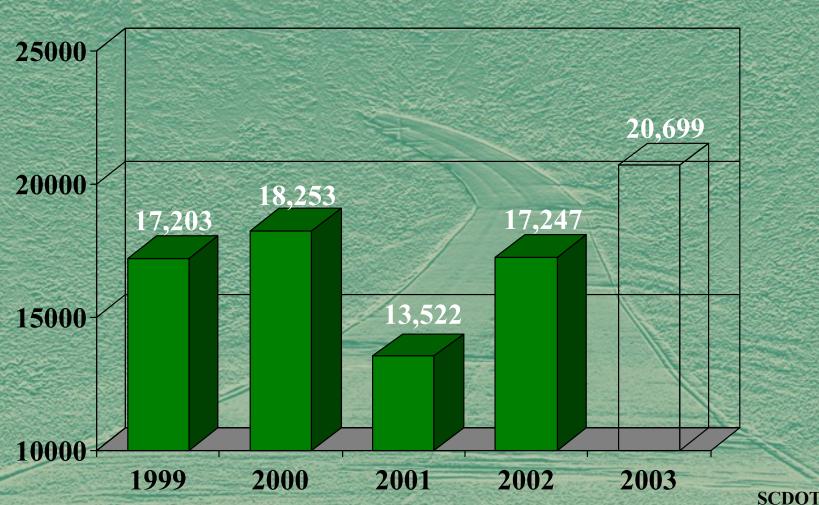
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#### South Carolina Traffic Trends Fatalities in Speed Related Collisions



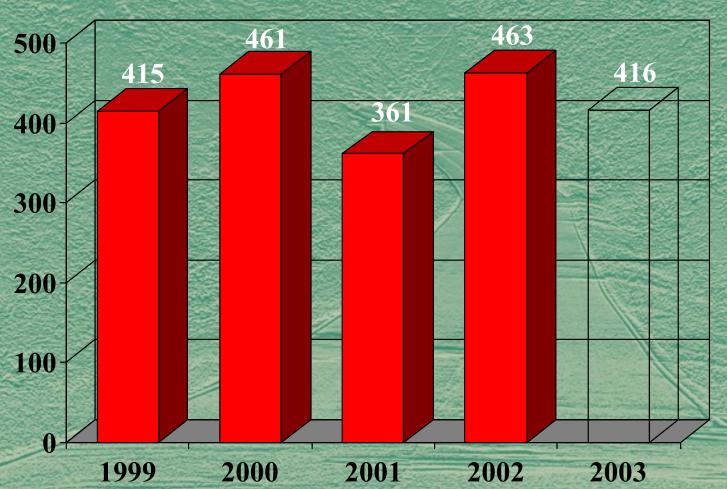
Source: FARS

#### **Run-Off-Road Crashes**

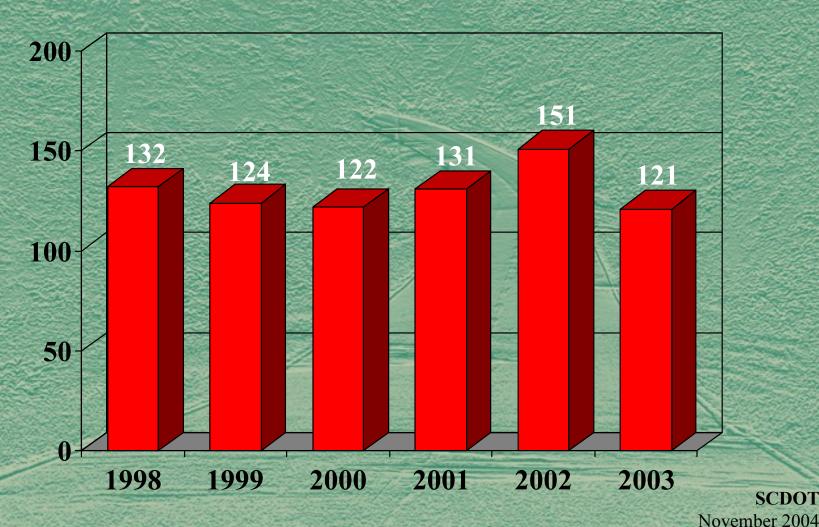


November 2004

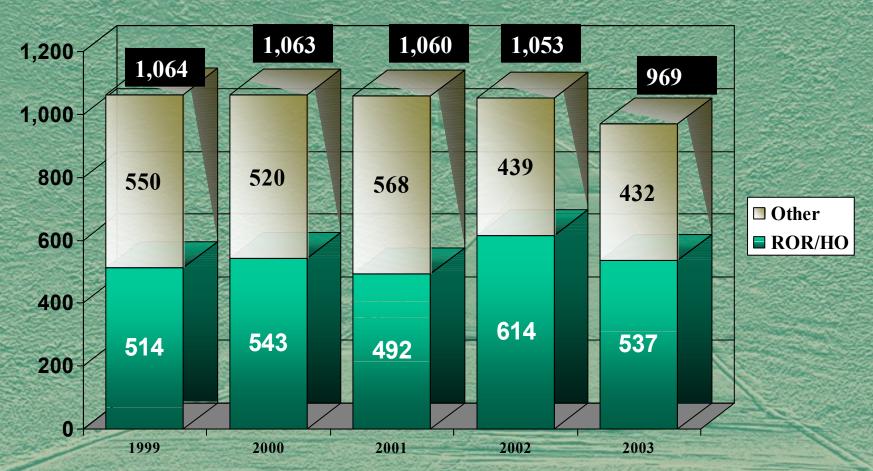
#### **Run-Off-Road Fatalities**



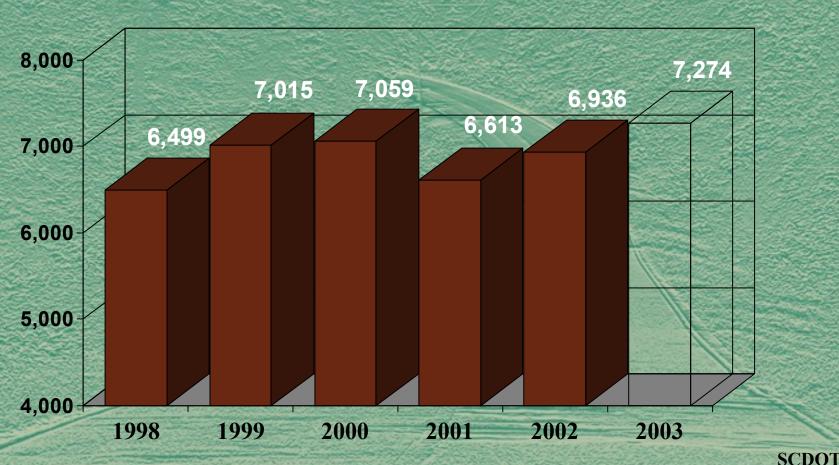
#### **Head-on Traffic Fatalities**



Run-off-Road/Head On Fatalities Compared to all Fatalities 1999-2003



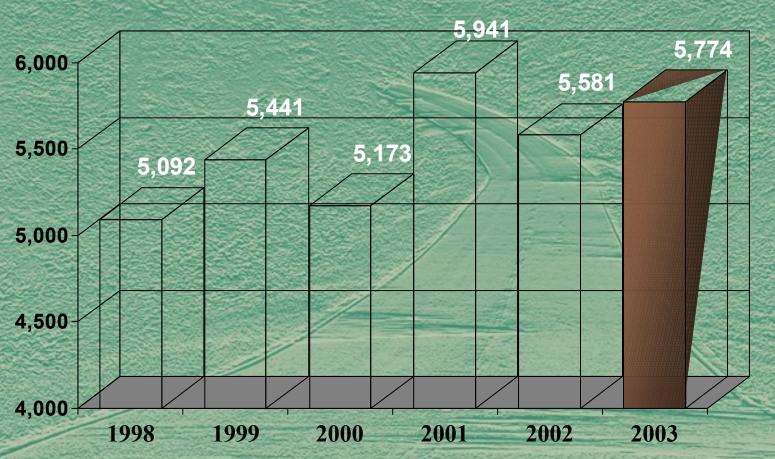
### **South Carolina Traffic Trends Following-Too-Closely Traffic Collisions**



Source: SCDPS

November 2004

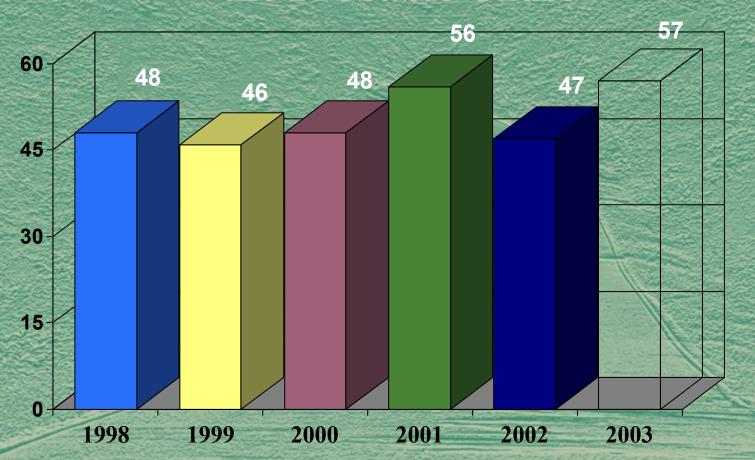
Traffic Collisions with Disregarding Sign/Signal as the Probable Cause



Source: SCDPS

2001 figures are preliminary

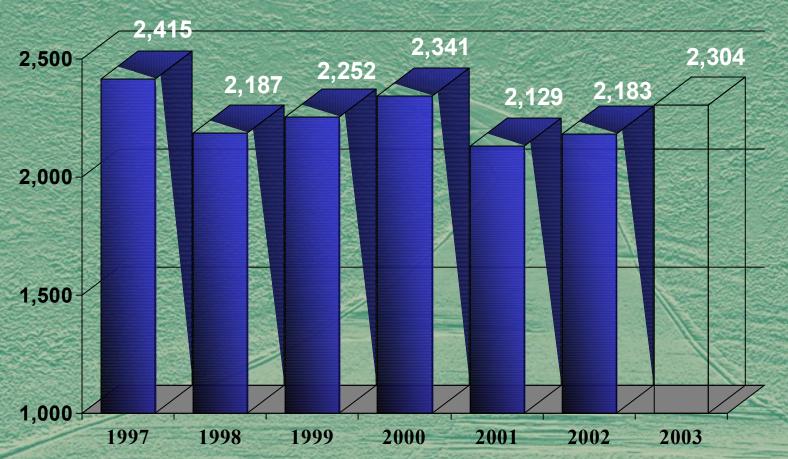
Traffic Fatalities with Disregarded Sign/Signal the Probable Cause



