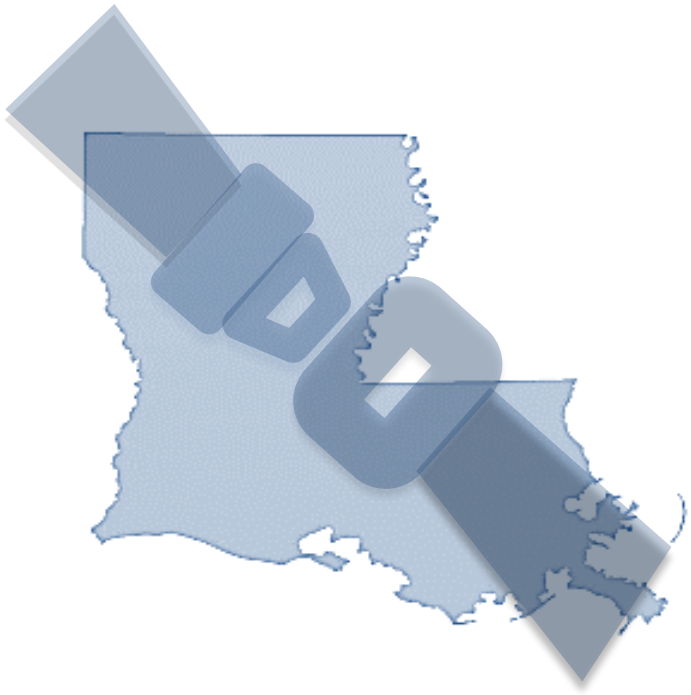
2024 LOUISIANA SEAT BELT OBSERVATION SURVEY RESULTS
LHSC Project No. 2024-20-10



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EXECUTIVE SUMMARY

Background

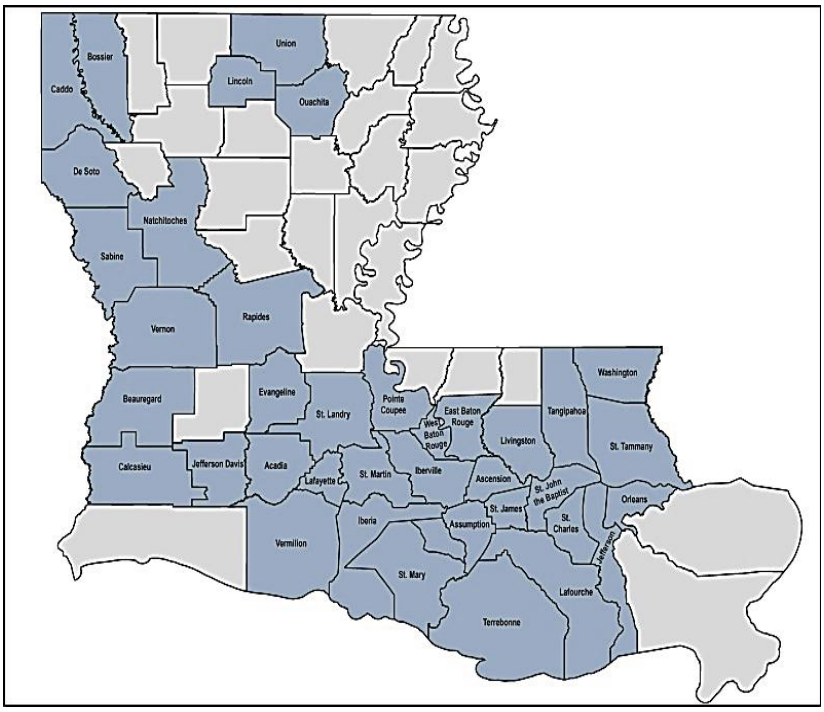
This report documents Louisiana's annual Statewide Seat Belt Use Survey. The Louisiana Highway Safety Commission (LHSC) is responsible for the State of Louisiana's Highway Safety Program. Occupant protection is among several significant program areas for which LHSC is responsible. A portion of LHSC's occupant protection program funding comes from the Federal Government, which requires administration of a statewide survey of seat belt use that must adhere to Federal Register Guidelines (Schneider, 2012).

The report that follows provides results from the 2024 statewide observational survey. The survey followed National Highway Traffic Safety Administration (NHTSA) procedures that determine the outboard, front-seat occupant belt use rate. Rear-seat belt usage was measured as well. Preusser Research Group, Inc. (PRG) conducted the survey with the support and help of scientist and statistician, Helmut Schneider, Ph.D., of Louisiana State University.

Methodology

NHTSA requires that statewide surveys are updated every five years to include newly sampled survey sites based on the most recent traffic fatality counts. Dr. Schneider complied with NHTSA's requirements and, in 2022, selected 285 sites across 39 parishes. These sites were first used for the 2022 statewide survey and will remain functional in all statewide surveys up to, and including, the 2026 survey. The sites randomly represent all the traffic on various types of roadways around the state.

Parishes Included in Statewide Seat Belt Survey



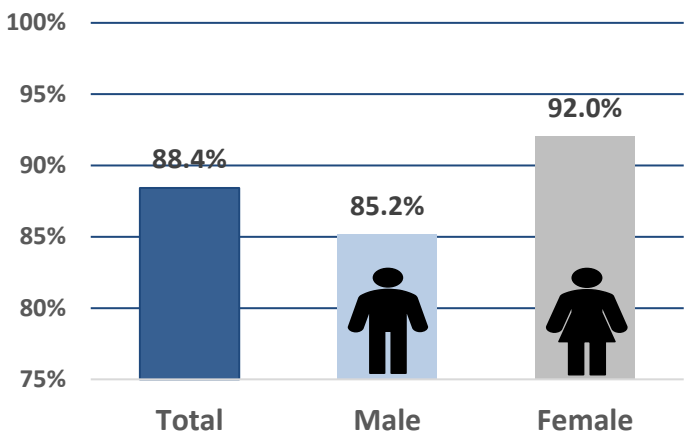
Observations were randomly scheduled for all days of the week during daylight hours, between 7:00 a.m. and 6:00 p.m. One-hour observations took place at each site. PRG observers recorded information on vehicle type, driver sex, driver race, and driver seat belt use. Observers also recorded information on passenger sex, race, and belt use when an outboard passenger was present in the front seat of the vehicle. The survey effort took place late May - June of 2024.

Results

Louisiana's statewide belt usage rate for 2024 is 88.4%. The 2024 statewide use rate is 2.9 percentage points above the most recent rate of 85.6% measured in June of 2023, and 0.6 percentage points above the historic high measured in December 2016 (87.8%). The increase from 2023 to 2024 is statistically significant (at $p = 0.05$).

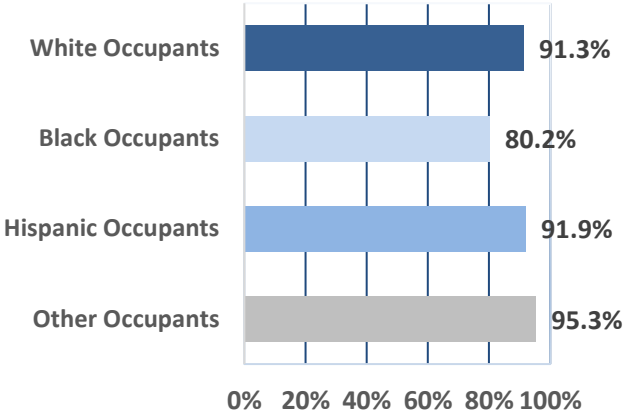
The 2024 survey included additional information such as: occupant sex, race/ethnicity, and vehicle type. The figure to the right shows that belt use among male occupants was 6.9 percentage points lower compared to female usage (85.2% vs. 92.0%), which is slightly less than the gap of 7.5 percentage points in 2023.

