# Strategic Highway Safety Plan 2012 Update



presented to Florida Association County Engineers Roadway Superintendents

*presented by* Joseph Santos, PE State Safety Engineer Florida Department of Transportation

June 27, 2013

## Agenda

Florida Statistics

Strategic Highway Safety Plan (SHSP) Update Process (moving from 2006 to 2012)

Florida Crash Data Systems

Coordination efforts with LTAP Center for Local Road Safety (HSIP)

### **Florida Statistics - Injuries**

In Florida, injuries are the number one cause of fatalities for ages 1–44, and the third leading cause of death overall after heart disease and cancer (Florida Vital Statistics). In 2011, injuries claimed 12,364 lives and accounted for 7.2% of all resident deaths. (http://www.doh.state.fl.us/DEMO/InjuryPrevention/)

How does Motor Vehicle Traffic injury deaths compare with other types of injury deaths?

10 Leading Causes of Injury Death by Age Group, Florida Residents – 2011

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Suffocation	Drowning	MV Traffic	MV Traffic	MV Traffic	Poisoning	Poisoning	Poisoning	Poisoning	Fall	Poisoning
	82	64	17	30	413	654	646	944	496	2,031	3,136
2	MV Traffic	MV Traffic	Drowning	Firearm	Firearm	Firearm	Firearm	MV Traffic	Firearm	Firearm	MV Traffic
	7	15	5	14	388	419	330	418	325	476	2,367
3	Drowning	Suffocation	Suffocation	Suffocation	Poisoning	MV Traffic	MV Traffic	Firearm	MV Traffic	MV Traffic	Firearm
	4	10	4	12	197	370	322	405	308	467	2,364
Ref. http://www.doh.state.fl.us/DEMO/InjuryPrevention/InjuryData.html											

# Florida Statistics - Injuries

#### 10 Leading Causes of Injury Death by Age Group, Florida Residents - 2011

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	4	10	4	12	197	370	322	405	308	467	2,364

#### 10 Leading Causes of Non-Fatal Injury Hospitalizations by Age Group, Florida Residents - 2011

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Fall 279	Fall 612	Fall 650	Fall 552	MV Traffic 2,685	Poisoning 3,338	Poisoning 3,480	Poisoning 4,654	Fall 6,140	Fall 42,286	Fall 61,121
2	Poisoning 46	Poisoning 438	M∨ Traffic 208	MV Traffic 272	Poisoning 2,678	MV Traffic 2,291	MV Traffic 1,875	Fall 3,794	Poisoning 3,060	Poisoning 2,785	Poisoning 20,734
3	Hot Object/ Substance 40	Hot Object/ Substance 176	Struck by, Against 115	Struck by, Against 257	Fall 886	Fall 1,166	Fall 1,756	MV Traffic 2,330	MV Traffic 1,786	MV Traffic 2,357	MV Traffic 13,956
4	Struck by, Against 27	MV Traffic 141	Bites & Stings 67 (Tied)	Poisoning 201	Struck by, Against 839	Struck by, Against 711	Struck by, Against 567	Struck by, Against 700	Struck by, Against 351	Struck by, Against 556	Struck by, Against 4,234

# Local vs State – VMT, Centerline Miles, and Crashes



Note: 2011 Data has the same percentage distribution for VMT and Centerline Miles. For crashes there were 58% State and 42% Local based on Crash Analysis Reporting (CAR)

## Crashes Rates on Local Roads (2011)



Note: Rates based on 2011 data as provided from FDOT Safety Office and Transportation Statistics Office.

# **2012 SHSP UPDATE PROCESS**

# **2012 SHSP Update Process**



## 2006 to 2012 SHSP Emphasis Areas

#### **2006 Emphasis Areas**

Aggressive Driving
Intersection Crashes
Lane Departure Crashes
Vulnerable Road Users (VRU)

With Continuing Priority on:

- Occupant Protection
- Impaired Driving
- Traffic Data and Decision Support

#### **2012 Emphasis Areas**

- Aggressive Driving
- Intersection Crashes
- Lane Departure Crashes
- Vulnerable Road Users (VRU)
- Distracted Driving (new)
- At-Risk Drivers (new)
- Impaired Driving (elevated)
- Traffic Data (elevated)

Note: The Florida Strategic Highway Safety Plan can be downloaded at <a href="http://www.dot.state.fl.us/safety/SHSP2012/StrategicHwySafetyPlan.pdf">http://www.dot.state.fl.us/safety/SHSP2012/StrategicHwySafetyPlan.pdf</a>

# **SHSP Performance Statewide**

#### Annual Traffic Volumes Versus Annual Counts of Serious Injuries and Fatalities on Florida Public Roads



"All public roads" encompasses primarily (98.2%) the State Highway System (9.9%), the County Road System (57.4%) and city streets (30.8%), but also includes roads? maintained by other governmental agencies (1.8%). The only exclusions are state park service roads, private roadways (not under public or municipal maintenance) and nontravel accessways such as alleys in urban areas.