Source: SCDPS

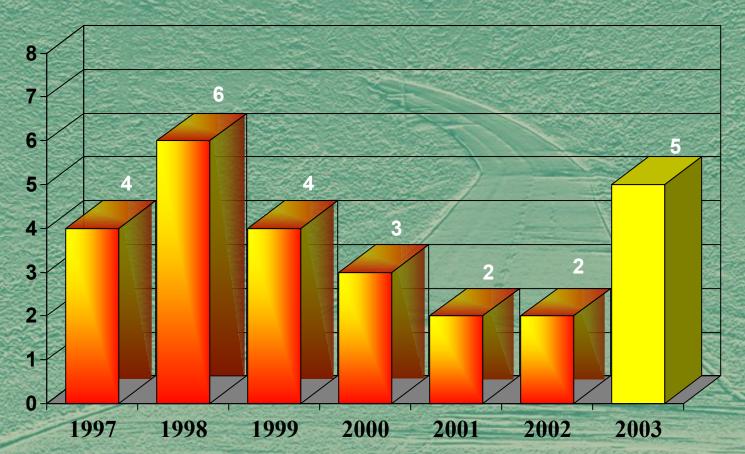
2003 figures are preliminary

# South Carolina Traffic Trends Traffic Collisions with Improper Turn as the Probable Cause



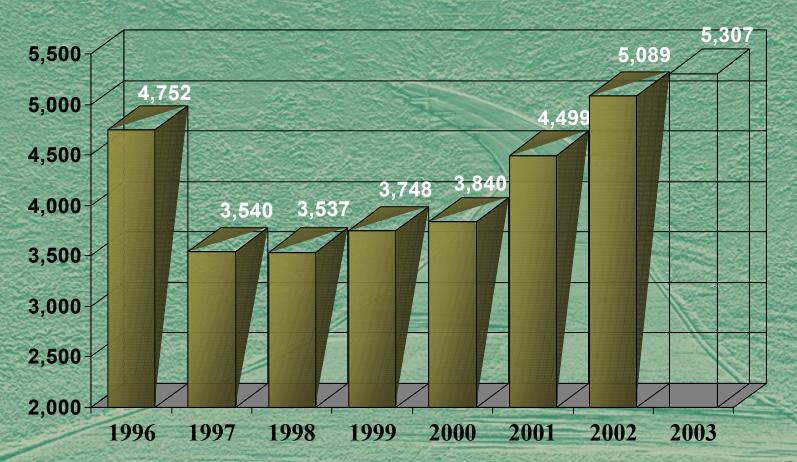
**Source: SCDPS** 

## South Carolina Traffic Trends Traffic Fatalities with Improper Turn as the Probable Cause



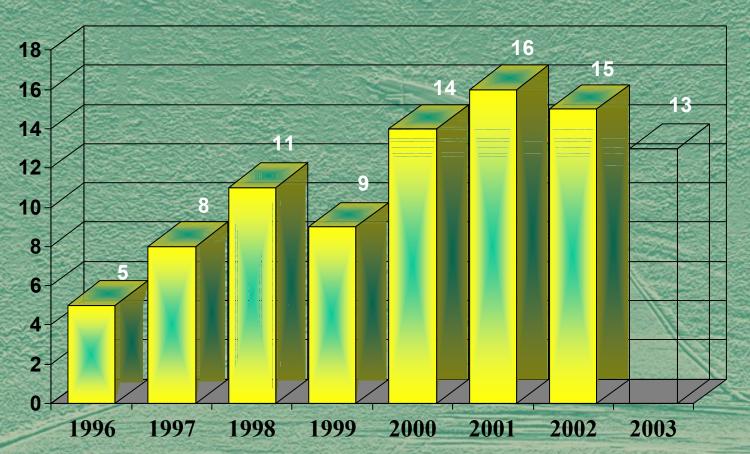
**Source: SCDPS** 

Traffic Collisions with Improper Lane Change as the Probable Cause



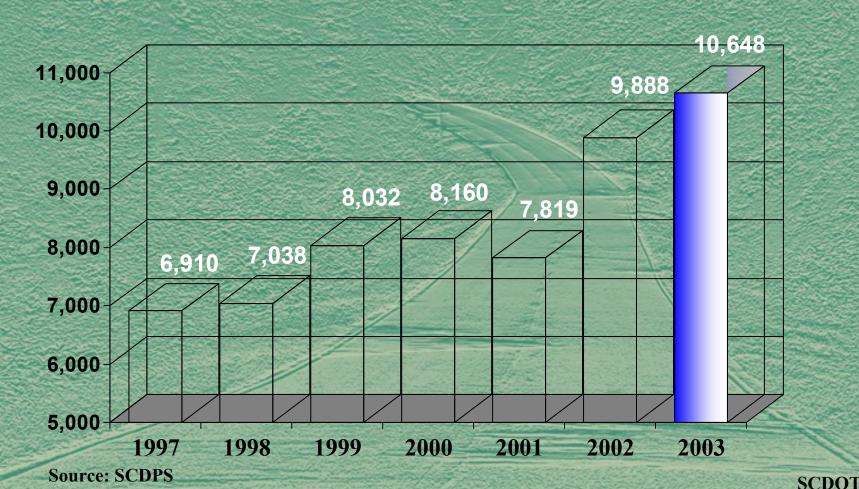
Source: SCDPS

### Traffic Fatalities with Improper Lane Change as the Probable Cause



**Source: SCDPS** 

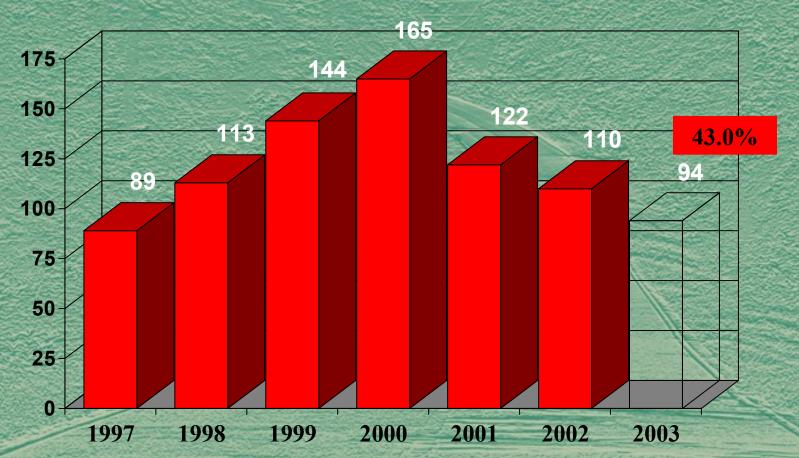
#### South Carolina Traffic Trends Traffic Collisions on Interstate Highways



2003 figure is preliminary

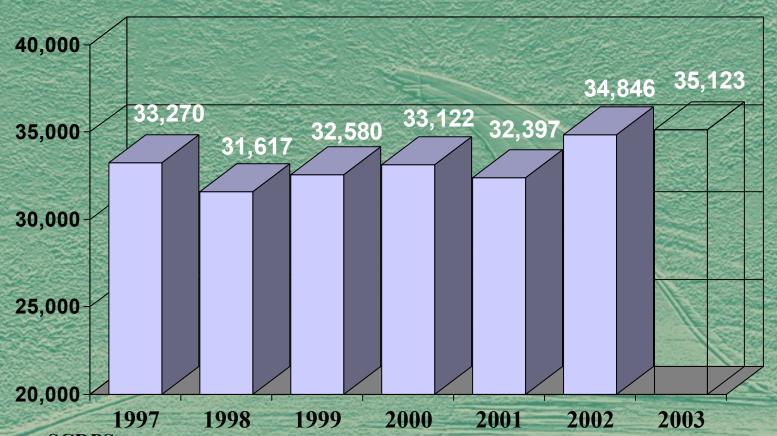
November 2004

#### South Carolina Traffic Trends Traffic Fatalities on Interstate Highways



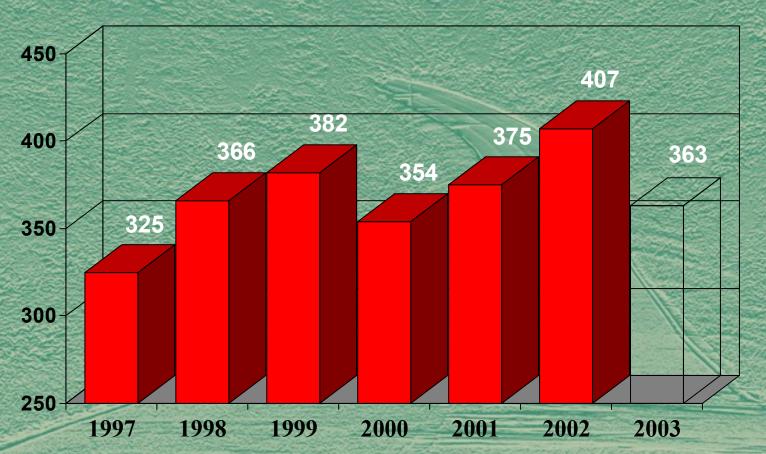
Source: SCDPS
2003 figures are preliminary

#### South Carolina Traffic Trends Traffic Collisions on Secondary Highways



Source: SCDPS
2003 figures are preliminary

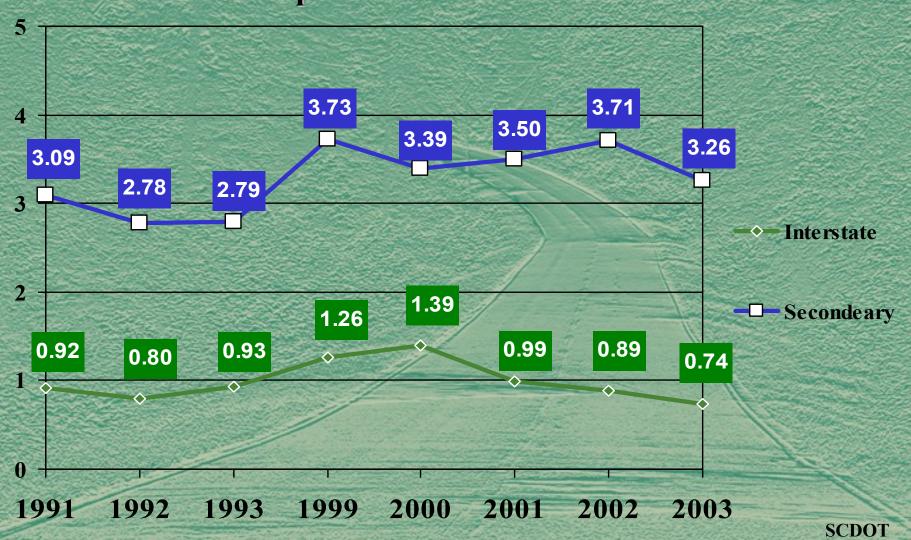
#### South Carolina Traffic Trends Traffic Fatalities on Secondary Highways