2024 Seat Belt Use Rate by Occupant Sex



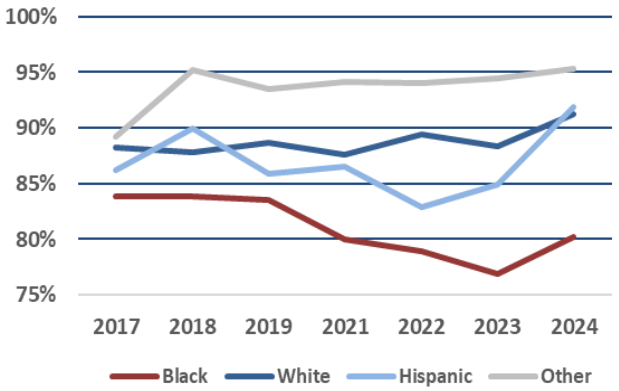
Belt usage has historically differed by occupant race/ethnicity. Most notably, Black occupants are less likely to wear a seat belt compared to other races/ethnicities. This has been the case for each year of this survey. LHSC directed resources in the recent past towards improving minority belt use while working to improve overall belt usage. The gap in usage between Black occupants and the other races/ethnicities decreased only slightly in 2024 compared to 2023 as usage for all race/ethnicities increased year to year. For example, belt usage among black front-seat occupants was 11.4 percentage points lower than white front seat occupants in 2023 and this gap decreased to 11.1 percentage points in 2024. However, over time, this gap is still at the largest levels measured to date. Please note that Hispanic and Other/Unknown occupant usage rates have large swings from year-to-year, largely due to small sample sizes.

2024 Seat Belt Use Rate by Race/Ethnicity



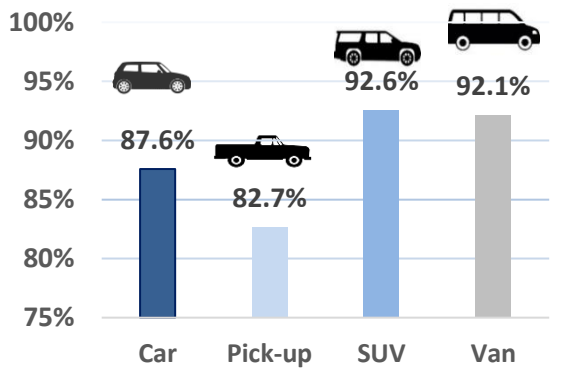
Vehicle type also makes a difference in belt usage (see figures on next page). Operators and passengers in pickup trucks use seat belts less often than occupants in other vehicle types. A large portion of the sample (over one-quarter) from year-to-year includes pickup trucks and that drags the overall statewide average downward. This has been the case every year of the survey. While belt use did increase in all vehicle types year to year, usage has not changed much from 2017 levels. The wide gap in usage between occupants in pickup trucks and other vehicle types remains largely unchanged. The seat

Seat Belt Usage by Race/Ethnicity: 2017-2024

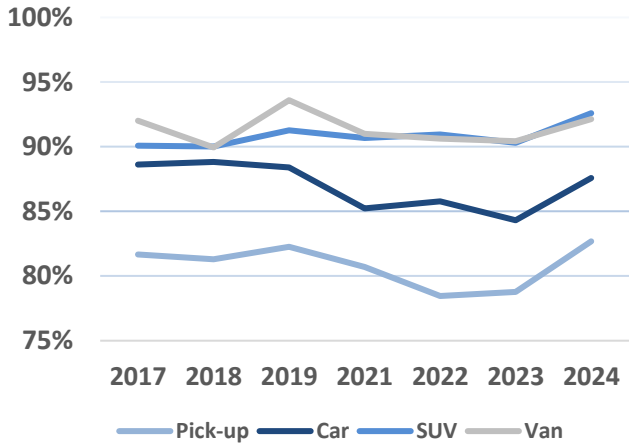


belt use of front seat occupants in pickup trucks was 82.7% in 2024 compared to 78.8% in 2023, an increase that was statistically significant at p=0.05.

2024 Seat Belt Use Rate by Vehicle Type



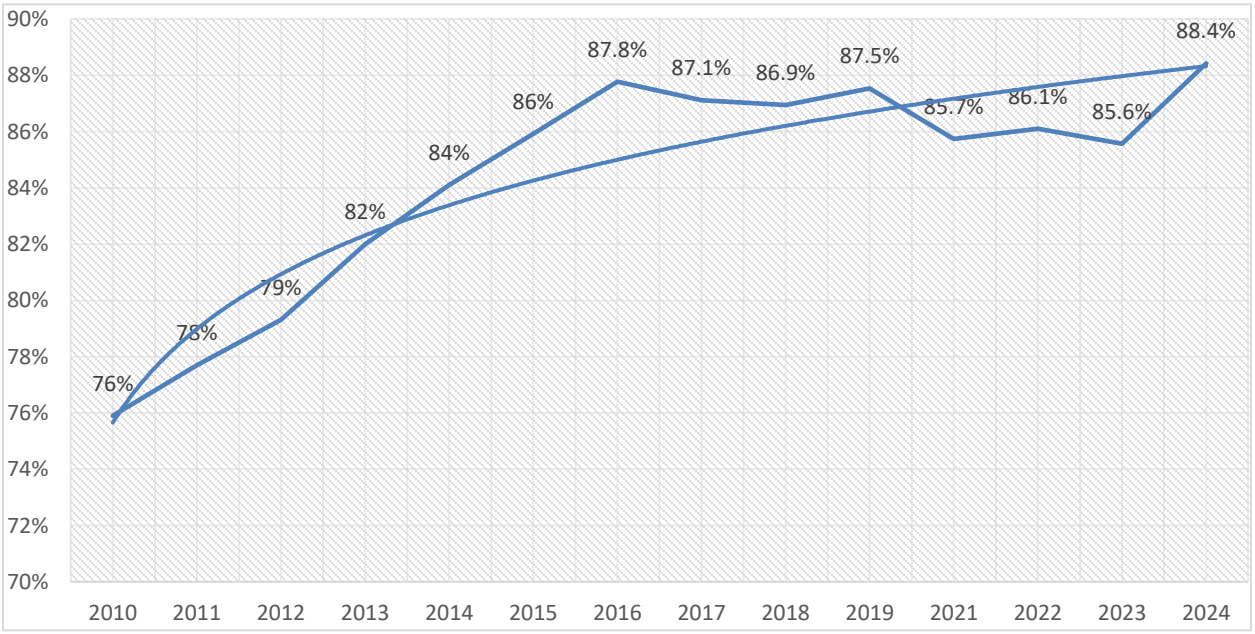
Seat Belt Usage by Vehicle Type: 2017-2024



Conclusion

Louisiana's front-seat belt use rate for 2024 is 88.4%. The difference in rate was statistically significant from the rates determined for the years 2016 to 2023. Seat belt usage on Louisiana roadways, which had generally shown an upward trend of around one percentage point annually between 2010 and 2016, plateaued between 2016 and 2019, dropped in 2021 to 2023, and increased again in 2024 to its highest level to date. The graph below shows that the seat belt use between 2010 and 2024 followed a typical learning curve which exhibits larger increases early on and smaller increases later. The 95% confidence interval for the current seat belt use rate is from 87.7% to 89.2%.

