

2018 LOUISIANA CHILD RESTRAINT OBSERVATION SURVEY RESULTS
LHSC Project No. 2018-20-10



Prepared for:

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INTRODUCTION

BACKGROUND

Research has shown that child safety seats reduce fatal injury by 71 percent for infants (under 1-year old) and by 54 percent for toddlers (1 to 4 years old) in passenger cars. The corresponding reductions in light trucks are 58 percent and 59 percent respectively. Among children under 5 years old, an estimated 252 lives were saved nationwide in 2014 by restraint use (NHTSA, 2014). Older children and adults are far more likely to survive a severe crash with less injury when wearing a safety belt (CDC, 2017).

LOUISIANA CHILD PASSENGER LAWS

Louisiana law (R.S. 32:295) states that children under the age of 6 years or less than 60 pounds must be in a child restraint system or booster seat that is age and size appropriate, in accordance with manufacturers recommendations. Children 6 to 12 years of age must be restrained by a lap belt, shoulder harness, or an age / size appropriate child safety or booster seat.

TYPES OF RESTRAINT

Child safety experts recommend that children aged 12 and under should ride properly buckled in the back seat. Airbags can kill young children riding in the front seat. Never place a rear-facing car seat in the front seat or in front of an airbag.

Type of restraint is determined based on age, weight, and height of the child. The device manufacturer provides directions that should be followed. Car seat inspection stations are located throughout Louisiana. Information on types of restraint and experts who can help answer questions on proper seats and correct installation can be located at the Louisiana Highway Safety Commission web portal: <http://www.lahighwaysafety.org/Pages/OurPrograms/ChildPassengerSafety.aspxh>

2018 CHILD RESTRAINT SURVEY

Preusser Research Group, Inc. (PRG), under contract with the Louisiana Highway Safety Commission (LHSC), conducted an observational survey in May 2018 to determine child restraint use rates across the State of Louisiana. The LHSC sponsored this survey to determine compliance with the state's Child Passenger Safety Law.

The 2018 Child Restraint Survey in Louisiana followed a design prepared by Dr. Helmut Schneider. Dr. Schneider is the Ourso Family Distinguished Professor of Information Systems and Chairman of Information Systems and Decision Sciences at Louisiana State University, Baton Rouge, Louisiana. The Schneider design provided for data collection at specified locations throughout eight regions comprising the State of Louisiana.

The 2018 survey was the 31st child restraint usage survey (statewide survey) conducted in Louisiana. This was the fourth year Preusser Research Group was responsible for the observational data collection. The findings from the 2018 survey are presented in this report.

METHODOLOGY

Observation Site Selection

Observations took place at the same 69 site locations used since year 2011. These locations were spread among 8 regions (Figure 1) to provide statewide representation. See Appendix A for a complete listing of the observation sites.

PRG provided each observer a site location list and a schedule that included the day of week and times of day to observe. PRG observers used site maps made by observers in 2013 in order to replicate the location to stand while observing and the flow of traffic to observe at each site. The same observers from 2017 went to their same locations for 2018.

PRG data collectors observed from locations at or near traffic control devices or entrances/exits of businesses. In some cases, more than one lane of traffic and direction of travel was observed. PRG instructed observers to carefully position themselves to allow for a safe and unobstructed view inside vehicles while not disturbing the flow of passing traffic.

FIGURE 1: LOUISIANA SURVEY REGIONS



Scheduling

Observations took place on the same days of week and times of day as in previous survey efforts. The Louisiana Child Restraint survey was conducted by Applied Technology prior to 2013. PRG discussed details of scheduling with Applied Technology to help develop the 2013 observation schedule and observational protocol in order to closely replicate prior surveys. The 2018 survey was completed using the same survey schedule developed and used in 2013, 2014, 2015 and 2017.

Data Collection Protocol and Procedures





Each observation period lasted one hour (60 minutes). Observers wore reflective safety vests at all times during data collection activities. Each observer also carried a letter of identification stating that the Louisiana Highway Safety Commission commissioned the survey. The letter indicated the purpose of the survey and provided details about the survey dates and times.

Observers determined a child occupant's approximate age, placement in the vehicle (including seat position), and use of a safety restraint device. Observers were provided an explanation of the current child passenger safety law (Table 1) to be knowledgeable under what conditions children are to be restrained in Louisiana. Observers first determined the approximate age group of the child occupant and marked the corresponding age group on the data form (Appendix B). If the child appeared restrained in a device or seat belt, the appropriate box was checked on the data

collection form. If a child appeared unrestrained, observers recorded “No” on the form. If a partial determination was made, the observation was recorded as “Undetermined.”

Multiple children were often observed in a vehicle. When that was the case, restraint use for the youngest child was recorded first, then information for the next youngest child occupant was recorded as time/visibility allowed.

TABLE 1. LOUISIANA CHILD RESTRAINT REQUIREMENTS

Age Group	Ages	Weight	Facing	Restraint Device
Infant	< 1	< 20 pounds	rear-facing	infant seat 
1 - 3	1, 2, 3	20-39 pounds	forward-facing	child safety seat (with internal harness) 
4 - 5	4, 5	40-59 pounds	(not specified)	belt positioning booster seat (backless or high-backed) 
6 - 12	6, 7, 8, 9, 10, 11, 12	60 or more pounds	(not specified)	child booster seat or safety belt 

Child Occupant Seatbelt (R.S. 32:295) - Children under the age of 6 years or less than 60 lbs. must be in a child restraint system or booster seat that is age and size appropriate, in accordance with manufacturers’ recommendations. Children 6 through 12 years of age must be restrained by a lap belt, shoulder harness, or an age / size appropriate child safety or booster seat.

FINDINGS

PRG observers collected the survey data between May 6th and May 19th, 2018. Ultimately, the survey included data on 1,774 children under the age of 13 on 1,571 vehicles. Table 2 displays the number of children observed by age and by region across all 69 observation sites.

TABLE 2. NUMBER OF OBSERVATIONS MADE AND SITES WORKED BY REGION (2018)

Regions	Number of Sites	Total Observations	Age Unk.	Age <1	Age 1 - 3	Age 4 - 5	Age 6 - 12
1. New Orleans vicinity	15	279		13	47	66	153
2. Baton Rouge vicinity	10	191		3	42	38	108
3. Houma/Thibodaux vicinity	7	226		12	50	56	108
4. Lafayette vicinity	10	263		24	43	13	183
5. Lake Charles vicinity	5	114		15	8	4	87
6. Alexandria vicinity	7	173		12	22	15	124
7. Shreveport vicinity	9	329		20	82	78	149
8. Monroe vicinity	6	199		8	53	67	71
Total	69	1774		107	347	337	983

Usage by Age Category

Table 3 depicts the restraint use by age group and restraint type. Observed restraint type by age category indicates that children, by and large, use the proper restraint type when not unrestrained.