Source: SCDPS
2003 figures are preliminary

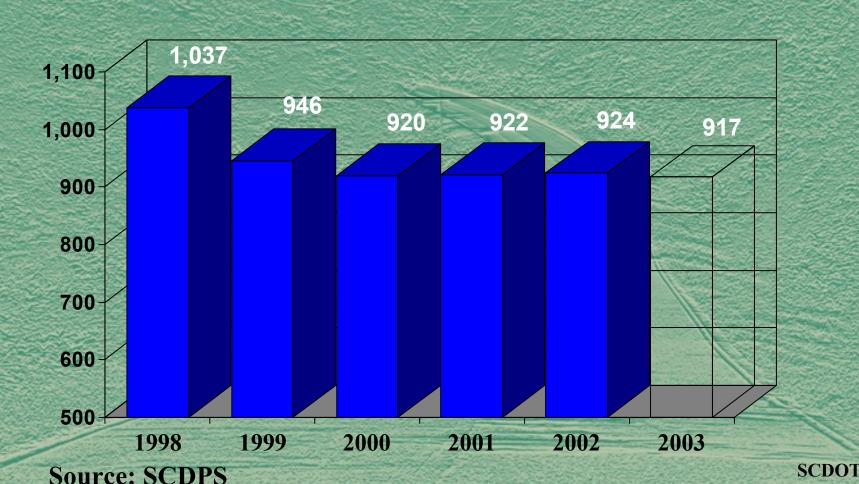
## South Carolina Mileage Death Rates Interstate vs Secondary Roads

Traffic Deaths per 100 Million Vehicle Miles Traveled



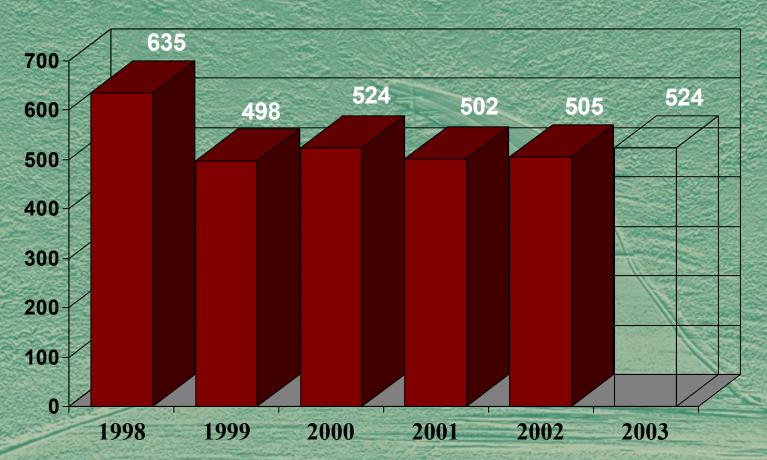
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### **South Carolina Traffic Trends Traffic Collisions Involving Pedestrians**



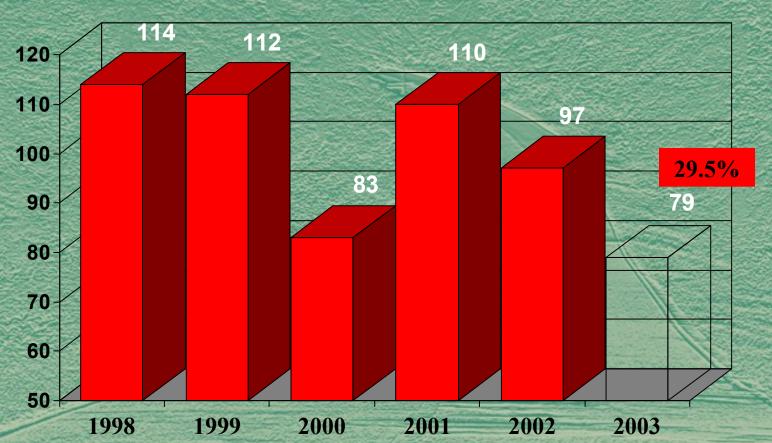
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Non-Fatal Injuries in Collisions Involving Pedalcyclists



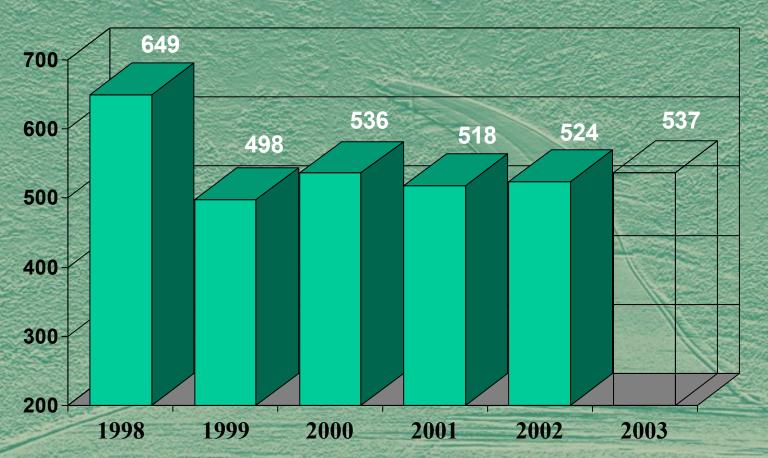
**Source: SCDPS** 

### **South Carolina Traffic Trends Fatalities in Collisions Involving Pedestrians**



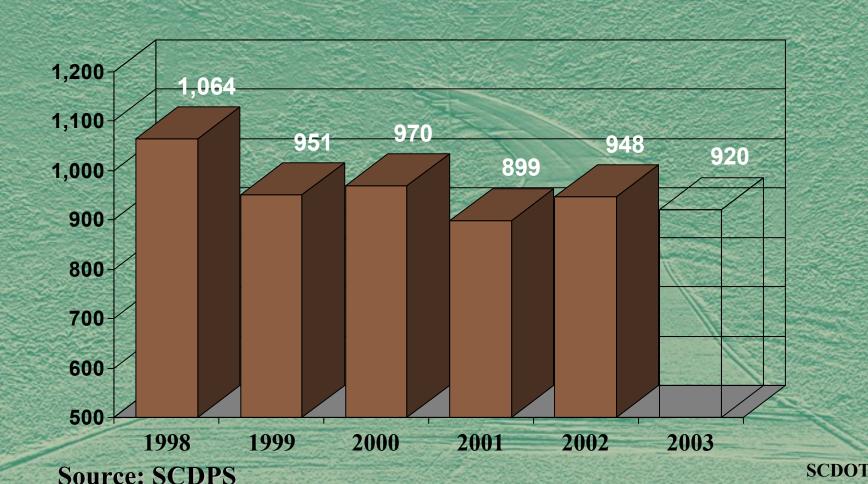
Source: SCDPS School Sc

#### **South Carolina Traffic Trends** Traffic Collisions Involving Pedalcyclists



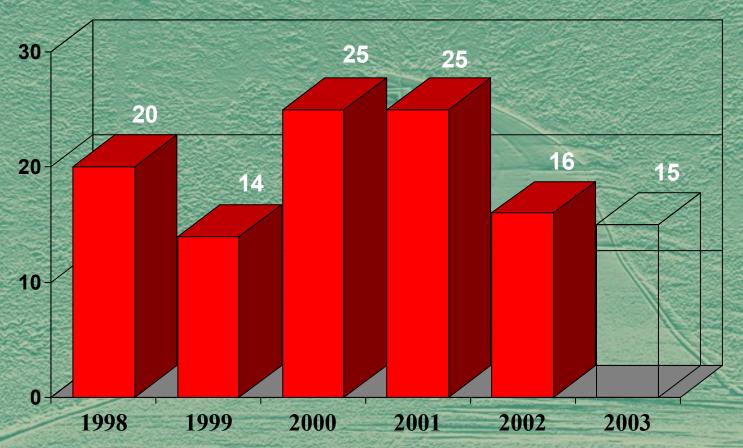
**Source: SCDPS** 

Non-Fatal Injuries in Collision Involving Pedestrians



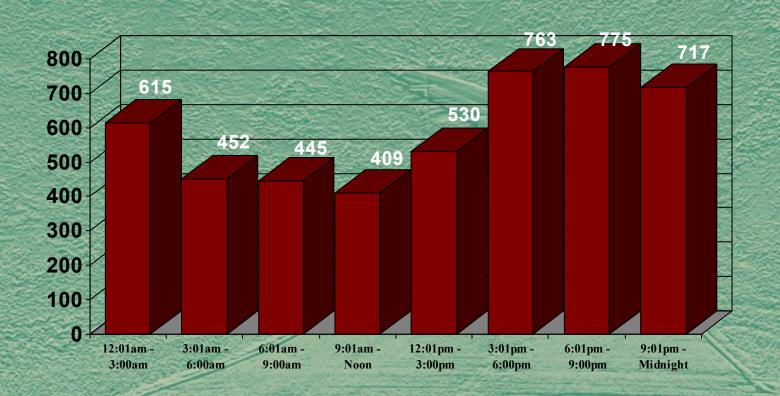
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### South Carolina Traffic Trends Fatalities in Collisions Involving Pedalcyclists