Louisiana Seat Belt Weighted Use Rates, 2010-2024



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BACKGROUND

Introduction

The Louisiana Highway Safety Commission (LHSC) is responsible for the State of Louisiana's Highway Safety Program. Occupant protection is among several significant program areas for which LHSC is responsible. A portion of LHSC's occupant protection program funding comes from the Federal Government, which requires administration of a statewide survey of seat belt use that must adhere to Federal Register Guidelines (Schneider, 2012). This report documents Louisiana's 2024 Statewide Seat Belt Use Survey effort.

The statewide seat belt survey covered by this report was conducted by Preusser Research Group, Inc. (PRG), under contract with the LHSC. All the survey work was completed throughout the month of June 2024. The results that follow provide an accurate and reliable estimate of outboard front-seat belt usage in the State of Louisiana in 2024, and results are directly comparable to previous surveys.

Seat Belt Law and Seat Belt Use

The Louisiana State Legislature passed the first seat belt law in 1985, and it went into effect July 1, 1986. That law was a secondary enforcement law, meaning law enforcement officers could not stop a vehicle solely for a seat belt violation. The law was changed to a primary enforcement law almost ten years later, in 1995, with the intention of allowing police to stop violators for the sole reason of not wearing a seat belt. However, in 1998, courts ruled that the wording of the bill did not allow violation of the law to be considered a primary offense. It was not until August 15, 1999, that a revised primary enforcement law became effective in Louisiana (McKenzie, III, 2011). The law was amended in 2008 to include rear-seat passengers. According to the current Louisiana seat belt law, if a person is being transported by a motor vehicle, no matter the seating position, a proper restraint should be used.

Seat belt use rates in Louisiana have fluctuated over the past couple of decades since the primary law was passed. From 1999 to 2002, statewide seat belt use rates increased very little from 67.0 to 68.6 percent. Louisiana first participated in the national *Click It or Ticket* campaign in 2003 and a 5-point increase in the statewide use rate (73.8%) was measured that year (Schneider, 2004). Statewide seat belt use rates increased over the next two years peaking at 77.7 percent in June 2005. In 2006, the statewide measurement result decreased 2.9 percentage points to 74.8 percent (U.S. Department of Transportation, National Highway Traffic Safety Administration, July 2011). It should be noted that Louisiana sustained serious damage from Hurricane Katrina in 2005. The property damage and displacement of many of the State's residents could have influenced seat belt use rates. Use rates climbed back to the peak level seen in 2005 by 2011. By 2016, the annual survey measured seat belt use at an all-time high of 87.8 percent (Preusser Research Group, Inc., 2016). The annual rate remained in the same statistical range until the December 2021 measure. No survey was conducted in 2020 due to the Covid-19 pandemic.

Statewide Survey Statistician

Dr. Helmut Schneider has developed all the seat belt survey designs approved by the National Highway Traffic Safety Administration (NHTSA) to be used in the State of Louisiana, including the designs PRG, Inc. has used when it has conducted the annual statewide survey. Dr. Schneider is a professor at the E. J. Ourso College of Business, Associate Dean of Research and Economic Development, and an Ourso Family Distinguished Professor at Louisiana State University. Dr. Schneider received his degree in Operations Management and Statistics in 1978 and has taught statistics and statistical sampling for 33 years. He has published over 50 articles in peer reviewed journals and written two books. He has more

than 20 years of experience in working with crash data and has analyzed Louisiana's statewide seat belt survey results since 2003 (McKenzie, III, 2011).

Preusser Research Group, Inc. (PRG) planned and implemented Louisiana's 2024 seat belt survey using Dr. Schneider's most recent resample from 2023 as a guide. Every five years, NHTSA requires that statewide surveys include newly sampled survey sites based on the most recent traffic fatality counts. Dr. Schneider complied with NHTSA's requirements and PRG carried out the survey effort. The 2022 resample and the survey effort in 2024 are compliant with NHTSA's Uniform Criteria for State Observational Surveys of Seat Belt Use. [1]

[1]National Highway Traffic Safety Administration. (2011) Uniform Criteria for State Observational Surveys of Seat Belt Use. 23 CFR Part 1340, Docket No. NHTSA-2010-0002, RIN 2127-AK41, Federal Register Vol. 76 No. 63, April 1, 2011, Rules and Regulations, pp. 18042 – 18059.

METHODOLOGY

Survey Design and Site Selection

Louisiana's 2024 Statewide Seat Belt Survey was the second survey iteration using observation site locations resampled in 2022. This resample was in response to a NHTSA requirement that new sites be selected every five years. As such, every survey from 2022 through 2026 will use the new set of sites.

The 2022 survey design was developed by Dr. Helmut Schneider. The 2012 design included 390 observation sites and was approved by NHTSA. The number of observation sites dropped to 336 in 2013, and that change was accepted by NHTSA, as it proved to be both efficient and reliable. The 2017 resample used updated vehicle miles traveled (VMT), numbers of fatalities, and road inventory to determine the number and location of observation sites. The 2022 design does not use VMT, but rather a stratified sample of 3 road segments from each road class available from the 39 parishes included in the sample. The resample includes 285 sites, 51 fewer than the 2017 sample, but still reliable. The current sample of observation sites was approved for use by NHTSA in the spring of 2022.

Dr. Schneider used crash-related fatality data from 2016-2019 to select the parishes included in the 2022 resample. According to the Fatality Analysis Reporting System (FARS), 38 of 64 parishes account for 85% of crash-related fatalities in Louisiana. However, one parish was added in Region 8 for a total of 39 parishes included in the survey design to have a minimum of three parishes in lower populated regions, i.e., Morehouse Parish was added in Region 8.

Figure 1.
Parishes Included in Statewide Seat Belt Survey

The 2022 design divided the sampling frame into eight statewide regions, the parishes within these regions, and highway types. In 2024 a ninth region was added on the north shore of Lake Pontchartrain across from New Orleans. This area has grown in population over the years and thus was added as a planning region comprised of four parishes, one (St. Tammany) from Region 1 and three (Washington, St. Helena and Tangipahoa) from Region 2 (see Figure 1).

Dr. Schneider used a 2019 TIGER file provided by NHTSA. The selected road segments were classified into three types: Interstates, US and State routes, and Local roads. A site number reflecting the region, parish, and highway type was assigned to each road segment. Rural roads were excluded from the sample in parishes that were not within Metropolitan Statistical Areas - as well as other non-public roads, unnamed roads, unpaved roads, vehicular trails, access ramps, cul-de-sacs, traffic circles, and service drives. A stratified probability sampling in regions, parishes, and road segments was used to determine site locations for Interstates and US and State routes. The stratification consists of 95 different strata, and each stratum is identified by one of the 39 parishes included in the sampling frame and one of 3 road types (Limited Access Highways, Arterials and Local Roads). However, some parishes will not have all road types included (or available for use) because they either may not have limited access highways, or their rural roads are excluded as mentioned above.

PRG used specific road segment information provided by Dr. Schneider to pinpoint observation site locations in 2017, and this was done again in 2022 for the newly selected sites (Schneider, 2022). The 2024 survey used the same sites as the 2023 survey: 278 primary sites from the 2022 design and 7 alternate sites from the 2022 design submitted and approved by NHTSA. Trained observers revisited the exact observation locations (i.e., where data collectors stood to observe vehicles) from the previous site visits. Observers created site maps in 2022 upon the completion of each observation to ensure replication of exact observation locations from year to year.

Scheduling

Observation sites were organized into clusters of four to six sites based on geographical proximity. Each cluster was randomly assigned a single day of week for observation. The first site to be surveyed in each cluster was also randomly assigned. A time efficient route, starting with the randomly selected first site, was developed to determine the order of the remaining sites in the cluster. Observers were given a schedule and a mapped-out route for each cluster. The schedule specified site order, day of week to conduct observations, start times, name of road segment, location to observe, and direction of traffic to observe for each site.