TABLE 3: RESTRAINT TYPE/USE BY AGE CATEGORY

	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12
Standard Belt	0.0%	0.6%	16.9%	87.5%
		n=2	n=57	n=860
Rear Facing CSS	94.4%	6.9%	0.0%	0.0%
	n=101	n=24		
Front Facing CSS	4.7%	78.7%	2.4%	0.1%
	n=5	n=273	n=8	n=1
High Back Booster	0.0%	0.3%	30.9%	0.3%
		n=1	n=104	n=3
Backless Booster	0.0%	0.0%	24.3%	0.1%
			n=82	n=1
Not Belted	0.9%	11.8%	23.4%	11.5%
	n=1	n=41	n=79	n=113
Unknown	0.0%	1.7%	2.1%	0.5%
		n=6	n=7	n=5
Total	n=107	n=347	n=337	n=983

It is important to note that an unobtrusive, observational survey like the one presented here cannot tell if a child is correctly using a child safety seat or booster seat. There may be cases where booster seat usage is recorded as “seat belted” due to not detecting a backless booster seat. Also, as noted in Table 3, 18 different children had their usage marked as ‘Unknown’ even though the observer documented their age. The following tables and graphs on this page and the next, do not include passenger data in cases where usage was recorded “unknown.”

Table 4: RESTRAINT TYPE/USE BY AGE CATEGORY






		<u>Age < 1</u> (n=107)	<u>Age 1-3</u> (n=341)	<u>Age 4-5</u> (n=330)	<u>Age 6-12</u> (n=978)
	Rear-Facing Carrier	94.4% (n=101)	7.0% (n=24)	0% (n=0)	0% (n=0)
	Forward-Facing Carrier	4.7% (n=5)	80.1% (n=273)	2.4% (n=8)	0.1% (n=1)
	Booster Seat	0% (n=0)	0.3% (n=1)	56.3% (n=186)	0.4% (n=4)
	Vehicle Safety Belt	0% (n=0)	0.6% (n=2)	17.3% (n=57)	87.9% (n=860)
	No Restraint Used	0.9% (n=1)	12.0% (n=41)	23.9% (n=79)	11.6% (n=113)

FIGURE 2: TOTAL RESTRAINT USAGE BY AGE CATEGORY

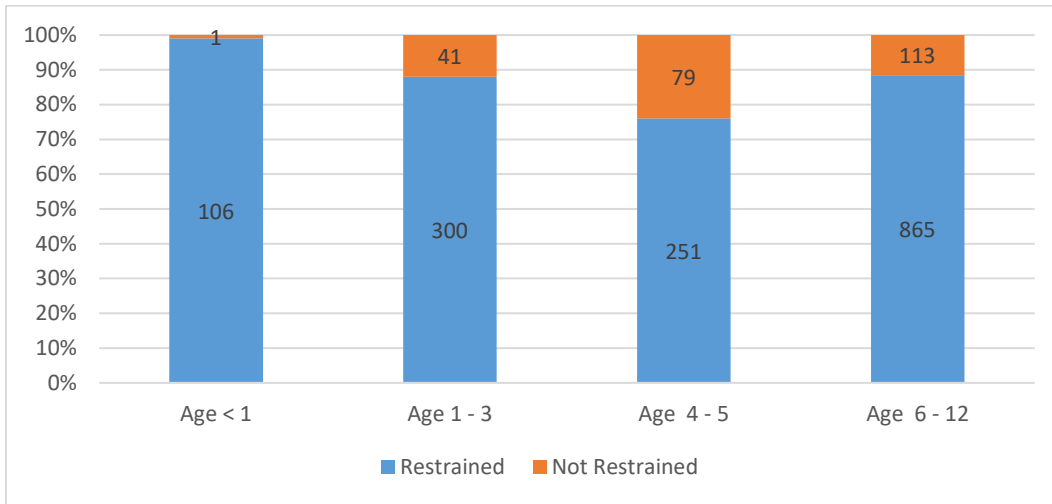
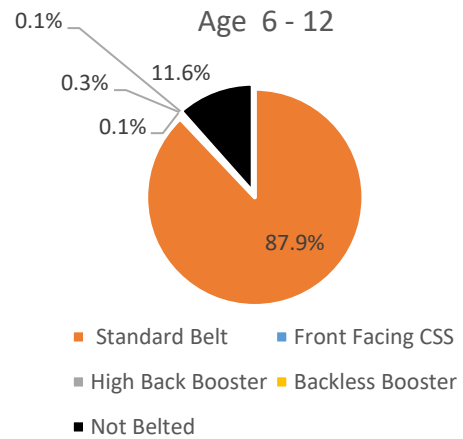
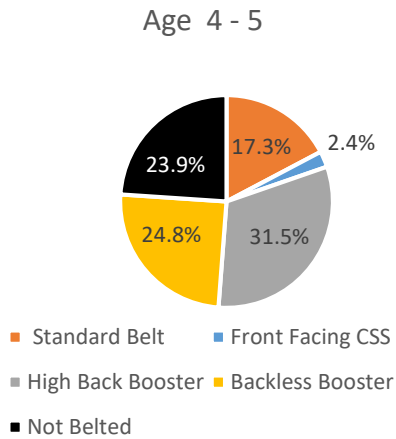
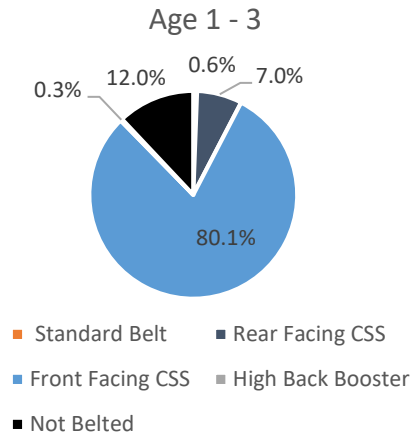
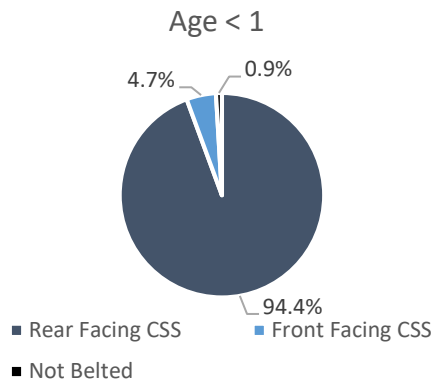


FIGURE 3: RESTRAINT TYPE/USE BY AGE CATEGORY



More than four out of five (87.9%) of all children included in the survey were restrained (Table 5). The sample error for this estimate was 1.0 percentage point. Survey data indicated that nearly every child less than one-year old was riding in a child safety seat (99.8%). Usage was 100% in all but one (Caddo) of the Louisiana Regions (Table 5).