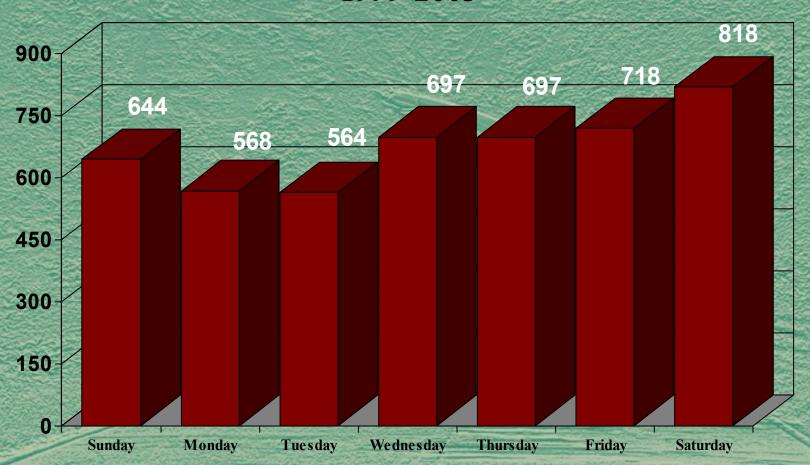


Source: SCDPS

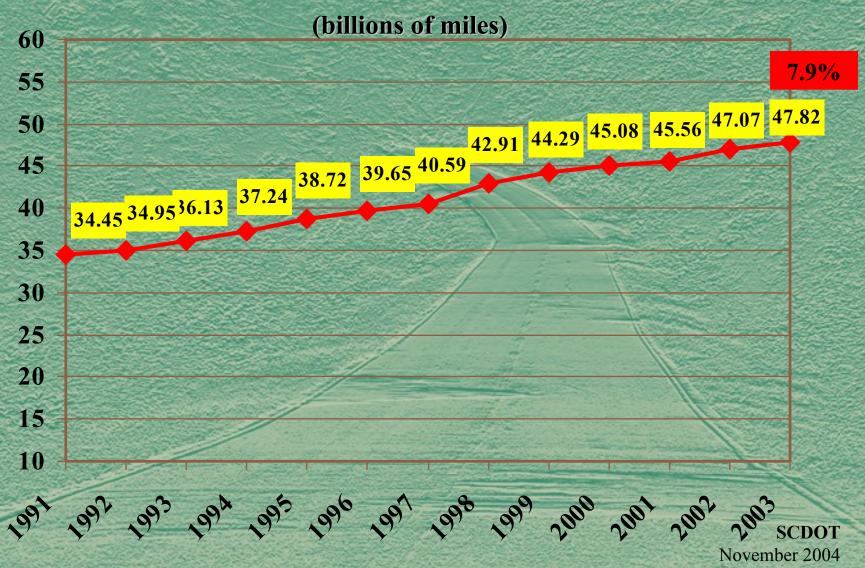
Fatal Traffic Crashes by Time of Day 1999-2003



Fatal Traffic Crashes by Day of Week 1999-2003

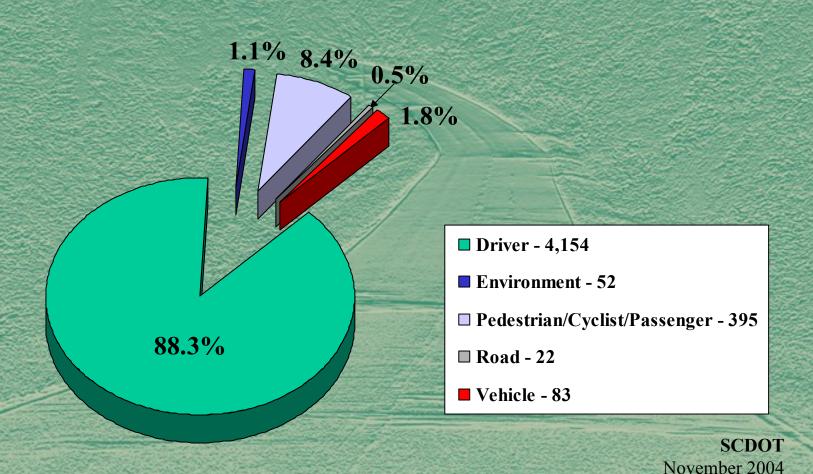


### South Carolina Traffic Trends Vehicle Miles of Travel

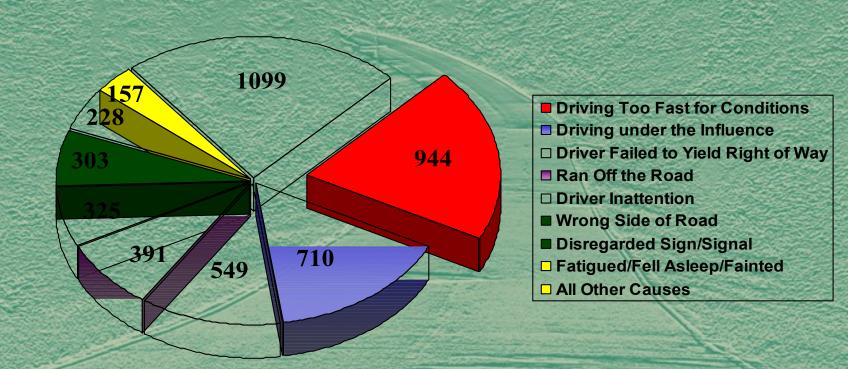


#### South Carolina Traffic Trends

Fatality Crash Probable Cause Categories 1999-2003

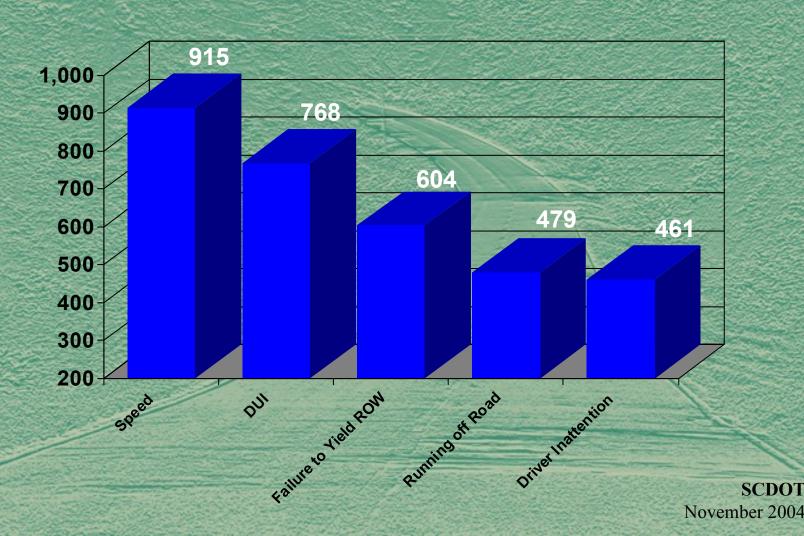


# South Carolina Traffic Trends Leading Driver Probable Causes Fatal Crashes: 1999-2003

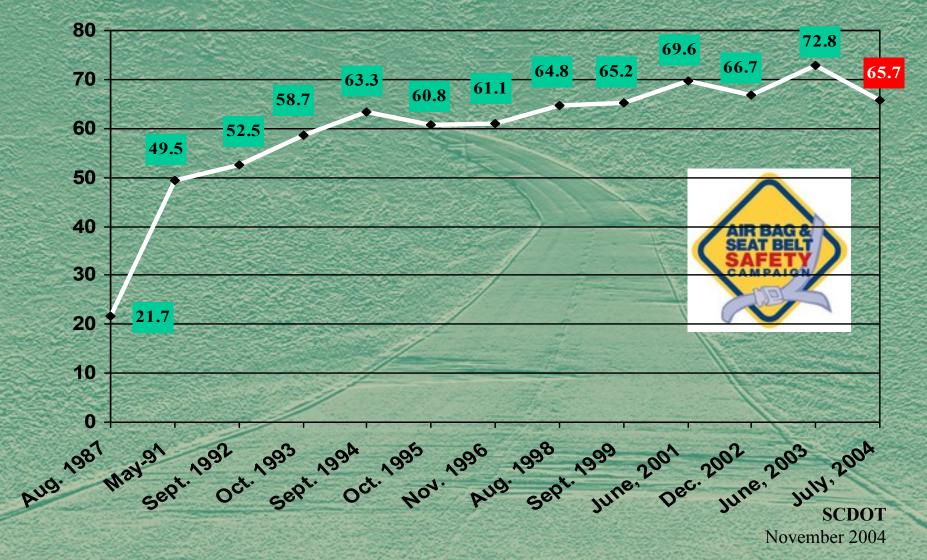


#### South Carolina Traffic Trends

Traffic Fatalities - Leading Probable Causes 2003



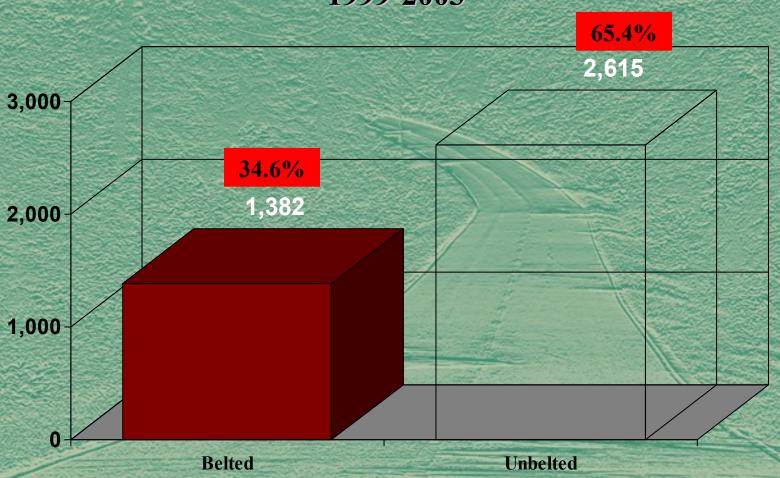
### South Carolina Traffic Trends Restraint Utilization



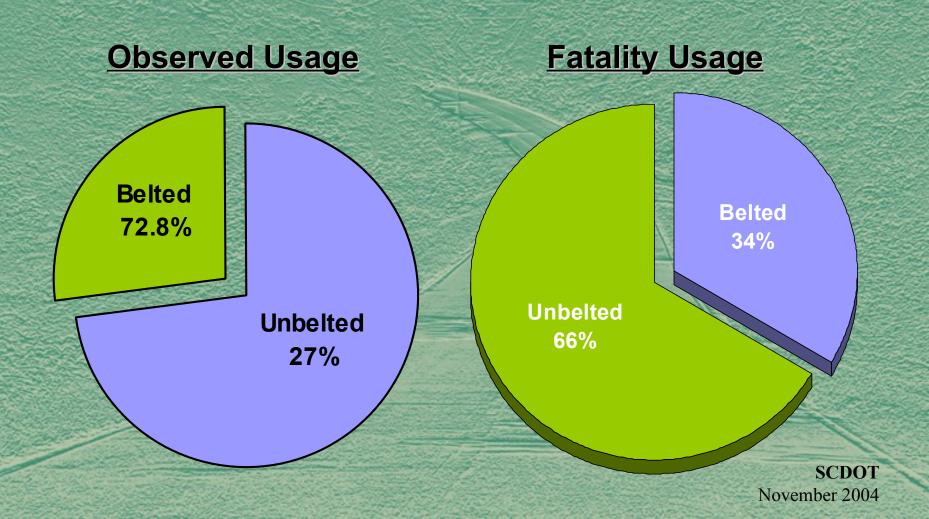
#### South Carolina Traffic Trends

Belt Usage of Vehicle Occupants Killed in Traffic Crashes (excludes occupants with unknown belt usage)