Observations were prescheduled for all days of the week during daylight hours between 7:00 a.m. and 6:00 p.m. Observers were provided with a time frame to use as a guide to schedule sites throughout the day. Depending on the number of sites in a cluster, the time from 7:00 a.m. to 6:00 p.m. was divided into nearly equal-length time periods. For example, for five-site days, time of day was specified as one-of-five, time periods, such as 7:00 – 9:00 a.m., 9:00 – 11:00 a.m., 11:00 a.m. – 2:00 p.m., 2:00 – 4:00 p.m., and 4:00 – 6:00 p.m. Also, for six-site days, time of day was specified as one-of-six, time periods, such as 7:00 – 8:45 a.m., 8:45 – 10:30 a.m., 10:30 a.m. – 12:15 p.m., 12:15 – 2:30 p.m., 2:30 – 4:15 p.m., and 4:15 – 6:00 p.m. Exact times were subject to adjustment but resulted in approximately an equal number of sites being observed throughout the individual 7:00 a.m. – 6:00 p.m. time frames. In all cases, each survey period lasted exactly one hour and was required to take place entirely within the broader allowable time period.

Observers

Observers were hired and trained exclusively by PRG. All had conducted seat belt observations for PRG in previous surveys, and all were trained to the specific requirements for the Louisiana survey, though most observers remained consistent from preceding years. Prior to any data collection, procedures specific to the Louisiana survey were explained to observers in a training session. Observers also participated in hours of supervised street-side practice prior to conducting observations in the field. Additionally, observers were trained on procedures to follow in conditions such as bad weather or temporary traffic impediments which may require rescheduling of sites. Nine observers operated individually, and one quality control monitor was utilized.

Data collectors created new Site Map forms, documenting details of each new site location upon initial arrival (see Appendix A). Site maps include information about where to stand to make observations, the direction of traffic flow to observe, a point of reference, and any prominent landmarks (names of intersecting roadways, traffic lights, nearby buildings, etc.). Site maps ensure the survey and its data can be accurately reproduced year to year.

Observation Site Details
Most locations for data observation were tentatively selected based on available on-line mapping information such as satellite images and ground-level photos. When convenient, potential site locations were visited in advance. The complete road segments were also described by map details such as road name or number and segment length.

Preference was given to observation points where traffic appeared to naturally slow or stop. For street locations, representing segments with generally equivalent traffic throughout, a suitable observation point closest to the latitude and longitude mapped pinpoint was sought, but any location along the segment where accurate observations could be made was accepted. Preferred locations were near intersections which may cause vehicles to slow, increasing the time for observation and improving data completeness and accuracy. However, observation sites were not confined to intersections only. In some cases, traffic was observed at or near exit ramps for limited access highway segments at a point where traffic slowed enough to allow reliable and accurate observations.

Data Collection Procedures
Passenger vehicles with a gross vehicle weight up to 10,000 pounds were included in the survey. Passenger vehicle drivers, right front-seat passengers (excluding children in child safety seats), and rear-seat passengers 13 years of age and older were observed for seat belt use. Observers noted vehicle type (Car, Truck, SUV, Van), sex of drivers and passengers, race/ethnicity (White, Black, Hispanic, "Other") of drivers and passengers, and belt use on the data collection form. A copy of the data collection form can be found in Appendix A.

Observers recorded pertinent site information on the data collection form including site number, exact roadway location, observer's initials, date, day of week, time, weather condition, and direction of traffic flow. Each one-page form included space to record information on 25 vehicles. For more vehicles, additional sheets were used and all sheets for the period were fastened together. If data could not be collected at a site due to a temporary problem such as bad weather, a traffic impediment, or sudden illness, observers were instructed to reschedule data collection at the same site for the same time of day and day of week, when possible. If the site could not be used due to a more permanent factor such as construction, a pre-selected alternate road segment was used.

Quality Control
PRG has extensive experience in training seat belt use observers. All observers received training that included both classroom instruction and field (roadside) practice. An additional trained observer also served as a Quality Control Monitor (QCM) and conducted random, unannounced visits to other trained observers in the field. The QCM conducted checks at approximately 5 percent of total sites and ensured that observers were in place and making observations during the scheduled observation period.

All observation data were reviewed when received and no anomalies were found, suggesting the data did not reflect anything other than proper on-site seat belt use observations. Some cues to the contrary would have included repeating patterns within the observation data, unusual proportions of vehicle type, driver or passenger sex, presence of passengers, seat belt use, excessive unknown seat belt use, or very high or low total numbers of observations. Some variation in these values is normal, of course. If any suspicious data patterns had been noted, PRG would have followed up to verify whether observations were done properly. Invalid data would have been replaced in such cases. Again, no problems were detected and thus, corrective actions were not necessary for this survey iteration.

Building a Data Set

Observation data were keypunched by PRG staff into Excel spreadsheets. PRG applied the Statistical Package for the Social Sciences (SPSS) software to run frequencies and correlations to identify any outliers or coding errors. A thorough check of the data indicated only minimal coding or key-punch errors, all of which were corrected pre-analysis. The data set was then forwarded to Dr. Schneider for analyses and the calculation of weighted rates and results.

RESULTS

Sample Characteristics

Data collectors observed seat belt use at 285 sites across 39 parishes, divided into nine regions across the State. Table 1 allocates the site distribution by region. The nine regions represent the following areas: New Orleans, Baton Rouge, Houma, Lafayette, Lake Charles, Alexandria, Shreveport, Monroe and Northshore.

TABLE 1.
Number of Observation Sites by Region, 2024

Region	Sites per the Design	Sites Completed
1-New Orleans	18	18
2-Baton Rouge	57	57
3-Houma	36	36
4-Lafayette	48	47
5-Lake Charles	18	18
6-Alexandria	27	27
7-Shreveport	33	33
8-Monroe	21	21
9-Northshore	27	27
State Total	**285**	**284**

**One site had zero vehicles observed.*

Seat belt use information was recorded for 31,587 front-seat occupants over the nine regions. One of the sites in the 2024 survey resulted in zero belt use observations, and number of occupants with unknown seat belt use was 29 or 0.1%. The distribution of those occupants by region, including occupant type (driver or passenger), is shown on the next page (Table 2). The observed number of vehicles increased from 23,942 in 2023 to 32,587 in 2024 or 10%. Table 3 presents the distribution of observed passenger vehicle types by region.

The relative distribution of vehicle type changed slightly from 2023 to 2024. While there was a lower percentage of light trucks (-1.0 percentage points), SUVs (-0.6 percentage points) and vans (-0.2% percentage points) there was a higher percentage of cars (+1.8 percentage points) in the 2024 sample compared to 2023. It should be noted that while the 2024 distribution of vehicles was mostly similar to 2023, the percentage of pickup trucks in the 2024 and 2023 observed samples were the second highest and highest, respectively, of all surveys over the past ten years.