# FLORIDA CRASH DATA SYSTEMS

## Florida Crash Data Systems

Florida Integrated Report Exchange System (FIRES) – (<u>https://firesportal.com/Pages/Public/Home.aspx</u>)

Signal Four Analytics – (<u>http://s4.geoplan.ufl.edu/</u>)

FDOT Crash Shapefiles –

- » External FDOT (<u>https://www3.dot.state.fl.us/unifiedbasemaprepositor</u> <u>y/</u>)
- » Internal FDFOT (<u>http://webapp01.dot.state.fl.us/unifiedbasemapreposit</u> ory/default.aspx)

# Florida Integrated Report Exchange System (FIRES)

- The FIRES website is developed and maintained by Appriss, Inc. on behalf of the Florida Department of Highway Safety and Motor Vehicles. It serves as a portal into the State of Florida's repository for traffic accident reports completed by Florida law enforcement agencies.
- The integrity of FIRES data is dependent upon both the accuracy and frequency with which the data is updated and user's interpretation.
- Therefore, no warranty, either expressed or implied, is given to the accuracy, completeness, reliability, or suitability for any particular purpose of the information contained in FIRES.

# FIRES (Login)





Contact Us Manuals

Home

Member Login User ID:

Password:

Forgot Username/Password Log in

Only authorized users have access to FIRES data and reporting. To request access:

Law Enforcment access Non-Law Enforcement access

We welcome feedback Submit comments and suggestions to the FIRES Site Administrator

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#### Restricted Access

FIRES online services provided by Appriss, Inc. are for the exclusive use of law enforcement, approved agencies, and other authorized users in the

Attention: At this time FIRES Portal only supports Internet Explorer.

#### News & Updates

Data Dictionary Old Form 6/14/2013 Data Dictionary New Form 6/12/2013 2013 Crash Performance Report 6/3/2013 Crash Memo Closeout 2012 5/31/2013 2011 Official Crash Facts 12/10/2012

# FIRES (Home)

Crash Data

**Quick Stats** 

Year: 2013 -

**Crash Summary** 

Total Crashes:

Injury Crashes:

Total Injured:

Fatal Crashes:

Total Fatalities:

Private Property Crashes:

FIRES FLORIDA'S INTEGRATED REPORT EXCHANGE SYSTEM

Reports & Extracts

Home

Contact Us Manuals

#### Latest Headlines

Data Dictionary Old Form 6/14/2013 Data Dictionary New Form 6/12/2013 2013 Crash Performance Report 6/3/2013

Crash Memo Closeout 2012 5/31/2013 2011 Official Crash Facts 12/10/2012



This chart/report contains only data from reports that have been approved by DHSMV.

\*Please note: Crash reports are continually being submitted to the database from which these results were calculated. Therefore, these results may continue to change depending on

# FIRES (Crash Data)



Home	Crash Data	Reports & Extracts				
Find a Document Adv	vanced Search					
Report Number:						
Date of Crash:	to	מרורו ססעאאו)				
Individual Informa	tion					
Last Name	First Name	Driver License Number	Plate Number	VIN		
Location of Incide	nt					
Trafficway	County	Agency				
	Alachua					
Find						

\*Please note: Crash reports are continually being submitted to the database from which these results were calculated. Therefore, these results may continue to change depending on the search criteria used.

## **FIRES (Reports & Extracts)**



Crash Data

Reports & Extracts

/STEM	F	
112		

Crashes by Agency

Home

Construction Zone Crashes

Run a Report View Generated Reports

Crashes by BAC

Crashes by Contributing Circumstance

Crashes by County

Crashes by Day of Week

Crashes by Driver Age

Crashes by Gender

Crashes by Light Condition

Crashes by Manner of Collision

Crashes by Month

Crashes by Officer Id

Crashes by Pedestrian Age

Crashes by Roadway Id

Crashes by Surface Condition

Crashes by Time Of Day

Crashes by Unit Type

Crashes by Weather

Fatal Crashes by County



#### **Overview**

Signal Four Analytics is an interactive, web-based geospatial crash analytical system

Funded by the State (Traffic Records Coordinating Committee)

Developed by and hosted at University of Florida, Geoplan Center

#### Focus

#### Accessibility

» Makes it easy to get to the data, no special software required

#### Timeliness

» Crash data is as up to date as it can be

#### Otilization

» Web-based simple to use intuitive tools, little training required

#### **Database Content**

- Crash Records 7 years, over 2.5 million records
- Long Forms: complete for the entire state from 2006 till Present