1999-2003



### Observed Belt Usage vs. Belt Usage for Fatalities in South Carolina 2003

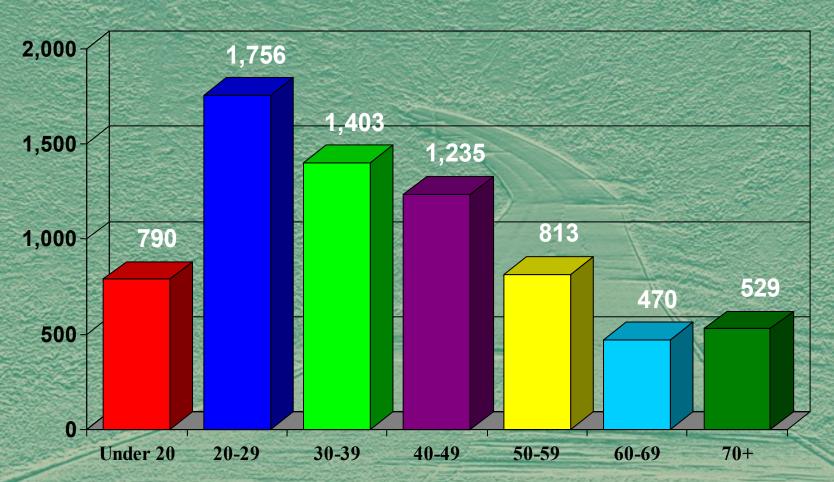


### **Leading Counties for Fatalities 1999-2003**

• Horry	343
• Greenville	342
• Spartanburg	282
• Richland	266
• Anderson	272
• Charleston	224

#### South Carolina Traffic Trends

Age of Drivers in Fatal Traffic Crashes 1999-2003

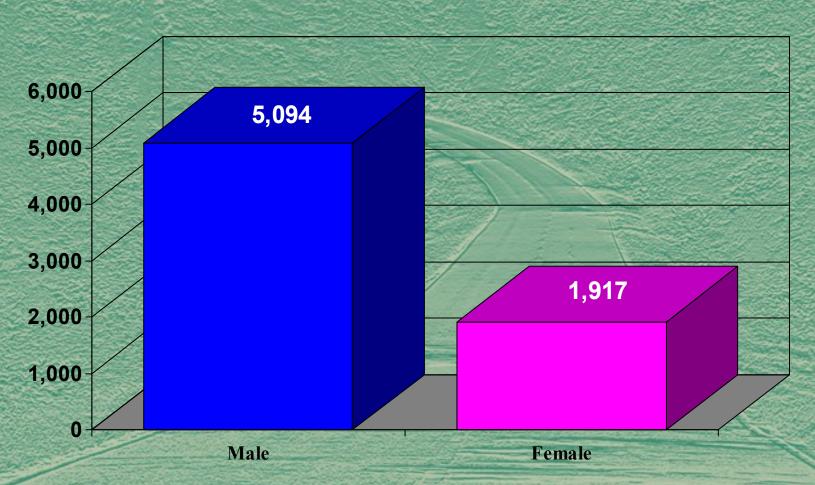


Graph does not include 222 drivers with unspecified ages. Excludes pedestrians

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#### South Carolina Traffic Trends

Sex of Drivers in Fatal Crashes 1999-2003



**Excludes Pedestrians.** All other vehicle operators included.

#### **Economic Loss Valuations**

(per incident)

<b>Property Damage Only</b>	\$	6,200
Possible Injury	\$	9,800
Non-incapacitating Injury	\$	17,500
Incapacitating Injury	\$	52,100
Fatality	\$1,	,090,000
Average Cost Per Crash	\$	21,155

South Carolina Total Economic Loss in 2002: \$2,303,000.00 scnot

## Economic Loss if You had to Pay

**Cost Per Person** 

\$ 555

Cost Per Family of Four \$ 2,220



You ARE paying the bill !!!



Crashes

### In South Carolina

Definition: Any Crash Involving One or More

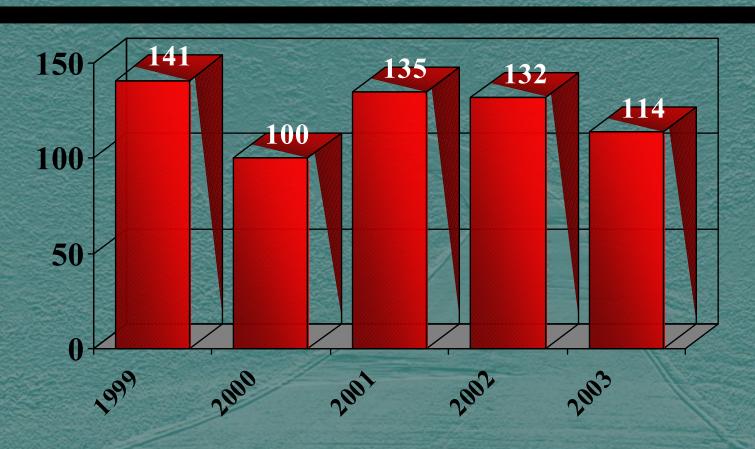
Drivers Age 15 - 18

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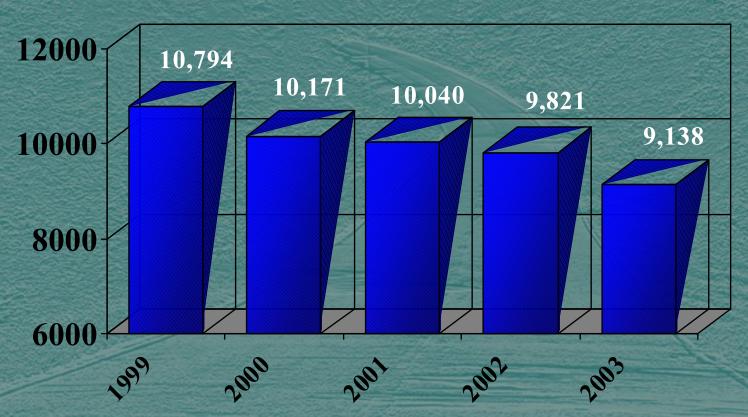
#### **Young Driver Crashes** 1999 - 2003



#### **Young Driver Crash Fatalities** 1999 - 2003



#### **Young Driver Crash Injuries** 1999 - 2003



# Economic Loss Resulting From South Carolina Young Driver 1998-2002

Property Damage Only Crashes \$ 376,600,000

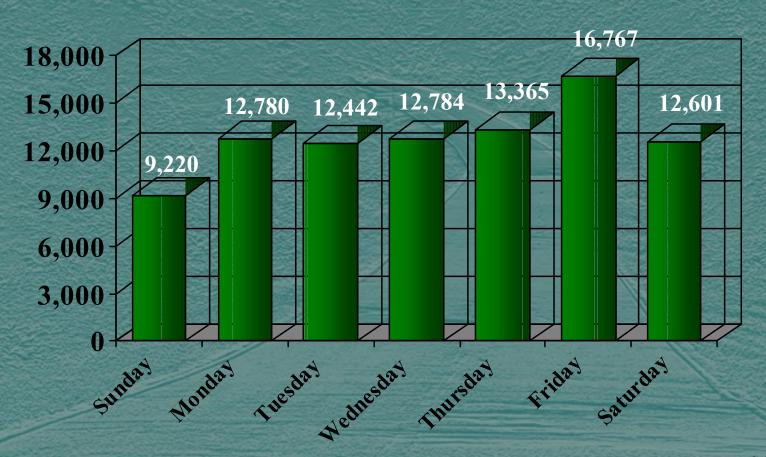
Young Driver Crash Fatalities \$ 685,600,000

Pedestrian Crash Injuries \$ 763,100,000

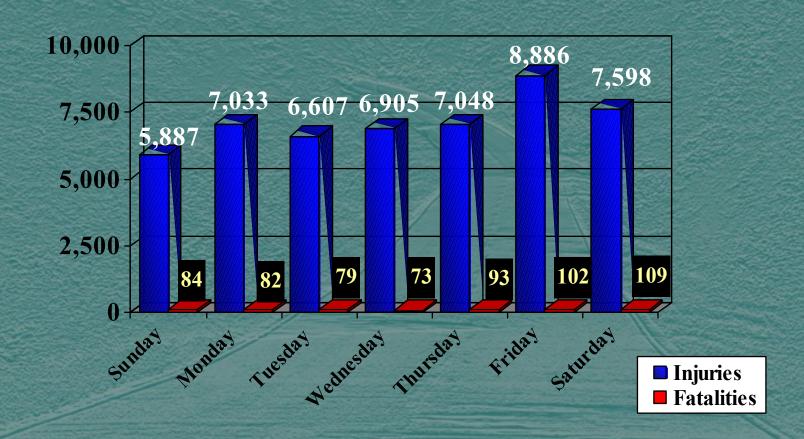
**Total Economic Loss Due to Young Driver Crashes:** 

\$1,825,300,000

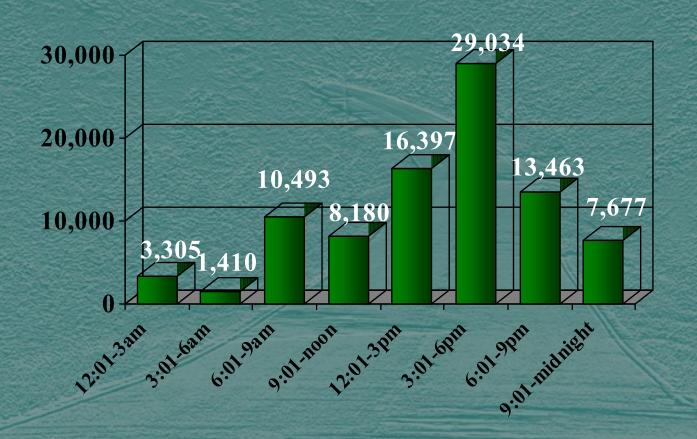
# South Carolina Traffic Crashes Involving Young Drivers By Day of the Week – 1999 - 2003



