

**LOUISIANA SAFETY RESTRAINT  
(FRONT AND REAR SEAT SAFETY BELT)  
USE OBSERVATION SURVEY 2011 RESULTS**

-FINAL REPORT-

**CONTRACT NO. K2-2010-02-00-00**

**STATE OF LOUISIANA**  
Bobby Jindal, Governor

**LOUISIANA HIGHWAY SAFETY COMMISSION**  
John A. LeBlanc, Executive Director

**September 2011**

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## INTRODUCTION and BACKGROUND INFORMATION

The Louisiana Highway Safety Commission has sponsored statewide observational surveys to determine safety restraint usage among the driving public since 1986. The surveys are conducted to determine the level of compliance with the state's mandatory safety belt use law and to identify changes in safety restraint usage rates.

### Louisiana Safety Restraint Use Laws

On July 7, 1985, the Louisiana legislature passed a mandatory, secondary offense, seat belt use law requiring front seat occupants of privately-owned automobiles to wear safety belts. The law became effective on July 1, 1986. During the period of July 1-31, 1986, only warning tickets were issued. Actual issuance of citations began on August 1, 1986. During the 1988 session of the Louisiana legislature, the mandatory use law was revised to cover each driver and each front seat occupant of a passenger car, truck or van having a gross weight of six thousand pounds or less. In 1995, a primary safety belt use law was enacted by the Louisiana legislature. Act 643 providing for the required use of safety belts received final approval on June 20, 1995, and became effective September 1, 1995. The Act provided for the issuance of warning tickets prior to October 31, 1995, and citations bringing penalties consisting of a fine and costs of court thereafter.

In November 1998, the Louisiana Third Circuit Court of Appeal ruled the state's seat belt law does not allow police to stop drivers only for a seat belt violation. In 1995, the Legislature intended to change the seat belt law to make not wearing a seat belt a "primary" offense, a violation for which a law enforcement officer can stop a driver. Amendment of the seat belt law from a secondary to a primary enforcement law started when the Louisiana House of Representatives removed the word "detained" from that part of the secondary offense law which said that no one could be "inspected, detained or searched" solely for violating the seat belt law. Later, the wording of the bill was amended in Louisiana Senate where the word "detained" was put back into the law. The court ruled that if a motorist could not be detained by a law enforcement officer, the violation of the law could not be considered a primary offense or one under which a motorist could be stopped. As a result of the court ruling, the 1995 law was still a secondary offense law. The Louisiana State Police issued notice to troopers telling them not to stop drivers for seat belt violations. The court's ruling was announced the same day as the kick off meeting for the fall 1998 "Buckle Up America" campaign was taking place in Baton Rouge.

On June 21, 1999, during the closing days of the legislative session, the Legislature, responding in part to a strong showing of support by the Louisiana State Police, passed a bill that allowed law enforcement officers to stop motorists for not wearing a seat belt. That revised primary enforcement law became effective August 15, 1999.

Earlier in the 1999 regular session of the Louisiana Legislature, the law requiring mandatory use of helmets for motorcycle operators and passengers was modified to allow persons age 18 and older who could provide proof of certain medical insurance coverage exempt for the helmet

requirement. During the 2004 regular session, the legislature re-instated the mandatory motorcycle helmet law effective August 15, 2004.

During the 2009 regular session of the Louisiana Legislature, the primary enforcement law was amended to apply to both front and rear seat occupants. That new law went into effect August 15, 2009. Revised Statute 32:295.1 requires each driver of a passenger car, van, or truck having a gross weight of ten thousand pounds or less, commonly referred to as a pickup truck, to have a safety belt properly fastened about his or her body at all times when the vehicle is in forward motion. The law also requires each occupant to have a safety belt properly fastened about his or her body at all times when the vehicle is in forward motion, if a belt for his seating space has been provided by the manufacturer.