The survey data indicated that 91.3% of children ages one through three were restrained. Usage among this age group varied across the regions of the State. Among this age group, restraint usage ranged from a low of 77.0% in the Shreveport Region to a high of 100% in the Lake Charles Region.

Four and five-year old children were restrained least often (77.7%) compared to both younger and older children (statewide). Survey results by region indicated vast differences between the regions. Survey data indicated the highest observed usage for four and five-year old children in the New Orleans Region (89.2%) and lowest observed usage in the Lafayette Region (52.2%). **However, it must be noted that sample sizes by regions and age groups are too small to draw reliable conclusions regarding differences between regions by age group.**

The restraint usage rate in Louisiana for children under age six was 87.6% with a standard error of 1.2 percentage points. Survey data also indicated that 88.1% of children ages six through twelve were restrained with a standard error of 1.4 percentage points.

TABLE 5: CHILD RESTRAINT USAGE ESTIMATES (PERCENT RESTRAINED) AND ASSOCIATED SAMPLE ERROR BY REGION AND AGE CATEGORY (2018) — WEIGHTED DATA

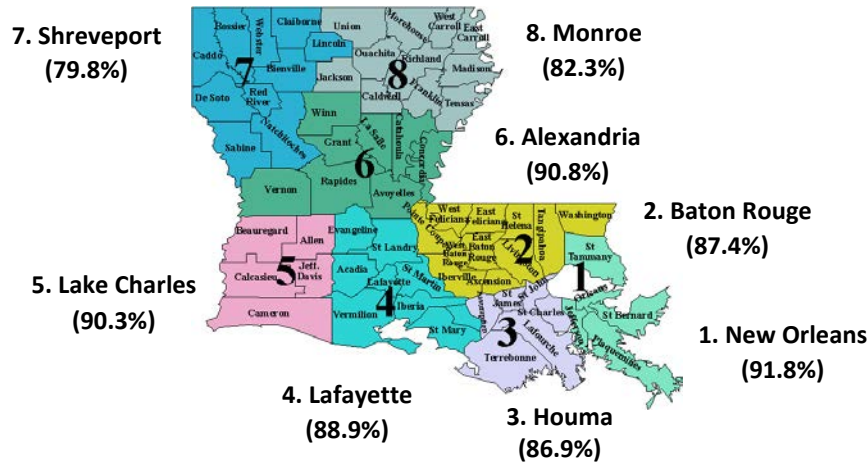
Regions	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12	Age <6	Age <13	Error Age <6	Error Age <13
1. New Orleans	100.0%	95.3%	89.2%	90.6%	93.8%	91.8%	2.1%	2.5%
2. Baton Rouge	100.0%	93.4%	84.9%	85.5%	90.7%	87.4%	3.0%	2.3%
3. Houma/Thibodaux	100.0%	83.6%	80.8%	87.8%	85.4%	86.9%	3.1%	2.5%
4. Lafayette	100.0%	97.0%	52.2%	93.4%	81.1%	88.9%	3.1%	1.7%
5. Lake Charles	100.0%	100.0%	78.8%	89.2%	92.3%	90.3%	7.2%	3.1%
6. Alexandria	100.0%	95.5%	76.2%	91.9%	89.0%	90.8%	3.6%	2.2%
7. Shreveport	98.1%	77.0%	71.1%	80.4%	78.7%	79.8%	3.9%	3.1%
8. Monroe	100.0%	79.5%	74.7%	83.2%	80.7%	82.3%	3.0%	3.3%
Statewide	99.8%	91.3%	77.7%	88.1%	87.6%	87.9%	1.2%	1.0%
Error	0.2%	1.7%	2.4%	1.4%	1.2%	1.0%		

Usage by Region

Figure 4 shows restraint usage for all ages in 2018. The low “n” collected at many sites allows for double digit swings in usage year to year at the local and regional level. None of the differences measured between 2017 and 2018 were statistically significant at $p=0.01$. Comparing the 2017 and 2018 results, statistically significant increases ($p=0.05$) were measured in the following regions: New Orleans (+7.6 percentage points); Houma (+17.4); Lafayette (+17.7); Alexandria (+11.7); and Shreveport (+19.1). Increases measured in the Lake Charles (+6.9) and Monroe (+12.0) regions

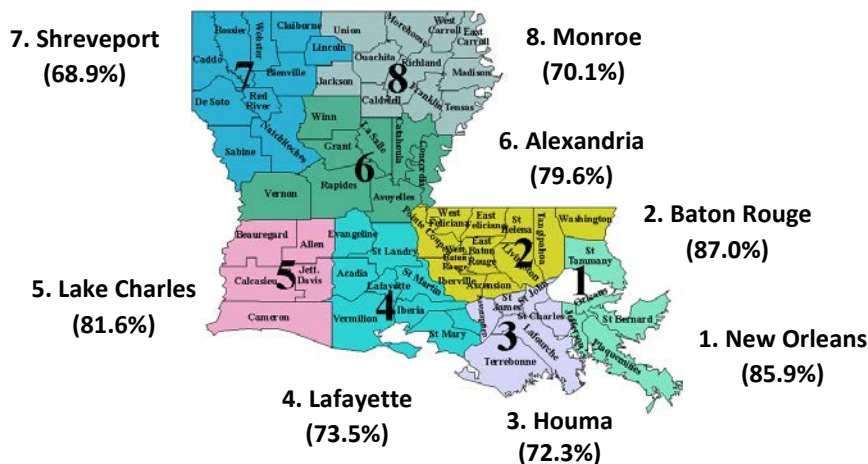
were not statistically significant at $p=0.05$. A decrease measured in the Baton Rouge Region (-2.1) was not statistically significant. The 2018 usage rate for children ages 12 and younger was highest in the New Orleans Region (91.8%) followed by these regions: Alexandria (90.8%); Lake Charles (90.3%); Lafayette (88.9%); Baton Rouge (87.4%) and Houma (86.9%). In comparison, child restraint usage rate was lower in the Monroe and Shreveport Regions (82.3% and 79.8%, respectively).