TABLE 2.
Number of Louisiana Front-Seat Occupants Recorded by Region, 2024

Region	Drivers	Passengers	Total
1-New Orleans	3,224	630	3,854
2-Baton Rouge	6,028	987	7,015
3-Houma	4,593	868	5,461
4-Lafayette	3,480	850	4,330
5-Lake Charles	841	170	1,011
6-Alexandria	1,424	335	1,759
7-Shreveport	2,822	668	3,490
8-Monroe	1,513	234	1,747
9-Northshore	2,289	631	2,920
LA Total	**26,214**	**5,373**	**31,587**

**Does not include cases with unknown belt usage information.*

TABLE 3.
Distribution of Vehicle Type* by Region, 2024

Region	% Car	% Pickup	% SUV	% Van
1-New Orleans	31.8%	44.0%	18.3%	6.0%
2-Baton Rouge	33.2%	37.4%	26.4%	3.1%
3-Houma	29.1%	35.7%	31.6%	3.6%
4-Lafayette	29.1%	37.0%	30.3%	3.6%
5-Lake Charles	29.1%	27.0%	39.7%	4.2%
6-Alexandria	28.1%	28.2%	40.0%	3.7%
7-Shreveport	43.3%	18.4%	34.3%	4.0%
8-Monroe	41.9%	19.8%	33.5%	4.8%
9-Northshore	34.8%	32.0%	27.3%	5.9%
LA Total	33.1%	33.5%	29.3%	4.1%

**Unknown vehicle type not included*

Observers recorded occupant sex and race/ethnicity. Tables 4 and 5 display these characteristics by region for all front-seat occupants. If a characteristic was unclear to the observer, "unknown" was recorded on the data form. There was a slightly lower percentage of males in the 2024 sample compared to the 2023 sample (-0.7 percentage points).

TABLE 4.
Distribution of Occupant Sex by Region, 2024

Region	% Males	% Females	% Unknown
1-New Orleans	53.8%	46.2%	0.00%
2-Baton Rouge	51.7%	47.8%	0.51%
3-Houma	57.3%	42.4%	0.29%
4-Lafayette	53.0%	47.0%	0.00%
5-Lake Charles	57.7%	42.2%	0.10%
6-Alexandria	57.9%	42.0%	0.06%
7-Shreveport	55.2%	44.7%	0.09%
8-Monroe	53.0%	46.7%	0.29%
9-Northshore	51.1%	48.9%	0.00%
LA Total	54.0%	45.8%	0.20%

Regarding race/ethnicity, the 2024 sample included a higher percentage of white occupants (+0.9 percentage points), a lower proportion of black occupants (-1.1 percentage points), and a higher proportion of Hispanic occupants (+0.4 percentage points) compared to 2023.

TABLE 5.
Distribution of Occupant Race/Ethnicity by Region, 2024

Region	% White Occupants	% Black Occupants	% Hispanic Occupants	% Other Occupants	% Unknown
1-New Orleans	53.5%	35.9%	8.7%	1.9%	0.00%
2-Baton Rouge	60.0%	32.9%	4.0%	2.7%	0.44%
3-Houma	64.4%	26.3%	7.5%	1.6%	0.24%
4-Lafayette	72.0%	24.3%	2.4%	1.3%	0.02%
5-Lake Charles	69.8%	25.4%	2.9%	1.9%	0.00%
6-Alexandria	78.3%	18.9%	2.0%	0.6%	0.11%
7-Shreveport	72.4%	24.5%	2.8%	0.3%	0.03%
8-Monroe	73.2%	20.3%	3.1%	2.5%	0.92%
9-Northshore	79.0%	17.6%	3.0%	0.3%	0.00%
LA Total	66.8%	26.9%	4.5%	1.6%	0.20%

Occupant Seat Belt Use Estimates and Descriptive Results - Based on Weighted Calculations

The 2024 Louisiana seat belt use rate, for drivers and front-seat passengers combined, is 88.4% with a standard error of 0.4%. The 2024 weighted estimate is 2.9 percentage points higher than the 2023 estimate of 85.6%. The observed increase is statistically significant (*p = 0.05*). Table 6 shows use rate estimates by region with respective standard sampling error. Usage varied from a low of 70.0% in the Alexandria region to a high of 95.7% in the Lake Charles region. These estimates and the descriptive rates for front-seat occupants that follow are based on weighted results. Three regions (7-Shreveport 8-Monroe, and 9-North Shore) had a statistically significant increase in seat belt use rates (at *p = 0.05)* of 9 to 13 percentage points. No other region had a statistically significant change (at *p = 0.05*) in seat belt use from 2023 to 2024.

TABLE 6.
Front-Seat Occupant Seat Belt Use Estimates by Region, 2024

Region	Estimate	STD Error	Diff 2023-2024
1-New Orleans	91.2%	0.8%	2.1%
2-Baton Rouge	82.8%	1.0%	2.1%
3-Houma	85.9%	0.8%	-2.0%
4-Lafayette	85.2%	1.2%	-3.2%
5-Lake Charles	95.7%	0.7%	5.6%
6-Alexandria	70.5%	1.8%	-6.5%
7-Shreveport	94.2%	0.9%	9.1%*
8-Monroe	88.4%	0.8%	9.2%*
9-Northshore	94.4%	0.8%	13.6%*
LA total	88.4%	0.4%	2.9%*

**Statistically significant at p=0.05.*

Table 7 examines overall occupant belt use weighted by roadway type and shows that belt use continues to be highest on Interstates (91.9%). This was 2.6 percentage points higher than in 2023. US and state routes had a belt use rate of 85.8%; 0.8 percentage points higher than in 2023. Belt usage on Local roadways, usually found within neighborhoods in city limits, was 89.5% in 2024, an increase of 3.9 percentage points from 2023. These differences are statistically significant for interstate and local roads, but not for US & State routes (at *p = 0.05*).

TABLE 7.
Louisiana Front-Seat Occupant Belt Use Estimates by Road Type, 2024

Road Type	Estimate	STD Error	Diff 2023-2024
Interstate	91.9%	0.7%	2.6%*
US & State	85.8%	0.4%	0.8%
Local Road	89.5%	0.6%	3.9%*

**Statistically significant at p=0.05.*

Louisiana has traditionally examined seat belt use rates by the nine Louisiana State Police Troop area designations which align with the 9 regions. However, the regions and troops cover slightly different parishes. For instance, region 3 includes two parishes from Troop B (St. Charles & St. John) and two parishes from Troop C (Lafourche & Terrebonne) and region 7 includes three parishes from Troop G (Bossier, Caddo and Webster) and 2 parishes from Troop E (Natchitoches and Sabine). Table 8 shows use rates per Troop area, along with the standard error. Use rate estimates by Troop area ranged from 76.7% in Troop E to 95.7% in Troop D. Compared to 2023, Troop F, G and L had statistically significant (*p = 0.05*) increases in belt use of between 9 and 13.6 percentage points. No other troop had a statistically significant (*p = 0.05*) change from 2023 to 2024.

TABLE 8.
Louisiana Front-Seat Occupant Belt Use Estimates by Troop Area, 2024

Troop	Estimate	STD Error	Diff 2023-2024
A-Baton Rouge	82.8%	1.0%	2.1%
B-New Orleans	90.1%	0.8%	1.5%
C-Houma	87.8%	1.0%	-2.2%
D-Calcasieu	95.7%	0.7%	5.6%
E-Natchitoches	76.7%	1.4%	-1.2%
F-Monroe	88.4%	1.4%	9.2%*
G-Shreveport	94.5%	1.1%	9.0%*
I-Lafayette	85.2%	0.8%	-3.2%
L-Hammond	94.4%	0.8%	13.6%*

**Statistically significant at p = 0.05*

Table 9 (on the following page) presents estimates for all front-seat occupants by parish for the 2024 survey and the weighted average of three surveys using the revised 2022 design, namely 2022, 2023 and 2024. The rows are grouped by region. While the parish use rates should be interpreted with caution because the overall survey design was not intended to provide single parish belt use rates, but rather one single, statewide use rate and thus there is a larger variance and standard error with respect to occupant usage at the parish levels due to the lower sample sizes, still, the percent seat belt use by Parish with the color schema from green (high seat belt use) to red (low seat belt use) allows some insights. First, comparing the 2024 result with the average allows to identify parishes that have consistently low or high belt use and parishes that had a decline or increase in belt use compared to its 3-year average. For instance, Avoyelles and Grant have consistent low belt use over the past 3 years. Parishes with a "*" are parishes that were added in the 2022 design.