### Prior Surveys

Only drivers and front seat occupants of privately-owned automobiles were included in observation surveys prior to 1989. All drivers and front seat occupants of passenger cars, vans and light trucks were included in the surveys conducted from 1989 to 1991 and after 1995 (Waves 5-7 and 12-17). The surveys conducted from 1992 to 1995 (Waves 8-11) included only drivers and front seat occupants of privately-owned automobiles. Motorcycle operators and passengers were also observed for use of helmets during the surveys conducted since 1992.

In surveys prior to 2001, seat belt use was reported by three categories of vehicles: passenger cars, vans and light trucks. Starting with the seventeenth wave survey (2001), belt use was recorded by four categories of vehicles: passenger cars, vans, SUVs and pickup trucks. The passenger car and van categories remained unchanged from prior surveys. The former light truck category was split into the SUV and the pickup truck categories.

Observations on the first eleven survey waves (through 1995) were collected in accordance with a probability sample prepared by WESTAT, the National Highway Traffic Safety Administration contractor. Observation locations for the twelfth wave (1996) through the nineteenth wave (2003) survey were selected by the Washington Consulting Group (WCG).

Observations starting with the twentieth wave were collected in accordance with a probability sample prepared by Dr. Helmut Schneider, Ourso Family Distinguished Professor of Information Systems and Chairman of Information Systems and Decision Sciences, Louisiana State University, Baton Rouge, Louisiana<sup>1</sup>. The new design is compliant with existing NHTSA guidelines. The Schneider design provided for data to be collected at 418 road segments throughout the eight regions comprising the State of Louisiana to prepare estimates of statewide and regional safety belt use.

Two significant hurricanes, Katrina and Rita, did serious damage to Louisiana between the time data were collected on the twenty-first wave survey in 2005 and the twenty-second wave survey in 2006. Substantial displacements of people and organizations occurred as a result of damage associated with these two hurricane events. Hurricane Katrina and subsequent flooding due to levee failure cause extensive destruction across southeast Louisiana while Hurricane Rita wreaked havoc in the southwest portion of Louisiana.

Hurricane Gustav caused extensive devastation throughout south central Louisiana, especially in the Baton Rouge metropolitan area in early September 2008 after data had been collected for the twenty-fourth wave survey.

The twenty-fifth wave survey was conducted in June and July 2009. The data collection form developed for use in the 1989-1991 surveys which was revised for the 1996 survey and was subsequently revised in 2004 was used in the twenty-fifth wave survey. Observations were made on drivers and front seat passengers of privately-owned vehicles to whom the state's belt use law applied.

Although not by a hurricane this time, conditions in Louisiana were seriously disrupted by the massive intrusion of oil gushing from the Macondo well located 5,000 feet below the surface of the Gulf of Mexico. The oil spill followed the April 20, 2010 explosion of the Deepwater Horizon drilling rig. That explosion killed eleven workers. The spill caused extensive damage to marine and wildlife habitats as well as disruption to the coastal fishing and tourism industries. A subsequent moratorium on deepwater drilling has all but shut down Louisiana's offshore oil and gas exploration and production operations. The combined effects of the spill and moratorium have seriously disrupted the economy and life in the communities throughout much of southern Louisiana.

Data collection for the twenty-sixth wave survey was started in early June slightly less than two months following the Deepwater Horizon explosion. Data collection was completed in July 2010. This was the first full-scale Louisiana statewide safety restraint observational survey to cover both front and rear seat passengers.

#### This Year's Survey

This twenty-seventh wave survey was conducted in June and July 2011. The data collection form developed for use in the 1989-1991 surveys which was revised for the 1996 survey and was subsequently revised in 2004 and later revised for use in the November 2008 mini-survey of belt use among front and rear seat passengers was used in the twenty-seventh wave survey. Observations were made on drivers and front seat passengers and adult rear seat passengers of privately-owned vehicles to whom the state's belt use law applied.

## SURVEY RESULTS

Safety restraint observation data were collected at 418 locations selected in the design developed by Dr. Helmut Schneider (Table 1). The observation data were submitted to Dr. Schneider for calculation of seat belt use estimates.