#### Short Forms:

- » FHP for the entire state from 2011 till Present
- » Some selected counties from 2006 to Present

#### Crash Database Update

- » Daily as current as it can be at present
- » Mapping conducted by University of Florida and FDOT

## **Database Content – cont.**

#### GIS Streets

- » Uses Navteq Florida unified basemap
- » Includes statewide RCI functional class, traffic volumes etc

#### Some Local Data

» Measured traffic volumes on local roads for selected counties

## **Main Functions**

Interactive crash visualization on cartographic or aerial photo basemap

Queries by numerous attributes including search by intersections, streets and corridors

Access to scanned police reports

Chart-based summary statistics

## Main Functions – cont.

Ability to determine high crash segments and intersection by crash count, crash rate, crash severity

Ability to edit crash location and crash type

Collision diagrams

Functions to export data, map and charts



#### **Road Ahead**

Enhanced analytics and network screening

- Will include Citations Pilot with FHP underway
- Development of a public interface with limited functionality

Training webinars: email <u>ilir@ufl.edu</u> to sign up

## **Access Information**

Currently close to 1000 users, 120 public agencies

Web address <u>s4.geoplan.ufl.edu</u>

Access is free

Accounts managed by agencies through a user administrator within each agency

Consultants/contractors can have access for duration of contracts with public agencies

#### **To Request Access**

FDOT employees or consultants contact: Ricky Fitzgerald at <u>Rickey.Fitzgerald@dot.state.fl.us</u>

Other users contact: Ilir Bejleri at <u>ilir@ufl.edu</u>

Access is typically provided within 24-48 hours



## **FDOT Crash Shapefiles**

#### Florida Crash Shapefiles can be downloaded from the Unified Basemap Repository.

#### Florida Department Of Transportation

Unifie

Jnified Basemap Repository

Business Partners | Employment | Programs | Projects | Related Links | Research/Statistics | Travel Information

#### Mission

"To develop, deploy, and implement a unified base map resource that is seamless, universal, accessible, timely, and supportive of multiple member missions and visions."

#### History

The Florida Unified Roadway Basemap Initiative was conceived as a response to the 2005 SAFETEA-LU (Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users) legislation that placed an increased emphasis on the coordination and sharing of information to support safety analyses. The most critical requirement resulting in a need for a uniform foundation for consistent data exchange is that states must address high-risk rural roads and identify the 5 percent of the worst safety problems regardless of roadway ownership. Every jurisdiction and agency use independent Geographic Information Systems (GIS) that do not easily interact. This makes it difficult to locate and analyze crash data along with roadway location and feature data. Spatial data is key to understanding not only safety information such as crash mapping, but also other related transportation phenomenon such as roadway characteristics and environmental impacts. Therefore, the requirement for a unified approach to GIS data management to support transportation decision-making was formed as the "GIS One Map" initiative in 2006 by the Florida Traffic Records Coordinating Committee (TRCC). Since that time, the project has been renamed to the Florida Unified Roadway Basemap Initiative. However, the project goal remains the same: to develop a standard, comprehensive transportation network that could be used throughout the State, shared across jurisdictional boundaries, through multi-agency involvement and coordination.

In March 2007, a feasibility study of the Unified Roadway Basemap initiative was completed and presented to the TRCC. This study consisted of a comprehensive survey of all entities that may be interested or affected by the Unified Basemap Initiative. A sample of the agencies receiving the survey included the Florida Department of Florida Department of Health, Department of Highway Safety and Motor Vehicles, Florida Healthcare Administration Agency, Florida Office of the State Courts Administrator, Florida Highway Patrol, and the Florida Office of Motor Carrier Compliance. All counties and large Metropolitan Planning Organizations were also included in the survey. In addition, the GIS Task Team (subcommittee of TRCC) supplemented this list by recommending other entities to include on the recipient list. Results of the survey indicated that over 80 percent of respondents specified that a comprehensive basemap would be extremely useful for their business processes.

Since the Feasibility study and extensive implementation planning, the TRCC has approved and purchased the licensed rights to all Florida Government the use of this data (please see license for more details)



Florida Department of Transportation Report Unified Basemap Repository questions to <u>UBR Admin</u> Report Technical Problems to the Service Desk @ 1-886-955-4357 (HELP) or email: <u>Service Desk</u> Internet Privacy Policy, Disclaimers & Credits Menu

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#### EDOT Crach Shapofilos

	Category	
Select	NAV STREETS FL 1st QTR 2013	This is the first quarter 2013 (Jan-Mar) update o
Select	NAV STREETS FL 2nd QTR 2012	This is the second quarter 2012 (Apr-Jul) update
Select	NAV STREETS FL 2nd QTR 2013	This is the second quarter 2013 (Jan-Mar) updat
Select	NAV STREETS GA AL 1st QTR 2013	This is the first quarter 2013 update from Navte
<u>Select</u>	NAV STREETS GA AL 2nd QTR 2013	This is the second quarter 2013 update from Na