FIGURE 4: 2018 CHILD RESTRAINT USAGE (AGE < 13) PER REGION



The data shows a consistent increase from 2017 to 2018. While this is very likely indicative of some behavioral changes, it is advisable to use this or any singular year's data with caution when drawing conclusions. This is especially true at the local and regional level. While some differences may be due to chance because of the large standard errors for region estimates, the Shreveport and Monroe regions had consistently low use rates in the past five surveys. In trying to get a clear and accurate picture of child restraint usage with a low number of data points, looking at multiple years averaged together indicates broader trends and patterns than any singular year. Figure 4.1 shows five-year averages for each region. Restraint usage is highest in the Baton Rouge and New Orleans regions and lowest in the two northern most regions.

FIGURE 4.1: FIVE-YEAR AVERAGE CHILD RESTRAINT USAGE (AGE < 13) PER REGION



Usage by Louisiana State Police Troop Area

Child restraint usage varied by Louisiana State Police Troop Area (Table 6). Children under six years of age used restraints most often in the areas covered by Troops L (93.4%) and D (92.3%) and noticeably less in Troop G (78.7%). Troop C had the highest restraint use (93.9%) among the older children ages six through twelve, while Troops G (80.4%) and F (83.2%) had noticeably lower usage.

**TABLE 6: CHILD RESTRAINT USAGE ESTIMATES (PERCENT RESTRAINED) AND ASSOCIATED SAMPLE ERROR
BY TROOP AND AGE CATEGORY (2018) — WEIGHTED DATA**

Troop Region	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12	Age < 6	Age < 13	Standard Error Age <6	Standard Error Age <13
A (Baton Rouge)	100.0%	96.6%	81.5%	85.5%	90.8%	87.4%	2.1%	2.5%
B (New Orleans)	100.0%	92.1%	88.3%	88.0%	92.2%	89.5%	3.0%	2.3%
C (Houma)	100.0%	90.3%	84.9%	93.9%	90.0%	92.4%	3.1%	2.5%
D (Lake Charles)	100.0%	100.0%	78.8%	89.2%	92.3%	90.3%	3.1%	1.7%
E (Alexandria)	100.0%	95.5%	76.2%	91.9%	89.0%	90.8%	7.2%	3.1%
F (Monroe)	100.0%	79.5%	74.7%	83.2%	80.7%	82.3%	3.6%	2.2%
G (Shreveport)	98.1%	77.0%	71.1%	80.4%	78.7%	79.8%	3.9%	3.1%
I (Lafayette)	100.0%	97.0%	52.2%	93.4%	81.1%	88.9%	3.0%	3.3%
L (Hammond)	100.0%	91.3%	93.4%	93.1%	93.4%	93.2%	3.0%	3.3%
Standard Error	0.2%	1.7%	2.4%	1.4%	1.2%	1.0%		

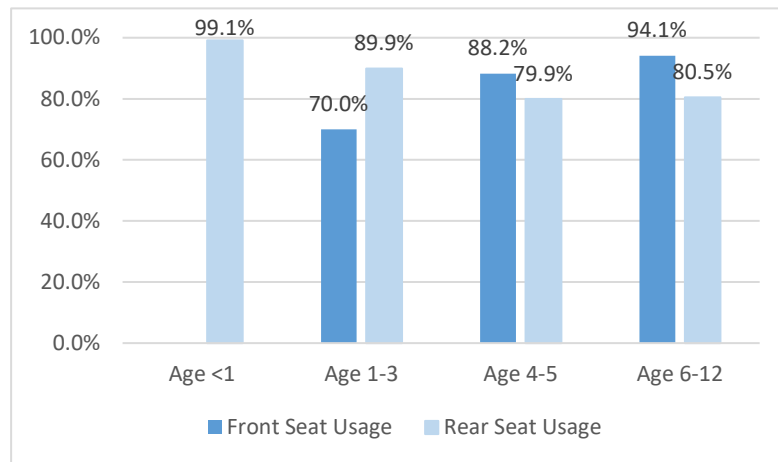
Front Versus Back Seat Usage

The 2018 survey results by seating position show that child restraint use for toddlers in front seating positions was very low, 70.0%. (Table 7 and Figure 5). No infant was observed in the front seat. However, it should be noted that there were only 10 toddlers observed in the front seating position. While this is only about 2.9% of all toddlers observed, these cases show that there is a small minority of drivers who have small children in the front seat positions not using a restraint device.

TABLE 7: CHILD RESTRAINT USAGE ESTIMATES (PERCENT RESTRAINED) AND SAMPLE SIZE

	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12
Front Seat Usage		70.0%	88.2%	94.1%
Rear Seat Usage	99.1%	89.9%	79.9%	80.5%
Front (N)		10	34	609
Rear (N)	107	337	303	374
Total	107	347	337	983
Front %	0.0%	2.9%	10.1%	62.0%
Rear %	100.0%	97.1%	89.9%	38.0%

FIGURE 5: CHILD RESTRAINT USAGE BY AGE AND SEATING POSITION



Trends in Child Restraint Usage

PRG observers recorded data for 1,774 children in the 2018 survey. This is lower than the number of observations made for the previous three surveys (1,941, 2,494 and 2,429 respectively), but still slightly higher than the 1,697 observations made at the same 69 sites during the 2011 survey.

Comparing the 2018 survey with the 2017 survey found that restraint use for children (less than 13 years of age) was 9.9 percentage points higher measure to measure (statistically significant at $p = .001$). The estimate for children ages five and younger was 3.2 percentage points higher than the 2017 estimate (statistically significant at $p = 0.002$), mainly due to a 4.5 percentage point increase in restraint use among infants (a statistically significant finding in itself at $p = .001$). Child restraint usage among four and five-year-old children was 3.6 percentage points higher in 2018 compared to 2017, however this finding was not statistically significant. Restraint use for toddlers was up 2.2% in 2018 (not statistically significant). Restraint use for children ages five and younger declined in some regions while it increased in others, but only two of the changes, the Monroe Region at +18.7 and the Houma Region at +10.4 points, were statistically significant at $p=0.001$ and $p=0.03$, respectively. The usage rate in Louisiana for children ages six through twelve was 88.1% in 2018 compared to 74.2% in 2017, a large increase of 13.8 percentage points (statistically significant at $p = .001$).

The restraint use in the 2018 survey was the highest for the last five years for all age groups. This was mainly due to a significant increase in restraint use in regions with past low child restraint use: the Shreveport Region, Monroe Region, and Alexandria Region. For instance,

- the 2017-2018 increase for children ages 5 and younger was 5.1 percentage points in the Alexandria Region, 8.7 percentage points in the Shreveport Region and 18.7 percentage points in the Monroe Region;
- for infants from 2017-2018, the increase was 21.4 percentage points in the Shreveport Region and 10.8 percentage points in the Monroe Region;

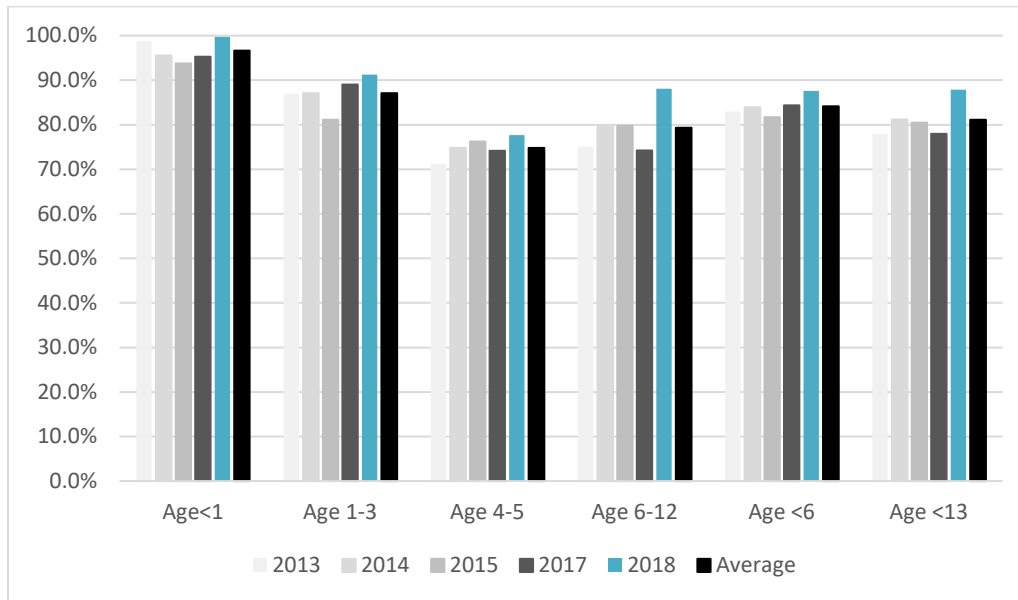
- the 2017-2018 increase for children ages 12 and younger was 11.7 percentage points in the Alexandria Region, 19.1 percentage points in the Shreveport Region and 12.0 percentage points in the Monroe Region.

TABLE 8: 2013-2018 CHILD RESTRAINT USAGE ESTIMATES BY AGE GROUP

Year	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12	Age < 6	Age < 13
2013	98.9%	86.9%	71.2%	75.1%	83.0%	78.0%
2014	95.6%	87.1%	74.8%	79.6%	83.9%	81.2%
2015	93.8%	81.1%	76.2%	79.7%	81.7%	80.5%
2017	95.3%	89.0%	74.1%	74.2%	84.4%	78.0%
2018	99.8%	91.3%	77.7%	88.1%	87.6%	87.9%
Average 2013–2018*	96.3%	84.9%	74.2%	77.3%	82.9%	79.4%
Difference 2017 to 2018	4.5%	2.3%	3.6%	13.9%	3.2%	9.9%
Standard Error Difference	1.1%	2.1%	3.2%	2.4%	1.0%	1.3%

*Weighted Average

FIGURE 6: 2013-2018 CHILD RESTRAINT USAGE ESTIMATES BY AGE GROUP



A word of caution is appropriate; regionally, the results are less stable when looking at particular age groups year to year, so we should not make too much about those changes by region at the age level. There may be variation not captured by the standard error we use -such as ongoing enforcement, time of day, day of week, and different populations of people present. We believe the 5-year average (Table 8) is probably the best indicator of what is going on in the regions by age group. Nevertheless, the 2018 survey results are encouraging. Specifically, the increase in restraint use in regions that have traditionally low restraint use is noteworthy.

TABLE 9: FIVE-YEAR AVERAGE CHILD RESTRAINT USAGE ESTIMATES BY AGE GROUP BY REGION

<i>REGION</i>	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12	Age < 6	Age < 13	<i>STD Error (Age <6)</i>	<i>STD Error (Age 6-12)</i>
1. New Orleans	99.5%	94.7%	86.4%	82.2%	92.3%	85.9%	1.1%	1.1%
2. Baton Rouge	100.0%	96.2%	83.1%	84.2%	91.7%	87.0%	0.9%	0.8%
3. Houma/Thibodaux	91.7%	77.2%	73.5%	68.9%	78.5%	72.3%	2.0%	1.8%
4. Lafayette	97.2%	79.5%	58.2%	72.8%	74.7%	73.5%	1.6%	1.3%
5. Lake Charles	98.5%	88.6%	76.4%	79.1%	85.8%	81.6%	1.6%	1.3%
6. Alexandria	98.0%	87.0%	71.5%	77.3%	83.4%	79.6%	1.4%	1.3%
7. Shreveport	87.1%	66.1%	64.0%	68.6%	69.5%	68.9%	1.6%	1.6%
8. Monroe	89.4%	64.2%	55.4%	72.7%	65.7%	70.1%	1.6%	1.5%
LA	96.3%	84.9%	74.2%	77.3%	82.9%	79.4%	0.5%	0.5%
Standard Error	0.5%	0.8%	1.0%	0.7%	0.5%	0.5%		

Characteristics of Drivers with Children

The 2018 survey had 1,571 drivers with children; 67.5% (n= 1,060) of the drivers were female and 32.2% (n=506) were male. For a small percentage the gender was not determined (0.3%, n=5.). Among drivers, 67.5% were coded as White (n=1,061); 27.3% were coded Black (n=429); 2.4 percent were coded Hispanic (n=38); 2.2 percent were coded Other (n=35) and 0.6% (n=8) were unknown. Race/ethnicity of drivers with children in the car closely matched the distribution of licensed drivers in the State of Louisiana in 2017 (67.1% White, 27.4% Black and 5.5% Other).