**TABLE 1.  
NUMBER OF OBSERVATION SITES BY REGION, 2011**

<u>REGION</u>	<u>SITES PER THE DESIGN</u>	<u>SITES COMPLETED</u>
1	68	68
2	86	86
3	40	40
4	62	62
5	32	32
6	35	35
7	60	60
8	35	35
TOTAL STATE	418	418

### Drivers and Front Seat Passengers Observed

A total of 61,185 drivers and front seat passengers were observed at the 418 locations (Table 2). The safety restraint use observations were categorized based on type vehicle: automobile, pick-up truck, SUV (sports utility vehicle) and vans.

**TABLE 2.  
NUMBER OF DRIVER AND FRONT SEAT PASSENGER OBSERVATIONS  
(UNWEIGHTED) LOUISIANA, 2011 BY REGION AND VEHICLE TYPE.**

<u>REGION</u>	<u>TOTAL</u>				<u>TOTAL ALL</u>
	<u>AUTO</u>	<u>PICKUP</u>	<u>SUV</u>	<u>VAN</u>	
1	5,202	3,248	2,968	1,567	12,985
2	5,396	3,696	3,166	1,068	13,326
3	1,872	1,520	1,027	379	4,798
4	3,255	2,604	1,856	596	8,311
5	1,990	1,423	1,045	592	5,050
6	1,911	1,367	914	485	4,677
7	3,213	2,194	1,721	866	7,994
8	1,674	1,173	781	416	4,044
Louisiana	24,513	17,225	13,478	5,969	61,185

Drivers and Front Seat Passengers Usage Estimates

The 2011 overall estimate of safety restraint usage among drivers and front seat outboard passengers in Louisiana for all private vehicles is 77.7% (Table 3). Safety restraint usage ranges by region from a low of 74.8% in the Lake Charles and Alexandria areas to a high of 80.5% in the Lafayette area. Usage rates by vehicle type range from a low of 70.0% among pickup truck occupants to 85.5% among van occupants. Restraint usage among automobile occupants is 80.1%. Overall safety restraint use increased by 1.8 percentage points from 2010.

The sample error for the 2011 estimates are shown in Table 4.

**TABLE 3.  
PERCENT OF SEAT BELT USAGE AMONG DRIVERS AND FRONT SEAT PASSENGERS IN  
LOUISIANA, 2011, BY REGION AND VEHICLE TYPE (WEIGHTED DATA).**

<u>REGION</u>	<u>AUTO</u>	<u>PICKUP</u>	<u>SUV</u>	<u>VAN</u>	<u>ALL</u>
1-New Orleans	77.9%	67.4%	75.0%	86.0%	74.9%
2-Baton Rouge	80.3%	73.8%	78.8%	78.8%	78.5%
3-Houma	80.0%	75.6%	82.5%	88.5%	79.6%
4-Lafayette	80.7%	76.4%	84.9%	81.6%	80.5%
5-Lake Charles	79.3%	62.9%	75.7%	87.0%	74.8%
6-Alexandria	80.1%	63.4%	74.4%	87.3%	74.8%
7-Shreveport	81.3%	66.2%	81.1%	91.6%	78.2%
8-Monroe	81.6%	66.6%	79.3%	92.6%	77.8%
Louisiana	80.1%	70.0%	79.2%	85.5%	77.7%