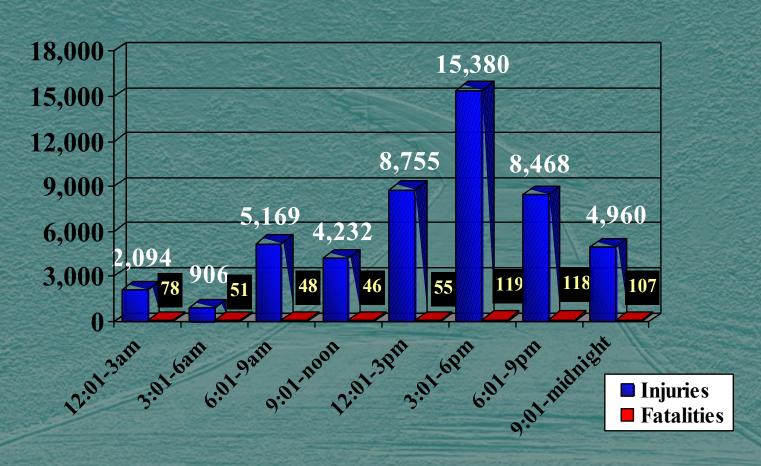
# South Carolina Traffic Injuries/Fatalities Involving Young Drivers By Day of the Week – 1999 - 2003



## South Carolina Traffic Crashes Involving Young Drivers By Time of Day – 1999 - 2003



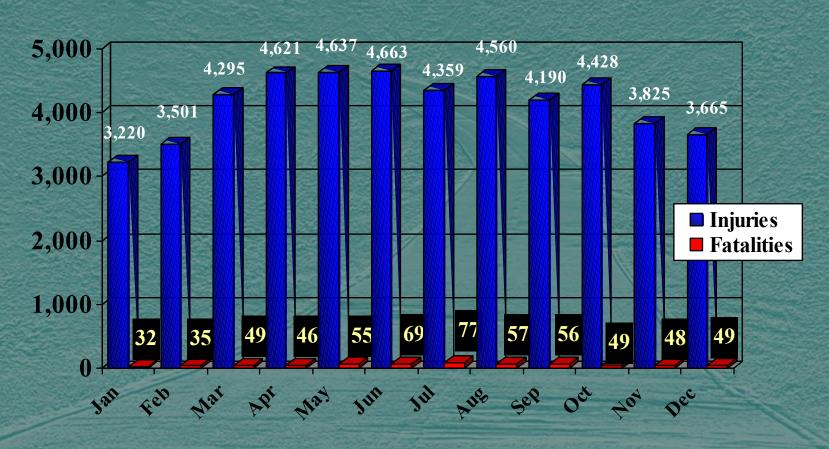
#### South Carolina Traffic Injuries/Fatalities Crashes Involving Young Drivers By Time of Day – 1999 - 2003



## South Carolina Traffic Crashes Involving Young Drivers By Month – 1999 - 2003



## South Carolina Traffic Injuries/Fatalities Involving Young Drivers By Month – 1999 – 2003



# Young Driver Crashes Leading Probable Causes 1999 - 2003

Driver Failed to Yield Right of Way	22,397
Driver Inattention	18,042
Driving too fast for Conditions/Speeding	16,647
Following Too Closely	7,132
Disregarding Sign or Signal	4,504

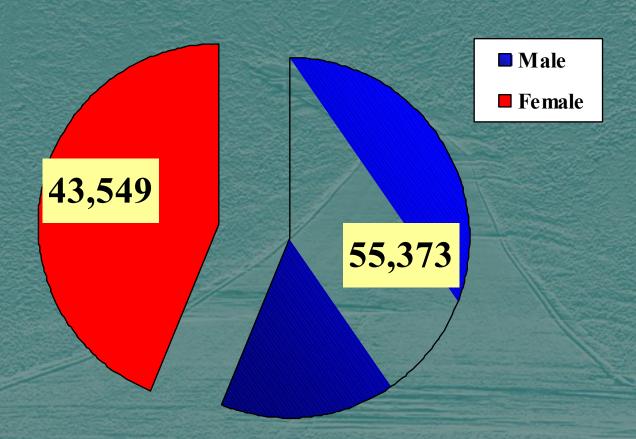
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# Young Driver Crash Fatalities Leading Probable Causes 1999 - 2003

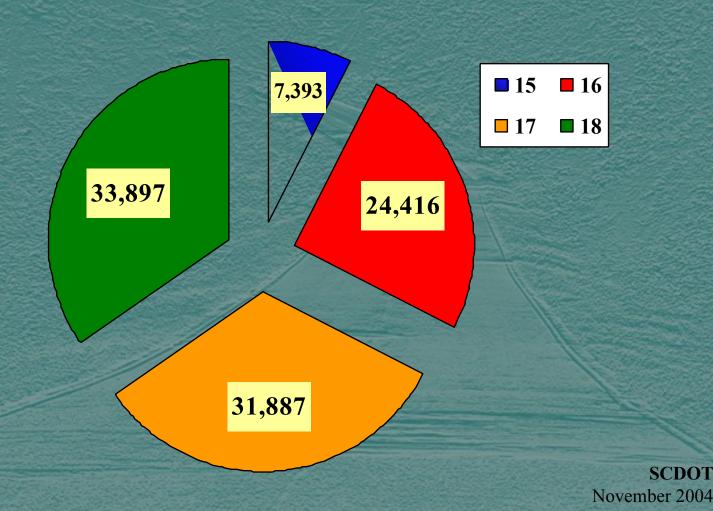
Driving too fast for Conditions/Speeding	174
Driver Failed to Yield Right of Way	80
Driving on Wrong Side of the Road	63
Driving under the Influence	60
Ran Off Road	41

### Young Driver Involvement in South Carolina Traffic Crashes

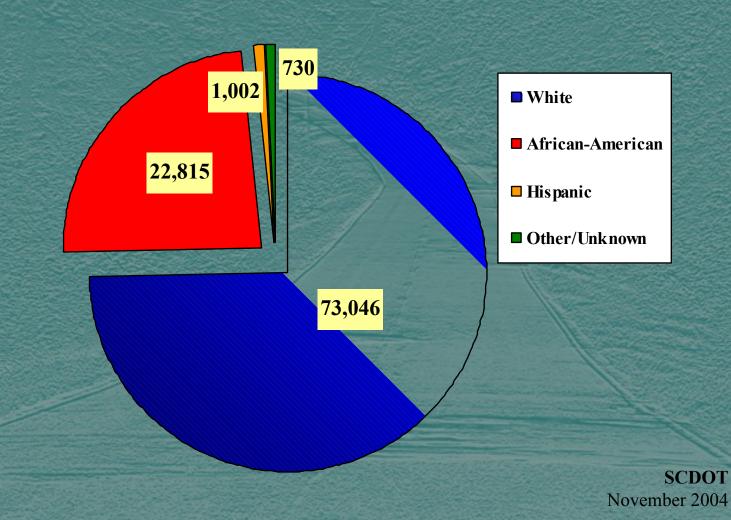
By Sex - 1998-2002



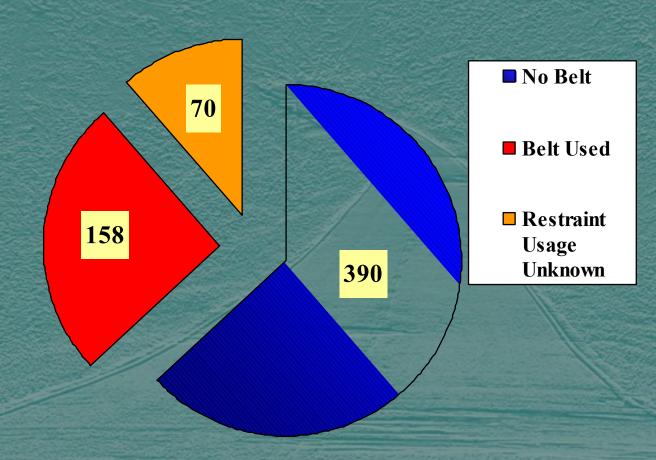
#### Young Driver Involvement in South Carolina Traffic Crashes By Age – 1999 - 2003



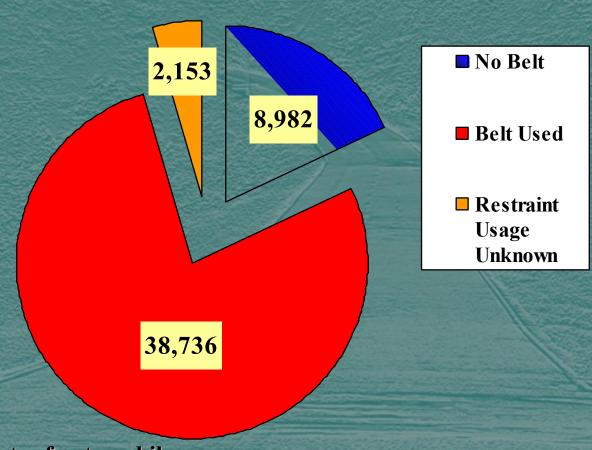
## Young Driver Involvement in South Carolina Traffic Crashes By Race – 1999 - 2003



# Fatally Injured Occupants\* Age 15-18 in South Carolina Traffic Crashes By Restraint Usage – 1999 - 2003



## Non-Fatally Injured Occupants\* Age 15 - 18 in South Carolina Traffic Crashes By Restraint Usage — 1999 - 2003



\*Includes only occupants of automobiles, trucks, SUVs, Vans and Buses

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### Legislative Update



#### **ACT 307**

#### Safe Routes To School

- Introduced in the House on February 11, 2004
- Introduced in the Senate on April 20, 2004
- Last Amended on June 3, 2004
- The General Assembly passed it on June 3, 2004
- Signed by the Governor on September 8, 2004

#### Safe Routes To School Bill

 Law is titled "South Carolina Safe Routes to Schools Act".

 Law is located in Chapter 17, Title 59 of the 1976 Code of Laws amended, Section 59-17-150.

#### Section 59-17-150. (A)

- Directs municipal and county governments to work with local schools to identify problems and/or hazards to children walking or bicycling to school
- Directs municipalities, counties and school districts to develop a plan for funding improvements.
- Identifies sources of potential funding for improvements
- Does not obligate the sources listed to provide funding

#### **Section 59-17-150. (B)**

- Encourages each school district to establish a Safe Routes to School Coordinating Committee
- Requires multidisciplinary and community representation on the committee
- Defines the duties/responsibilities of the Coordinating Committee
- Establishes and defines the composition and duties/responsibilities of a Safe Routes to School Team for each school where desired

### The Coordinating Committee Members

- Parents
- Children
- Teachers
- Administrators
- Local Law Enforcement Officials
- Public Health Officials
- Interested Citizens
- Other persons familiar with the transportation needs or the school district

### **Duties of Coordinating Committee**

- Gathering information (through surveys and traffic counts)
- Organizing incentive based events to encourage children to try new modes of transportation
- Promoting the program through newsletters, assemblies, web sites and other means to reach parents and students.