Driver Belt Use

The seat belt use rate among the drivers in this survey was 88.0% which is close to the seat belt use rate of 87.8% in 2016. Belt use rates by sex and race are depicted in Table 10. The belt use rates for female drivers is slightly lower than for male drivers in this sample. This is contrary to the results from the 2017 state wide survey which shows that male drivers have a lower belt use rate than female drivers of about 6.5 percentage points. Black drivers in this sample have a relative low belt use rate of 73.0% for female drivers and 73.6% for male drivers, while the 2017 state wide survey shows that black occupants have a belt use rate of 83.8%.

TABLE 10: AVERAGE SEAT BELT USAGE ESTIMATES OF DRIVER BY SEX AND RACE AND SAMPLE SIZE

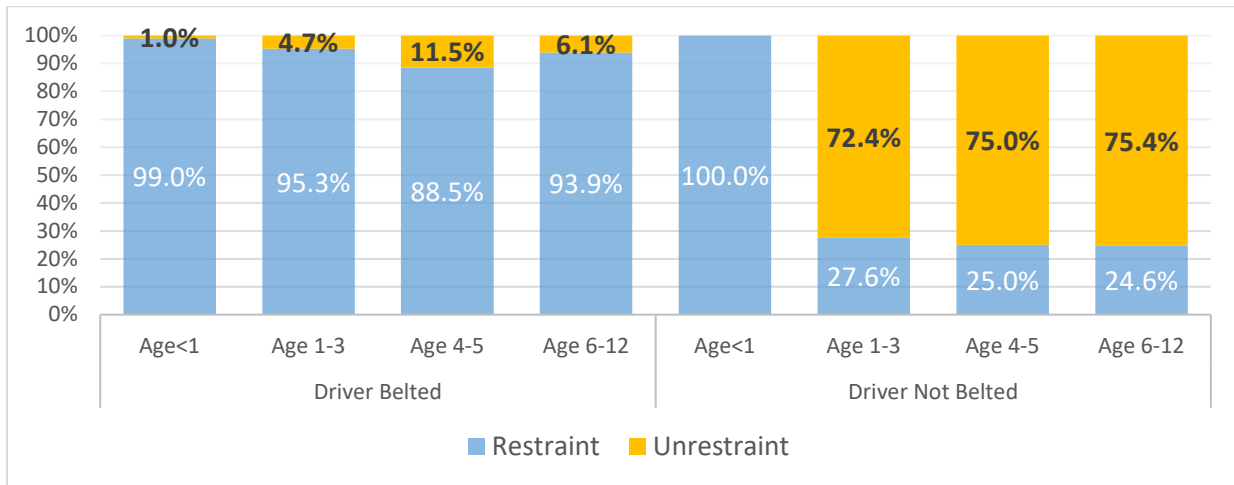
Race/Sex	Male	Female	Grand Total
White	94.7% (338)	93.8% (720)	94.0% (1,058)
Black	73.6% (129)	73.0% (300)	73.2% (429)
Hispanic	87.5% (16)	86.4% (22)	86.8% (38)
Other	82.6% (23)	83.3% (18)	83.7% (41)
Grand Total	88.5% (506)	87.5% (1,060)	87.8% (1,566)

*Does not include 5 drivers with unknown sex or belt use

How is Driver Belt Use Related to Child Restraint Use?

The 2018 child restraint survey found driver belt use is associated with child restraint usage. A child was far less likely to be restrained when a driver was not belted. The survey indicated children ages 1-12 were less likely restrained with an unbuckled driver. Only 25% of children ages 4-12 were restrained when the driver was not belted and only 28% of children ages 1-3 were restrained when the drivers was not belted. In comparison. This finding sheds new light on the importance of seat belt enforcement because drivers who do not buckle up are also very likely to put their children at risk by not restraining them.

FIGURE 7: CHILD RESTRAINT USAGE ESTIMATE BY AGE GROUP AND DRIVER BELT USE



There were only slight differences (although statistically not significant) between male and female drivers with respect to restraining their children.

FIGURE 8: CHILD RESTRAINT USAGE ESTIMATE BY AGE GROUP AND DRIVER SEX

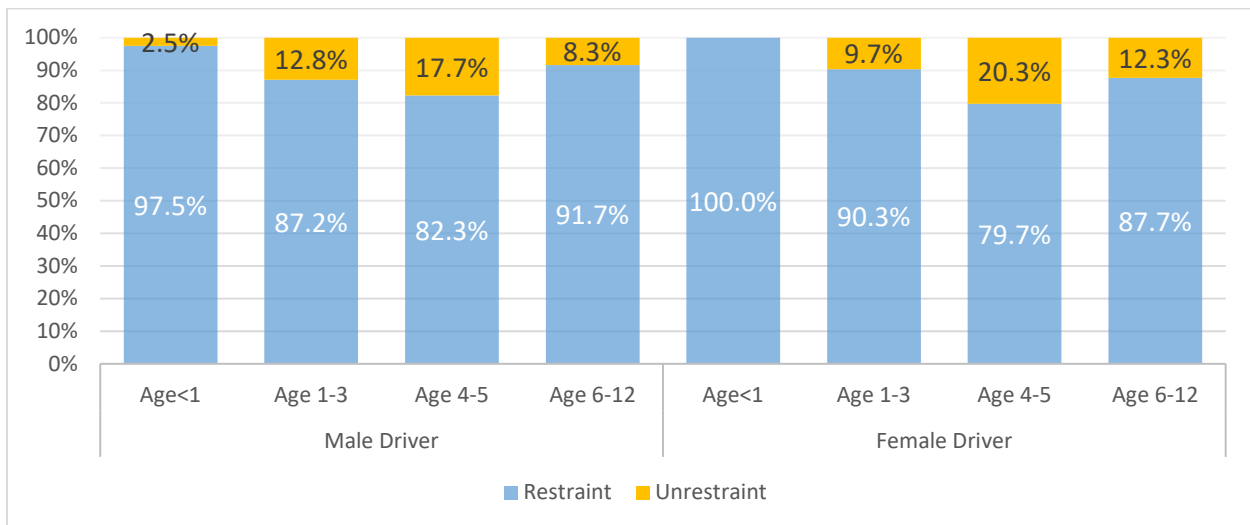
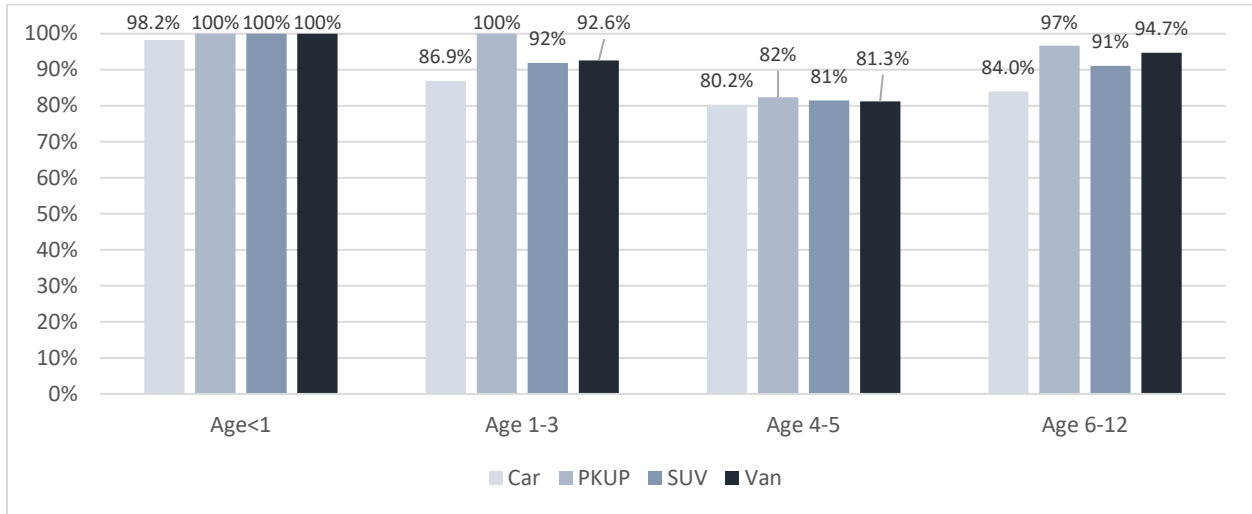