**TABLE 4.  
STANDARD ERROR, LOUISIANA, 2011**

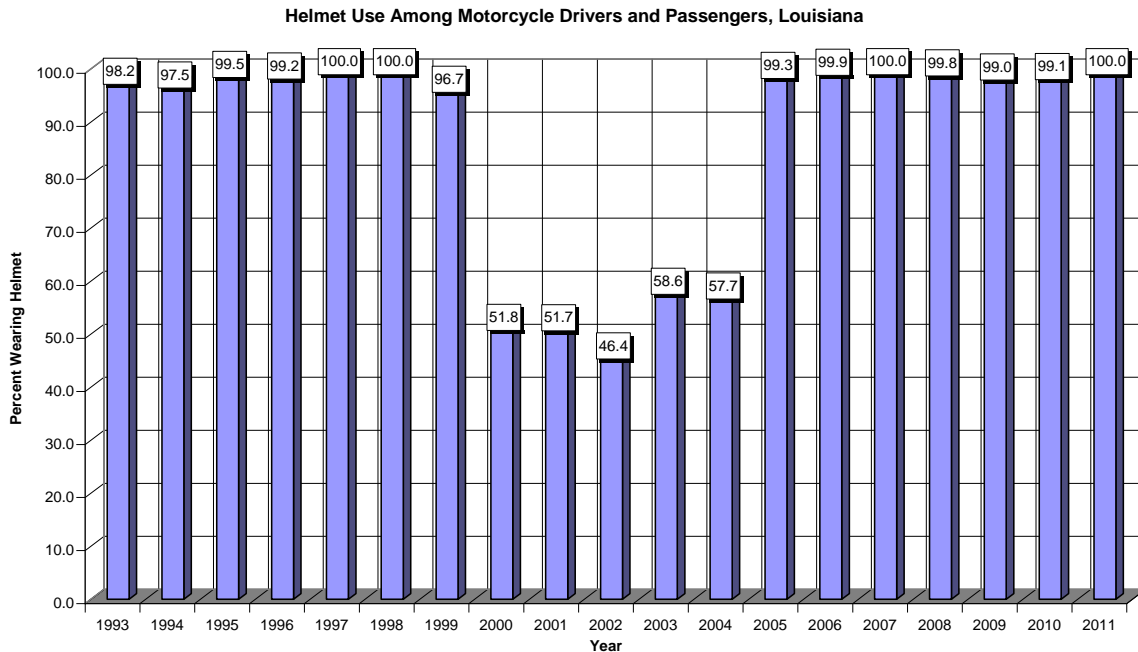
<u>REGION</u>	<u>AUTO</u>	<u>PICKUP</u>	<u>SUV</u>	<u>VAN</u>	<u>ALL</u>
1-New Orleans	0.9%	2.0%	1.4%	1.9%	0.7%
2-Baton Rouge	0.6%	1.0%	1.6%	3.1%	0.5%
3-Houma	0.9%	1.0%	1.1%	3.0%	0.7%
4-Lafayette	0.7%	1.0%	0.9%	4.3%	0.5%
5-Lake Charles	0.8%	0.9%	1.5%	1.5%	0.7%
6-Alexandria	0.8%	0.9%	1.6%	2.3%	0.8%
7-Shreveport	0.7%	0.8%	0.9%	1.2%	0.6%
8-Monroe	1.2%	0.7%	1.6%	1.3%	0.9%
Louisiana	0.3%	0.5%	0.5%	1.1%	0.2%

Motorcycle Helmet Usage Estimates

During the 1999 regular session, the Louisiana legislature modified the then existing mandatory motorcycle helmet law. Prior to the 1999 modification, which allowed persons age 18 and older who could provide proof of certain medical insurance coverage exempt for the helmet requirement, almost all motorcycle operators and passengers wore helmets (the 1999 rate, based on data collected prior to the effective date of the modification, was 96.7%). In the year 2000 following the modification, motorcycle helmet use dropped to 51.8%. In subsequent years the motorcycle helmet rate remained comparatively low (51.7% for 2001, 46.4% for 2002, 58.6% for 2003, and 57.7% for 2004) (Figure 1).

During the 2004 regular session, the legislature re-instated the mandatory motorcycle helmet law effective August 15, 2004. The re-instatement of Louisiana's mandatory motorcycle helmet law had a pronounced impact on helmet usage.

**FIGURE 1. MOTORCYCLE HELMET USAGE, LOUISIANA, 1993-2011.**



The helmet usage estimate for motorcycle drivers and passengers in Louisiana for 2011 is 100.0% (Table 5).