Second, the grouping by region shows that there can be large differences between parishes in the same region as in region 2. Generally, more populated parishes tend to have high belt use. However, there are exceptions such as Region 3 where all parishes in the survey have relatively high belt use.

TABLE 9.
Louisiana Front-Seat Occupant Seat Belt Use Estimates by Parish, 2024 and 3-Year Average

Parish	2024	3-Year Average
Jefferson	91.9%	91.3%
Orleans	90.5%	87.8%
Ascension	83.3%	82.4%
East Baton Rouge	82.2%	81.9%
East Feliciana*	74.9%	76.9%
Iberville	71.3%	72.4%
Livingston	86.5%	83.4%
Pointe Coupee*	79.4%	80.3%
West Baton Rouge	87.7%	87.5%
Lafourche	84.4%	87.0%
St. Charles	84.7%	86.3%
St. John	80.7%	82.3%
Terrebonne	89.1%	89.2%
Acadia	83.3%	78.3%
Evangeline	82.9%	82.7%
Iberia	87.7%	86.9%
Lafayette	88.8%	90.7%
St. Landry	72.2%	70.9%
St. Martin	72.2%	78.9%
Allen*	90.3%	89.9%
Calcasieu	96.6%	91.4%
Jefferson Davis	89.0%	87.9%
Avoyelles*	59.6%	64.9%
Grant*	64.0%	73.2%
LaSalle*	79.3%	71.3%
Rapides	65.7%	72.0%
Vernon	97.2%	93.2%
Bossier	92.9%	89.7%
Caddo	95.2%	89.4%
Natchitoches	90.0%	83.1%
Sabine	95.5%	92.3%
Webster*	85.7%	86.0%
Morehouse	72.9%	72.6%
Ouachita	89.2%	86.5%
Richland*	89.3%	86.2%
St. Tammany	83.1%	85.4%
St. Helena*	95.1%	94.3%
Tangipahoa	94.5%	87.6%
Washington	88.9%	79.1%

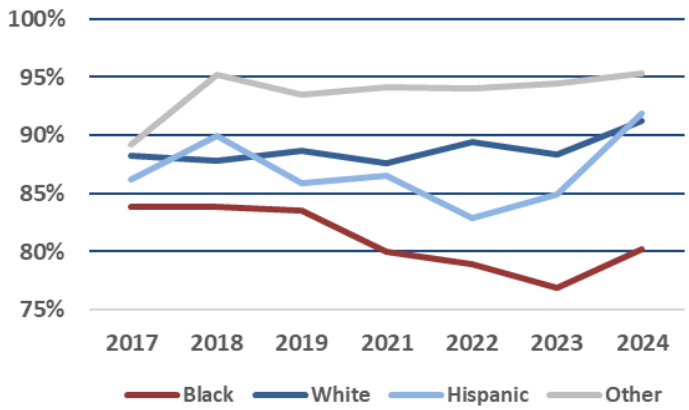
The 2024 survey also captured occupant gender and race/ethnicity characteristics along with vehicle type. Table 10 provides both driver and passenger use rate estimates for these occupant types. The table shows that male occupant belt usage continues to lag behind female occupant usage (85.2% vs. 92.0%) and male drivers were less likely to be belted compared to male passengers (84.8% vs. 87.2). The percentage point range in Table 10 indicates the wide range of belt use due to gender, race, and vehicle type. The gap in belt use between male and female narrowed slightly from 7.5 percentage points in 2023 to 6.9 percentage points in 2024, and the gap between White and Black occupants also narrowed from 11.4 percentage points in 2023 to 11.1 percentage points in 2024.

TABLE 10.
Louisiana Front-Seat Belt Use Estimates by Sex, Race, and Vehicle Type, 2024

	% Use Rate					
	Driver		Passenger		All Front Seat	
	Estimate	STD Error	Estimate	STD Error	Estimate	STD Error
Occupant Sex						
Male	84.8%	0.6%	87.2%	1.4%	85.2%	0.6%
Female	91.7%	0.5%	93.3%	0.8%	92.0%	0.4%
Range	6.8%		6.2%		6.9%	
Occupant Race						
White	90.8%	0.4%	93.5%	0.7%	91.3%	0.5%
Black	80.0%	1.0%	81.3%	2.2%	80.2%	1.0%
Hispanic	91.7%	1.4%	92.3%	2.5%	91.9%	1.5%
Other	94.8%	2.2%	98.8%	1.2%	95.3%	2.0%
Range(W v. B)	10.8%		12.2%		11.1%	
Vehicle Type						
Car	87.5%	0.7%	88.2%	1.7%	87.6%	0.7%
Pick-up	82.1%	0.9%	85.6%	1.7%	82.7%	0.9%
SUV	92.0%	0.6%	95.1%	0.8%	92.6%	0.5%
Van	90.8%	1.9%	97.0%	0.9%	92.1%	1.6%
Range	9.9%		11.4%		9.9%	

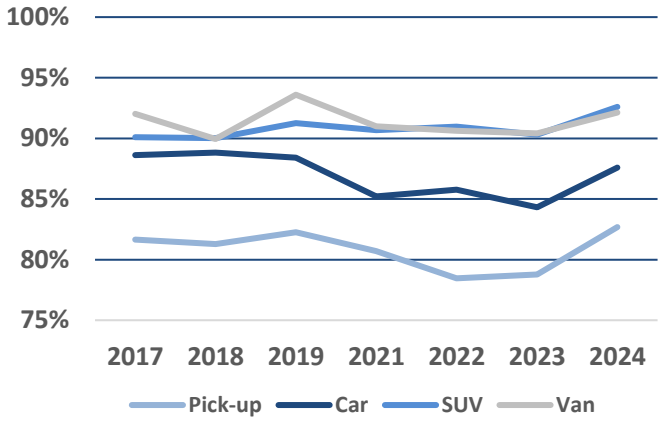
Trends in Usage by Race and Vehicle Type

FIGURE 2.
Seat Belt Usage by Race/Ethnicity: 2017-2024



Usage among Black occupants measured lower compared to other races/ethnicities (80.2% for Black occupants vs. 91.3% for White occupants vs. 91.9% for Hispanic occupants). The group of "Other" occupants is too small a sample size to include in a comparison. The range of 11.1 percentage points is between the White and Black occupants. Figure 2 shows the trend of belt use by race between 2017 and 2024. While there was little change in usage among Black occupants from 2017 to 2019, there was a sharp 3.5 percentage point drop in 2021, a further decline of 1.1 percentage points from 2021 to 2022 and yet another decline of 2.0 percentage points from 2022 to 2023. The 6.6 percentage point decline from 2019 to 2024 was statistically significant at p=0.05. In 2024, this decline was reversed by an increase of 3.2 percentage points. Note that Hispanic and Other occupant usage rates have some large year-to-year swings due to small sample sizes.

FIGURE 3.
Seat Belt Usage by Vehicle Type: 2017-2024



Vehicle type also made a difference in belt usage. Occupants in pickup trucks used seat belts less often than occupants in other vehicle types. A sizeable portion of the sample includes occupants in pickups, thus dragging the overall statewide average downward. That has been the case every year of this survey (Figure 3). Belt use rates in 2024 by vehicle type were higher for all vehicle types than in 2023. But the increase was only statistically significant at p=0.05 for cars, trucks and SUVs.