Figure 9 depicts child restraint use by vehicle type. While there are some apparent differences between child restraint use in different vehicles, they are not statistically significant and thus should not be over interpreted.

FIGURE 9: CHILD RESTRAINT USAGE ESTIMATE BY VEHICLE TYPE



CONCLUSIONS

Preusser Research Group carried out the 2018 child restraint survey. It was the fifth time PRG was tasked to conduct the survey.

The results of the 2018 survey indicate that a very high percentage of infants travelling in Louisiana are riding in a child restraint (99.8%). Restraint use is somewhat lower for children ages one through three (91.3%). Four and five-year old children were observed least often in a restraint (77.7%). Older children, ages 6 through 12, were using a seat belt 88.1% of the time.

Examining the five-year average is recommended for a more reinforced current landscape of child restraint use, especially at the regional level. It is encouraging that restraint use for ages 12 and younger has increased significantly in the two places, the Monroe Region and the Shreveport Region, that had very low restraint use in the past.

Children are more likely to ride in the front seat as they grow older and front seat restraint use was higher among older age children. The reverse was true in the rear seat, where younger children were more likely using a restraint in the rear seat. There is still room for improvement in child restraint use in both the front and rear seating positions and this is especially true among children ages four and older.

This is the first Louisiana child restraint use survey that also includes driver characteristics. The survey indicates that drivers who do not buckle up, by and large, do not restrain child passengers. These drivers are not only endangering themselves, but also endanger their child passengers. In the interest of child welfare, the State of Louisiana should focus efforts on all unrestrained children and the 12% of drivers who do not buckle up.

APPENDIX A. CHILD RESTRAINT SURVEY OBSERVATION SITES

CHILD RESTRAINT OBSERVATION SITES

REGION 1- New Orleans	Address	Description	Day of Week	Time
	300 W Esplanade Ave. Kenner LA	Wal-Mart Supercenter	Th	3:50 - 4:50
	2104 Williams Blvd. Kenner LA	Winn-Dixie Marketplace	Th	2:35 - 3:35
	Veterans Memorial Blvd. Metairie LA	Lakeside Mall--Main Entrance Side	W	3:00 - 4:00
	4500 Veterans Memorial Blvd. Metairie LA	Target	W	5:30 - 6:30
	5901 Airline Highway Metairie LA	Winn-Dixie Marketplace	Tues	5:00 - 6:00
	Veterans Memorial Blvd. Metairie LA	Toys R Us	W	4:10 - 5:10
	5110 Jefferson Highway Harahan LA	Wal-Mart Supercenter	Tues	3:30 - 4:30
	1901 Tchoupitoulas St. New Orleans LA	Wal-Mart Supercenter	Sun	5:00 - 6:00
	5400 Tchoupitoulas St. New Orleans LA	Winn-Dixie Marketplace--Riverside Market	Th	1:00 - 2:00
	Highway 23 Belle Chasse LA	McDonalds	Sun	2:00 - 3:00
	150 Northshore Blvd. Slidell LA	North Shore Square	Mon	1:00 - 2:00
	2985 Gause Blvd. Slidell LA	Winn-Dixie Marketplace	Mon	6:15 - 7:15
	167 Northshore Blvd. Slidell LA	Wal-Mart Supercenter	Mon	2:10 - 3:10
	109 Northpark Blvd. Covington LA	Causeway Place Shopping Center	Mon	3:45 - 4:45
	3414 Highway 190 Mandeville LA	Bed Bath & Beyond	Mon	4:50 - 5:50
REGION 2- Baton Rouge				
	2410 Tanger Blvd. Gonzales LA	Tanger Outlet Center	Sat	10:00 - 11:00
	308 N Airline Highway Gonzales LA	Wal-Mart Supercenter	Sat	11:15 - 12:15
	9401 Cortana Pl. Baton Rouge LA	Mall at Cortana -- Shopping	Sat	12:40 - 1:40
	6401 Bluebonnet Blvd. Baton Rouge LA	Mall of Louisiana -- Shopping	Sat	3:00 - 4:00
	10606 North Mall Drive Baton Rouge LA	Wal-Mart Supercenter	Sat	5:15 - 6:15
	2001 Millerville Road Baton Rouge LA	Target	Sat	6:30 - 7:30
	904 South Range Road Denham Springs LA	Wal-Mart Supercenter	Fri	5:20 - 6:20
	2000 SW Railroad Ave. Ste. 103 Hammond LA	Hammond Square Shopping Mall	Fri	2:30 - 3:30
	2799 West Thomas St. Hammond LA	Wal-Mart Supercenter	Fri	3:40 - 4:40
	3255 LA 1 South Port Allen LA	Wal-Mart Store	Sun	10:20 - 11:20

**REGION 3-
Houma**

401 N Canal Blvd. Thibodaux LA	Wal-Mart Supercenter	Sat	12:20 -1:20
Highway 308 Thibodaux LA	Rouse's -- Grocery	Sat	11:15 - 12:15
13001 Highway 90 Boutte LA	Wal-Mart Supercenter	Sat	4:00 - 5:00
1803 Louisiana 3125 Gramercy LA	Winn-Dixie	Sat	2:15 - 3:15
5953 W. Park Ave. Houma LA	Southland Mall Shopping Center	Sun	11:40 - 12:40
MLK Drive Houma LA	Wal-Mart Supercenter	Sun	10:30 - 11:30
933 Grand Caillou Road Houma LA	Wal-Mart Supercenter	Sat	9:45 - 10:45

**REGION 4-
Lafayette**

729 Oddfellows Rd. Crowley LA	Wal-Mart Supercenter	Th	2:30 - 3:30
1205 E. Admiral Doyle New Iberia LA	Wal-Mart Supercenter	Fri	3:50 - 4:50
E. Admiral Doyle New Iberia LA	Big K-Mart	Fri	1:45 - 2:45
5725 Johnston St. Lafayette LA	Acadiana Mall	Th	3:45 - 4:45
3142 Ambassador Caffery Lafayette LA	Wal-Mart Supercenter	Wed	6:10 - 7:10
2240 Ambassador Caffery Lafayette LA	Winn-Dixie Marketplace	Wed	4:50 - 5:50
4313 Ambassador Caffery Lafayette LA	Super Target	Th	5:00 - 6:00
1629 Creswell Ln. Opelousas LA	Wal-Mart Supercenter	Sat?	12:40 - 1:40
1400 Rees St. Breaux Bridge LA	Wal-Mart Supercenter	Wed	3:30 - 4:30
3005 Charity St. Abbeville LA	Wal-Mart Supercenter	Fri	12:30 - 1:30

**REGION 5-
Lake Charles**

1125 North Pine Deridder LA	Wal-Mart Supercenter	Fri	4:30 - 5:30
4060 Ryan St. South Lake Charles LA	Albertsons	Sat	10:00 - 11:00
3415 Highway 14 Lake Charles LA	Wal-Mart Supercenter	Sat	1:45 - 2:45
496 W. Prien Lake Rd. Lake Charles LA	Prien Lake Mall	Sat	11:15 - 12:15
303 Interstate Dr. Jennings LA	Wal-Mart Supercenter	Sat	3:40 - 4:40

**REGION 6-
Alexandria**

7162 Highway 1 Marksville LA	Wal-Mart Supercenter	Mon	3:00 - 4:00
940 Highway 167 Dry Prong LA	Dollar General Store	Sun	3:30 - 4:30

3437 Masonic Drive Alexandria LA	Alexandria Mall--J.C. Penney	Sun	1:30 - 2:30
2671 S. MacArthur Dr. Alexandria LA	Old Navy	Sun	10:00 -11:00
2050 North Mall Blvd. Alexandria LA	Wal-Mart Supercenter	Sun	12:25 - 1:25
2265 S. MacArthur Drive Alexandria LA	Albertson's	Sun	11:15 - 12:15
2204 South 5th St. Leesville LA	Wal-Mart Supercenter	Fri	3:00 -4:00

**REGION 7 -
Shreveport**

2536 Airline Highway Bossier City LA	Wal-Mart Supercenter	Tues	3:15 - 4:15
2950 E. Texas St. Bossier City LA	Pierre Bossier Mall	Fri	4:35 - 5:35
390 Plaza Loop Bossier City LA	Louisiana Boardwalk (weekend only)	Sat	12:00 - 1:00
9550 Mansfield Rd Shreveport LA	Wal-Mart Supercenter	Fri	3:00 - 4:00
8400 Millicent Way Shreveport LA	Cinemark Tinseltown	Sat	1:30 - 2:30
1133 St. Vincent St. Shreveport LA	Mall St. Vincent	Fri	4:15 - 5:15
7110 Youree Dr. Shreveport LA	Shreveport Super Target	Fri	5:30 - 6:30
1024 Cut Off Rd. Coushatta LA	Rivertown Market/Dollar General	Tues	3:05 - 4:05
1379 Homer Road Minden LA	Wal-Mart Supercenter	Tues	1:30 - 2:30

**REGION 8-
Monroe**

184 Old Winnfield Rd. Jonesboro LA	Wal-Mart Supercenter	Mon	3:00 -4:00
6091 Mer Rouge Rd Bastrop LA	Wal-Mart Supercenter	Wed	3:00 - 4:00
1025 Glenwood Dr. West Monroe LA	Wal-Mart	Thurs	3:00 - 4:00
4103 Pecanland Mall Dr. Monroe LA	Monroe Target	Wed	4:45 - 5:45
4700 Milhaven Rd. Monroe LA	Pecanland Mall	Thurs	4:30 - 5:30
1350 Pecanland Plaza Monroe LA	Toys R Us	Thurs	5:40 - 6:40



APPENDIX B. CHILD RESTRAINT SURVEY DATA COLLECTION FORM

Louisiana Child Restraint Use Data Collection Form 2018

SITE #: _____ PARISH: _____ Observer Name: _____ DATE: _____

TIME: _____ a.m. p.m. DAY OF WEEK: Sun M Tu W Th F Sat DIRECTION OF TRAVEL: N S E W
 (circle one) (circle one)

LOCATION: _____
 (street) (cross street or other landmark)

VEHICLE TYPE:		DRIVER			
<input type="checkbox"/> Passenger Car <input type="checkbox"/> SUV <input type="checkbox"/> Van/Minivan <input type="checkbox"/> Pickup Truck		RESTRAINT USE: <input type="checkbox"/> Belted <input type="checkbox"/> Unknown <input type="checkbox"/> Not Belted	GENDER: <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown	RACE: <input type="checkbox"/> White <input type="checkbox"/> Hispanic <input type="checkbox"/> Unknown <input type="checkbox"/> Black <input type="checkbox"/> Other	
CHILD PASSENGER 1		CHILD PASSENGER 2			
RESTRAINT USE: <input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster <input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted <input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unknown <input type="checkbox"/> High Back Booster		AGE: <input type="checkbox"/> <1 <input type="checkbox"/> 1-3 <input type="checkbox"/> 4-5 <input type="checkbox"/> 6-12	 Seating Position	RESTRAINT USE: <input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster <input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted <input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unknown <input type="checkbox"/> High Back Booster	
AGE: <input type="checkbox"/> <1 <input type="checkbox"/> 1-3 <input type="checkbox"/> 4-5 <input type="checkbox"/> 6-12		 Seating Position			