**TABLE 5.  
MOTORCYCLE HELMET USAGE IN LOUISIANA, 2011  
(UNWEIGHTED DATA).**

<u>NUMBER WEARING HELMETS</u>	<u>NUMBER NOT WEARING HELMETS</u>	<u>PERCENT WEARING HELMETS</u>
407	0	100.0%

Rear Seat Occupants Seat Belt Usage Estimates

During the 2009 regular session of the Louisiana Legislature, the primary enforcement law was amended to apply to both front and rear seat occupants. That new law went into effect August 15, 2009. The 2010 statewide observational survey is the first full-scale Louisiana statewide survey to cover both front and rear seat passengers.

A November 2008 mini-survey (subset of statewide survey sites) was the first to document rear seat occupant safety restraint use in Louisiana. Data on rear seat occupant safety restraint were collected in response to Regular Session 2008, Senate Resolution No. 165 by Senator Walsworth. That resolution directed the Louisiana Highway Safety Commission to study the need for all occupants of a motor vehicle thirteen years of age and older to wear a safety belt. Occupants under the age of thirteen were already required by law to be properly restrained.

Only rear seat occupants age thirteen years of age or older are included in the rear seat belt use estimates. A total of 632 rear seat occupants were observed (Table 6).

**TABLE 6.**  
**NUMBER OF REAR SEAT OCCUPANT OBSERVATIONS (UNWEIGHTED) LOUISIANA, 2011.**

<u>AUTO</u>	<u>PICKUP</u>	<u>SUV</u>	<u>VAN</u>	<u>TOTAL ALL</u>
404	62	119	47	632

The estimate of safety restraint usage among rear seat occupants age 13 or older in Louisiana for 2011 is 53.8% (Table 7). The 2011 usage rate is down slightly from the 2010 rate, but is still 26.6 percentage points higher than the pre-legislation rate.

**TABLE 7.**  
**PERCENT OF SEAT BELT USAGE IN LOUISIANA, NOVEMBER 2008, 2010, AND 2011 BY VEHICLE TYPE (WEIGHTED DATA).**

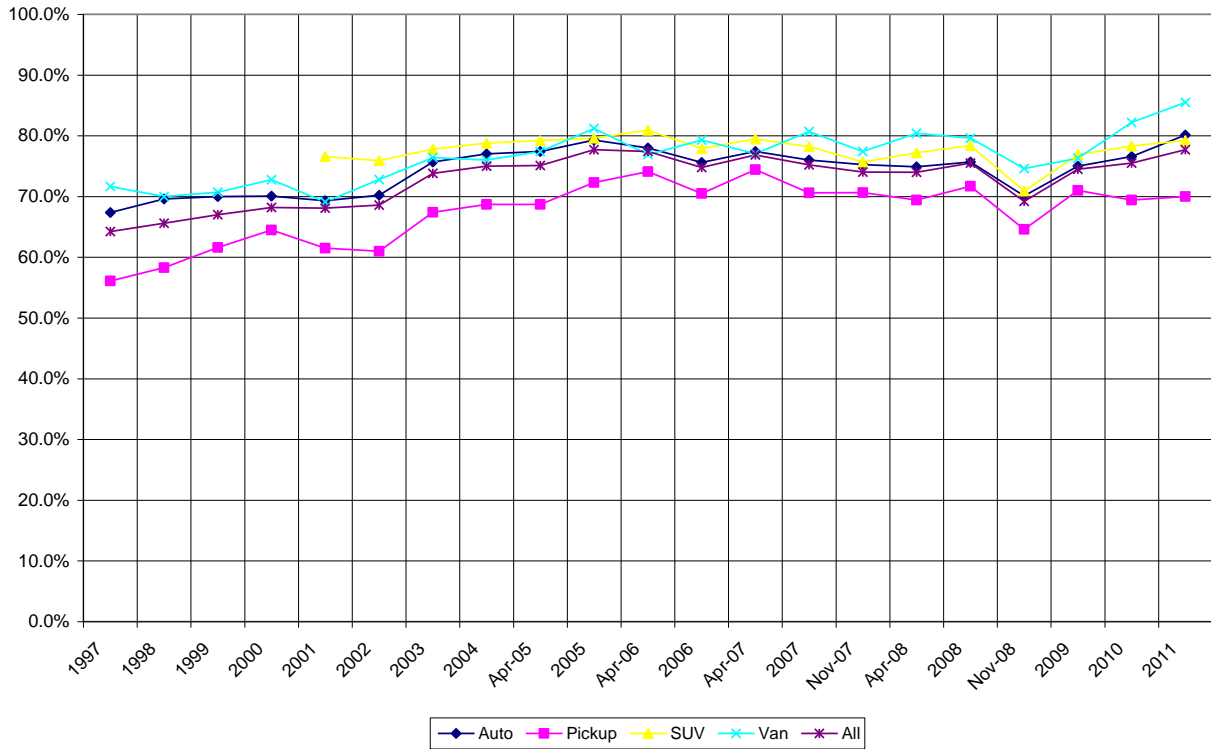
	<u>AUTO</u>	<u>PICKUP</u>	<u>SUV</u>	<u>VAN</u>	<u>ALL</u>
Rear Seat 2008	27.3%	12.5%	31.3%	29.4%	27.2%
Rear Seat 2010	50.0%	47.8%	77.2%	90.7%	58.4%
Rear Seat 2011	46.0%	40.3%	71.4%	93.6%	53.8%

## CONCLUSIONS

Since the 2009 annual survey, the overall seat belt usage rate among drivers and front seat outboard passengers increased 3.2 percentage points to 77.7%.

With the exception of seat belt usage among pickup truck occupants, usage has been on the increase since 2008 (Figure 2).

**FIGURE 2.  
SEAT BELT USE AMONG DRIVERS AND FRONT SEAT PASSENGERS  
BY VEHICLE TYPE, LOUISIANA, 1997–2011.**



## REFERENCES

1. Schneider, Helmut, 2003, Design of Louisiana Safety Belt Use Survey, September 21, 2003.

## **APPENDIX A. PROCEDURES**

### **TRAINING**

All field observers completed a training session. The training session included background information on the project design, classification of observation sites, data collection procedures, scheduling, supervision, fiscal accounting, and administrative reporting.

### **SCHEDULING**

Applied Technology Research Corporation (ATRC) prepared daily observation schedules and compiled location maps for the observation locations selected by the design contractor. In most cases, each daily schedule generally covered six to eight locations per observer day. Observations were made for a period of sixty (60) minutes at each site. In accordance with the National Highway Traffic Safety Administration (NHTSA) guidelines, all days of the week were represented in the survey and the assignment by time within day was randomized within site clusters.

### **OBSERVATION DATA COLLECTION**

ATRC field observers followed the daily observation schedules and recorded observation data on the data collection form. Completed observation forms were subjected to edit and verification procedures by supervisors prior to entry.

### **QUALITY CONTROL**

Periodic inspections were made by field supervisors to each region. The purpose of these visits was to monitor data collection and administrative reporting by field observers. Supervisors also met with observers to discuss and clarify any difficulties encountered while working. Field supervisors reviewed data reports, and any problems noted were brought to the attention of the field observers. Remedial data collection activities were initiated to verify or replace any questionable data.

### **DATA EDITS**

All completed data collection forms were subject to an edit by records clerks and/or field supervisors. Checks were made between tallies and summary totals at observation sites. A master log of sites was maintained to ensure that all scheduled site observations were conducted and any changes or substitutions in locations was documented. The data collection forms were also edited for completeness of entries which included location, condition and time entries as well as data counts. Problematic data were brought to the attention of project management personnel who were responsible for remedial action implementation.

### **FISCAL MANAGEMENT**

During the periodic inspections conducted by field supervisors, all fiscal source documents (time sheets, travel and other direct expense reports) were reviewed for accuracy. In addition to this verification in the field, the fiscal reports were also reviewed by clerical staff.