A regional breakdown of occupant belt use by vehicle type (Table 11) shows a fairly consistent pattern of lower observed belt use among occupants in pickup trucks compared to the *average* of all other vehicle occupants with respect to region. Differences in usage rates between pickup trucks and the average of other vehicles range from -1.8 percentage points in the Shreveport Region to -10.5 percentage points in the Monroe area. The average gap in belt use between pickup truck occupants and other vehicle occupants for Louisiana was 8.1 percentage points. However, as with previous tables, it is important to note the larger standard errors associated with occupant usage estimates at these levels—in some cases due to lower sample sizes and higher variances. As such, data breakdowns presented here should be carefully interpreted.

TABLE 11.
Louisiana Front-Seat Belt Use Estimates by Region and Vehicle Type, 2024

Region	CAR	STD Error	PICKUP	STD Error	SUV	STD Error	VAN	STD Error	AVG* Diff PKUP
1-New Orleans	89.9%	1.3%	82.2%	2.0%	94.6%	1.2%	90.3%	2.7%	-7.0%
2-Baton Rouge	77.9%	1.5%	80.7%	2.3%	87.5%	1.7%	93.2%	3.2%	-4.2%
3-Houma	84.5%	1.5%	82.9%	2.3%	89.0%	1.7%	97.8%	3.3%	-5.6%
4-Lafayette	81.0%	2.0%	75.1%	2.5%	94.5%	2.0%	83.9%	3.7%	-8.5%
5-Lake Charles	98.0%	2.9%	92.1%	3.3%	98.9%	3.0%	91.2%	9.5%	-2.9%
6-Alexandria	73.9%	2.7%	66.0%	3.8%	72.4%	3.4%	80.0%	3.9%	-7.1%
7-Shreveport	92.5%	1.9%	93.9%	2.7%	97.7%	1.9%	98.6%	3.1%	-1.8%
8-Monroe	92.4%	3.2%	79.5%	4.3%	93.4%	3.3%	94.8%	3.7%	-10.5%
9-North Shore	93.0%	3.2%	90.9%	4.3%	97.3%	3.3%	95.6%	3.7%	-3.3%
LA total	87.6%	0.7%	82.7%	0.9%	92.6%	0.5%	92.1%	1.6%	-8.1%

**Differences of belt usage rate* between *pickup trucks and the average of all other vehicles*

Rear-Seat Belt Use

Louisiana began collecting rear-seat passenger data in response to Regular Session 2008, Senate Resolution No. 165 by Senator Walsworth.[2] A total of 225 rear-seat occupants were observed in the 2024 survey. Table 12 presents the distribution of rear-seat observations by vehicle type.

TABLE 12.
Number of Rear-Seat Observations by Vehicle Type, 2024

CAR	PICKUP	SUV	VAN	TOTAL
88	57	66	14	225

Unweighted estimates of belt use for rear-seat occupants, thirteen years of age or older, are presented in Table 13. The estimates presented display use rates by survey year and vehicle type. The use rate in 2024 is estimated to be 64%, which is 5 percentage points higher than the 59% in 2023, is not a statistically significant increase from 2023 ($p = 0.05$).

[2] Senate Resolution No. 165 (2008) 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. An amendment to Louisiana's seat belt law was made during the 2009 regular session of the Louisiana Legislature. The amendment expanded the State's primary seat belt law to include rear-seat occupants 13 years of age and older and went into effect August 15, 2009 (McKenzie, III, 2011). Prior to the law change, in 2008, rear-seat belt use among rear seat-passengers was estimated. The 2010 statewide survey was the first full-scale Louisiana statewide survey to cover both front and rear-seat passengers. Statewide surveys in 2011 and in 2013-2019 also include rear-seat occupants.

TABLE 13.
Louisiana Rear Passenger Seat Belt Use Rate, 2010-2011, 2013-2019 & 2021-2024

	CAR	PICKUP	SUV	VAN	TOTAL
2010	50%	48%	77%	91%	58%
2011	46%	40%	71%	94%	54%
2013	51%	47%	67%	62%	55%
2014	49%	42%	69%	77%	55%
2015	68%	55%	81%	79%	69%
2016	71%	46%	81%	84%	69%
2017	66%	50%	71%	78%	66%
2018	62%	58%	74%	89%	66%
2019	63%	62%	82%	77%	68%
2021	56%	51%	71%	72%	61%
2022	53%	52%	71%	50%	57%
2023	50%	48%	71%	73%	59%
2024	59%	56%	74%	71%	64%

CONCLUSION

The State of Louisiana's statewide seat belt use rate for 2024 is 88.4%. The 2024 survey was conducted late May - June like most statewide surveys in years past. The 2024 rate represents a 2.9 percent increase from the 2023 survey. This increase is statistically significant, indicating that seat belt usage in Louisiana is back to the seat belt usage levels observed during the years 2016-2019. It is also the highest measured rate to date.

While the proportion of pickup truck occupants in the 2024 survey was one percentage point lower than in the 2023 survey, it was still 6.9 percentage points higher than in the 2019 survey when Louisiana had a seat belt use rate of 87.5%. Lower usage among pickup truck occupants has a downward pull on the overall statewide rate. In other words, the higher the prevalence of pickup trucks in the sample, the stronger the downward pull on the overall use rate. Conversely, fewer pickup trucks have less of a pull, as evidenced by the highest rate measured to date (87.8%) in the December 2016 survey.

It is also worth noting that usage rates among Black occupants went up in 2024 for the first time in four years. However, the long-standing gap between Black and White occupant belt use, which had decreased from previous surveys to 5.1 percentage points in 2019, increased to 11.4 percentage points in 2023, and decreased only slightly in 2024 to 11.1 percentage points. The negligible difference in the gap was partly due to usage increasing across all race/ethnicity categories. Lower usage among Black occupants has a downward pull on the statewide rate, and the high proportion of Black occupants in the sample leads to a greater overall usage rate decline. That said, overall seat belt use in Louisiana has generally showed an upward trend over time with one percentage point increase per year on average (Figure 4; next page), increasing 10 percentage from 2010 to 2015, but has now leveled off at use rates between 87.7% and 89.2% given by the 95% confidence interval for 2024.