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#### NAVSTREETS FL 1st QTR 2013 Files

<u>Select</u> Select		File Name		
Select Select	Download	Boundaries.zip	This is s	
1 2	Download	CulturalFeatures.zip	This is s	4
AVSTREE	Download	Documentation.zip	Please	
Download Download	Download	Hydrography.zip	This is :	urants, points of interest.
Download Download	Download	Metadata.zip	This is a	
Download Download Download	Download	PointAddress.zip	The poir	
	Download	Transportation.zip	This is a	
Office of		•		

# **FDOT Crash Shapefiles**

Category	Description
State Safety Office Crash Data statewide	These are shapefiles for plotted crash points for Long-form-reported crashes for Florida, years 2003-11, separated into crash, vehicle and occupant files, ~100Mb per year, updated 3/4/2013.
State Safety Office Crash Rates statewide	This is the 5-year crash rate analysis data for the State Highway System, as produced by the FDOT State Safety Office annually.

#### atewide Files

File Name	Description
2003_SHSonly_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2003 on the State Highway System only. Crash-level attributes, vehicle-level attributes, and occupant- or pe
2004_SHSonly_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2004 on the State Highway System only. Crash-level attributes, vehicle-level attributes, and occupant- or pe
2005_Statewide_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2005. Crash-level attributes, vehicle-level attributes, and occupant- or person-level attributes are in separate
2006_Statewide_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2006. Crash-level attributes, vehicle-level attributes, and occupant- or person-level attributes are in separate
2007_Statewide_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2007. Crash-level attributes, vehicle-level attributes, and occupant- or person-level attributes are in separate
2008_Statewide_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2008. Crash-level attributes, vehicle-level attributes, and occupant- or person-level attributes are in separate
2009_Statewide_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2009. Crash-level attributes, vehicle-level attributes, and occupant- or person-level attributes are in separate
2010_Statewide_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2010. Crash-level attributes, vehicle-level attributes, and occupant- or person-level attributes are in separate
2011_Statewide_Crash_Vehicle_Occupant.zip	These are shapefiles for plotted crashes in 2011. Crash-level attributes, vehicle-level attributes and occupant- or person-level attributes are in separate f

2011\_Statewide\_Crash\_Vehicle\_Occupant.zip

These are shapefiles for plotted crashes in 2011. Crash-level attributes, vehicle-level attributes and occupant- or person-level attributes are in separate files. Approximately 92Mb. Updated to ne



Download

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# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP), SHSP, AND ONGOING RESEARCH

## **HSIP** and the SHSP

- HSIP requires a comprehensive, <u>data-driven</u>, SHSP that defines State safety goals and describes a program of strategies to improve safety. To obligate HSIP funds, a State must develop, implement and update a SHSP, <u>produce a program of projects</u> <u>or strategies to reduce identified safety problems</u>, and evaluate the SHSP on a regular basis.
- States are required to have a safety data system to perform problem identification and countermeasure analysis on all public roads, adopt strategic and performance-based goals, advance data collection, analysis, and integration capabilities, determine priorities for the correction of identified safety problems, and establish evaluation procedures.

Ref. http://www.fhwa.dot.gov/map21/hsip.cfm

# Ongoing Research – Safety and Local Roads

Safety Project Development Capacity for Small Communities in Coordination with Local Technical Assistance Program Center (LTAP) Start date: 2012/6/12 End date: 2013/9/30

The objectives of this research are to:

- (1) Identify the information required to conduct safety analysis appropriate for small communities especially in rural areas.
- (2) Determine how to assemble the resources that are easily accessible and contain the appropriate data and tools to support the needs of local communities for conducting safety analysis.
- (3) Explore options on how to best package the safety analysis methods and process and teach it to agencies in a way that's most effective to conduct safety studies and develop countermeasures either by their own in-house staff and/or with the assistance of Local Technical Assistance (LTAP) centers.
- (4) Determine how to assemble the evidence necessary when applying for funds for safety improvement projects.
- (5) Develop a plan to deploy the safety project development capabilities to the agencies with limited resources or directly implement them through the LTAP center for the agencies without in-house staff.

## Agenda

Florida Statistics

Strategic Highway Safety Plan (SHSP) Update Process (moving from 2006 to 2012)

Florida Crash Data Systems

Coordination efforts with LTAP Center for Local Road Safety (HSIP) FATALITIES

# DRIVING DOWN FATALITIES

Joseph Santos, PE State Safety Engineer Florida Department of Transportation Joseph.santos@dot.state.fl.us