### The Safe Routes To School Team

- The team shall include parents, children, teachers, administrators, and neighbors of the school.
- The team may be expanded to include local law enforcement officials, public health officials, and other persons familiar with the transportation needs of the school.
- The team shall select a representative to serve on the Coordinating Committee.

# The Safe Routes To School Team Duties

Gathering information (through surveys and traffic counts)

 Organizing incentive based events to encourage children to try new modes of transportation

 Promoting the program through newsletters, and other means to reach parents and students.

### Section 59-17-150. (C)

 Declares the first Wednesday of October each year as "Walk or Bicycle with Your Child to School Day"

### **ACT 286**

#### Steer It and Clear It

- Introduced in the House on March 12, 2003
- Introduced in the Senate on February 26, 2004
- Last Amended on June 2, 2004
- The General Assembly passed it on June 3, 2004
- Signed by the Governor on July 22, 2004

### Steer It Clear It

- In property damage only crashes, driver must move vehicle so traffic is not blocked.
- Driver does not have to wait for arrival of a law enforcement officer to move vehicle.
- Driver not considered liable for cause of the crash solely by reason of moving the vehicle.
- Instructional signs to be erected, asking drivers to move any vehicle capable of being driven off of roadway.

### Rubbernecking Law

- (A) Defines a temporary work zone as "an area on a roadway identified by orange work zone signs or equipment with flashing lights, and the presence of workers on the scene."
- (B) Recognizes "A temporary work zone as a special hazard."

### Rubbernecking Law

- Requires drivers approaching temporary work zones to:
  - keep vehicle under control
  - proceed with due caution
  - significantly reduce vehicle speed.
  - yield the right of way by making a lane change into a lane not adjacent to temporary work vehicle or equipment if on a highway with at least four lanes, with at least two lanes proceeding in the same direction
  - maintain safe speed for road conditions if changing lanes is impossible or unsafe

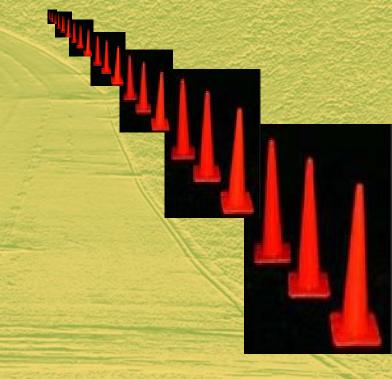
### Rubbernecking Law

- Misdemeanor of endangering temporary work zone personnel
- Upon conviction fine not less than \$300.00 nor more than \$500.00.



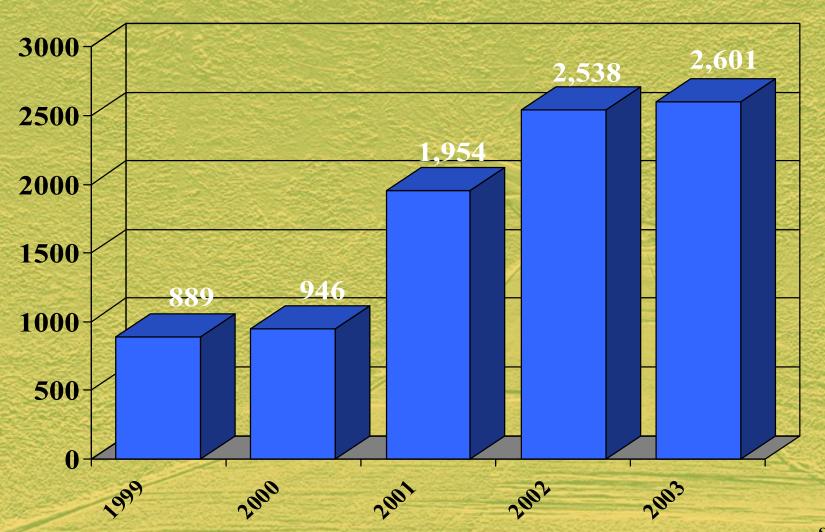
# WORK ZONE SAFETY...

A Major Initiative at SCDOT



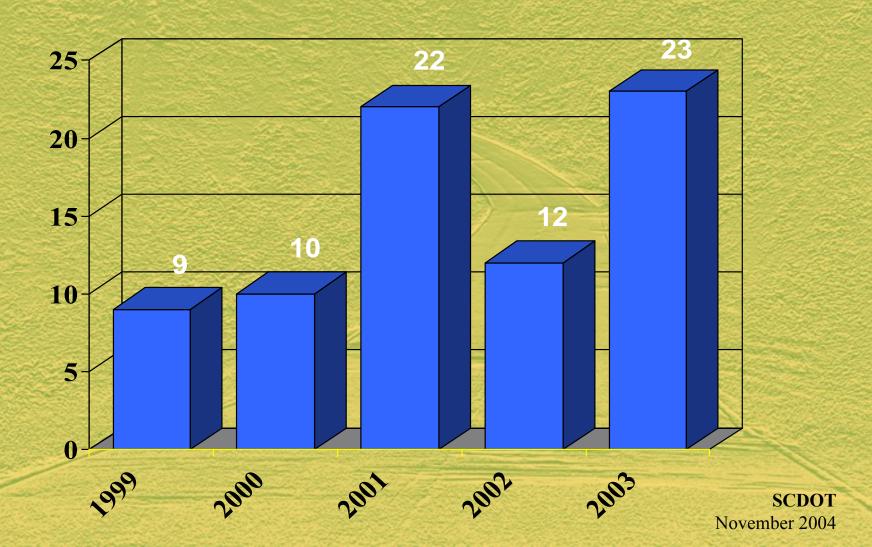
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### Work Zone Traffic Crashes 1999 - 2003



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### Work Zone Traffic Fatalities 1999 - 2003



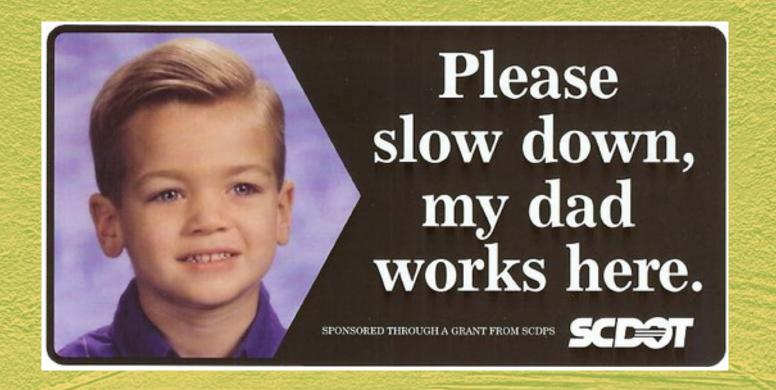
# Award Winning Public Awareness Statewide Campaigns



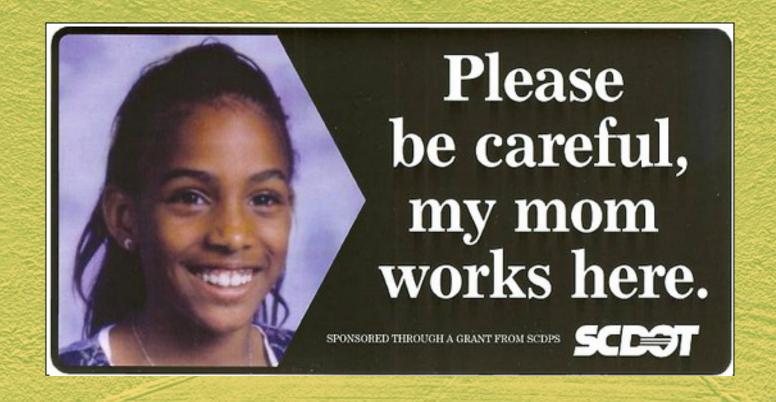
# Public Awareness Television PSA's

- Phase I, "At the Office and "In the Elevator" Aired 1,722 Times in 2002.
- In Phase II, "The Children" and "The Other Children" Aired 7,898 Times to Date
- In Phase III, "The Brad Sanders Story" and "The Ted Yandle Story" Aired over 7,900 Times to Date

### The Children's Signs



### The Children's Signs



### **New Work Zone Initiatives**

- High visibility enforcement program
- Program to be launched April 2005
- Includes partnerships with SCHP and local law enforcement agencies
- Focus will be zero tolerance for speeding and other violations in highway work zones
- Program includes media outreach

### Special Partnerships with SCHP

 Agreement under development between DOT and SCDPS to fund trooper class of 24 to 30 troopers

 Troopers to be dedicated for 3 year period to enforcement of speed and DUI in highway work zones and high crash corridors

### Safety Campaigns Coming in 2005

- Steer It Clear It Educational Campaign
- Rubbernecking Legislation Educational Campaign
- Statewide Public Information and Education Campaign focusing on prevention of speed related crashes/ reducing young driver involvement in crashes

# Safety Conscious Planning (SCP) and the Integrated Safety Management Process (ISMP)

### Safety Planning Requirement

TEA-21 Moving Americans into the 21st Century

Each statewide and metropolitan planning process shall provide for consideration of projects and strategies that will increase the safety and security of the transportation system for motorized and non-motorized users.

### Safety Conscious Planning

"...a proactive approach for the prevention of motor vehicle crashes and unsafe transportation conditions."

### **Improving Safety on Our Highways**

### Safety Conscious Planning

... a comprehensive, system wide, multi-modal, proactive process that better integrates safety into surface transportation decision making.

## Safety Conscious Planning (SCP) is... continued

- Considers all aspects of highway safety –
  engineering, education, awareness, enforcement
  & emergency response
- Uses a system-wide approach including sites, corridors & entire state, regional & local transportation systems

### SCP is.... continued

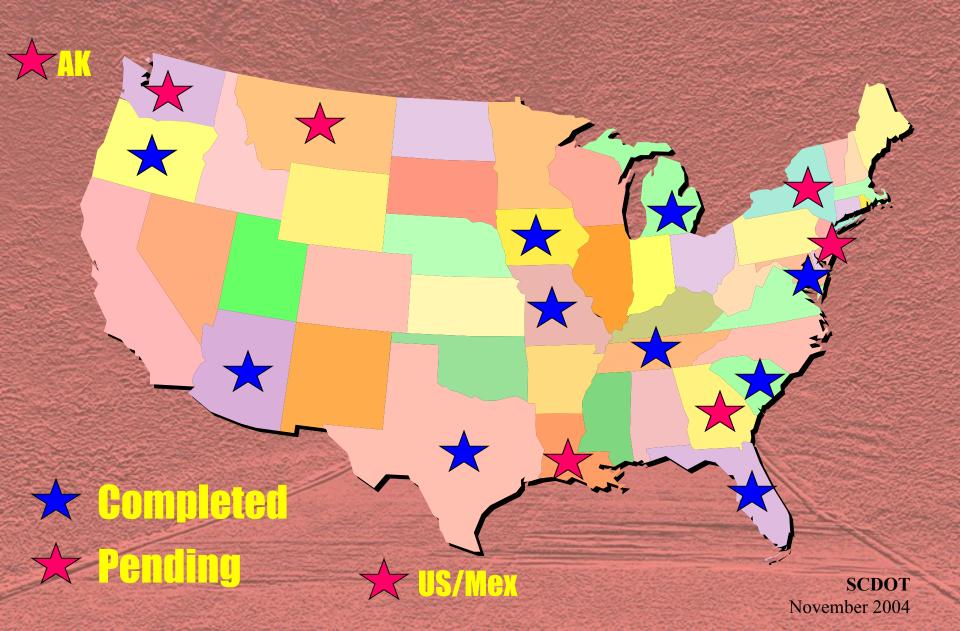
- SCP is multi-modal including transit, pedestrian & bicycle safety needs
- SCP is proactive addresses current safety problems & looks for opportunities to prevent them in the future

### SCP Communication: Forums

- Purpose dialogue among key players
- Objective jump start the SCP process
- Result action plan



### Communication: SCP Forums



### **Pre-Planning for the Forum**

- Began on August 28, 2002 with Planning Meeting
- Involved 25 key transportation and safety partners (all E's)
- Allowed participants to determine focus
  - Articulate Forum Objectives
  - Outline an Agenda
  - Develop a participant list
  - Address logistical and process issues

### **E** Key Forum Objectives

- Brief safety and planning communities on current issues/practices
- Help the partners understand the other's planning processes
- Facilitate a partnership that encourages collaborative planning and project selection
- Inform planners of products, programs, tools to support safety planning

### Forum Participants

Broad cross section of planning and safety communities

- Statewide representation
- Multidisciplinary group (including MPO's, COG's)
- Federal partners (FHWA, NHTSA, FMCSA)

### Teams Planning Meeting

- Logistics & Program Team
- Data Team
- Themes & Message Team
- Goals & Objectives Team

### Plans Provided to Participants

- AASHTO Strategic Highway Safety Plan
- Emergency Medical Services State Plan
- Federal Railroad Administration Action Plan
- 402 Highway Safety Plan
- Injury Control Plan
- SCDOT Strategic Plan
- SC Long Range Transportation Plan
- Others

### Data Guide

- SCDOT (Road Inventory, Traffic Counts, Mileage Reports)
- SCDPS (Collision File)
- SCDMV (Driver & Vehicle Files)
- EMS (Run Reports, Trauma Registry)
- DAODAS (School Age & Adult Surveys)
- Office of Research & Statistics (CODES, Census, Hospital Discharge)

### Discussion Group Assignments

- Set safety goals
- Develop recommendations for how to incorporate safety in the planning process
- Identify innovative solutions & strategies; tools & resources
- Create messages & themes to improve safety

### **Next Steps**

- Dissemination of Forum Final Report
- Schedule follow-up meetings of Discussion Groups
  - Complete discussions
  - Reach consensus on all recommendations

 Include the recommendations in the Comprehensive Safety Plan

#### Forum Accomplishments

- Brought over 200 partners together, many 1st time
- Adopted several goals & strategies to improve safety – all willing to support in their plan
- Improved communications among partners (Email group)
- Enlightened participants on available data sources

#### Forum Accomplishments

- Gave SC a "step up" in complying with Reauthorization requirements for a State Strategic Highway Safety Plan
- Prepared SC for participation in National Pilot Program – Integrated Safety Management Process (ISMP)

## Integrated Safety Management Process

### The Integrated Safety Management Process (ISMP)

- Product of the National Cooperative Highway Research Program (NCHRP) Project 17-18
   (5) – NCHRP Report 501
- An integrated management system to reduce highway injuries and fatalities across a jurisdiction

#### The Big Picture

Safety Conscious Planning

Integrated
Safety
Management
Process

Other TIP STIP Term Plan

Comprehensive Safety Plan

#### Integration at all Levels

- Integration starts at the decision making level with top management of various agencies working together
- Integration across 4 E's Enforcement, Engineering, Education, and Emergency Services
- Integration across safety agencies and jurisdictions
- Integration during implementation

#### Implementation Guides

- Emphasis areas (e.g. run-off-road, intersection crashes, aggressive driving)
- Part of AASHTO's Strategic Highway Safety
   Plan

## Implementation Guides provide answers to:

- What goals should we set for a particular emphasis area? (85% statewide restraint use by the end of 2004)
- What are our priorities for a particular emphasis area? (Infants, young children)
- What strategies are available to us for a particular emphasis area? (Education for new mothers at hospitals)

# Implementation Guides do NOT provide answers on:

- Which emphasis areas to prioritize?
- Which combination of strategies to apply?
- How to integrate the effort of multiple agencies implementing a single strategy?
- How to optimize the implementation of multiple strategies simultaneously?
- What level of deployment should be implemented for each strategy?

#### Establishing an ISMP

 In order to implement an ISMP, an ISMP must first be established

10 requirements

# Requirements for Establishing an ISMP (1 of 2)

- 1. Form the Safety Program Leadership
- 2. Determine the coalition's mission
- 3. Create a Memorandum of Understanding
- 4. Develop a communication plan
- 5. Appraise the existing safety management system

## Requirements for Establishing an ISMP (2 of 2)

- 6. Establish the administrative structure of the IMSP
- 7. Appoint an Operations Manager
- Assemble the Risk Analysis and Evaluation Group (RAE)
- 9. Set a vision
- 10. Link databases

#### ISMP

Establishing the Integrated Road Safety System



5. Develop detailed action plans



6. Evaluation of performance



1. Review safety information

4. Determine appropriate combination of strategies

3. Develop objectives, strategies and preliminary action plans

2. Establish emphasis areas



#### Benefits of the ISMP (1 of 2)

- A protocol and organizational structure for integrating across the agencies responsible for road safety
- Data driven decision making
- Quantifiable results that can be demonstrated and used to leverage for additional support and funding
- Cost effective implementation

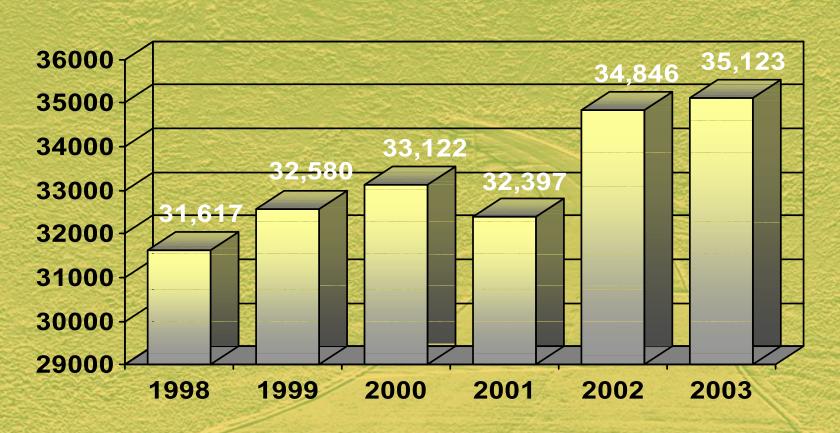
#### Benefits of the ISMP (2 of 2)

- Comprehensive Safety Plan (strategic, data driven, comprehensive collaborative, integrated)
- Greater safety benefit working together than independently
- Improved road safety, a reduction in both the number and severity of crashes

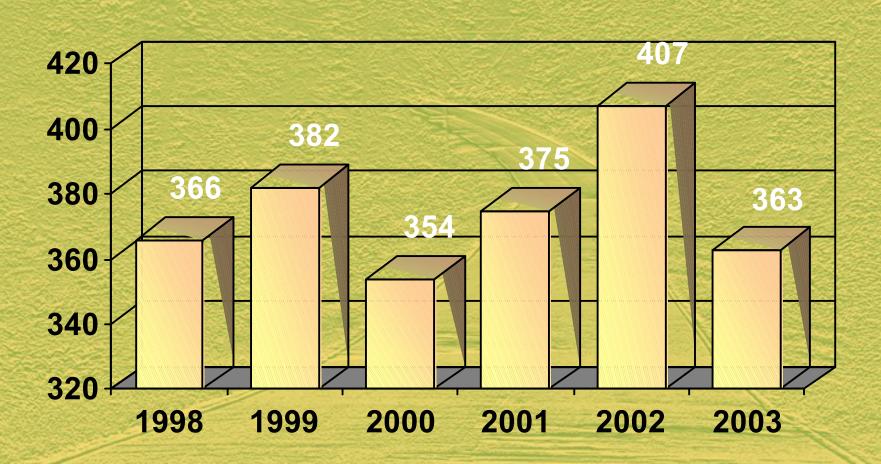
### CRISOS

Crash Reduction
by Improving Safety
on Secondaries

### Traffic Collisions on Secondary Roads in South Carolina



### Traffic Fatalities on Secondary Roads in South Carolina



#### CRISOS PROGRAM

- Focuses on safety improvements on federal aid and non-federal aid roads.
- Focuses on low-cost, short term strategies.
- Prioritizes roads based on crash rate, crash severity, and other factors.

### CRISOS PROGRAM

 Focuses on safety improvements on federal aid and non-federal aid roads.

Includes a multi-disciplinary approach within SCDOT.

 Includes local, community partners from EMS, law enforcement.

Contacts will be made to assist in the site visits.

#### Legislative Issues

- Primary Seat Belt Legislation
- Strengthened DUI Legislation
- Mini Bottle Legislation

 Increased Funding for Safety Improvement to Highways

# Legislative Issues: Primary Seat Belt Legislation

- Crash rates for young people are four times that of older drivers
- Fatality rates for young people are two times that of older drivers
- In SC from 1998 2002, 956 young people ages 16 24 died in crashes
- 707 young people were unbuckled
- Belt usage in SC crashes for young people at 26%

### Terecia Wilson

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### Thank You!