Figure 4.
Louisiana Seat Belt Weighted Use Rates, 1999-2024

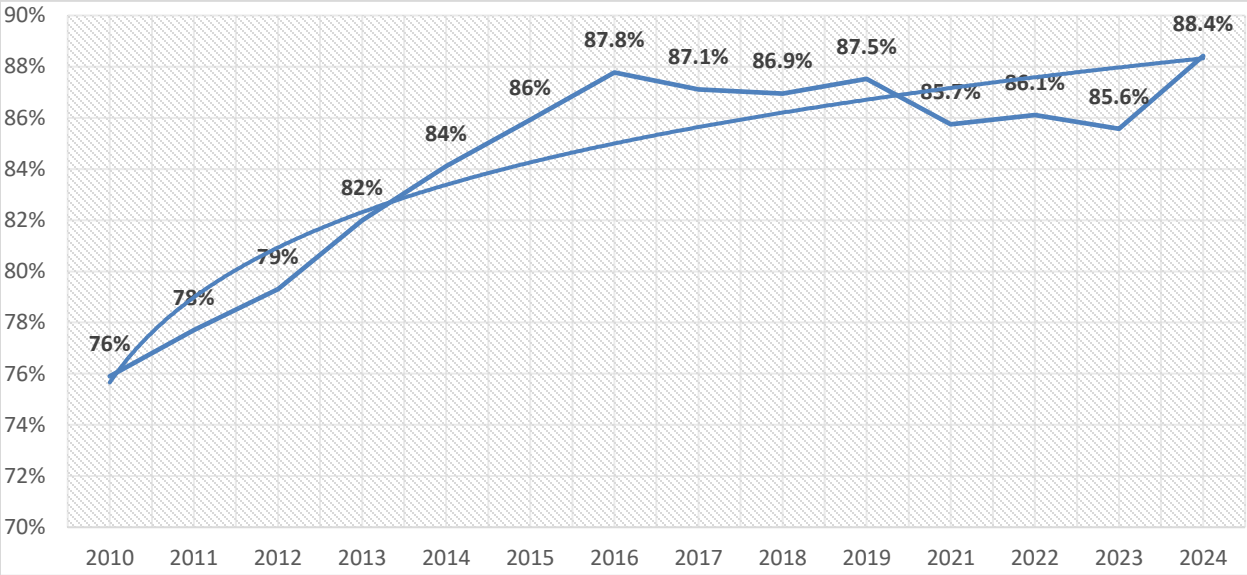
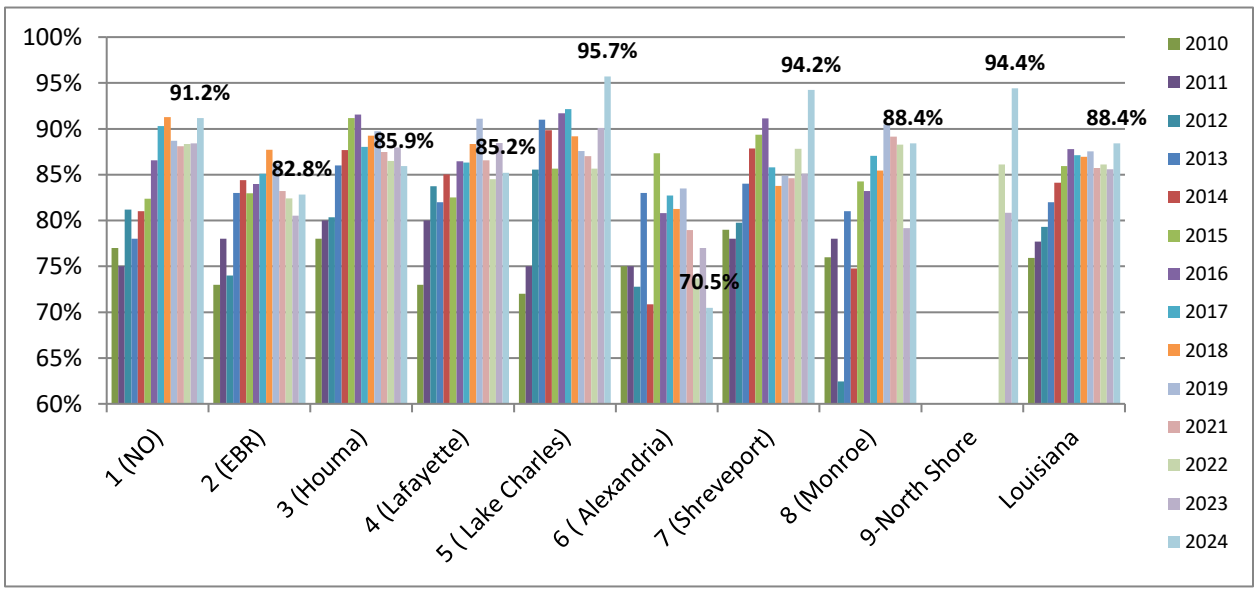


Figure 5, below, shows the trend in usage by region over the past 14 years. Numbers displayed are 2024 regional averages. While every region in the State of Louisiana has seen usage improve since 2010, many regions have seen a decline in seat belt use over the past couple of years. However, the Lake Charles, Shreveport and North Shore Regions currently have the highest seat belt use rates ever reported.

Figure 5.
Louisiana Seat Belt Weighted Use Rates by Region, 2010-2024



REFERENCES

Preusser Research Group, Inc. (2023). *2023 Louisiana Seat Belt Observation Survey Results.*

Preusser Research Group, Inc. (2022). *2022 Louisiana Seat Belt Observation Survey Results.*

Preusser Research Group, Inc. (2022). *2021 Louisiana Seat Belt Observation Survey Results.*

Preusser Research Group, Inc. (2019). *2019 Louisiana Seat Belt Observation Survey Results.*

Preusser Research Group, Inc. (2018). *2018 Louisiana Seat Belt Observation Survey Results.*

Preusser Research Group, Inc. (2017). *2017 Louisiana Seat Belt Observation Survey Results.*

Preusser Research Group, Inc. (2016). *2016 Louisiana Seat Belt and Motorcycle Helmet Use Observation Survey Results.*

Preusser Research Group, Inc. (2015). *2015 Louisiana Seat Belt and Motorcycle Helmet Use Observation Survey Results.*

Preusser Research Group, Inc. (2014). *2014 Louisiana Seat Belt and Motorcycle Helmet Use Observation Survey Results.*

Preusser Research Group, Inc. (2013). *2013 Louisiana Seat Belt and Motorcycle Helmet Use Observation Survey Results.*

Preusser Research Group, Inc. (2012). *2012 Louisiana Seat Belt and Motorcycle Helmet Use Observation Survey Results.*

Schneider, H. (2012). *Seat Belt Use Survey Design For Louisiana - Sampling, Data Collection and Estimation Plan 2012.*

Schneider, H. (2022). *Seat Belt Use Survey Design for Louisiana - Sampling, Data Collection and Estimation Plan 2022.*

McKenzie, III, L. S. (2011). *Louisiana Safety Restraint (Front and Rear Seat Safety Belt) Use Observation Survey 2011 Results.* Baton Rouge, LA: Applied Technology Research Corporation.

U.S. Department of Transportation, National Highway Traffic Safety Administration. (July 2011). *Traffic Safety Facts - Seat Belt Use in 2010 - Use Rates in the States and Territories.* Washington, DC: NHTSA's National Center for Statistics and Analysis.

U.S. Department of Transportation, National highway Traffic Safety Administration. (April 2009). *Traffic Safety Facts - Seat Belt Use in 2008 - Use Rates in the States and Territories.* Washington, DC: NHTSA's National Center for Statistics and Analysis.

Schneider, H. (2004). *2004 Occupant Protection Evaluation Report.* Louisiana State University, Baton Rouge, LA.

Appendix A

Copy of:

Seat Belt Use Observation Data Form

Seat Belt Use Observation Data Form

SITE NUMBER:_____ **SITE:**_____ **OBSERVER INITIALS:**_____

DIRECTION OF TRAFFIC FLOW: N S E W

CHECK ONE: _____**DAYTIME** _____**NIGHTTME**

DATE: _____-_____-_____ **DAY OF WEEK:**_____

START TIME:_____**AM / PM (Observation period will last exactly 60 minutes)**

WEATHER CONDITIONS
1. Clear/Sunny
2. Light Rain
3. Cloudy
4. Fog
5. Wet (Not Raining)

	VEHICLE	DRIVER			PASSENGER			REAR SEAT
Veh. #	**Veh. Type** C=Car T=Truck S=SUV V=Van	**Sex** M=Male F=Female U=Unsure	**Race** W=White B=Black H=Hispanic O=Other U=Unsure	**Belt Use** + = Yes - = No U = Unsure	**Sex** M=Male F=Female U=Unsure	**Race** W=White B=Black H=Hispanic O=Other U=Unsure	**Belt Use** + = Yes - = No U = Unsure	**Sex/Race/Use** (13+ years old) Example: M W +
1								
2								
3								
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Seat Belt Observation Data Form (back)

Location:_____

(Street) **(Cross Street or other landmark)**

Site #: _____

Notes:

Diagram: