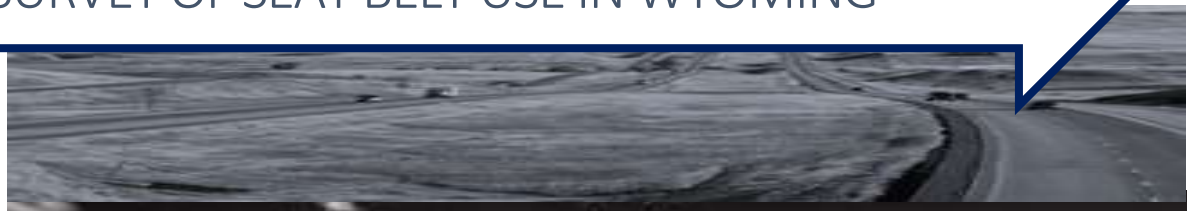
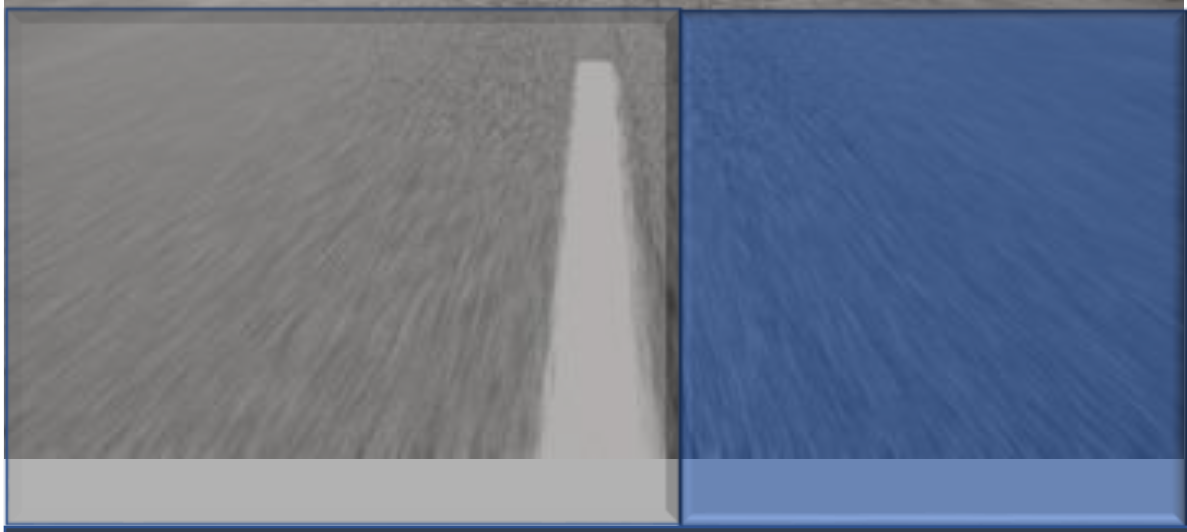
2017

SURVEY OF SEAT BELT USE IN WYOMING





Wyoming State Government

Wyoming Department of Transportation
5300 Bishop Blvd.
Cheyenne, WY 82009
307-777-4375

2017 WYOMING SEAT BELT SURVEY

The protocols implemented for this study were per the federal guidelines set up in 2012, which distinguish it from all prior surveys of seat belt use in Wyoming. The standards and protocols align with the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340. The 2017 survey analysis was the fifth survey conducted under the 2012 guidelines for seat belt use in the state of Wyoming

Acknowledgments

DLN Consulting, Inc. expresses appreciation to several individuals who were essential to the completion of this project.

- Lydia DeJesus assisted with project coordination; observer training, supervised coding, data entry, and quality assurance procedures; and developed spreadsheets, charts, and graphs.
- Dawn Nelson performed the coordination for the training session and subsequently aided with data compilation.
- Bridget White coordinated and secured the acquisition of contractors to conduct the survey observations.
- Bridget White and Vicky Peterson conducted field monitoring.

Without the dedicated challenging work of the people who conducted the field observations, we could not complete this survey:

Monty Byers, Brooke Darden, Jaclyn Davison, Peggy Dowers, Dawn Edwards, Dixie Elder, Deb Eutsler, Candy Hunter, Molly Laidlaw, Russell Loestcher, Donna Lucas, Derald Maddison, Susan Parkinson, Doug Peterson, Vicky Peterson, Cindy Pope, Kayla Schear, Daleen Sebelius, Kris Smith, and Bill Spencer.

Finally, special thanks to the staff of the Wyoming Highway Safety Program and Engineering Services for their support and help during the project period.

Deb Nelson, DLN President
Project Administrator

Keith Fernsler, PhD
Project Analyst

James G. Leibert, PhD
Project Statistician

Table of Contents

Table of Figures

Executive Summary

Seat belt use in Wyoming during 2017 is the subject of the narrative and appendices in this report. The study was developed in accordance with the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR § 1340. Per the required procedures, the sample first created in 2012 reached its expiration date and required a new sampling for the 2017 data collection period. Therefore, this study represents a new baseline survey, which means that no comparisons with prior surveys or the results of those surveys are directly comparable with the 2017 estimates of seat belt use in Wyoming. The details of the procedures used to develop the new 2017 sample are in another section of this report.

The narrative begins with a presentation of the estimates of seat belt use for all vehicle occupants, and separate estimates for drivers and front-seat outboard passengers.[1] The seat belt use rates are then presented within the categories of several other variables that offer more details about patterns of seat belt use. For example, the reader will find estimates by urban and rural population density, estimates for each of the counties, estimates by the roadway type, and estimates by in-state and out-of-state vehicle licenses, by vehicle type, by the gender of the vehicle occupants, and by the combination of gender and vehicle types.

In the report, the measures of seat belt use are characterized as "estimates" rather than raw numbers. These estimates were derived from data that was weighted by the probabilities associated with the sampling methodology. In this case, the weighting process used the Complex Samples module in the Statistical Package for the Social Sciences to develop the estimates.

Here is a summary of the major findings:

- **Statewide Estimate.** The overall estimate of seat belt use for all vehicle occupants was 84.8 percent belted, with a standard error of 0.1 percent. This total estimate was based on observations of 23,775 vehicle occupants. Included in the vehicle occupants were drivers, whose estimated rate of belt use was 82.7 percent, and front seat outboard passengers, whose estimated rate of belt use was 90.0 percent. Among the 23,775 vehicle occupants, there were 17,342 drivers and 6,433 passengers. The standard errors for drivers and passengers were each 0.2 percent.
- **Urban and Rural Sites**. In Wyoming, observations collected in sites with populations of 5,000 or more are considered urban; if less than 5,000, the observations are classified as rural.[2] In this year's survey, vehicle occupants observed in urban areas were belted at a rate of 72.3 percent, while occupants in rural areas were belted at a rate of 86.8 percent, a difference of 14.5 percentage points. In the sample, there were almost four times more observations from rural than urban sites, which is indicative of Wyoming's rural character.
- **Counties.** Of the seventeen Wyoming counties in the sample, seven had seat belt use estimates above the statewide average (84.8%) and ten had rates below the statewide average. Seven of those ten had estimates

[1] Throughout this report, the term "vehicle occupants" refers to the combined driver and outboard passenger totals.

[2] An exception is for sites in Teton County, which we believe to be defined as "rural" regardless of the actual population of those sites.

below 80 percent. The county seat belt use rates for all vehicle occupants range from a low of 64.4 percent belted in Sweetwater County to a high of 93.1 percent belted in Crook County.

- **In-State and Out-of-State.** Observers noted whether vehicle occupants were in vehicles registered in Wyoming or out-of-state. Occupants in Wyoming vehicles accounted for more than half of all observations (55.7%). However, the seat belt use rate for occupants of Wyoming vehicles was 78.7 percent, while the rate for occupants in out-of-state vehicles was 90.7 percent.
- **Roadways.** The seat belt use rate for vehicle occupants observed on primary roadways was 87.9 percent; the rate on secondary roads was 83.7 percent; and the rate for vehicle occupants observed within the catch-all category of "local roads, rural roads and city streets" was 72.4 percent.
- **Gender.** Males accounted for more than six of every 10 vehicle occupants observed for this survey. Males had an estimated rate of 81.2 percent belted. Female vehicle occupants were outnumbered, but their seat belt usage estimate was 89.9 percent belted, which was 8.7 points higher than the male rate.
- **Vehicle Type.** The highest rates of seat belt use were for vehicle occupants in vans (90.5%) and sport utility vehicles (87.5%). The seat belt use rate was 86.8 percent for occupants in automobiles, still higher than the statewide rate (84.8%). However, the rate for combined drivers and passengers in pickup trucks was 77.6 percent belted, an estimated rate 9.2 points lower than the next lowest rate of 86.8 percent for automobile vehicle occupants.
- **Gender and Vehicle Type.** The analysis of the combination of vehicle type and gender shows higher rates of seat belt usage for females than for males in every vehicle type. The highest difference between the genders was the rate of belt use for females in pickup trucks, 86.3 percent, which was 11.6 points higher than the rate for males in pickup trucks, which was 74.7 percent.

One final note before the body of this report: with few exceptions, the only detailed presentation of raw frequencies for the variables in this study are in the appendix. While many readers like to see raw frequencies to provide some context for the data analysis, such a presentation tends to be confusing when frequencies are comingled with estimates based on sample weights derived from probabilities. For that reason, most of the report will focus on estimates with a mention of frequencies only as needed for background information.

Introduction to the Survey

From Monday June 5, 2017 to Sunday June 11th, 2017, seventeen trained observers were dispatched to their assigned counties. There were two alternate observers, but only one was needed in the field to collect data.

There were seventeen counties in the sample, each with seventeen sites: that amounts to 289 total sites. However, some sites had no vehicle traffic, which means no seat belt use data was collected. A total of 13 of the 289 sites had no data. One site and its associated alternates could not be observed because of road closures. Per the guidelines, the assigned observer documented the site as unobservable.

Observers identified 239 vehicle occupants whose seat belt use could not be determined and were coded as "unsure." Dividing 239 "unsure" by 23,775 total vehicles produces an "unknown" rate of .0100526, or 1.0 percent.

The list of counties, observers, the one alternate observer (Cindy Pope), and the number of observations collected by each observer are in Table 1.

Table 1: Frequencies by Observer

COUNTY	OBSERVER	FREQUENCY
ALBANY	Monty Byers	1,497
BIG HORN	Dixie Elder	882
CAMPBELL	Dee Sibelius	1,388
	Cindy Pope	27
CARBON	Russel Loestcher	1,276
CONVERSE	Kris Smith	1,170
CROOK	Derald Maddison	1,801
FREMONT	Jaclyn Davison	1,559
	Cindy Pope	111
JOHNSON	Deb Eutsler	1,163
LARAMIE	Brooke Darden	501
LINCOLN	Dawn Edwards	1,310
NATRONA	Molly Laidlaw	581
NIOBRARA	Bill Spencer	941
PARK	Donna Lucas	1,311
PLATTE	Doug Peterson	1,453
SHERIDAN	Susan Parkinson	1,334
SWEETWATER	Kayla Schear	2,125
TETON	Peggy Dowers	3,345
	Total	23,775

Seat Belt Observer Training

iPads were used to collect the 2017 seat belt survey, which required an iPad and survey tool training segment. The observers received basic iPad training related to the functions, features, and maintenance. All iPads were preloaded with the 2017 Seat Belt Survey data collection tool. All the observers and quality control staff received training on the individual components of the application in audio, visual, and tactile format. On day one each of the training participants practiced using the program for a period during the training session. After practicing in the classroom, the observers had an opportunity to complete a mock data collection period. On day two, the observers completed four data collection sessions. Three of the four data collection sessions were used to calculate their individual inter-accuracy ratios.

Quality Control

For the 2017 Wyoming Seat Belt Use Survey, observer training began in the classroom. The assembled observers were presented with survey procedures and methods, using the protocols set up for surveys of seat belt use. The DLN staff placed special emphasis on directions for parking and locations for optimal observation of seat belt use.

Following the classroom training, observers took part in a series of pilot tests to assess their skills and measure the accuracy of their observations. Pairs of observers viewed the same traffic but independently recorded their observations. The staff calculated each pair's inter-accuracy ratios, which needed to show a minimum of 85 percent agreement before observers could qualify. This step exists to insure the reliability of the data before any observations are collected.

A third part of the training involved written tests of each observer's knowledge of observation rules and procedures. A minimum passing grade of 80 percent was required for all the observers. The same standards applied to the alternate observers and the quality control supervisors.

Once in the field, quality control monitors conducted random spot checks on the reliability of the observations for different observers. These monitors were required to attend training sessions with observers, and received additional training separate from the observers in a half-day session. That quality control monitoring session included an extensive review of the directions that applied to the monitors. During that session, the random site selections were determined for reliability spot checks where monitoring would occur.

During the survey, DLN staff were always available to help observers with questions and issues. This included situations where conditions might require changes to alternate sites or other adjustments that observers might need to make to insure the quality of observations.

When observers completed an electronic record of observations for each site, the observers transferred the data electronically to the DLN staff person assigned the task of compiling the data. DLN staff took steps to insure the data was accurate and contained correct codes, working with observers to resolve any issues to insure reliable data going forward. Once the data was "cleaned" of any errors, it was moved to Excel files and examined further for any anomalies. At that point, the Excel files were loaded into the *Statistical Package for the Social Sciences*, where variable and value labels were created along with other preparations for analysis. The initial SPSS files were reviewed for any additional cleaning that might be needed. At that point, the Complex Samples plan in SPSS was developed to weight the data by the sampling probabilities required to generate estimates of seat belt use.

At every step, from observer training to data analysis, DLN followed standard protocols to insure the reliability and accuracy of the data utilized to compile this report.

The Overall Estimates of Belt Use

The estimated rate of belt use for 23,775 vehicle occupants, drivers and outboard passengers combined, was 84.8 percent belted. Observers found 14.2 percent as "not belted," and they were unsure about the belt use for 1.0 percent of the vehicle occupants. The table shows the standard error rate and the 95 percent confidence intervals.[3]

Table 2: Occupant Seat Belt Use, with Standard Errors and Confidence Intervals

	Estimate	Standard Error	95% Confidence Interval		Unweighted Count
			Lower	Upper	
BELTED	84.8%	0.1%	84.5%	85.1%	19,574
NOT BELTED	14.2%	0.1%	14.0%	14.5%	3,962
UNSURE	1.0%	0.0%	0.9%	1.0%	239
TOTAL	100.0%	0.0%	100.0%	100.0%	23,775

In past Wyoming surveys, the estimated belt use for drivers has been lower than the overall rate, while the rate fo**r** passengers tended to be higher than the overall rate. For this new baseline survey, the results were similar. The estimated belt use for drivers was 82.7 percent, or 2.1 percentage points below the rate for all vehicle occupants. For passengers, the rate was 90.0 percent belted, or 5.2 percentage points above the overall rate. Because drivers represent 72.9 percent of all vehicle occupants, their belt use has a much greater effect on the overall rate. Passengers made up 27.1 percent of all vehicle occupants, so while they tend to inflate the overall rate, their small number does not pull the overall rate up as much as the larger number of drivers pull the rate down.

[3] The very low standard error rates and the very narrow confidence intervals tell us that our estimates were statistically accurate.

Table 3 and Table 4 show the overall estimates for the drivers and passengers including the standard error and 95 percent confidence intervals.

Table 3: Driver Seat Belt Use, with Standard Errors and Confidence Intervals

	Estimate	Standard Error	95% Confidence Interval		Unweighted Count
			Lower	Upper	
BELTED	82.7%	0.2%	82.4%	83.0%	13,940
NOT BELTED	16.4%	0.2%	16.1%	16.7%	3,236
UNSURE	0.9%	0.0%	0.8%	1.0%	176
TOTAL	100.0%	0.0%	100.0%	100.0%	17,342

Table 4: Passenger Seat Belt Use, with Standard Errors and Confidence Intervals

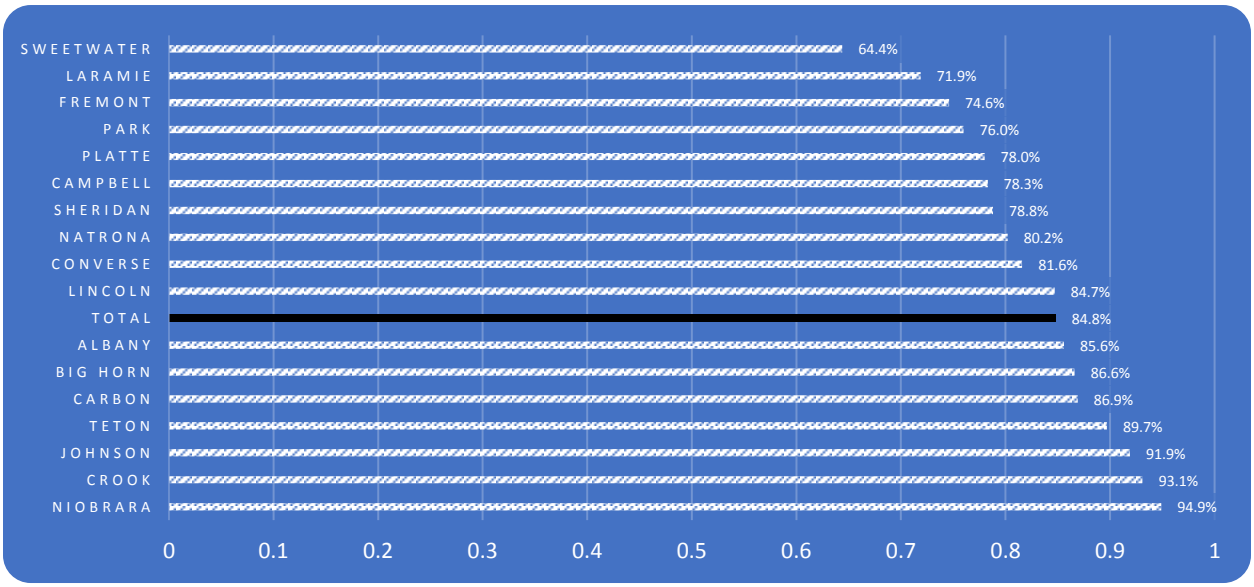
	Estimate	Standard Error	95% Confidence Interval		Unweighted Count
			Lower	Upper	
BELTED	90.0%	0.2%	89.6%	90.4%	5,634
NOT BELTED	8.9%	0.2%	8.5%	9.3%	736
UNSURE	1.1%	0.1%	0.9%	1.2%	63
TOTAL	100.0%	0.0%	100.0%	100.0%	6,433

Occupant Belt Use for Selected Variables

Seat Belt Use Rates by County

Seat belt use rates were calculated for factors that were either of interest to WYDOT or were presumed to be associated with rates of seat belt use because of past surveys. Figure 1 depicts the first rates presented for each of the counties in the sample, arranged from the lowest to the highest rates.

Figure 1: Occupant Belt Use by County, Wyoming 2017



There were counties in Wyoming with seat belt use rates generally more typical of states with primary laws. They include the county with the highest rate, Niobrara (94.9% belted). Other counties with such high rates included Crook (93.1%), Johnson (91.9%), and Teton County (89.7%). Some Wyoming counties had relatively low rates of belt use by vehicle occupants in this survey. They include Laramie (71.9%) and Sweetwater (64.4%). The rate for Sweetwater County, 64.4 percent, was a full 20.4 points below the overall state rate (84.8%).

These rates will serve as the baseline county rates going forward to future surveys for Wyoming. However, it is important to note that smaller numbers of observations for some counties in prior surveys made the rates less stable and more subject to fluctuation across the years. In this case, the counties with the smallest number of observations include Big Horn (882), Laramie (501), Natrona (581), and Niobrara (941). In future surveys, significant changes may occur in the rates for these counties.

Occupant Belt Use by Population Density

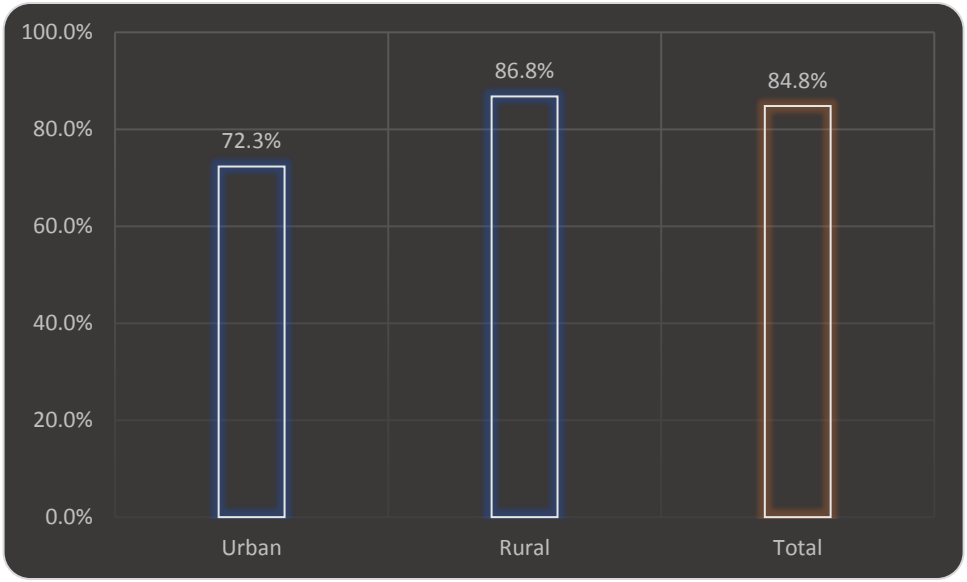
In Wyoming, sites in areas with more than 5,000 residents are defined as "urban," while sites in areas with fewer than 5,000 residents are defined as "rural." DLN staff consulted maps and U.S. Census data and determined the appropriate code for each site. For example, a site found within a city with a population of 5,000 or greater, was coded as urban. If the site was located outside of a city, the basis of the code became the area within the county population. Similarly, sites in cities or outside a city in a county were coded as rural when the population density was fewer than 5,000 residents.

The threshold of 5,000 residents may seem less than urban to observers of densely populated states, but Wyoming is the land of "wide open spaces" and relatively few people. The U.S. Census Bureau estimated the 2016 Wyoming population at 585,501 people, which ranks fiftieth in population among the fifty states. The largest city in Wyoming is Cheyenne; in 2015, the U.S. Census bureau estimated Cheyenne's population as 63,335, which would be much smaller than major cities in states with larger populations.

Given this context, it is not surprising that 79.0 percent of the vehicle occupants in this survey were observed in sites classified as rural, and 21.0 percent were coded as urban.

In past surveys of Wyoming seat belt use, vehicle occupants in rural areas were more likely to be wearing their seat belts. That result is also true for this new baseline survey: 86.8 percent of vehicle occupants in rural sites were belted, while 72.3 percent of vehicle occupants in urban areas were observed wearing their seat belts. The urban seat belt rate was 12.5 points lower than the statewide rate for all sites, but the small percentage of observations in urban areas did not have much of an effect on the overall rate. It appears that the urban rate pulls down the state average by about 2.0 percentage points from the 86.8 percent in the rural areas to the overall rate of 84.8 percent. Figure 2 shows these results.

Figure 2: Occupant Belt Use by Population Density, Wyoming 2017



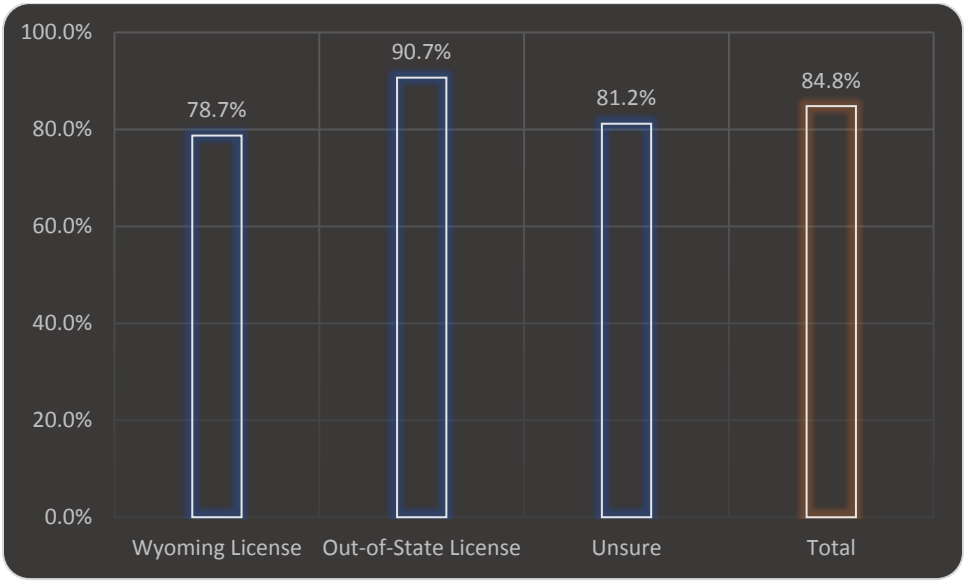
Occupant Belt Use by Vehicle Registration

Observers noted whether the occupants were in vehicles with either Wyoming license plates or out-of-state plates. The observations were coded to show occupant belt use: belted, not belted, or unsure when the observers were not able to identify the type of license plate.

The results in this survey indicated a lower rate of belt use for vehicle occupants in Wyoming-licensed vehicles. That rate was 78.7 percent belted. This compares to a rate of 90.7 percent for occupants of vehicles with out-of-state plates. The difference was 12.0 percentage points lower for occupants of Wyoming vehicles.

Observers were unable to identify registration for 392 vehicle occupants, or 1.6 percent of all vehicle occupants. Figure 3 illustrates these results, showing the various rates of belt use by license registration.[4]

Figure 3: Occupant Belt Use by State Registration, Wyoming 2017



[4] Throughout the report the data presented is depicted in table or chart format. For the purposes of analysis, the data shown represents the belted percentages. The detailed tables for each of the observed categories are included in the appendices to this report. The appendix will also have all the frequencies for the variables in this survey.

Occupant Belt Use by Roadway Types

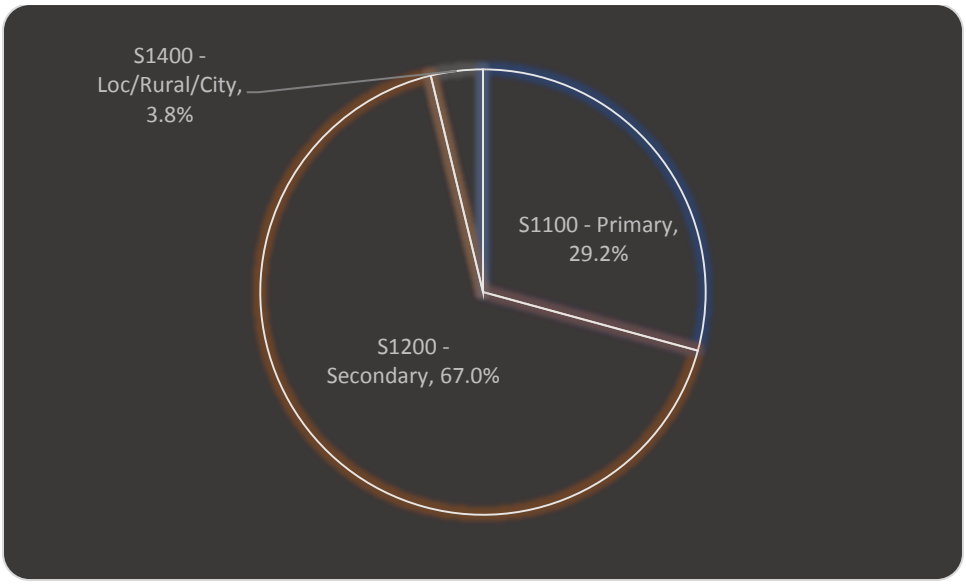
Site descriptions from NHTSA included a description of the roadway types. The assigned codes were S1100, S1200, and S1400. Roads coded as S1100 are generally federally or state-maintained primary roads, and include the interstate highways that run through Wyoming. These were likely to be the four-lane roadways in our sample. The data collected revealed that 97.2 percent of the "S1100" observations occurred when observers were entering data for vehicles across two lanes of traffic, showing that those observations were collected on four-lane highways. Overall, the data shows that 29.2 percent of the collected observations came from these primary roads.

Roads coded as S1200 were likely to be a mixture of two- and four-lane roads. The data showed that 58.6 percent of the observations in this category were from one-lane traffic, while 41.3 percent came from observations of two-lane traffic (or four-lane roadways). Overall, the data revealed that 67.0 percent of the observations in this survey came from these secondary roadways.

The S1400 classification was for a mixture of local, rural, and city roadways. While all the observations in this survey were collected on paved roadways, these "S1400" roads were likely to have the least amount of traffic. The data showed that only 3.8 percent of the observations in our sample came from this category. However, the sites within this roadway type were almost equally distributed among two- and four-lane roadways. We found that 53.7 percent of the 896 observations collected on these S1400 roadways involved observations of one-lane traffic, 46.3 percent were collected across two-lanes (four-lane roads).

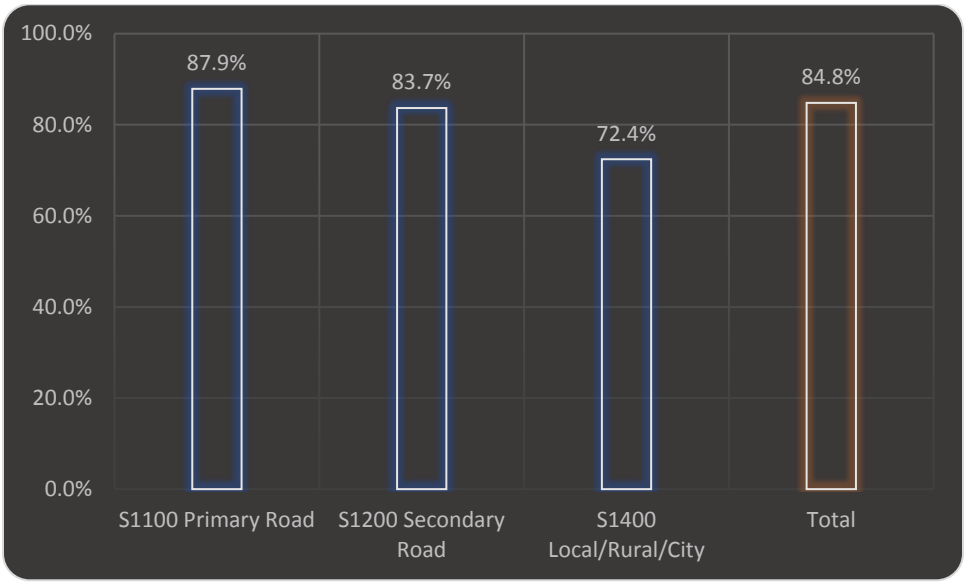
Figure 4 shows that the data in this 2017 survey of Wyoming seems to follow this pattern.

Figure 4: Occupant Frequencies by Type of Roadway, Wyoming 2017



The highest rate of seat belt use was for occupants observed in vehicles on primary roads; that rate was 87.9 percent belted. The largest number of observations was from vehicles within secondary roadways, and those vehicle occupants were belted at a rate of 83.7 percent. The lowest rate of belt use was for occupants observed in vehicles on local roads, city roads, and rural roads, at 72.4 percent belted.

Figure 5: Occupant Belt Use by Type of Roadway, Wyoming 2017

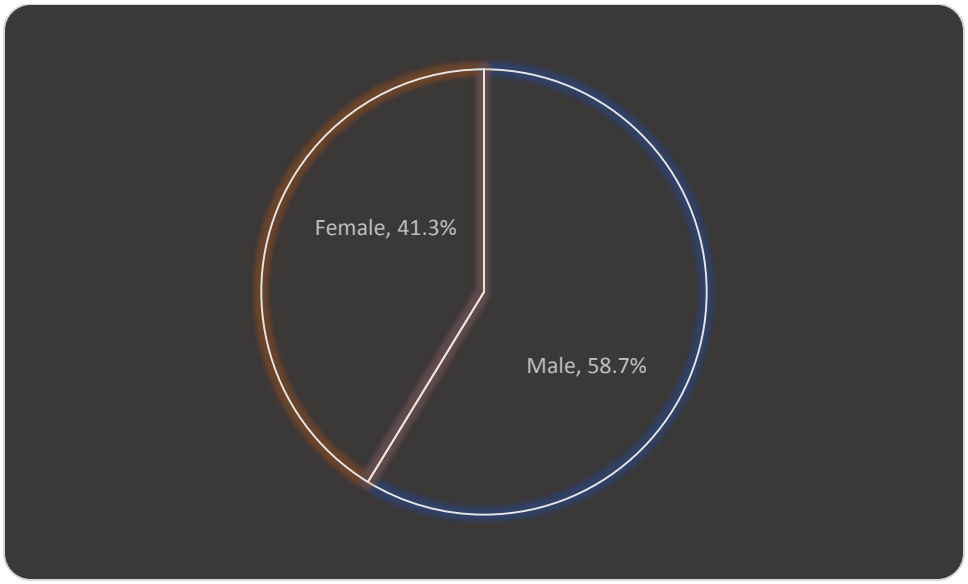


Prior surveys in Wyoming and elsewhere have typically found the highest rates of seat belt use on interstate-primary roads, perhaps because higher speeds and more traffic encourage a higher perception of risk and greater seat belt use to diminish the risk. Secondary roads may often share some of the characteristics of primary roads and show similar rates of seat belt use. The lowest rates often come from the least-traveled roads, or the roads with the lowest level of perceived risks from traffic. These were likely to be those local roads, rural roads, and city streets.

Occupant Belt Use by Occupant Gender

The results for the 2017 seat belt use survey in Wyoming show females belted at a rate of 89.9 percent and males belted at a rate of 81.2 percent, a difference of 8.7 points. The lower male rate tends to depress the overall rate because males made up 58.7 percent of all vehicle occupants. Females were 41.3 percent of the vehicle occupants, so their higher rate of seat belt use has less effect on the overall rate. Figure 6 illustrates this result.

Figure 6: Occupant Frequencies by Occupant Gender, Wyoming 2017



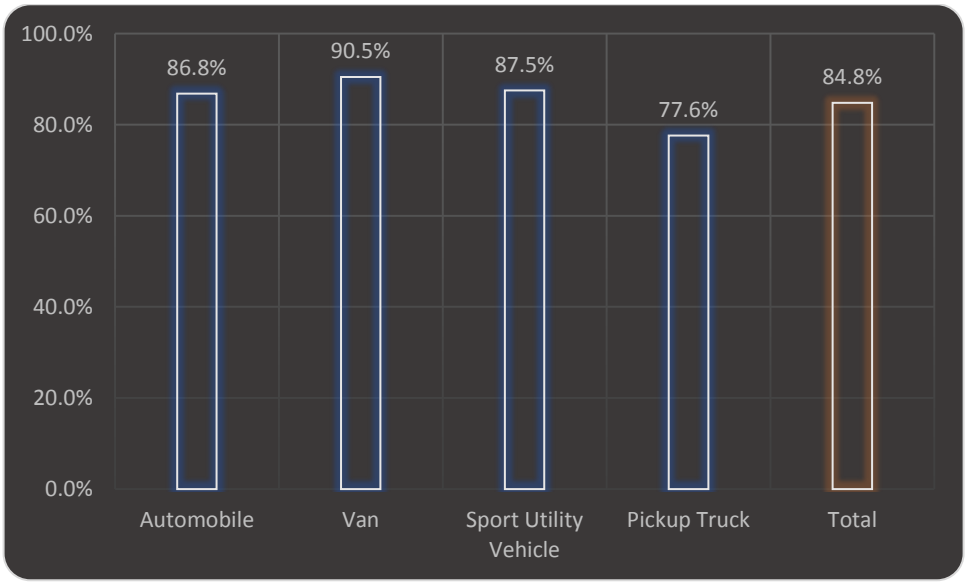
Occupant Belt Use by Vehicle Type

Drivers and passengers, the "occupants" in our survey, were more likely to be observed in pickup trucks than any other type of vehicle. For Wyoming 2017, 36.4 percent of vehicle occupants were observed in pickup trucks. Next highest type of vehicle was "vans," which carried 32.0 percent of vehicle occupants. Pickups and vans together comprised 68.4 percent of the vehicles in which occupants were observed. The dominance of pickups and vans may be peculiar to Wyoming, perhaps reflecting residents' preferences for vehicles connected to work and rugged conditions. Automobiles have declined in popularity in Wyoming; 24.6 percent of vehicle occupants were observed in automobiles in this 2017 survey. The fewest number of occupants were observed in sport utility vehicles (SUVs), with a frequency of 7.0 percent of the total occupants.

The dominance of the pickup truck is important because the lowest seat belt use has typically been found for occupants observed in pickup trucks. This is also true for this survey. The seat belt use rate for occupants in pickup trucks was 77.6 percent, a rate that was 7.2 percentage points lower than the overall rate of 84.8 percent. It appears that the higher frequency of occupants and the lower rate of belt use in pickup trucks tends to pull the overall rate down. The rates for occupants in each of the other vehicle types was higher: 86.8 percent in automobiles, 90.5 percent in vans, and 87.5 percent in SUVs.

Figure 7 demonstrates the results for these variables.

Figure 7: Occupant Belt Use by Vehicle Type, Wyoming 2017

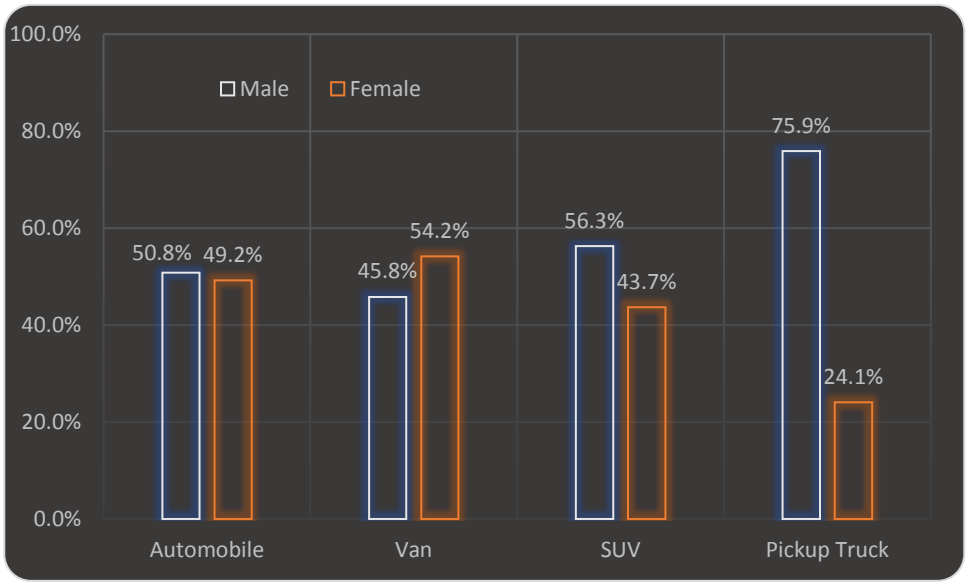


Occupant Belt Use by Vehicle Type and Gender

As previously noted in this report, male vehicle occupants outnumber females, 58.7 percent to 41.3 percent. It was also noted that females had higher rates of seat belt use. This section continues to explore those factors by examining gender differences in seat belt use across the different types of vehicles.

There were differences between males and females in terms of the types of vehicles. Figure 8 shows these distinctions.

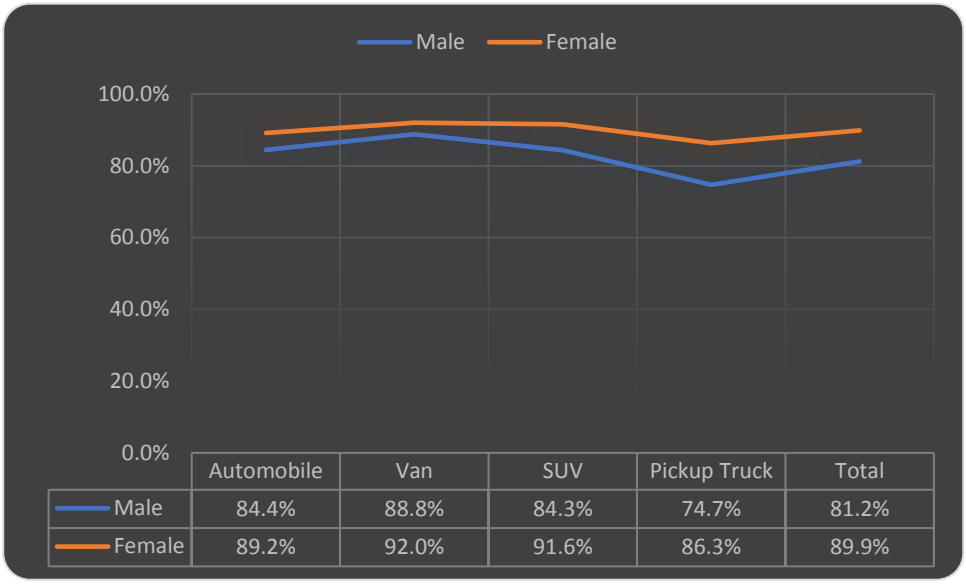
Figure 8: Occupant Percentages by Occupant Gender and Vehicle Type



The chart shows that females were the larger percentage of vehicle occupants only in vans (54.2% female), while males had slightly higher representation in automobiles (50.8%) and an even higher percentage in SUVs (56.3%). The greatest gender difference was found in pickup trucks: males constituted 75.9 percent of pickup truck occupants in the 2017 seat belt use survey in Wyoming.

These differences by gender are important because of the ways in which belt use varies by gender and vehicle type. As identified in the previous section, females had a higher overall rate of seat belt use, 89.9 percent compared to a rate of 81.2 percent for males. The following chart shows that the rate of seat belt use was greater for females in every type of vehicle.

Figure 9: Occupant Belt Use by Occupant Gender and Vehicle Type, Wyoming 2017



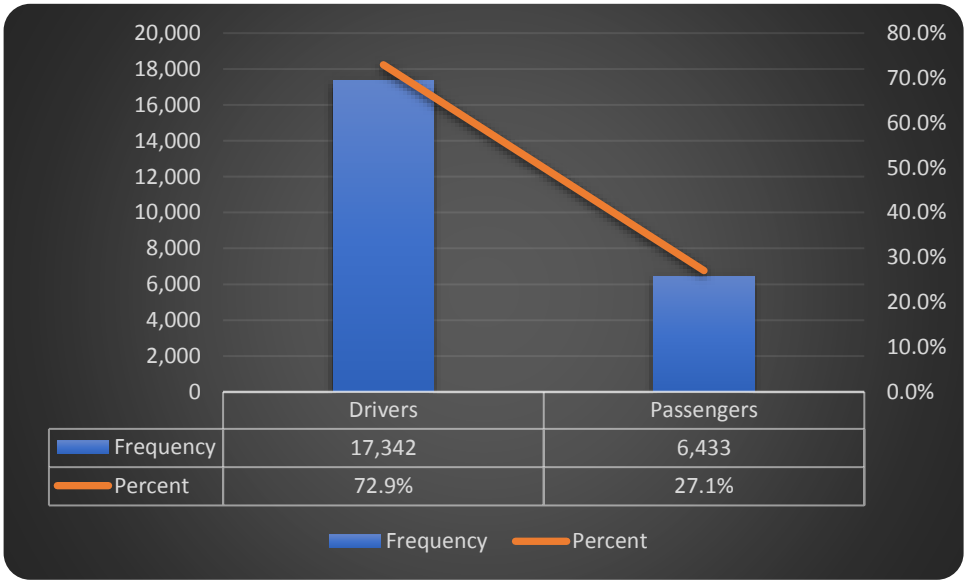
	Automobile	Van	SUV	Pickup Truck	Total
Male	84.4%	88.8%	84.3%	74.7%	81.2%
Female	89.2%	92.0%	91.6%	86.3%	89.9%

The most significant difference in the graph was for occupants in pickup trucks. Males in pickups had a seat belt use rate of 74.7 percent, and the female rate was 86.3 percent, a difference of 11.6 percentage points. The rates for males are typically similar until they enter a pickup truck, and then their rate falls dramatically. It falls from an overall 81.2 percent rate for males in all vehicle types to 74.7 percent in pickups, a drop of 6.5 percentage points. The rate was lower for females in pickups, but the decline was from an overall rate of 89.9 percent to 86.3 percent, a drop of 3.6 percentage points, nearly half of the decline for males. This "pickup truck effect" seems to occur for both males and females, but not as much for females. Seat belt use by females was more consistent across vehicle types.

Drivers and Passengers

For the seat belt survey, observations of seat belt use were collected for drivers and front seat outboard passengers, who together made up all the observed vehicle occupants. The data did not include seat belt use for middle front seat or back seat passengers. The frequencies for the 2017 Wyoming drivers and passengers are illustrated by the following chart.

Figure 10: Frequencies by Type of Vehicle Occupant, Wyoming 2017

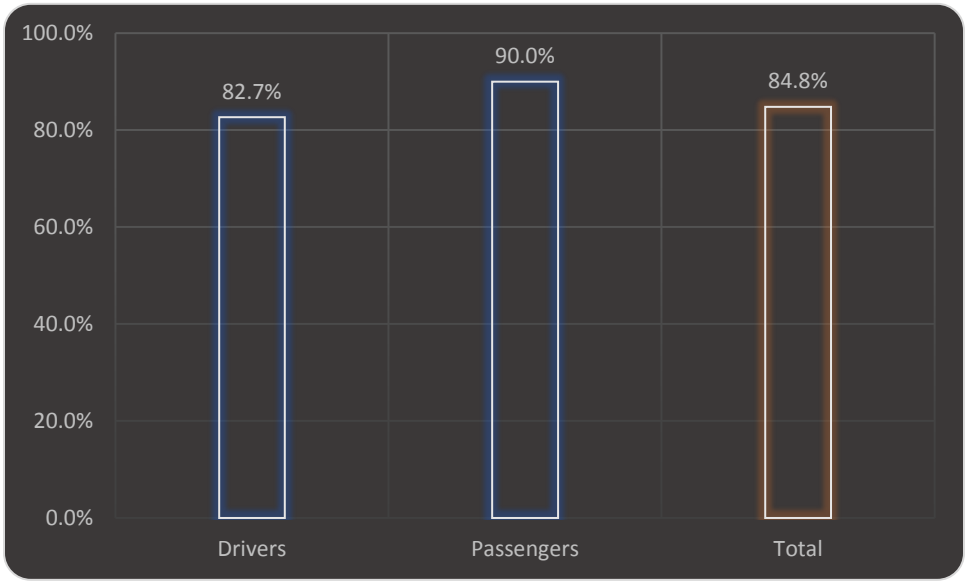


Drivers made up 72.9 percent of all the vehicle occupants; passengers were 27.1 percent. Although there may be other passengers in some vehicles -- for example, children in the back seat – it was likely that 72.9 percent of vehicles had only a driver.

It was noted previously in this report that drivers tend to have a lower rate of seat belt use than passengers. This is true for the Wyoming 2017 seat belt use survey, as shown by the following chart. The weighted estimates were 82.7 percent belted for drivers and 90.0 percent belted for passengers, a difference of 7.3 percentage points.[5]

This relationship tends to carry over within all the other major variables examined in this report. The following discussion provides highlights for each of these other variables found when driver and passenger rates were examined for 2017 in Wyoming, with accompanying charts to illustrate the differences.

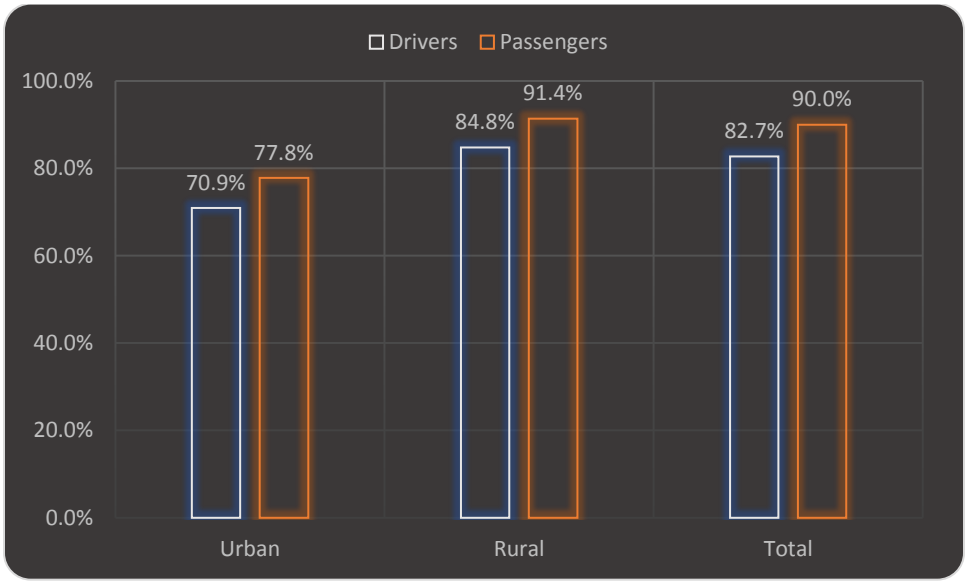
Figure 11: Occupant Belt Use by Driver and Passenger, Wyoming 2017



[5] Throughout this section, the calculations used to find the differences in seat belt use were done by subtracting the rate for drivers from the rate for passengers. This approach made most of the differences a positive number. While the percentage differences were not presented in the narrative, they will appear for reference in the appendix.

Population Density. Passengers had a higher rate of seat belt use in both urban and rural areas. As reported previously the vehicle occupants were more likely belted in rural areas than urban areas. The data also shows passengers with higher rates of seat belt use in urban areas, 6.9 points higher for passengers, and in rural areas, where passengers were 6.6 percentage points more likely to be belted.

Figure 12: Belt Use by Occupant and Population, Wyoming 2017



Counties. Passengers had higher rates of seat belt use in fifteen of the seventeen counties. Only Natrona and Sweetwater had drivers with a higher rate of belt use, and those differences (-2.9 percent in Natrona and -0.4 points in Sweetwater) were small. The higher rates of seat belt use for passengers were particularly significant for Albany (13.3 %), Converse (10.7 %), Laramie (12.1 %) and Sheridan (12.8%).

Figure 13: Belt Use by Occupant and County, Wyoming 2017

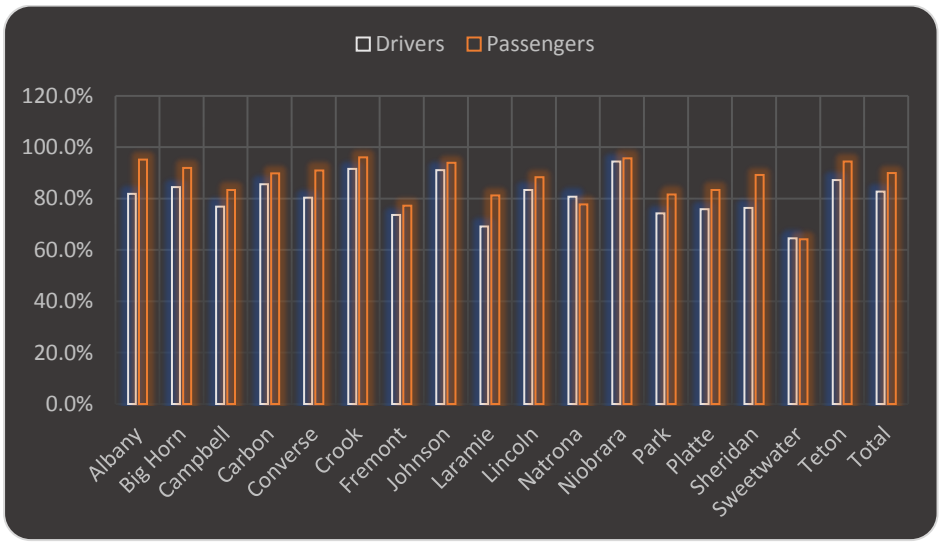
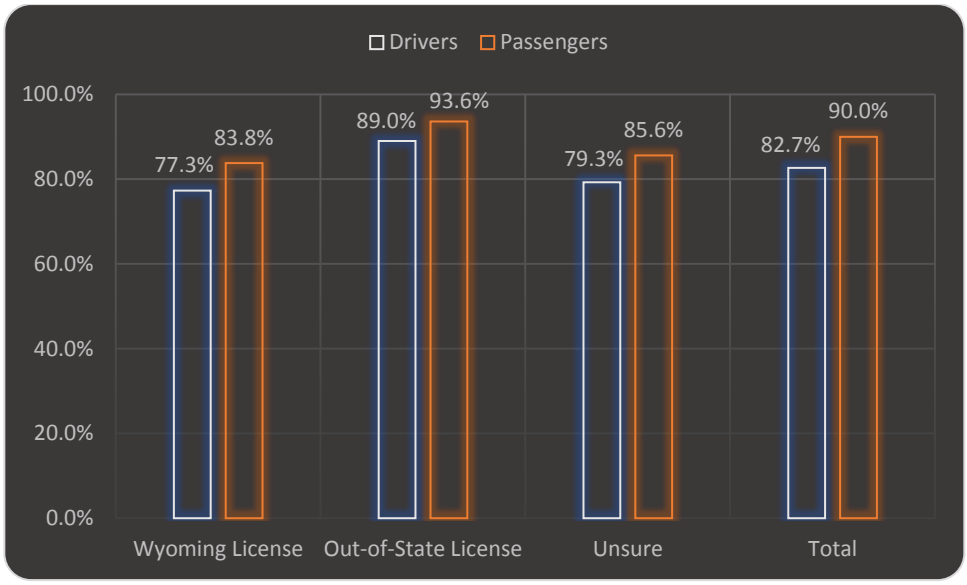


Table 5: Belt Use by Occupant & County

County	Drivers	Passengers	Differences
ALBANY	81.9%	95.2%	13.3%
BIG HORN	84.5%	92.0%	7.5%
CAMPBELL	76.9%	83.3%	6.4%
CARBON	85.6%	89.8%	4.2%
CONVERSE	80.3%	91.0%	10.7%
CROOK	91.6%	96.1%	4.5%
FREMONT	73.6%	77.2%	3.6%
JOHNSON	91.1%	94.0%	2.9%
LARAMIE	69.1%	81.2%	12.1%
LINCOLN	83.3%	88.4%	5.1%
NATRONA	80.7%	77.8%	-2.9%
NIOBRARA	94.5%	95.7%	1.2%
PARK	74.3%	81.6%	7.3%
PLATTE	75.9%	83.3%	7.4%
SHERIDAN	76.4%	89.2%	12.8%
SWEETWATER	64.5%	64.1%	-0.4%
TETON	87.2%	94.4%	7.2%
TOTAL	82.7%	90.0%	7.3%

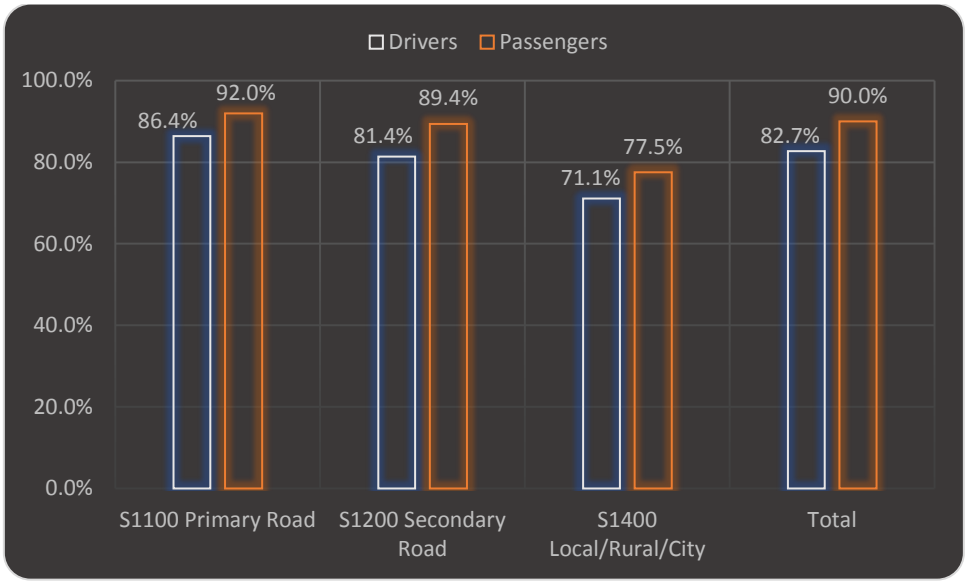
License. Passengers had higher estimates of seat belt use than drivers for both Wyoming and out-of-state vehicles. The difference was a passenger rate 6.5 points higher for passengers in Wyoming vehicles and 4.6 points higher for passengers in out-of-state vehicles.

Figure 14: Belt Use by Occupant and Vehicle Registration



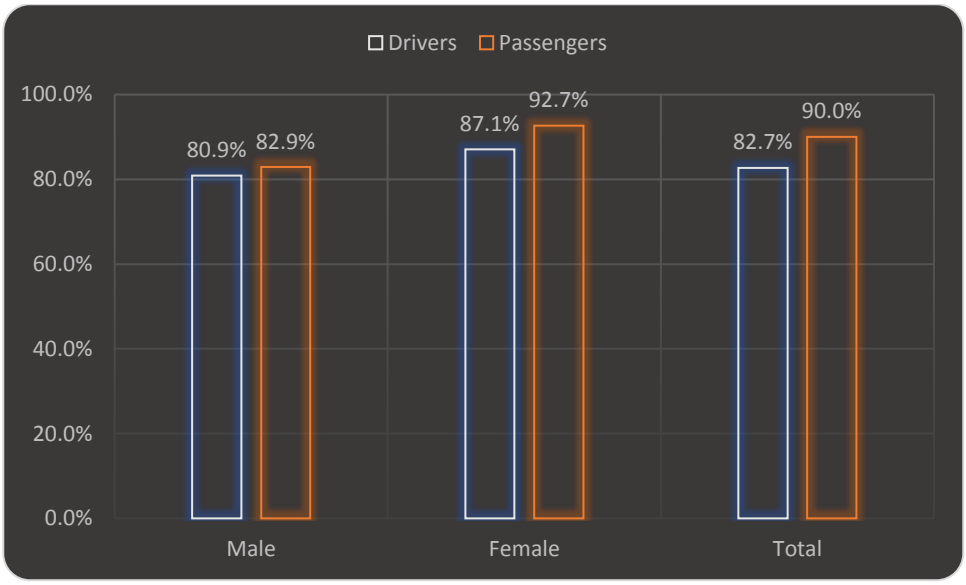
Roadway. Passenger seat belt estimates were higher than driver estimates across all three types of roadways. Passengers were belted at a rate 5.6 points higher on primary roads, 8.0 points higher on secondary roads, and 6.4 points higher on the composite local-rural-and city roadways.

Figure 15: Belt Use by Occupant and Type of Roadway



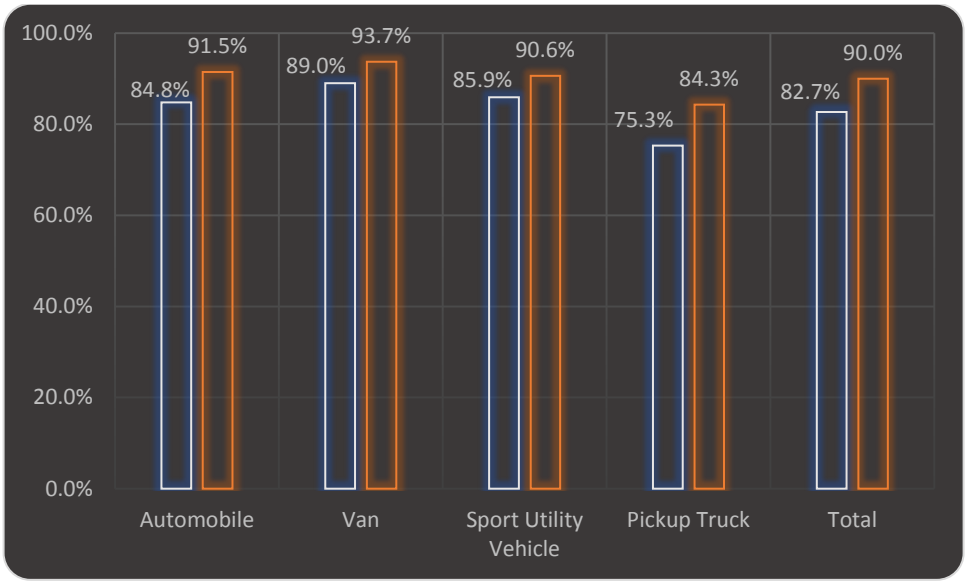
Gender. Both male and female passengers had higher rates of seat belt use than their driver counterparts. The passenger rates were 2.0 points higher for males and 5.6 points higher for females.

Figure 16: Belt Use by Occupant & Gender, Wyoming 2017



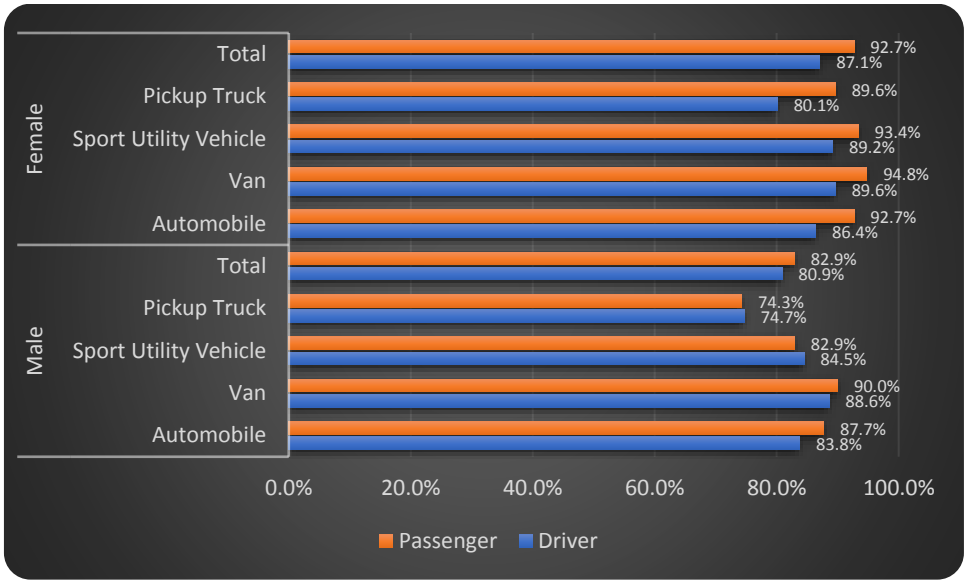
Vehicle Type. Passengers had higher rates of seat belt use in every type of vehicle, as illustrated by the following chart. The most notable rate difference was found in pickup trucks: passengers had a belt use rate of 84.3 percent while the comparable rate for drivers was 75.3 percent, a difference of 9.0 points. This difference appears to be a product of a higher rate of belt use for female passengers in pickup trucks, as illustrated by the next chart.

Figure 17: Belt Use by Occupant & Vehicle Type



Vehicle Type and Gender. This gender-vehicle type relationship is more complex than rate comparisons for other variables. As the accompanying chart indicates, belt use for males across the different vehicle types was relatively small. In fact, male passengers were only slightly less likely to be belted than male passengers in SUVs and pickup trucks. Overall, male passengers were only 2.0 percentage points more likely to be belted, a difference that occurs primarily in automobiles. On the other hand, female passengers were more likely than female drivers to be belted in every type of vehicle, especially in pickup trucks, where the difference was 9.5 percentage points. Overall, female passengers were more likely to be belted, at 92.7 percent, than female drivers, at 87.1 percent, a difference of 5.6 points. However, it should be noted that females, both drivers and passengers, had rates of belt use higher than the statewide average for all vehicle occupants (84.8%) in every type of vehicle.

Figure 18: Belt Use by Occupant, Gender, & Vehicle Type, Wyoming 2017



This comparative examination of seat belt rates for drivers and passengers shows that passengers typically had higher rates of seat belt use than drivers in nearly every instance. The only exceptions to the pattern occurred in a couple of counties and for males in SUVs and pickup trucks.

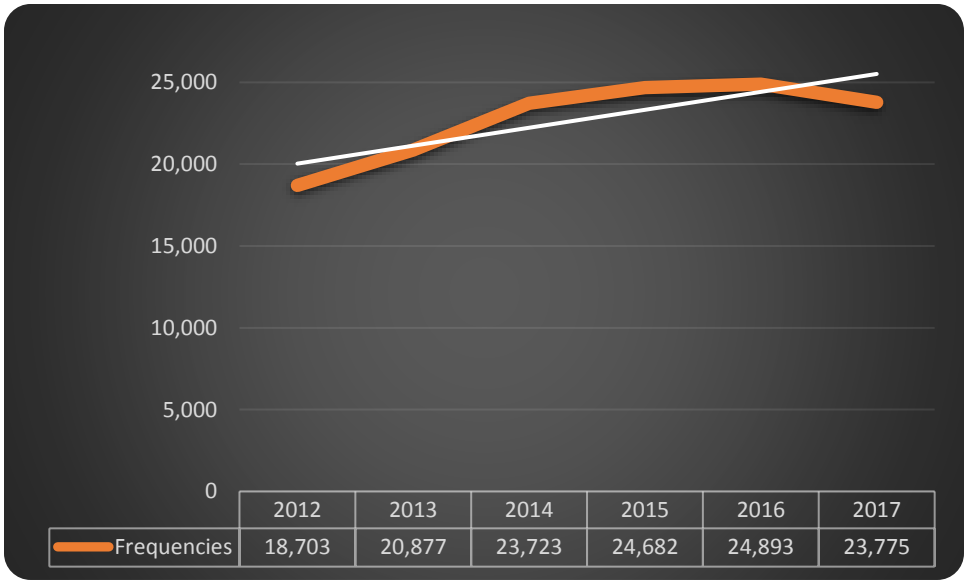
Seat Belt Use from 2012 to 2017

The year 2012 marked a new baseline survey of seat belt use for Wyoming. A new sample was drawn under new guidelines found in the Uniform Criteria for State Observational Surveys of Seat Belt Use. As is true with new baseline surveys, especially as associated with a new universe of counties and sites, the results for a baseline year cannot be compared directly with any other annual surveys. A real comparison cannot occur because any trends in belt use may be due to changes in samples rather than real changes in belt use.

With that caveat in mind, trends are offered here, but only for informational purposes. Readers should be very cautious about reaching any conclusions.

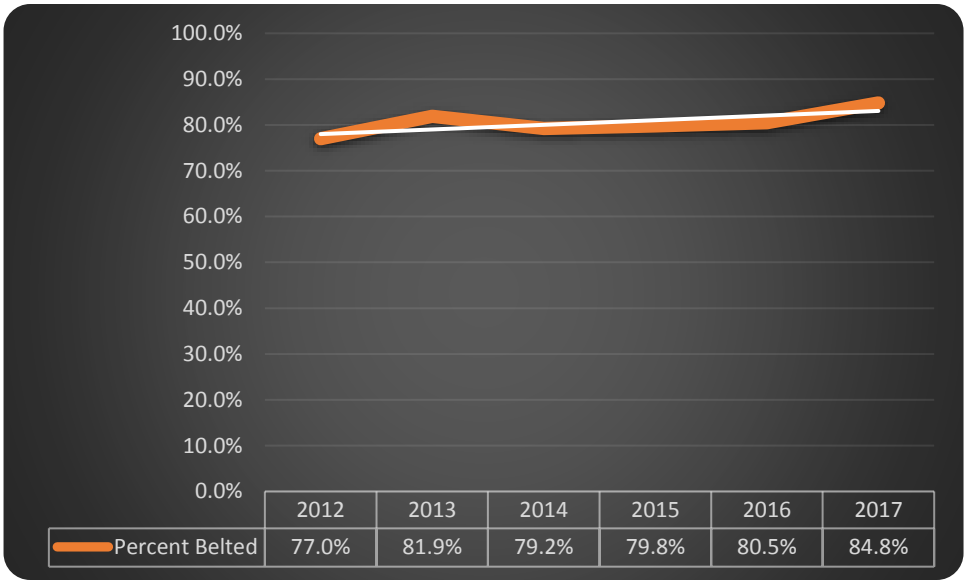
The main thing to notice about the trends is the similarly across the years from 2012 to 2017. For example, the following chart presents the total observations of vehicle occupants. The range of frequencies was from 18,703 in 2012 to 24,893 in 2016, with most frequencies closest to the overall six-year average of 22,776 vehicle occupants. The new baseline frequency for 2017 was not far off, at 23,775 vehicle occupants.

Figure 19: Occupant Frequencies by Year, Wyoming 2017



The estimates of seat belt use across the years is another matter. The new 2017 baseline of 84.8 percent belted is the highest estimate for the last six years, and it is greater than the highest rate for the five years attached to the 2012 baseline (81.9 percent in 2013) by 2.9 percentage points. The accompanying chart below illustrates these results.

Figure 20: Occupant Belted by Year, Wyoming 2017



The 2012 baseline rate is the lowest rate across the five-year life of the previous set of surveys. What the rates would be in Wyoming over the next five years was unknown in 2012. However, it is known that the 2017 baseline rate is 84.8 percent and the results over the next five years should be open to comparison.

The remainder of this report primarily consists of SPSS or Excel data tables that were produced for the report. The following appendices provide the data that is known about the 2017 Wyoming survey of seat belt use. The data tables are the same as those used by the author of this report and serve as a reference for readers.

APPENDIX

Appendix A: State Seat Belt Use Reporting Form

state seat belt use reporting form

State Seat Belt Use Survey Reporting Form

PART A

State: Wyoming

Calendar Year of Survey: 2017

Statewide Seat Belt Use Rate: 84.8 Percent

I hereby certify that: The Governor designated Matt Carlson as the State's Highway Safety Representative (GR), and has the authority to sign the certification in writing.

The reported Statewide seat belt use rate is based on a survey design that received approval by NHTSA, in writing, as conforming to the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340.

The survey design remained unchanged since NHTSA approved the survey.

Dr. James G. Leibert[6], a qualified survey statistician, reviewed the seat belt use rate reported above and information reported in Part B and determined that they meet the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340.

Signature

9-22-17

Date

Matthew D. Carlson

Printed name of signing official

---

6 In accordance with the final rule published in Federal Register Vol. 76 No. 63, April 1, 2011, Rules and Regulations, pp. 18042-18059, DLN contracted with statistician, Dr. James G. Leibert to determine that the methods used to process the collected data met the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340. Dr. Leibert reviewed the SPSS output files and related data tables to confirm the data are accurate and true. A copy of Dr. Leibert's abbreviated resume follows.

5820 York Ave. S.
Edina, MN. 55410

Phone 952.922.0018
E-mail 1jleibert@gmail.com

James G. Leibert, PhD.

Summary – Creative problem solver with knowledge of and experience in a broad array of statistical and computational tools and techniques. I understand that there is no one tool or technique that can be used for every situation. I can quickly see connections and use tools and techniques from other fields as appropriate.

Employment

Research Scientist III, Minnesota Department of Human Services, Disability Services Division, St. Paul, MN. Current

Chair, Dept. of Political Science and Public Administration / Director of the Master of Public Administration Program / Dean of Graduate and Undergraduate Studies, Kazakhstan Institute of Management, Economics, and Strategic Research (KIMEP), Almaty, Republic of Kazakhstan, 2001-2002.

Associate Professor (1999-2001) / International Programs Coordinator (2000 – 2001)

Chairman of the Department of Social Sciences (1999 – 2000) \ Assistant Professor (1993-1998), Dickinson State University Dickinson, ND, 1993-2001.

Leadership

Team Player

Problem

Solving

Appendix B: Survey Design

Wyoming survey design

The Wyoming Department of Transportation Highway Safety Program in collaboration with DLN Consulting, Inc. designed the following sampling, data collection, and estimation plan. The National Highway Traffic Safety Administration accepted and approved the plan on April 24, 2012. A copy of the approval notification can be found in Appendix C.

Seat Belt Use Survey Design for Wyoming

Sampling, Data Collection and Estimation Plan

Revised 04-03-2012

Seat Belt Use Survey Design for Wyoming

Sampling, Data Collection and Estimation Plan

January 3, 2012
Revised March 7, 2012

Submitted to:

National Highway Traffic Safety Administration
Traffic Safety Programs
1200 New Jersey Ave, SE
Washington, DC 20590

Submitted by:

Wyoming Department of Transportation
Highway Safety Program
5300 Bishop Boulevard
Cheyenne, WY, 82009-3340

DLN Consulting, Inc.
2493 4th Ave W
Suite G
Dickinson, ND 58601

Table of Contents

Introduction

This document provides the details of the methods proposed for a survey of seat belt use in the State of Wyoming in 2012. These methods have been developed by Wyoming to comply with the new Uniform Criteria for State Observational Surveys of Seat Belt Use issued in 2011 by the National Highway Traffic Safety Administration (NHTSA).[1]

This proposal includes the following:

- The general parameters of the study design, which produced the proposed sampling frame for the survey of Wyoming seat belt use.
- The sample design, including the proposed sample size and the methods to be used for the selection of road segments.
- The proposed data collection methods, including the training of observers, and the protocols that will guide observers in data collection, and the proposed quality control procedures.
- The proposed analytical methods to be used in producing an estimate of seat belt use in Wyoming, including the statistical use of sampling weights, the methods to adjust for nonresponsive data, and the methods of variance estimation.

This plan is compliant with the Uniform Criteria and will be used for the implementation of Wyoming's 2012 seat belt survey, upon approval.

Study Design

There are 23 counties in the State of Wyoming. Fatality Analysis Reporting System (FARS) data for the years 2005 – 2009 by county was examined to identify the counties that accounted for at least 85 per cent of the cumulative crash–related fatalities during that period of time. Five years of data was selected to produce the largest number of counties available for the sample. Sixteen of the 23 counties accounted for 87.7 percent of the fatalities during this five-year period. Table 1 lists the fatality counts, and cumulative percentage of fatalities by county in Wyoming.

Road segment data was acquired from NHTSA, as developed by the U.S. Census Bureau in the form of 2010 TIGER data, for each of the 16 counties in the sample frame. All roads, with the exception of rural local roads, non-public roads, unnamed roads, unpaved roads, vehicular trails, access ramps, cul-de-sacs, traffic circles, and service drivers. These exclusions are compliant under § 1340.5.a.2.ii. The data include the length of the road segments and the classification of the road segments by road type (MTFCC).[2] This classification scheme locates each road segment within three different types of roads, as follows:

- Primary roads (MTFCC Code S1100), which are generally divided, limited-access highways within the interstate highway system or under state management, and are distinguished by the presence of interchanges. These highways are accessible by ramps and may include toll highways, although there are no toll highways in Wyoming.

[1] The final rule was published in Federal Register Vol. 76 No. 63, April 1, 2011, Rules and Regulations, pp. 18042 – 18059.

[2] The classification scheme uses the MAF/TIGER feature Class Code, or MTFCC in the database.

- Secondary roads (MTFCC Code S1200), which are main arteries, usually in the U.S. Highway, State Highway, or County Highway system. These roads have one or more lanes of traffic in each direction, may or may not be divided, and usually have at-grade intersections with many other roads and driveways. They often have both a local name and a route number.
- Local neighborhood roads, rural roads, and city streets (MTFCC Code S1400), including paved non-arterial streets, roads or byways that usually have a single lane of traffic in each direction. The roads in this class may be privately or publicly maintained. Scenic park roads would be included, as would some unpaved roads, in this classification.

This classification scheme will be used to stratify the road segments in each county. The road segments to be included in the statewide sample will be drawn from the strata within each of the selected counties.

Sample Design

The proposed design is intended to conform to the requirements of the Uniform Criteria. The objective of the design is to generate annual estimates of occupant restraint use for adults and children using booster seats in the front seats of passenger vehicles. Wyoming intends to update the sample of data collection sites every five years in order to have survey results that reflect those counties with more than 85 percent of crash–related fatalities. The sample design described here was provided to Wyoming under a consultant agreement with DLN Consulting, Inc. and Dr. Jamil Ibriq of Dickinson State University in Dickinson, North Dakota.[3] The sample design is for a stratified, systematic, randomly selected sample of data collection segments, with the following detailed steps:

- All 23 counties in Wyoming were listed in descending order of the average number of motor vehicle crash-related fatalities for the period of 2005 to 2009. Fatality Analysis Reporting System (FARS) data were used to determine the number of crash-related fatalities per county. It was determined that 16 of the counties accounted for more than 85.0 percent of traffic-related fatalities.[4] A decision was made by the Wyoming Department of Transportation to include all 16 counties for observation in order to maximize the numbers of counties to be observed. This method used in the first sampling stage resulted in all counties in the sample being selected with certainty and a probability factor of 1. Table 1 lists Wyoming's counties, fatality counts, and cumulative fatality percentages.
- The road segments were selected randomly from all eligible segments in each of the strata in the sampled counties. The road segments were stratified on the basis of the MTFCC road type classification[5]. A total sample of 18 road segments was identified for each county based on the historical number of observations collected over the past five years in Wyoming. This stage of the sampling process resulted in the selection of 288 road segments (16 counties X 18 sites per county).

[3] Dr. Jamil Ibriq's résumé is included in Appendix A.
[4] The 16 counties account for 87.7 percent of traffic-related fatalities in the FARS cumulative data from 2005-2009.
[5] The road types, previously described, are (S1100) primary roads, (S1200) secondary roads, and (S1400) local neighborhood roads, rural roads, and city streets.

- The sampling process included the random selection of additional road segments within each road-type strata and county. These segments are part of a pool of reserve sites that can be substituted for existing segments in the sample that become unavailable due to extensive construction, weather-related problems, or other unanticipated events.
- It is expected that this process will produce approximately 28,800 observations, based on prior surveys of seat belt use in Wyoming. Given this sample size, the standard error should be less than the 2.5 percent maximum specified by the Uniform Criteria. In the event that the standard error exceeds 2.5 percent, additional observations will be collected from existing sites.
- Randomization procedures will be used to determine protocols regarding the initial road segment for observation within each county, the direction of traffic flow for observation, etc., to be described later in this proposal.

Table 1: Wyoming's Average Motor Vehicle Crash-Related Fatalities By County 2005 - 2009

STATE CODE	COUNTY NAME	Average fatality counts for 5 years	Fatality percentage within the state	Cumulative fatality percentage
Wyoming	FREMONT	20.6	12.4	12.4
Wyoming	SWEETWATER	19	11.4	23.8
Wyoming	NATRONA	13.2	7.9	31.8
Wyoming	CAMPBELL	11.8	7.1	38.9
Wyoming	LARAMIE	11.2	6.7	45.6
Wyoming	CARBON	10	6	51.7
Wyoming	ALBANY	7.6	4.6	56.2
Wyoming	JOHNSON	6.8	4.1	60.3
Wyoming	PARK	6.8	4.1	64.4
Wyoming	TETON	6.4	3.9	68.3
Wyoming	UINTA	6.4	3.9	72.1
Wyoming	SHERIDAN	5.4	3.3	75.4
Wyoming	SUBLETTE	5.4	3.3	78.6
Wyoming	LINCOLN	5.2	3.1	81.8
Wyoming	BIG HORN	5	3	84.8
Wyoming	PLATTE	4.8	2.9	87.7
Wyoming	CONVERSE	4.2	2.5	90.2
Wyoming	GOSHEN	3.3	2	92.2
Wyoming	CROOK	3.2	1.9	94.1
Wyoming	WESTON	3	1.8	95.9
Wyoming	NIOBRARA	2.8	1.7	97.6
Wyoming	HOT SPRINGS	2	1.2	98.8
Wyoming	WASHAKIE	2	1.2	100

Sample Size and Precision

A standard error of less than 2.5% for the seat belt use estimates is required by the Final Rule. Since 2006, Wyoming has conducted annual seat belt use studies that have historically obtained standard error rates below this threshold (e.g. 1.1%, 1.2%, 0.9%, 1.0%, and 0.8% in the past five years) via

observed sample sizes between 23,404 and 27,274. These observed sample sizes have been obtained from previous sample designs using nine counties and 23 road segments per county. Therefore, since the proposed design is expected to yield a sample of about 28,800 observations (16 counties X 18 sites per county X 100 vehicles per observation site), the precision objective should be achieved without problem. In the event that the precision objective of a 2.5% or less standard error is not met, additional observations will be taken starting with sites having the fewest observations. New data will be added to existing data until the desired precision is achieved.

County Selection

All 16 counties within the sample were selected with certainty. This was a decision made by the Wyoming Department of Transportation to measure seat belt use in all the top fatality counties within the state. As certainty counties, each was assigned a probability factor of 1 (16 counties selected from the 16 counties in the sample) and represented the first stage of sampling.

Road Segment Selection

After determining the number of road segments in each stratum, the probabilities of selection were determined. Based on the probability calculations, no certainty road segments were identified. The road segments in each stratum in each county were then selected randomly using a simple java program. The program randomly selected a particular site from the list of eligible sites in the stratum. Once a site was selected, it was removed from the list of eligible sites in the stratum. The next site was then selected randomly from the remaining sites. This random process continued until all the sites in the stratum were selected.

Table 2: Roadway Functional Strata by County, Road Segments Population (N), Length, and Number of Segments Selected (n)

County		MTFCC Strata			Total
		Primary	Secondary	Local	
Albany	N	149	992	0	1141
	Length	60.639697	247.87805	0	308.517747
	n	2	16	0	18
Big Horn	N	0	1182	0	1182
	Length	0	271.087301	0	271.087301
	n	0	18	0	18
Campbell	N	267	1041	0	1308
	Length	97.912343	275.346207	0	373.25855
	n	4	14	0	18
Carbon	N	222	1311	0	1533
	Length	80.064222	419.42926	0	499.493482
	n	3	15	0	18
Fremont	N	1	1891	0	1892
	Length	0.115489	486.099588	0	486.215077
	n	0	18	0	18
Johnson	N	698	862	0	1560
	Length	234.830117	196.282768	0	431.112885
	n	8	10	0	18
Laramie	N	447	966	10768	12181
	Length	170.462425	242.350688	2127.917681	2540.730794
	n	1	1	16	18
Lincoln	N	94	1312	0	1406
	Length	34.119548	284.555377	0	318.674925
	n	1	17	0	18
Natrona	N	402	1516	11520	13438
	Length	124.83999	273.858866	1699.585696	2098.284552
	n	1	2	15	18
Park	N	0	1593	0	1593
	Length	0	365.12326	0	365.12326
	n	0	18	0	18
Platte	N	401	754	0	1155
	Length	145.526417	168.650462	0	314.176879
	n	6	12	0	18
Sheridan	N	228	1470	0	1698
	Length	85.030844	222.495535	0	307.526379
	n	2	16	0	18
Sublette	N	0	1064	0	1064
	Length	0	258.890084	0	258.890084
	n	0	18	0	18
Sweetwater	N	329	1162	0	1491
	Length	154.80921	374.258433	0	529.067643
	n	4	14	0	18
Teton	N	0	785	0	785
	Length	0	226.731063	0	226.731063
	n	0	18	0	18
Uinta	N	223	624	0	847
	Length	74.802936	132.715057	0	207.517993
	n	5	13	0	18

Reserve Sample

In the event that an original road segment is permanently unavailable, a reserve road segment will be used for data collection. The reserve road segment sample consists of two additional road segments per original road segment selected, resulting in a reserve sample of 576 road segments. The reserve sample is generated by selecting the road segments immediately preceding and immediately following each randomly selected road segment, and constitutes the original sample. Since the road segments in the database for any road type and county are organized geographically by their longitude and latitude values, this implies that the road segments in the reserve sample for a particular road type and county are located in close proximity to each other. For example, if V_i-1 and V_i+1 are the same type as V_i, i.e., primary road type, and located in the same geographical region, they therefore have similar characteristics in terms of traffic flow and population mix. The reserve sample is developed using simple random sampling in which v road segments are selected from V road segments in a particular road classification and county in such a way that every possible combination of v road segments is equally likely to be the sample selected.

For the purposes of data weighting, the reserve road segments inherit all probabilities of selection and weighting components up to and including the road segment stage of selection from the original road segments actually selected.

Data Collection

Site Selection

Each of the road segments in the sample, including those in the reserve sample, was mapped according to the latitude and longitude of their midpoints. Observation sites were identified by the intersections that occurred within the road segment, except when there was no identifiable intersection or interchange. In the latter case, the midpoint within the road segment was selected for observation.

The data collection sites on the road segments were selected in a location approximately fifty yards from any controlled intersection. For interstate highways, data collection will occur on a ramp carrying traffic that is exiting the highway. In every case, the choice of the observation site will be based on maximizing observer safety and line of sight for reliable data collection.

The observed direction of travel was randomly assigned for each road segment. The locations of the data collection sites were described on Site Assignment Sheets for each county, and maps were developed to assist the observers and quality control monitors in travelling to the assigned locations.

Training

Wyoming will hire a minimum of 16 observers, one for each county in the sample, to collect the data. Additional observers will be hired as reserve observers and to assist assigned observers in high traffic sites, defined by known traffic patterns associated with the general area of the sample sites.[6]

Two quality control monitors will be hired. Each will be responsible for half the state. Observers and quality control monitors will be recruited by a contracted firm with preference given to individuals who have experience in past seat belt use surveys or other field data collection. Law enforcement personnel will be excluded from the hiring base to reduce data collection bias.

There will be two quality control monitors assigned to cover the data collectors. Quality control monitors will make unannounced visits at ten percent of the total sites for purposes of determining data reliability through the separate collection of data. The quality control monitors will not serve as both observer and quality control monitor.

Training for observers and quality control monitors will be conducted at a central location in the state prior to the state's pre-survey held the last week in April each year. The training session will include lecture, classroom, and field exercises. Each observer and quality control monitor will be tested through participation at a minimum of three observation test sites to acquire an inter-observer agreement ratio.

Test sites will be selected to represent the types of sites and situations observers will encounter in the field. No actual sites in the sample of roadway segments will be used as test sites. During field training, observers and quality control monitors will record data independently on separate observation forms. Each person will document vehicle type, gender, and seat belt use of drivers and outboard front seat passengers. Individual observations will be compared to the group to calculate the agreement rate. All agreement rates must be sufficiently high (85% or higher) or additional training will be conducted.

At the conclusion of the training, observers and quality control monitors will be given a post-training quiz to ensure they understand the survey terminology, the data collection protocols, and the reporting requirements.

Quality control monitors will be given an additional half-day training session that focuses on their specific duties. These include conducting unannounced site visits to a minimum of two sites (10%) for each observer and reviewing the field protocols with the observers during the visits. The quality control monitors will be available to respond to questions and offer assistance to observers as needed.

The training syllabus can be found in Appendix D.

Data Collection Protocols

Observers will collect data on the seat belt use of drivers and outboard passengers, including children in booster seats,[7] on the weekdays and weekends during the collection period during the first full week of

[6] The definition of high traffic sites includes the number of observations in similar areas from a combination of data from prior Wyoming SBU surveys, and/or demographic information from densely populated areas.

June 2012. Data collection will occur in 45-minute observation periods between the hours of 7:00 a.m. and 6:00 p.m. Start times will be staggered to ensure that a representative number of weekday/weekend sites and rush hour/non-rush hour sites will be included. Observers will cover between four and five sites per day, depending on the accessibility of sites and the travel time needed to arrive at the sites.

All observers will have packets of maps showing the location of assigned sites and data collection forms specific to each assigned site. Additional information will include the road segment names; the location of the intersection within the road segment; the assigned date, time, and direction of travel; and any additional instructions which may apply at any given site. Sites in close geographic proximity to each other will be clustered to increase efficiency of data collection. The first site to be observed within a cluster will be chosen randomly and observations at subsequent sites will be scheduled by geographic proximity to minimize travel within the cluster. The clustering process will be designed so that an observer can cover all the sites within the cluster in a single day.

Some sites will have much heavier traffic than others. An additional observer will be assigned to sites identified as having heavy traffic patterns. One person will be responsible for the visual observation and the second observer will record the observations as verbally provided by the first observer. The objective here is to maximize coverage and minimize those observations where seat belt use cannot be determined due to the volume of traffic. The number of second observers will be determined once all sites have been physically located.

Data Collection

All passenger vehicles, including commercial vehicles weighing less than 10,000 pounds, will be eligible for observation. Observers will be provided data collection forms, a sample of which is included in Appendix C.[8] Cover sheets for each site will provide for documentation of important site information, including the location of the road segment, assigned date, time, direction of traffic flow, lanes observed, start and end times, and additional information as appropriate, including weather conditions, road construction, or any other factors which might affect data collection. Observers will fill in the cover form at each site. If observers need to move to an alternate site, the reasons, along with all other information, will be detailed on the cover sheet.

For each vehicle, observers will record the type of vehicle, the gender of each driver and passenger, the belt status for each driver and passenger, and the vehicle license registration (Wyoming or out-of-state). These variables, along with belt use by county and roadway type, will be analyzed for the state of Wyoming. [9]

---

[7] Front seat occupants who are child passengers traveling in child seats with harness straps will not be included in the observations.

[8] The sample form included in the appendix may need some modifications before data collection occurs, but any changes are likely to be minor.

[9] Once all statistical calculations have been completed by Dr. Ibriq, Dr. Keith Fernsler will serve as the analyst of the data. Dr. Fernsler's resume can be found in Appendix A.

Belt status for each driver and passenger will be recorded as follows:

- Belted, which is defined as an observable shoulder belt in front of the occupant's shoulder;
- Not belted, when the shoulder belt is not in front of the occupant's shoulder;
- Unknown, which is the code used for the occupant or occupants when the observer cannot determine whether the driver or outboard passenger is belted.
- A code which indicates that no passenger is present.[10] This code would also apply to children restrained in safety seats with harnesses.

For sites with two-way traffic, the direction of the traffic to be observed will be predetermined through a random selection process. For road segments with two or more lanes of traffic traveling in the same direction, observations will be made in the lane closest to the observer.

Generally, observations will occur from observer vehicles. The vehicles will be parked in safe locations that do not hinder normal traffic and are not a traffic hazard. The objective is for the observer to find a safe site from which drivers and front seat outboard passenger seat belt use can be determined. Other considerations include light conditions and the direction of the sun, so as to minimize glare in making observations.

In some instances, observers will not be able to collect data from their vehicles. In those cases, observers may exit the vehicle and stand as close to the intersection as is safely feasible. Whenever they make observations outside the vehicle, observers will wear safety vests and hard hats as required by Wyoming Department of Transportation policy. This safety equipment will be issued to all observers and quality control monitors by the Wyoming Department of Transportation.

Alternate Sites and Rescheduling

Assigned sites on assigned days and times may not be available for a variety of reasons. When a site is temporarily unavailable due to inclement weather or a crash, data collection will be rescheduled for a similar time of day and day of week. If a site is permanently unavailable, such as on a detoured road segment or within a gated community, then an alternate site, selected as part of the reserve sample, will be used as the permanent replacement. The two alternate locations for each site will be clearly identified and listed on the Site Assignment Sheet. Observers will select one of the reserve sites at random. If the selected reserve site is also permanently unavailable, then the observer will use the second reserve site listed.

Quality Control

Quality control monitors will be randomly assigned to two data collection sites within each of the sixteen counties in the Wyoming sample. At each site, the monitor will evaluate the observer's general performance and will work alongside the observer to ensure that the observer is following all survey

[10] It is possible that separate lines of data for drivers and passengers during the data analysis stage may be created. This process will make it easier to combine drivers and passengers when reporting on seat belt use for all vehicle occupants.

protocols. The quality control monitor will include in the performance evaluation all or more of the following:

- Was the observer on time at the assigned sites?
- Did the observer complete the cover sheets and observation forms correctly?
- Were the observer's observations of seat belt use accurate?

The quality control monitors will prepare full reports on each of their site visits within a reasonable time after a site visit occurs. If there are problems with an observer's performance, the monitor should report these problems to the survey supervisor immediately so problems can be corrected.

Quality control monitors will be especially sensitive to any indications that an observer may have falsified data. Any such falsification will be reported by the monitor immediately so that the observer can be replaced by a reserve observer. This back-up observer will be assigned to revisit all sites where it is proven or suspected that falsification of data may have occurred.

Under normal circumstances, observers will be required to mail completed observation forms to the data entry supervisor at DLN Consulting, Inc. when observations are completed for all sites within the observer's assigned county, provided that no problems are identified by the quality control monitors for any given observer. When problems are identified, observers may be required to return forms from a given site immediately after observations are completed for that site so that the forms can be reviewed. Also, forms may need to be returned as soon as possible if either the quality control monitor or the observer encounters a large number of observations where seat belt use is coded as "unknown ."

The data entry supervisor will review all returned forms from the observers to ascertain if the rate of observations coded as "unknown" for seat belt use approximates or exceeds 10 percent of the observations for any given site. If this occurs, the observer will be sent back to any such site for an additional observation period.

Imputation, Estimation, and Variance

This section includes a discussion of the sampling weights and formulas; the procedures for adjustments for "nonresponse;" the estimators, with formulas; and the variance estimation.

Imputation

No imputation will be done on missing data.

Variance Estimation

A stratified multistage sample design has been proposed, and as such, direct variance estimation for the seat belt use estimator can be a complicated mathematical process, in addition to being time-consuming and costly. For the variance estimator, the ratio estimation procedure in *The Statistical Package for the Social Sciences (SPSS)* software package, its corresponding *Complex Sample Module for* SPSS, and the joint PSU selection probabilities to calculate the seat belt use rate and its variance will be employed.

Estimation

The following computation is based on the NHTSA guidelines provided in [1]. NHTSA provides two seat belt rate estimators: a ratio estimator, and an estimator using road segment level VMT. DLN implements the ratio estimator to compute the seat belt rate use.

Notation

The following notations are used in developing the seat use rate estimator

- The following are the subscripts used:
  - c used for county (PSU)
  - h used for road segment strata.
  - i used for road segment.
  - j used for time segment.
  - k used for road direction.
  - l used for the lane.
  - m used for vehicle.
  - n used for front seat occupants.
- π denote the inclusion probability, and
  - π_c represents the inclusion probability for a county.
  - $\pi_{hi|c}$ represents the inclusion probability for road segment.
  - $\pi_{j|chi}$ represents the inclusion probability for time segment.
  - $\pi_{k|chij}$ represents the inclusion probability for direction
  - $\pi_{l|chij}$ represents the inclusion probability for lane
  - $\pi_{m|chijl}$ represents the inclusion probability for vehicle.
- $w_{chijklm}$ denote the sampling weight for vehicle m and is computed as follows:

$$w_{chijklm} = \frac{1}{\pi_{chijklm}} \tag{1}$$

$\pi_{chijklm}$ in Equation (1) represents the overall vehicle inclusion probability which is the product of the selection probabilities at all stages in the sample design. $\pi_{chijklm}$ is computed as follows:

$$\pi_{chijklm} = \pi_c \cdot \pi_{hi|c} \cdot \pi_{j|chi} \cdot \pi_{k|chij} \cdot \pi_{l|chij} \cdot \pi_{m|chijl}$$

- *Length* denote the length of the road segment.
- p denote the rate estimator.

Nonresponse Adjustment

Given the data collection protocol described in this plan, including the provision for the use of alternate observation sites, road segments with non-zero eligible volume and yet zero observations conducted should be a rare event. Nevertheless, if eligible vehicles passed an eligible site or an alternate eligible site during the observation time but no usable data were collected for some reason, then this site will be considered as a "non-responding site." The weight for a non-responding site will be distributed over other sites in the same road type in the same PSU. Let

$$\pi_{ehi} = \pi_e \cdot \pi_{h|e}$$

be the road segment selection probability, and

$$w_{ehi} = \frac{1}{\pi_{ehi}}$$

be the road segment weight. The nonresponding site nonresponse adjustment factor:

$$f_{eh} = \frac{\sum_{\forall\ i}\ w_{ehi}}{\sum_{responding\ i}\ w_{ehi}}$$

will be multiplied to all weights of non-missing road segments in the same road type of the same county and the missing road segments will be dropped from the analysis file. However, if there were no vehicles passing the site during the selected observation time (60 minutes), then this is simply an empty block at this site and this site will not be considered as a nonresponding site, and will not require nonresponse adjustment.

In rare cases, the Nonresponse Adjustment procedure described above fails. For example, if in a county, only one road segment was drawn from a road type and that this segment was nonresponding and both alternate segments were unavailable, then the nonresponse adjustment will not work. In such a rare case, this cell would be collapsed with a cell of a different road type within the same county.

Seat Use Rate Estimator

The first stratum rate estimator can be obtained using the following equation:

$$p_{ehi} = \frac{\sum_{\forall\ ehijklmn}\ w_{ehijklm}\ Length_{ehi}\ y_{ehijklmn}}{\sum_{\forall\ ehijklmn}\ w_{ehijklm}\ Length_{ehi}} \tag{2}$$

where

$$y_{gehijklmn} = \begin{cases} 1 & if\ belt\ is\ used \\ 0 & otherwise \end{cases} \tag{3}$$

In the proposed sample design, it is assumed that after the selecting the road segment i, the selection probabilities for all vehicles at segment i are equal. Hence, $w_{jklmn|chi}$ values for the same road segment i are equal and can be cancelled in the calculation of the first seat belt rate use estimator. Furthermore, since the $Length_{chi}$ values for all vehicles at road segment i are the same, the length $Length_{chi}$ can also be cancelled from the first seat belt rate use estimator. Thus, the first stratum rate estimator for road segment i that is provided in equation (2) reduces to the following:

$$p_{chi} = \frac{1}{n_{chi}} \sum_{\forall jklmn \in chi} y_{chijklmn} \tag{4}$$

where n_{chi} is the sample size at road segment i.

Based on the above analysis, our design does not record amount of observation time, the number of directions, the number of lanes, and the number of vehicles passing the site i.

For the second stratum, namely the road type, the following formula is used:

$$p_{ch} = \frac{\sum_{\forall\ i\ in\ h} \ w_{chi}\ Length_{chi}\ p_{chi}}{\sum_{\forall\ i\ in\ h} \ w_{chi}\ Length_{chi}} \tag{5}$$

where

$$w_{chi} = \frac{1}{\pi_{chi}} \tag{6}$$

Another method can be used for the calculation of P_{chi}. Since stratified random sampling is proposed in this methodology where the sample is selected by simple random sampling, that is random sampling without replacement in each stratum, the following equation can be used to calculate the rate estimator at stratum h.

$$p_{ch} = \frac{1}{n_h} \sum_{i=1}^{n_h} p_{chi} \tag{7}$$

where n_h is number of road segments each road stratum.

For the county, the following rate estimator will be used:

$$p_c = \frac{\sum_{\forall\ h\ in\ c} \ w_{ch} \cdot Length_{ch} \cdot p_{ch}}{\sum_{\forall\ h\ in\ c} \ w_{chi} \cdot Length_{ch}} \tag{8}$$

where

$$w_{ch} = \frac{1}{\pi_{ch}} \tag{9}$$

The following equation can also be used to compute p_c.

$$p_c = \frac{1}{n_c} \sum_{i=1}^{n_c} p_{ch} \tag{10}$$

where n_c is number of road strata in the county.

For the state, the following rate estimator will be used:

$$p = \frac{\sum_{\forall\, c} \; w_c \cdot Length_c \cdot p_c}{\sum_{\forall\, c} \; w_c \cdot Length_c} \tag{11}$$

where

$$w_c = \frac{1}{\pi_c} \tag{12}$$

The following equation can also be used to compute p.

$$p = \frac{1}{n} \sum_{i=1}^{n} p_c \tag{13}$$

where n is number of counties in the frame.

Appendix A

Resumés

Jamil Ibriq

Summary

Dr. Jamil Ibriq is an assistant professor at Dickinson State University with extensive experience in simulation modeling that involves sampling and optimization techniques. Dr. Ibriq has expertise in area of data processing and survey research methodology. Dr. Ibriq is a proficient user of many programming languages and software packages, including SPSS.

Education

Ph.D., Computer Engineering, Florida Atlantic University, 2007
M.S., Computer Science, 2000
B.A. Biochemistry, University of Texas at Austin, 1979

Professional Associations

IEEE
ACM

Computer Skills

- Operation Systems: Windows, UNIX/LINUX, and UNIX shell scripts.
- Programming Languages: C, C++, Java, Visual Basic, SQL, Oracle PL/SQL, Motorola 68000 Assembly Language, PHP, Python, HTML, and Perl
- Software: Windows database, spreadsheet, and presentation software, TeX and LaTeX, SPSS, MatLab.

Publications

- J. Ibriq, I. Mahgoub, and M. Ilyas. Handbook of Information & Communication Security chapter Secure Routing in Wireless Sensor Networks, pages 549-574. Springer, Germany, December 2010.
- J. Ibriq and I. Mahgoub, "Hierarchical Key Management Scheme for Wireless Sensor Networks," in Proceedings of the 21st IEEE International Conference on Advanced Information Networking and Applications (AINA '07) Niagara Falls, Canada, May 2007, pages 210-219.
- J. Ibriq, I. Mahgoub, M. Ilyas and M. Cardei, Encyclopedia of Wireless and Mobile Communications chapter: Key Management Schemes in Wireless Sensor Networks, CRC Press, Boca Raton, FL, December 2007, pages 1509-1522.
- J. Ibriq and I. Mahgoub,"A hierarchical key management scheme for wireless sensor networks," Technical report, Florida Atlantic University, Boca Raton, FL, April 2006.
- J. Ibriq and I. Mahgoub, "A secure hierarchical routing protocol for wireless sensor networks," in Proceedings of the 10th IEEE International Conference on Communication Systems (ICCS '06),Singapore, October 2006, pages 1-6.
- J. Ibriq and I. Mahgoub,"Cluster-based Routing in Wireless Sensor Networks: Issues and Challenges," in Proceedings of the 2004 International Symposium on Performance Evaluation of Computer and Telecommunication Systems San Jose, CA, July 2004, pages 759 –766.

Keith Fernsler, Ph.D.

12/27/2011

942 9th Ave W, Dickinson, ND 58601
Home: 701-225-3436 Cell: 701-260-5807 Fax: 701-483-8475
keith@dlnconsulting.com

DLN Consulting Inc., 2493 4th Ave W Suite G, Dickinson, ND 58601

CURRENT EMPLOYMENT ACTIVITIES

Research Analyst, Evaluation Research, both quantitative and qualitative. Survey and Observational Research. Focus Group Design and Analysis. Data Analysis and Report Writing. Resident Analyst at DLN Consulting, Inc., 1999 – Present.

EDUCATION AND PROFESSIONAL ACTIVITIES

AB ('67) and MA ('72) Indiana University, Bloomington, IN; Ph.D. University of Montana, 1979.

College Teaching from 1968 – 1973 and 1978 - 2008 at St. Ambrose College (Iowa), Marycrest College (Iowa), Christopher Newport College (Virginia), and Dickinson State University. Several Bush Foundation Faculty Development Awards at Dickinson State; Social Science Department Chair (five years); DSU Professor Emeritus, 2008 – Present.

Membership in American Sociological Association (1976 – Present); Charter Member of ASA Teaching Resource Center; Author of two editions of the manual for Deviant Behavior courses. American Association of Public Opinion Research membership, 2003 – Present.

Knowledge of Microsoft Word and Excel, the Statistical Package for the Social Sciences; analysis of Census Data; and knowledge of the General Social Survey.

Specializations in sociology include methodology, theory, deviant behavior, criminology, sociological practice and public sociology.

RECENT CONSULTING ACTIVITIES

Wyoming seat belt pre-surveys and main surveys, research design and methodology development, data analysis, report writing (Wyoming Department of Transportation, 2006-2011; currently assisting in development of 2011 methodology under new Federal rules.

North Dakota Workforce Safety and Insurance, Employer and Injured Worker Surveys; research design, data analysis, and report writing; 2009 – present.

Focus group design, observation, analysis and report writing on topic of underage drinking (youth, law enforcement, educators, university students),

Community Action Partnership.

Alcohol, Tobacco and Other Drugs, data analysis and report writing, Dickinson Community Action Program.

North Dakota Seat Belt Use Surveys: Research design and data analysis consultation, 1999-2009, including major redesign in 2006; report writing; data analysis using SPSS.

CURRENT COMMUNITY SERVICE

Roughrider Country Kiwanis Club; First Congregational Church, UCC; North Dakota Public Employees Association.

REFERENCES

Deb Nelson, CEO and Owner, DLN Consulting, Inc. 2493 4th Ave W, Dickinson, ND 58601 (701/483-2801). deb@dlnconsulting.com

Becky Byzewski, SWCSC Coordinator, Community Action Partnership, 202 Villard St W, Dickinson, ND 58601 (701/227-0131).

Jamil Ibriq, Ph.D., Assistant Professor, Department of Mathematics and Computer Science, Dickinson State University, 291 Campus Drive, Dickinson, ND 58601 (701/483-2333) jamil.ibriq@dickinsonstate.edu

Steven Doherty, Ph.D., Assistant Professor of Political Science, Department of Social Science, Dickinson State University, 291 Campus Drive, Dickinson, ND 58601 (701/483-2065) steven.doherty@dickinsonstate.edu

Debora Dragseth, Ph.D., Professor of Business Administration, Department of Business and Management, Dickinson State University, 291 Campus Drive, Dickinson, ND 58601 (701/483-2696) deb.dragseth@dickinsonstate.edu

Appendix B

Selected Road Segments within Each County and Their Probabilities of Selection

STATEFP	COUNTYFP	MTFCC	FULLNAME	TLID	Alt_Name	DIVROAD	DECKEDROAD	Longitude	Latitude	SegLen_Mi	SRSWOR
56	1	S1100	I- 80	168749730	US Hwy 30	Y	N	-105.378496	41.145686	0.831622	0.01342282
56	1	S1100	I- 80	604512124		N	N	-105.976683	41.455622	0.185331	0.01342282
56	1	S1200	US Hwy 30	604512235	US Hwy 30	N	N	-105.613789	41.436288	0.487287	0.01612903
56	1	S1200	S 3rd St	168748704	US Hwy 287	N	N	-105.591913	41.28322	0.082576	0.01612903
56	1	S1200	State Hwy 130	168722835		N	N	-106.287656	41.350363	0.427204	0.01612903
56	1	S1200	S 3rd St	604506806	US Hwy 287	N	N	-105.594072	41.294338	0.176844	0.01612903
56	1	S1200	Snowy Range Rd	168750353	State Hwy 130	N	N	-106.138426	41.297205	0.029432	0.01612903
56	1	S1200	N 3rd St	168757040	N 3rd St	N	N	-105.591733	41.328609	0.047988	0.01612903
56	1	S1200	State Hwy 13	168722017		N	N	-106.005865	41.719918	0.045972	0.01612903
56	1	S1200	N 3rd St	604510122	N 3rd St	N	N	-105.589465	41.349592	0.023102	0.01612903
56	1	S1200	Snowy Range Rd	168738815	State Hwy 130	N	N	-105.695098	41.328608	0.311022	0.01612903
56	1	S1200	Happy Jack Rd	168744760	State Hwy 210	N	N	-105.309387	41.191091	0.653912	0.01612903
56	1	S1200	Bus I- 80	168756901	US Hwy 30	N	N	-105.568899	41.309599	0.005935	0.01612903
56	1	S1200	State Hwy 10	168745008		N	N	-105.994902	41.032165	0.213298	0.01612903
56	1	S1200	US Hwy 30	168737539	US Hwy 30	N	N	-105.618617	41.445781	0.55288	0.01612903
56	1	S1200	State Hwy 11	168755506		N	N	-106.090934	41.193713	0.3791	0.01612903
56	1	S1200	State Hwy 210	604505747		N	N	-105.438008	41.239964	0.011093	0.01612903
56	1	S1200	N 4th St	168755958	Co Rd 67	N	N	-105.975505	41.75157	0.062117	0.01612903
56	3	S1200	US Hwy 14 E	605633431		N	N	-107.749401	44.549772	0.01933	0.01522843
56	3	S1200	US Hwy 14A E	180494288		NA	NA	-108.222314	44.854737	0.237779	0.01522843
56	3	S1200	US Hwy 14A E	180493968		NA	NA	-108.320407	44.840598	0.062603	0.01522843
56	3	S1200	US Hwy 14A E	605624056		NA	NA	-108.354114	44.840581	0.053415	0.01522843
56	3	S1200	State Hwy 32	180493545		N	N	-108.415772	44.800116	0.006963	0.01522843
56	3	S1200	State Hwy 32	605621594		N	N	-108.587279	44.732075	0.173849	0.01522843
56	3	S1200	US Hwy 14	180484672		N	N	-108.015517	44.49378	0.057181	0.01522843
56	3	S1200	State Hwy 30	605616914		N	N	-108.339589	44.417795	0.321328	0.01522843
56	3	S1200	3rd St E	180505210	US Hwy 310	N	N	-108.46286	44.87988	0.015607	0.01522843
56	3	S1200	US Hwy 14 Alt	626936823		Y	N	-108.016292	44.79296	0.353805	0.01522843
56	3	S1200	US Hwy 16	180500795		N	N	-107.224785	44.177728	0.893127	0.01522843
56	3	S1200	US Hwy 14 Alternate Rte	180501932		N	N	-108.376118	44.839933	0.099877	0.01522843
56	3	S1200	US Hwy 310	180490602		N	N	-108.584372	44.89102	0.036785	0.01522843
56	3	S1200	State Hwy 32	180506937		N	N	-108.49826	44.776846	0.166397	0.01522843
56	3	S1200	State Hwy 433	180507017		N	N	-107.938854	44.197309	0.474787	0.01522843
56	3	S1200	Marshall St	180508412	State Hwy 31	N	N	-107.962173	44.274582	0.04248	0.01522843
56	3	S1200	State Hwy 433	180499656		N	N	-107.979944	44.249642	0.248082	0.01522843
56	3	S1200	C St	180485070	State Hwy 36	N	N	-108.041229	44.381112	0.071452	0.01522843

56	5	S1100	I- 90	607415957	I- 90	NA	NA	-105.248589	44.294692	0.2338	0.01498127
56	5	S1100	I- 90	607413318	I- 90	NA	NA	-105.383825	44.295056	0.565923	0.01498127
56	5	S1100	I- 90	146326960	US Hwy 14	N	N	-105.352327	44.289556	0.032443	0.01498127
56	5	S1100	I- 90	146347844	US Hwy 14	N	N	-105.378563	44.294171	0.039906	0.01498127
56	5	S1200	State Hwy 59	146348156		N	N	-105.526384	44.352279	0.035885	0.01344861
56	5	S1200	E 2nd St	146325159	E 2nd St	N	N	-105.489034	44.292555	0.006099	0.01344861
56	5	S1200	US Hwy 14	146349851	State Hwy 59	N	N	-105.529311	44.296796	0.051126	0.01344861
56	5	S1200	State Hwy 50	146329404		N	N	-105.62461	44.181178	0.128849	0.01344861
56	5	S1200	State Hwy 50	146334309		N	N	-105.724815	43.993419	0.268938	0.01344861
56	5	S1200	State Hwy 50	146353809		N	N	-105.719015	44.07693	0.152303	0.01344861
56	5	S1200	State Hwy 59	607396191		N	N	-105.464887	44.022166	0.220383	0.01344861
56	5	S1200	State Hwy 50	146333806		N	N	-105.750504	43.925684	0.026796	0.01344861
56	5	S1200	US Hwy 14	146321054	US Hwy 16	N	N	-105.538015	44.391359	0.066024	0.01344861
56	5	S1200	State Hwy 50	146353348		N	N	-105.711349	44.114846	0.837201	0.01344861
56	5	S1200	State Hwy 51	607406131		N	N	-105.283045	44.288769	0.020793	0.01344861
56	5	S1200	US Hwy 14	146346688	State Hwy 59	N	N	-105.530279	44.30921	0.060938	0.01344861
56	5	S1200	State Hwy 59	635532528		N	N	-105.44592	43.969271	0.227319	0.01344861
56	5	S1200	State Hwy 387	146342308		N	N	-105.979091	43.5588	0.24863	0.01344861
56	7	S1100	I- 80	611197576		N	N	-106.521149	41.752786	0.67332	0.01351351
56	7	S1100	I- 80	148702972	I- 80	N	N	-106.948342	41.751102	0.026198	0.01351351
56	7	S1100	I- 80	148729076	I- 80	Y	N	-107.373738	41.786936	0.145819	0.01351351
56	7	S1200	3rd St	622138133	US Hwy 287	N	N	-107.22921	41.807878	0.184918	0.01144165
56	7	S1200	State Hwy 70	148737136		N	N	-107.034068	41.156663	0.828525	0.01144165
56	7	S1200	State Hwy 789	148752555		N	N	-107.730909	41.291091	1.697048	0.01144165
56	7	S1200	State Hwy 130	148712671		N	N	-106.760293	41.392624	0.460732	0.01144165
56	7	S1200	State Hwy 130	148715207		N	N	-106.651357	41.343293	0.077775	0.01144165
56	7	S1200	State Hwy 230	148718040		N	N	-106.610856	41.172584	0.416111	0.01144165
56	7	S1200	State Hwy 220	148695417		N	N	-107.243952	42.428181	0.229884	0.01144165
56	7	S1200	N Higley Blvd	148729803	US Hwy 287 Byp	N	N	-107.215405	41.795669	0.069431	0.01144165
56	7	S1200	State Hwy 72	148707454		N	N	-106.453685	41.718692	0.74372	0.01144165
56	7	S1200	Lincoln Hwy	148702076	US Hwy 30	N	N	-106.277868	41.901903	1.701502	0.01144165
56	7	S1200	State Hwy 230	148743798		N	N	-106.701352	41.218277	0.116587	0.01144165
56	7	S1200	State Hwy 789	148736405		N	N	-107.693147	41.220518	0.326679	0.01144165
56	7	S1200	State Hwy 230	148714894		N	N	-106.776349	41.255209	0.053899	0.01144165
56	7	S1200	State Hwy 487	148727630		N	N	-106.186809	42.097454	1.894335	0.01144165
56	7	S1200	State Hwy 130	148716025		N	N	-106.496624	41.32687	0.364838	0.01144165

56	13	S1200	Fremont St	628694209	Fremont St	N	N	-108.739361	42.824433	0.041387	0.00951877
56	13	S1200	US Hwy 287	148440001	State Hwy 789	N	N	-108.355944	42.651302	0.917551	0.00951877
56	13	S1200	S Fifth St	148435866	S Fifth St	N	N	-108.735391	42.83345	0.075688	0.00951877
56	13	S1200	US Hwy 287	634121244	US Hwy 287	N	N	-107.749138	42.488102	0.108102	0.00951877
56	13	S1200	US Hwy 26	148495718		N	N	-108.56709	43.112365	0.083409	0.00951877
56	13	S1200	US Hwy 26	148494149	US Hwy 26	N	N	-109.43973	43.416155	0.271117	0.00951877
56	13	S1200	US Hwy 20	148486152	State Hwy 789	N	N	-108.160355	43.394654	0.521853	0.00951877
56	13	S1200	Blue Sky Hwy	148473776	Blue Sky Hwy	N	N	-108.766271	43.086613	0.493145	0.00951877
56	13	S1200	US Hwy 26	148485578	US Hwy 26	N	N	-109.940564	43.65715	0.666155	0.00951877
56	13	S1200	Gas Hills Rd	148433925	State Hwy 136	N	N	-108.336608	42.993204	0.029512	0.00951877
56	13	S1200	US Hwy 26	148495394		N	N	-108.879131	43.224349	0.382653	0.00951877
56	13	S1200	US Hwy 20	148468455	State Hwy 789	N	N	-108.115049	43.35974	0.359517	0.00951877
56	13	S1200	US Hwy 26	148486961		N	N	-108.920264	43.213638	0.606161	0.00951877
56	13	S1200	US Hwy 287	148429899	State Hwy 789	N	N	-107.580341	42.462137	0.201633	0.00951877
56	13	S1200	US Hwy 20	148448781	US Hwy 20	N	N	-107.689438	43.151979	0.292919	0.00951877
56	13	S1200	Missouri Valley Rd	148470962	Missouri Valley Rd	N	N	-108.610016	43.214772	0.456474	0.00951877
56	13	S1200	State Hwy 789	148433053		N	N	-108.553074	42.911615	0.035458	0.00951877
56	13	S1200	State Hwy 789	148432511		N	N	-108.569408	42.910442	0.085218	0.00951877
56	19	S1100	I- 25	624471389	I- 25	Y	N	-106.646302	43.995016	0.300971	0.01146132
56	19	S1100	I- 25	147364609	US Hwy 87	Y	N	-106.533561	43.598253	0.116223	0.01146132
56	19	S1100	I- 25	147364620	US Hwy 87	Y	N	-106.608497	43.644685	0.809497	0.01146132
56	19	S1100	I- 90	635198026		Y	N	-106.160823	44.212252	0.230765	0.01146132
56	19	S1100	I- 90	635203662		Y	N	-106.306087	44.217749	0.201378	0.01146132
56	19	S1100	I- 90	147303287		Y	N	-106.156158	44.212943	0.018582	0.01146132
56	19	S1100	I- 90	147364484		Y	N	-106.390326	44.235006	0.124988	0.01146132
56	19	S1100	I- 90	147365807		Y	N	-106.104178	44.219162	0.078479	0.01146132
56	19	S1200	Sussex Rd	147321002	Sussex Rd	N	N	-106.297982	43.698467	0.019054	0.01160093
56	19	S1200	N Main St	624035496	State Hwy 196	N	N	-106.697436	44.360852	0.066349	0.01160093
56	19	S1200	N Main St	147299782	State Hwy 196	N	N	-106.698941	44.34753	0.093436	0.01160093
56	19	S1200	Old Hwy 87	147375368	Old Hwy 87	N	N	-106.70217	44.152286	0.414683	0.01160093
56	19	S1200	Sussex Rd	147320405	State Hwy 1002	N	N	-106.52221	43.69458	0.231502	0.01160093
56	19	S1200	US Hwy 16	147301629		N	N	-106.917457	44.161293	0.182867	0.01160093
56	19	S1200	US Hwy 16	147301697		N	N	-106.92537	44.233648	0.042325	0.01160093
56	19	S1200	US Hwy 16	147330545		N	N	-106.686296	44.354195	0.03269	0.01160093
56	19	S1200	US Hwy 16	617881865		N	N	-106.7265	44.341227	0.069923	0.01160093
56	19	S1200	Sussex Rd	147320871	State Hwy 1002	N	N	-106.373653	43.706753	0.085488	0.01160093

56	21	S1100	I- 25	622388802	I- 25	N	N	-104.838174	41.198768	0.794488	0.00223714
56	21	S1200	E Four Mile Rd	624043730	E Four Mile Rd	N	N	-104.81166	41.189258	0.093536	0.0010352
56	21	S1400	Draper Rd	160176358		N	N	-104.822959	41.096529	0.061319	0.00148588
56	21	S1400	Harriman Rd	160145448	Co Rd 102	N	N	-105.255088	41.000815	0.014499	0.00148588
56	21	S1400	Hirsig Rd	160162024	Hirsig Rd	N	N	-105.164265	41.552454	0.505235	0.00148588
56	21	S1400	E 5th St	160151376		N	N	-104.793841	41.128595	0.05956	0.00148588
56	21	S1400	Foothills Rd	160148179		N	N	-104.773765	41.169918	0.052044	0.00148588
56	21	S1400	Clear View Cir	160171828		N	N	-104.797632	41.199493	0.174119	0.00148588
56	21	S1400	Jack Rabbit Rd	160148102		N	N	-104.772682	41.195892	0.201315	0.00148588
56	21	S1400	Douglas St	160148214		N	N	-104.769206	41.167367	0.028956	0.00148588
56	21	S1400	E 20th St	160149935		N	N	-104.810315	41.138992	0.061455	0.00148588
56	21	S1400	Bus Park	160172654	Bus Park	N	N	-104.057737	41.182368	0.016854	0.00148588
56	21	S1400	Carroll Ave	160147641		N	N	-104.827405	41.165087	0.123116	0.00148588
56	21	S1400	Monroe Ave	160152283		N	N	-104.758935	41.135548	0.125386	0.00148588
56	21	S1400	Co Rd 138	160160311		N	N	-104.566438	41.120511	0.223542	0.00148588
56	21	S1400	McDonald Rd	160176882		N	N	-105.067974	41.152391	0.087434	0.00148588
56	21	S1400	McAllister Ln	160179037		N	N	-104.808831	41.174821	0.015039	0.00148588
56	21	S1400	Military Rd	608318324		N	N	-104.885953	41.13547	0.003858	0.00148588
56	23	S1100	US Hwy 30	611001502		NA	NA	-110.063887	41.684366	0.185933	0.0106383
56	23	S1200	Hwy 238	130299361	State Hwy 238	N	N	-110.997509	42.736914	0.321042	0.01295732
56	23	S1200	US Hwy 30	130309240		N	N	-110.975366	41.842883	2.388625	0.01295732
56	23	S1200	US Hwy 26	130324547	US Hwy 89A	N	N	-111.02474	43.180649	0.251294	0.01295732
56	23	S1200	US Hwy 89	130316044	US Hwy 89A	N	N	-111.017462	43.167187	0.031132	0.01295732
56	23	S1200	US Hwy 26	130316740	US Hwy 89	N	N	-110.933792	43.191983	0.115793	0.01295732
56	23	S1200	Hwy 236	611004110	State Hwy 236	N	N	-110.961819	42.692569	0.058369	0.01295732
56	23	S1200	US Hwy 189	611001556		N	N	-110.571305	41.633032	0.036267	0.01295732
56	23	S1200	State Hwy 89	635503417		N	N	-111.04699	42.347346	0.288851	0.01295732
56	23	S1200	Hwy 237	130297921	State Hwy 237	N	N	-110.950765	42.793945	0.227784	0.01295732
56	23	S1200	State Hwy 239	619637613		N	N	-111.030837	42.982527	0.060775	0.01295732
56	23	S1200	US Hwy 30	130324450		N	N	-110.954794	41.923748	0.658579	0.01295732
56	23	S1200	US Hwy 89	611008956	US Hwy 89A	N	N	-111.025859	43.13296	0.053011	0.01295732
56	23	S1200	State Hwy 235	130301475		N	N	-110.242527	42.261535	0.421719	0.01295732
56	23	S1200	US Hwy 30	130301732		N	N	-110.981435	42.153542	0.502008	0.01295732
56	23	S1200	US Hwy 26	130316677	US Hwy 89	N	N	-110.943822	43.192256	0.401259	0.01295732
56	23	S1200	US Hwy 89	611008950	US Hwy 89A	N	N	-111.026041	43.133785	0.062243	0.01295732
56	23	S1200	US Hwy 189	130303332		N	N	-110.185824	42.179875	0.328363	0.01295732

56	25	S1100	I- 25	149010081	I- 25	N	N	-106.335419	43.056092	0.413891	0.00248756
56	25	S1200	Cy Ave	149022110	Cy Ave	N	N	-106.366423	42.82324	0.017426	0.00131926
56	25	S1200	Cole Creek Rd	149038958	Cole Creek Rd	N	N	-106.188882	42.891713	0.027375	0.00131926
56	25	S1400	Co Rd 607	149017131		N	N	-106.154287	42.66765	0.463712	0.00130208
56	25	S1400	E A St	607727858		N	N	-106.300759	42.85147	0.033396	0.00130208
56	25	S1400	Star Ln	617962807		NA	NA	-106.340114	42.849249	0.007403	0.00130208
56	25	S1400	S 5th Ave	149021251		N	N	-106.392876	42.84351	0.0661	0.00130208
56	25	S1400	Gooder Ave	149019813		N	N	-106.45744	42.894276	0.202048	0.00130208
56	25	S1400	Lakeshore Dr	607699609	Lakeshore Dr	N	N	-106.778388	42.529729	0.036057	0.00130208
56	25	S1400	E 13th St	149024110		N	N	-106.313672	42.837542	0.017916	0.00130208
56	25	S1400	Co Rd 602	149026356		N	N	-106.225292	42.853349	0.012091	0.00130208
56	25	S1400	N 6 Mile Rd	149020050	Co Rd 119	N	N	-106.434416	42.899062	0.408276	0.00130208
56	25	S1400	Second St	607727056		N	N	-106.365773	42.841959	0.030995	0.00130208
56	25	S1400	Oregon Trl	148992543	Turkey Track Rd	N	N	-107.479794	42.473862	0.38719	0.00130208
56	25	S1400	Missouri Ave	607718345	Missouri Ave	N	N	-106.29305	42.83014	0.109077	0.00130208
56	25	S1400	N East St	149039592		N	N	-106.24357	43.414304	0.02002	0.00130208
56	25	S1400	Goose Egg Cir	607701450		N	N	-106.515294	42.760538	0.070234	0.00130208
56	25	S1400	Granada Ave	617963960		N	N	-106.342498	42.814829	0.029059	0.00130208
56	29	S1200	Beartooth Hwy	612523424	US Hwy 212	N	N	-109.633519	44.922577	1.645067	0.01129944
56	29	S1200	Chief Joseph Hwy	612522810	Chief Joseph Hwy	N	N	-109.644082	44.866408	0.069016	0.01129944
56	29	S1200	N Fork Hwy	627160085	US Hwy 14	N	N	-109.619865	44.463599	0.38333	0.01129944
56	29	S1200	Rd 18	149194387	Badger Basin Rd	N	N	-108.916337	44.703963	0.240759	0.01129944
56	29	S1200	N Fork Hwy	149206406	US Hwy 14	N	N	-109.911367	44.482239	0.238308	0.01129944
56	29	S1200	E Entrance Rd	626966347	US Hwy 14	N	N	-110.363413	44.560993	0.680702	0.01129944
56	29	S1200	17th St	612520875	17th St	N	N	-109.054089	44.51858	0.033156	0.01129944
56	29	S1200	Hwy 114	612522765	Hwy 114	N	N	-108.665672	44.875669	0.469234	0.01129944
56	29	S1200	US Hwy 14 Alt	624469118		N	N	-108.683333	44.77285	0.003999	0.01129944
56	29	S1200	Ln 13	612517654	State Hwy 295	N	N	-108.750575	44.695729	0.017968	0.01129944
56	29	S1200	W Coulter Ave	149194643	W US Hwy 14A	N	N	-108.781521	44.744254	0.145786	0.01129944
56	29	S1200	Powell Hwy	612521823	Powell Hwy	N	N	-108.926863	44.679533	0.055645	0.01129944
56	29	S1200	State Hwy 120	149212941		N	N	-108.823272	44.12936	0.036804	0.01129944
56	29	S1200	State Hwy 294	149202036	State Hwy 294	N	N	-109.016527	44.855058	0.095278	0.01129944
56	29	S1200	Rd 9	612468763	Hwy 295	N	N	-108.75993	44.7847	0.219583	0.01129944
56	29	S1200	US Hwy 191	149216474		N	N	-111.055155	44.933339	0.096348	0.01129944
56	29	S1200	W Coulter Ave	625076103	W US Hwy 14A	N	N	-108.776052	44.745846	0.085806	0.01129944
56	29	S1200	R 9	612522218	Rd 9	N	N	-108.759912	44.741851	0.051305	0.01129944

56	31	S1100	I- 25	160436166	I- 25	N	N	-105.033471	42.488013	0.150221	0.01496259
56	31	S1100	I- 25	606897806	I- 25	NA	NA	-105.002408	42.181889	0.336848	0.01496259
56	31	S1100	I- 25	604828586	I- 25	N	N	-104.828994	41.694975	1.05719	0.01496259
56	31	S1100	I- 25	606897551	I- 25	NA	NA	-104.791379	41.788735	0.107012	0.01496259
56	31	S1100	I- 25	604829666	I- 25	NA	NA	-105.048003	42.280869	0.749704	0.01496259
56	31	S1100	I- 25	618035322	I- 25	NA	NA	-104.96093	42.014929	0.189146	0.01496259
56	31	S1200	N Pioneer Rd	604823280	N Pioneer Rd	N	N	-104.750109	41.89528	0.703969	0.01591512
56	31	S1200	Hartville Hwy	160432353	State Hwy 270	N	N	-104.724922	42.320239	0.333096	0.01591512
56	31	S1200	Lake Side Dr	604817760	Lake Side Dr	N	N	-104.747501	42.33979	1.191051	0.01591512
56	31	S1200	US Hwy 26	624031047		N	N	-104.847177	42.248395	0.091746	0.01591512
56	31	S1200	W Whalen St	604820352	US Hwy 26	N	N	-104.748604	42.269744	0.140121	0.01591512
56	31	S1200	State Hwy 34	160445492		N	N	-105.082689	41.953594	0.428089	0.01591512
56	31	S1200	N Wheatland Hwy	160445589	State Hwy 320	N	N	-104.936079	42.12393	0.519234	0.01591512
56	31	S1200	S Glendo Hwy	160431220	S Glendo Hwy	N	N	-104.992648	42.360525	0.223112	0.01591512
56	31	S1200	Hartville Hwy	160441567	State Hwy 270	N	N	-104.694803	42.501143	0.777523	0.01591512
56	31	S1200	el Rancho Rd	604820453	el Rancho Rd	N	N	-105.049222	42.271762	0.09635	0.01591512
56	31	S1200	Slater Rd	160442550	State Hwy 314	N	N	-104.830403	41.871476	0.442447	0.01591512
56	31	S1200	Iron Mountain Rd	160425201	State Hwy 211	N	N	-104.836275	41.756586	0.136607	0.01591512
56	33	S1100	I-90	629143491		NA	NA	-106.936971	44.802617	0.025825	0.00877193
56	33	S1100	I- 90	634774573		NA	NA	-106.828618	44.582922	3.868549	0.00877193
56	33	S1200	US Hwy 14	147411270	US Hwy 16	N	N	-106.534251	44.567071	0.032397	0.01088435
56	33	S1200	Big Goose Rd	147421444	State Hwy 331	N	N	-107.062538	44.76667	0.019143	0.01088435
56	33	S1200	E 5th St	605384408	State Hwy 336	N	N	-106.955285	44.806844	0.031902	0.01088435
56	33	S1200	US Hwy 14	147398734		N	N	-107.364785	44.799827	0.737105	0.01088435
56	33	S1200	Coffeen Ave	147408472	Coffeen Ave	N	N	-106.94748	44.736972	0.051388	0.01088435
56	33	S1200	Front St	147409609	US Hwy 14	N	N	-106.382235	44.637732	0.032159	0.01088435
56	33	S1200	US Hwy 14	147400215		N	N	-107.500689	44.714898	0.029523	0.01088435
56	33	S1200	State Hwy 345	147396185		N	N	-107.321543	44.948465	0.756063	0.01088435
56	33	S1200	N Piney Rd	147420545	N Piney Rd	N	N	-106.900559	44.578041	0.177454	0.01088435
56	33	S1200	US Hwy 87	605368387		N	N	-106.885561	44.63175	0.031174	0.01088435
56	33	S1200	Fish Hatchery Rd	147419891	State Hwy 194	N	N	-106.918967	44.568667	0.147106	0.01088435
56	33	S1200	Big Goose Rd	147399687	State Hwy 331	N	N	-107.070202	44.7648	0.393307	0.01088435
56	33	S1200	State Hwy 335	147408335		N	N	-106.980318	44.700411	0.029008	0.01088435
56	33	S1200	US Hwy 14	147398523		N	N	-107.476861	44.77952	0.069219	0.01088435
56	33	S1200	W Loucks St	614721355	W Loucks St	N	N	-106.973517	44.796617	0.05157	0.01088435
56	33	S1200	Main St	147417308	Main St	N	N	-107.262715	44.871275	0.020451	0.01088435

56	35	S1200	Big Piney Calpet Rd	149346148	Big Piney Calpet Rd	N	N	-110.283783	42.393018	0.195383	0.01691729
56	35	S1200	Big Piney Calpet Rd	149347154	Big Piney Calpet Rd	N	N	-110.284863	42.37851	0.385055	0.01691729
56	35	S1200	State Hwy 352	149330874		N	N	-109.989113	42.956827	0.497131	0.01691729
56	35	S1200	State Hwy 352	149342158		N	N	-110.023781	43.098791	0.126517	0.01691729
56	35	S1200	Bloomfield Ave	617103316		NA	NA	-109.879699	42.882772	0.190991	0.01691729
56	35	S1200	US Hwy 189	614284845	US Hwy 189	N	N	-110.409656	43.20366	0.12783	0.01691729
56	35	S1200	State Hwy 352	631784199		N	N	-109.989064	42.97478	0.225948	0.01691729
56	35	S1200	Big Piney Calpet Rd	149328921	Big Piney Calpet Rd	N	N	-110.290572	42.358646	0.278765	0.01691729
56	35	S1200	Middle Piney Rd	149319272	Middle Piney Rd	N	N	-110.285006	42.538177	0.847708	0.01691729
56	35	S1200	Big Piney Calpet Rd	149327486	Big Piney Calpet Rd	N	N	-110.282524	42.387895	0.261669	0.01691729
56	35	S1200	State Hwy 354	611631792		N	N	-110.124057	42.890585	0.348304	0.01691729
56	35	S1200	State Hwy 353	149335729		N	N	-109.714446	42.749503	0.046943	0.01691729
56	35	S1200	Big Piney Calpet Rd	149349722	Big Piney Calpet Rd	N	N	-110.28701	42.453728	0.154211	0.01691729
56	35	S1200	State Hwy 352	149348298		N	N	-110.024543	43.100778	0.158921	0.01691729
56	35	S1200	Fox Willow Dr	624696401		NA	NA	-109.863534	42.858926	0.039994	0.01691729
56	35	S1200	US Hwy 189	149341811	US Hwy 191	N	N	-110.167302	43.096316	0.195055	0.01691729
56	35	S1200	State Hwy 353	149343493		N	N	-109.509085	42.67973	0.040054	0.01691729
56	35	S1200	US Hwy 191	611631778		N	N	-110.070024	42.890439	0.046435	0.01691729
56	37	S1100	I- 80	624231944	I- 80	NA	NA	-108.780959	41.678094	0.163315	0.01215805
56	37	S1100	I- 80	633104230	US Hwy 30	N	N	-109.316632	41.554826	0.039476	0.01215805
56	37	S1100	I- 80 Interstate Rmp	149499689		N	N	-109.587987	41.555451	0.259911	0.01215805
56	37	S1100	I- 80	149487238	I- 80	N	N	-108.066013	41.661045	0.136447	0.01215805
56	37	S1200	US Hwy 191	618328344		N	N	-109.437956	42.043985	0.338956	0.01204819
56	37	S1200	State Hwy 374	149511333		N	N	-109.482509	41.541523	0.131587	0.01204819
56	37	S1200	Uinta Dr	149500497	Uinta Dr	N	N	-109.472709	41.511854	0.0531	0.01204819
56	37	S1200	State Hwy 414	149464554		N	N	-109.985213	41.027126	0.131917	0.01204819
56	37	S1200	State Hwy 28	149493695		N	N	-109.808056	41.858995	0.147627	0.01204819
56	37	S1200	Lower Farson Cutoff Rd	149492132	California-Mormon Emigr	N	N	-109.666317	41.965696	0.038819	0.01204819
56	37	S1200	Dewar Dr	149503912	Dewar Dr	N	N	-109.226073	41.584776	0.04782	0.01204819
56	37	S1200	US Hwy 191	149496622		N	N	-109.325226	41.744334	0.329502	0.01204819
56	37	S1200	Pilot Butte Ave	611877695	Pilot Butte Ave	NA	NA	-109.216939	41.59261	0.030201	0.01204819
56	37	S1200	State Hwy 430	149458823		N	N	-108.78958	41.049775	0.243255	0.01204819
56	37	S1200	US Hwy 191	149461346	State Hwy 373	N	N	-109.310187	41.437909	1.183344	0.01204819
56	37	S1200	State Hwy 372	149499742	State Hwy 374	N	N	-109.591055	41.555985	0.056765	0.01204819
56	37	S1200	D St	149502711	State Hwy 430	N	N	-109.2125	41.581594	0.037972	0.01204819
56	37	S1200	State Hwy 430	149457693		N	N	-108.836841	41.204642	0.057298	0.01204819

56	39	S1200	Grand Loop Rd	130447128	US Hwy 89	N	N	-110.647369	44.4336	0.335289	0.02292994
56	39	S1200	State Hwy 22	130412425		N	N	-111.023765	43.531226	0.014713	0.02292994
56	39	S1200	W Broadway Ave	626815081	US Hwy 26	N	N	-110.767775	43.479528	0.008592	0.02292994
56	39	S1200	US Hwy 26	130414136	US Hwy 26	N	N	-110.747679	43.393058	0.052961	0.02292994
56	39	S1200	US Hwy 26	130440602	US Hwy 26	N	N	-110.519893	43.822999	0.705899	0.02292994
56	39	S1200	State Hwy 22	235945248		N	N	-111.044466	43.542907	0.121907	0.02292994
56	39	S1200	N Cache St	130449024	US Hwy 26	N	N	-110.762232	43.489123	0.002913	0.02292994
56	39	S1200	Grand Loop Rd	130410308	US Hwy 89	N	N	-110.849699	44.487252	0.476339	0.02292994
56	39	S1200	US Hwy 26	130442142	US Hwy 26	N	N	-110.140642	43.785674	0.058013	0.02292994
56	39	S1200	US Hwy 26	130414163	US Hwy 26	N	N	-110.745142	43.384441	0.015347	0.02292994
56	39	S1200	US Hwy 26	130416881	US Hwy 26	N	N	-110.179349	43.812532	0.085526	0.02292994
56	39	S1200	John D Rockefeller Jr Pkwy	625696810	US Hwy 89	N	N	-110.632246	43.929951	0.644068	0.02292994
56	39	S1200	US Hwy 26	633121288	US Hwy 26	N	N	-110.748242	43.394564	0.107092	0.02292994
56	39	S1200	Grand Loop Rd	130435259	US Hwy 20	N	N	-110.418215	44.54549	0.012986	0.02292994
56	39	S1200	N Moose Wilson Rd	130421972	N Moose Wilson Rd	N	N	-110.846204	43.500474	0.111366	0.02292994
56	39	S1200	W Broadway Ave	626815080	US Hwy 26	N	N	-110.767992	43.479487	0.01271	0.02292994
56	39	S1200	US Hwy 189	130430099	US Hwy 189	Y	N	-110.730176	43.322355	0.075306	0.02292994
56	39	S1200	John D Rockefeller Jr Pkwy	130438888	US Hwy 89	N	N	-110.617709	43.904563	0.02257	0.02292994
56	41	S1100	I- 80	160262564		N	N	-110.424833	41.332567	0.082322	0.02242152
56	41	S1100	I- 80	160262989		N	N	-110.382457	41.349435	0.884846	0.02242152
56	41	S1100	I- 80	160263878		N	N	-110.369274	41.354538	0.581572	0.02242152
56	41	S1100	I- 80	160276521		N	N	-110.449606	41.328957	0.025325	0.02242152
56	41	S1100	I- 80 Bus	625848180		N	N	-110.374475	41.316471	0.467979	0.02242152
56	41	S1200	State Hwy 150	160278118	State Hwy 150	N	N	-110.948574	41.26097	0.069808	0.02083333
56	41	S1200	State Hwy 89	160256726	State Hwy 89 N	N	N	-111.041282	41.406968	0.045853	0.02083333
56	41	S1200	State Hwy 414	160278610		N	N	-110.33637	41.272014	0.050479	0.02083333
56	41	S1200	State Hwy 414	160276641		N	N	-110.32857	41.269014	0.002005	0.02083333
56	41	S1200	State Hwy 89	160259758	State Hwy 89 N	N	N	-110.982831	41.297753	0.059565	0.02083333
56	41	S1200	State Hwy 414	160269401		N	N	-110.121784	41.048317	0.287048	0.02083333
56	41	S1200	State Hwy 412	160258496		N	N	-110.423572	41.4321	0.102188	0.02083333
56	41	S1200	State Hwy 410	160266210		N	N	-110.493857	41.1882	0.094194	0.02083333
56	41	S1200	US Hwy 189	160257875		N	N	-110.625197	41.430625	0.935336	0.02083333
56	41	S1200	Carter Cutoff Rd	160258469	Carter Cutoff Rd	N	N	-110.441935	41.452999	0.052881	0.02083333
56	41	S1200	State Hwy 414	160269069		N	N	-110.178426	41.097522	0.74704	0.02083333
56	41	S1200	State Hwy 150	606738273	State Hwy 150 S	N	N	-110.953165	41.262237	0.015361	0.02083333
56	41	S1200	State Hwy 89	160275943		N	N	-110.957224	41.281488	0.07992	0.02083333

Appendix C

Sample Data Collection Form and Cover Sheet

WYDOT SEAT BELT SURVEY DATA COLLECTION FORM

Observer _____ Total # of observation pages: _____

County _____ Date: _____

Site # _____

Site Location _____

Alternate Site Information

Available alternate sites:

1. _____

2. _____

Is this an alternate site? Yes No (Please circle response)

If yes, which site was selected? 1 2 (Please circle response)

Please provide reason for using alternate site:

_____

_____

_____

Site Description

Please circle your responses:

Assigned traffic flow North South East West

Number of lanes in this direction: _____

Weather conditions clear/sunny cloudy light fog light rain light snow

Observation Site start and end times:

Start Time: _____ AM PM End Time: _____ AM PM

(Total observation period MUST last EXACTLY 45 minutes)

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Vehicle Type				WY License		
(1) Auto	(2) Van	(3) SUV	(4) PU	(1) Y	(2) N	(9) Unsure
Driver	(1) M	(2) F	(1) Y	(2) N	(3) UK	
Pass.	(1) M	(2) F	(1) Y	(2) N	(3) UK	(4) NP

Appendix D

Training Syllabus

Day One

Welcome and introduction of all participants

- Trainers
- Employer
- Highway Safety Office Personnel
- Observers
- Alternate (reserve) observers
- Quality Control Monitors

Distribution of equipment

- Checklist of materials, including WYDOT authorization letter, safety materials, all forms & observation materials

Survey overview

- Steps
- Importance of Data Collection process

Data Collection Techniques

- Definition of vehicles
- Definition of passengers & belt/booster seat use
- Weekday/weekend
- Heavy traffic v. light traffic
    - Use of second observers
- Weather conditions
- Observation duration

Scheduling and Rescheduling

- Site assignment sheet
- Daylight observation
- Problems encountered because of temporary impediments (i.e., weather)
- Permanent problems at data collection sites

Site locations

- Site location & description sheet
- Parking
- Interstate ramps and surface streets
- Direction of travel/number of observed lanes
- Non-intersection requirement
- Alternate site selection

Data Collection Forms

- Cover sheet
- Recording observations
- Recording temporary problems/weather conditions
- Recording alternate site information

Safety and Security

Field Testing

- Practice field site

Day Two (AM)

Review of maps
- Locating all sites on county maps

Shipment of Forms and materials
- Review materials
- Essential timeline

Timesheet and expense reporting

Field Testing
- 3 Test Sites

Post Training Quiz

Day Two (PM)

Quality Control Training
- Review of randomly selected QC sites
- Checklist of field protocols to address during site
- Inter-observer agreement ratio testing
- Procedures in cases of suspected or confirmed data falsification
- Reporting

2017 certification form

Uniform Criteria for State Observational Surveys of Seat Belt Use

Per the required procedures, the sample first created in 2012 reached its expiration date and necessitated a new sampling. What follows is the certification form submitted for NHTSA approval.

Uniform Criteria for State Observational Surveys of Seat Belt Use

Certification Form

1. CONTACT INFORMATION

Submit Form

State: Wyoming

Name: Contact Name

Address: Street Address

City | State | Zip Code

Email: Email Address

Phone number:

2. VERIFICATION

I verify that this sample design is consistent with the previously NHTSA approved design plan (i.e., the sample design characteristics (stratification, stages of selection, etc.) and sample sizes have not changed). I verify that all of the information provided is complete and accurate.

(●) Yes ( ) No

3. ROAD SEGMENT SAMPLING FRAME

a. What road segment sample frame was used? TIGER

If Other, please specify:

b. If you are not using NHTSA provided road segment data please verify the following:

I verify that every road in the state is represented in the database, with the exception of rural local roads in counties that are not within Metropolitan Statistical Areas (MSAs), other non-public roads, unnamed roads, unpaved roads, vehicular trails, access ramps, cul-de-sacs, traffic circles, and service drives. If the database is a sample of roads, I verify that all in-scope roads had a chance to be selected and the overall probability of selection is trackable.

(●) Yes ( ) No

4. EXCLUSIONS

a. Was the optional FARS 85% fatality exclusion implemented? (●) Yes ( ) No
[1340.5.a.1 allows for exclusions of counties proivded that the sample frame accounts for at least 85% of the state's fatalities in the last 3, 4, 5 years based on FARS.]

i. If yes, please specify years of FARS data used:

Year 2014 and range 5 years

b. Was the optional rural local roads exclusion implemented? (●) Yes ( ) No
[1340.5.a.2.iii allows for exclusions of rural local roads that are not within a Metropolitan Statistical Area (MSA).]

c. Were the optional road types exclusions implemented? (●) Yes ( ) No
[1340.5.a.2.iii allows for exclusions of non-public roads, unnamed roads, unpaved roads, vehicular trails, access ramps, cul-de-sacs, traffic circles, and service drives.]

5. STAGES OF SELECTION

a. How many stages of selection? 2 Stages

b. Please specify the definition of units:

Stage	Unit	
1	County	If Other, please specify:
2	Road segments	If Other, please specify:
3	Select Unit	If Other, please specify:
4	Select Unit	If Other, please specify:

c. Was stratification of sampling units used for each for each stage (i.e., PSUs/counties, road segments, etc.)? (●) Yes ( ) No

i. If yes, please specify:
County Stratification: By Region
Road Segment Stratification: By Road Type

6. **PROBABILITIES OF SELECTION**

a. Probabilities of selection: Other | SRS by County and Road Type

i. If PPS, please specify measure of size: Specify PPS Measure of Size:

7. **ALLOCATION**

a. Please provide the following information on the allocation of the road segment sample:

Stratum/County	Description	Population	Sample Count
Albany	S1100	254	4
Albany	S1200	954	13
Big Horn	S1200	1258	17
Campbell	S1100	234	3
Campbell	S1200	990	14
Carbon	S1100	385	4
Carbon	S1200	1216	13
Converse	S1100	310	5
Converse	S1200	765	12
Crook	S1100	315	5
Crook	S1200	820	12
Fremont	S1200	1613	17
Johnson	S1100	667	8
Johnson	S1200	842	9
Laramie	S1100	527	1
Laramie	S1200	964	1
Laramie	S1400	13007	15
Lincoln	S1200	1430	17
Natrona	S1200	1335	1
Natrona	S1400	28117	16
Niobrara	S1200	495	17
Park	S1200	1561	17
Platte	S1100	372	6
Platte	S1200	751	11
Sheridan	S1100	218	2
Sheridan	S1200	1422	15
Sweetwater	S1100	534	5
Sweetwater	S1200	1135	12
Teton	S1200	617	17

Submit Form

Appendix C: NHTSA Approval

NHTSA approval and final review

State Seatbelt Survey Plan

NHTSA Final Review

Wyoming

Version 4

Requirement Type		Design Requirement	Status	Comments
Statistical	1	Are the sampling units, with measures of size, defined and compliant with 1340.5.a?	Compliant	16 counties account for approximately 85% of the passenger vehicle crash-related fatalities according to FARS data averages for the period 2005 to 2009 (p.4).
GIS	2	Is the source for the sample frame road segments specified and compliant with 1340.5.a.2.i?	Compliant	Westat supplied 2010 TIGER data (p.4).
Statistical	3	If there are any exclusions to the sampling frame, are they specified and compliant with 1340.5.a.2.ii?	Compliant	Wyoming exercised the available exclusion option and removed rural local roads in counties that are not within Metropolitan Statistical Areas (MSAs), and other non-public roads, unnamed roads, unpaved roads, vehicular trails, access ramps, cul-de-sacs, traffic circles, and service drivers from the dataset (p.4).
Statistical	4	Are the stratification methods for each stage of sampling defined along with a description of methods that were used for allocating the sample units into the strata?	Compliant	1) County: 16 of 23 counties accounted for 85% of the traffic-related fatalities; all 16 counties were selected for the sample (p.5). 2) Road segment: Stratified by MTFCC road classification into three groups (Primary, Secondary, and Local) (pp.4-5).
Statistical	5	Is the method used for selecting road segments for observation sites specified and compliant with 1340.5.b?	Compliant	Segments were sampled by random sampling (p.5). The reserve sample segments were also selected SRS within a particular road classification and county (p.9).
Statistical	6	Is there a list of all observation sites and their probabilities of selection?	Compliant	A list of sites is found in Appendix B (p.23). The probabilities represent an SRS.
Statistical	7	Is there an explanation of how the sample sizes were determined? Is that explanation compliant with section 1340.5.d?	Compliant	Based on historical data, the state estimates a total of 28,800 vehicle observations (16 counties * 18 sites in each county * 100 observations per site) (pp.6-7).

Requirement Type		Design Requirement	Status	Comments
Operational	8	Is the process of assigning observation sites to observation time periods explained? Is it compliant with 1340.6?	Compliant	All observations will be conducted during weekdays and weekends between 7 a.m. and 6 p.m. (p.11). Sites within relatively close geographic proximity will be assigned as data collection clusters. The first site within each cluster will be assigned a random day and time for completion. All other sites within a cluster will be assigned to the same day and scheduled in order of operational efficiency (p.11).
Statistical	9	Is the state statistician named and his/her qualifications described? Does the statistician meet the requirements in 1340.8.c?	Compliant	The statistician's resume is Appendix A (p.19).
Operational	10	Is an observation period defined?	Compliant	45 minutes (p.11)
Operational	11	Are the procedures used to reschedule and substitute observation sites specified and compliant with 1340.5.c?	Compliant	When a site is temporarily unavailable, data collection will be rescheduled for a similar day of the week and time of day. In the event that the site is permanently unworkable, an alternate site, selected as part of the reserve sample, will be used as a permanent replacement (p.12).
Statistical	12	Are the procedures for collecting additional data to reduce the nonresponse rate specified and compliant with 1340.9.f.2?	Compliant	If a site exceeds 10% nonresponse, data collectors will be sent back to that site for an additional observation period (p.13).
Operational	13	Are the data collection procedures described?	Compliant	Data collection will primarily be performed by single observers, except at high volume sites where two data collectors will be assigned (p.11). The observed direction of traffic will be predetermined and randomly assigned (p.12). The appropriate vehicles, occupants, belt use definitions, and data elements are included in the survey (pp.10-12).
Operational	14	Are the number of observers and quality control monitors specified?	Compliant	16 data collectors and 2 QC Monitors will be hired (p.10). QC Monitors will visit 2 sites per county (or 11%) (p.10). Training will take place prior to data collection, during the last week of April (p.10). The training agenda is Appendix D (p.35).
Statistical	15	Is there a description of how the seat belt use rate estimate will be calculated?	Compliant	A ratio estimator will be used (pp.15-16).
Statistical	16	Is there a description of how the variance will be calculated? Is it compliant with 1340.9.g?	Compliant	Complex Sample Module for SPSS will be used to calculate the variance (p.13).

Requirement Type		Design Requirement	Status	Comments
Statistical	17	If any imputation is planned, are the methods specified and compliant with 1340.9.c?	Compliant	No imputation is planned (p.13).
Statistical	18	Are the weighting procedures appropriate for the design, including base weights, and adjustments for observation sites with no usable data, and specified and compliant with 1340.9.d and 1340.9.e?	Compliant	Weights and estimators are appropriate for the SRS design (pp.14-17). The nonresponse adjustment is also appropriate for the proposed plan (p.15).
Statistical	19	If the standard error exceeds 2.5 percentage points, are the procedures to reduce it specified and compliant with 1340.9.g?	Compliant	If the standard error exceeds 2.5%, more data will be collected from existing sites (p.6).

U.S. Department of Transportation
National Highway Traffic Safety Administration

Region 8
Colorado, Nevada, North Dakota, South Dakota, Utah, Wyoming

12300 West Dakota Avenue
Suite 140
Lakewood, CO 80228
Phone: 720-963-3100
Fax: 720-963-3124

February 9, 2017

Kenneth Ledet, Grants Manager
Highway Safety Behavioral Program
Wyoming Department of Transportation
5300 Bishop Boulevard
Cheyenne, WY 52009

Dear Ken:

NHTSA has completed its review of your Uniform Criteria for State Observational Surveys of Seat Belt Use Certification form and supporting documentation, evaluating the four requirements related to the re-selection of observation sites listed in 1340.10 of the Final Rule. We are pleased to inform you that your re-selection is fully compliant with the Uniform Criteria for State Observational Surveys of Seat Belt Use.

Sincerely,

Gina Mia Espinosa-Salcedo
Regional Administrator

cc: Karson James

NHTSA
www.nhtsa.gov

Appendix D: Data Tables

Detailed table of collected data

Seat Belt Use Estimates

Occupant Belt Use

		Estimate	Standard Error	95% Confidence Interval	
				Lower	Upper
% of Total	Belted	84.8%	0.1%	84.5%	85.1%
	Not Belted	14.2%	0.1%	14.0%	14.5%
	Unsure	1.0%	0.0%	0.9%	1.0%
	Total	100.0%	0.0%	100.0%	100.0%

Driver Seat Belt Use

Standard Error	95% Confidence Interval		Unweighted Count
	Lower	Upper	
0.2%	82.4%	83.0%	13940
0.2%	16.1%	16.7%	3226
0.0%	0.8%	1.0%	176
0.0%	100.0%	100.0%	17342

Passenger Seat Belt Use

		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	1	90.0%	0.2%	89.6%	90.4%	5634
	2	8.9%	0.2%	8.5%	9.3%	736
	3	1.1%	0.1%	0.9%	1.2%	63
	Total	100.0%	0.0%	100.0%	100.0%	6433

Occupant Frequencies

County

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Albany	1497	6.3	6.3	6.3
	Big Horn	882	3.7	3.7	10.0
	Campbell	1415	6.0	6.0	16.0
	Carbon	1276	5.4	5.4	21.3
	Converse	1170	4.9	4.9	26.2
	Crook	1801	7.6	7.6	33.8
	Fremont	1670	7.0	7.0	40.8
	Johnson	1163	4.9	4.9	45.7
	Laramie	501	2.1	2.1	47.8
	Lincoln	1310	5.5	5.5	53.4
	Natrona	581	2.4	2.4	55.8
	Niobrara	941	4.0	4.0	59.8
	Park	1311	5.5	5.5	65.3
	Platte	1453	6.1	6.1	71.4
	Sheridan	1334	5.6	5.6	77.0
	Sweetwater	2125	8.9	8.9	85.9
	Teton	3345	14.1	14.1	100.0
	Total	23775	100.0	100.0	

Population

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	4989	21.0	21.0	21.0
	Rural	18786	79.0	79.0	100.0
	Total	23775	100.0	100.0	

Day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sunday	2114	8.9	8.9	8.9
	Monday	3501	14.7	14.7	23.6
	Tuesday	3802	16.0	16.0	39.6
	Wednesday	4047	17.0	17.0	56.6
	Thursday	3291	13.8	13.8	70.5
	Friday	4448	18.7	18.7	89.2
	Saturday	2572	10.8	10.8	100.0
	Total	23775	100.0	100.0	

Weekday and Weekend

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Weekend	4686	19.7	19.7	19.7
	Weekday	19089	80.3	80.3	100.0
	Total	23775	100.0	100.0	

Roadway Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S1100 Primary Road	6951	29.2	29.2	29.2
	S1200 Secondary Road	15928	67.0	67.0	96.2
	S1400 Local/Rural/City St	896	3.8	3.8	100.0
	Total	23775	100.0	100.0	

Occupant Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	13963	58.7	58.7	58.7
	Female	9812	41.3	41.3	100.0
	Total	23775	100.0	100.0	

Occupant Belt Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Belted	19574	82.3	82.3	82.3
	Not Belted	3962	16.7	16.7	99.0
	Unsure	239	1.0	1.0	100.0
	Total	23775	100.0	100.0	

Vehicle Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Automobile	5849	24.6	24.6	24.6
	Van	7611	32.0	32.0	56.6
	Sport Utility Vehicle	1657	7.0	7.0	63.6
	Pickup Truck	8658	36.4	36.4	100.0
	Total	23775	100.0	100.0	

State Registration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Wyoming License	13252	55.7	55.7	55.7
	Out-of-State License	10131	42.6	42.6	98.4
	Unsure	392	1.6	1.6	100.0
	Total	23775	100.0	100.0	

Occupant Seat Belt Use

County * Occupant Belt Use

County			Occupant Belt Use			
			Belted	Not Belted	Unsure	Total
Albany	% within County	Estimate	85.6%	14.3%	0.1%	100.0%
		Unweighted Count	1277	218	2	1497
Big Horn	% within County	Estimate	86.6%	13.4%		100.0%
		Unweighted Count	764	118		882
Campbell	% within County	Estimate	78.3%	16.8%	4.9%	100.0%
		Unweighted Count	1111	234	70	1415
Carbon	% within County	Estimate	86.9%	12.9%	0.2%	100.0%
		Unweighted Count	1110	164	2	1276
Converse	% within County	Estimate	81.6%	14.0%	4.4%	100.0%
		Unweighted Count	953	165	52	1170
Crook	% within County	Estimate	93.1%	6.7%	0.2%	100.0%
		Unweighted Count	1672	125	4	1801
Fremont	% within County	Estimate	74.6%	25.3%	0.1%	100.0%
		Unweighted Count	1246	423	1	1670
Johnson	% within County	Estimate	91.9%	5.7%	2.3%	100.0%
		Unweighted Count	1067	69	27	1163
Laramie	% within County	Estimate	71.9%	26.0%	2.1%	100.0%
		Unweighted Count	357	133	11	501
Lincoln	% within County	Estimate	84.7%	13.9%	1.5%	100.0%
		Unweighted Count	1109	182	19	1310
Natrona	% within County	Estimate	80.2%	17.9%	1.9%	100.0%
		Unweighted Count	466	104	11	581
Niobrara	% within County	Estimate	94.9%	4.6%	0.5%	100.0%
		Unweighted Count	893	43	5	941
Park	% within County	Estimate	76.0%	23.6%	0.4%	100.0%
		Unweighted Count	996	310	5	1311
Platte	% within County	Estimate	78.0%	22.0%		100.0%
		Unweighted Count	1128	325		1453
Sheridan	% within County	Estimate	78.8%	21.1%	0.1%	100.0%
		Unweighted Count	1054	279	1	1334
Sweetwater	% within County	Estimate	64.4%	35.5%	0.1%	100.0%
		Unweighted Count	1371	751	3	2125
Teton	% within County	Estimate	89.7%	9.5%	0.8%	100.0%
		Unweighted Count	3000	319	26	3345

Total	% within County	Estimate	84.8%	14.2%	1.0%	100.0%
		Unweighted Count	19574	3962	239	23775

Population * Occupant Belt Use

Population			Occupant Belt Use			
			Belted	Not Belted	Unsure	Total
Urban	% within Population	Estimate	72.3%	27.2%	0.5%	100.0%
		Unweighted Count	3634	1326	29	4989
Rural	% within Population	Estimate	86.8%	12.2%	1.0%	100.0%
		Unweighted Count	15940	2636	210	18786
Total	% within Population	Estimate	84.8%	14.2%	1.0%	100.0%
		Unweighted Count	19574	3962	239	23775

Day * Occupant Belt Use

Day			Occupant Belt Use			
			Belted	Not Belted	Unsure	Total
Sunday	% within Day	Estimate	88.5%	10.6%	1.0%	100.0%
		Unweighted Count	1808	283	23	2114
Monday	% within Day	Estimate	83.8%	14.6%	1.6%	100.0%
		Unweighted Count	2839	600	62	3501
Tuesday	% within Day	Estimate	83.8%	15.0%	1.3%	100.0%
		Unweighted Count	3048	698	56	3802
Wednesday	% within Day	Estimate	87.1%	11.7%	1.2%	100.0%
		Unweighted Count	3462	533	52	4047
Thursday	% within Day	Estimate	84.0%	15.6%	0.3%	100.0%
		Unweighted Count	2740	537	14	3291
Friday	% within Day	Estimate	83.5%	16.0%	0.4%	100.0%
		Unweighted Count	3581	845	22	4448
Saturday	% within Day	Estimate	83.3%	16.0%	0.7%	100.0%
		Unweighted Count	2096	466	10	2572
Total	% within Day	Estimate	84.8%	14.2%	1.0%	100.0%
		Unweighted Count	19574	3962	239	23775

Weekday and Weekend * Occupant Belt Use

Weekday and Weekend			Occupant Belt Use		
			Belted	Not Belted	Unsure
Weekend	% within Weekday and	Estimate	85.9%	13.3%	0.8%

	Weekend	Unweighted Count	3904	749	33
Weekday	% within Weekday and Weekend	Estimate	84.5%	14.5%	1.0%
		Unweighted Count	15670	3213	206
Total	% within Weekday and Weekend	Estimate	84.8%	14.2%	1.0%
		Unweighted Count	19574	3962	239

Weekday and Weekend * Occupant Belt Use

Weekday and Weekend			Occupant Belt Use
			Total
Weekend	% within Weekday and Weekend	Estimate	100.0%
		Unweighted Count	4686
Weekday	% within Weekday and Weekend	Estimate	100.0%
		Unweighted Count	19089
Total	% within Weekday and Weekend	Estimate	100.0%
		Unweighted Count	23775

Time of Observation * Occupant Belt Use

Time of Observation			Occupant Belt Use		
			Belted	Not Belted	Unsure
7:30-9:30	% within Time of Observation	Estimate	83.2%	15.5%	1.3%
		Unweighted Count	3101	673	53
9:30-11:30	% within Time of Observation	Estimate	85.6%	13.3%	1.1%
		Unweighted Count	4107	772	50
11:30-1:30	% within Time of Observation	Estimate	86.5%	12.7%	0.8%
		Unweighted Count	4497	868	50
1:30-3:30	% within Time of Observation	Estimate	84.7%	14.6%	0.6%
		Unweighted Count	3159	733	24
3:30-5:30	% within Time of Observation	Estimate	83.7%	15.2%	1.1%
		Unweighted Count	4710	916	62
Total	% within Time of Observation	Estimate	84.8%	14.2%	1.0%
		Unweighted Count	19574	3962	239

Time of Observation * Occupant Belt Use

Time of Observation			Occupant Belt Use
			Total
7:30-9:30	% within Time of Observation	Estimate	100.0%
		Unweighted Count	3827
9:30-11:30	% within Time of Observation	Estimate	100.0%
		Unweighted Count	4929
11:30-1:30	% within Time of Observation	Estimate	100.0%
		Unweighted Count	5415
1:30-3:30	% within Time of Observation	Estimate	100.0%
		Unweighted Count	3916
3:30-5:30	% within Time of Observation	Estimate	100.0%
		Unweighted Count	5688
Total	% within Time of Observation	Estimate	100.0%
		Unweighted Count	23775

Roadway Type * Occupant Belt Use

Roadway Type	Occupant Belt Use

			Belted	Not Belted
S1100 Primary Road	% within Roadway Type	Estimate	87.9%	11.0%
		Unweighted Count	6027	845
S1200 Secondary Road	% within Roadway Type	Estimate	83.7%	15.4%
		Unweighted Count	12859	2926
S1400 Local/Rural/City St	% within Roadway Type	Estimate	72.4%	25.8%
		Unweighted Count	688	191
Total	% within Roadway Type	Estimate	84.8%	14.2%
		Unweighted Count	19574	3962

Roadway Type * Occupant Belt Use

Roadway Type			Occupant Belt Use	
			Unsure	Total
S1100 Primary Road	% within Roadway Type	Estimate	1.1%	100.0%
		Unweighted Count	79	6951
S1200 Secondary Road	% within Roadway Type	Estimate	0.9%	100.0%
		Unweighted Count	143	15928
S1400 Local/Rural/City St	% within Roadway Type	Estimate	1.8%	100.0%
		Unweighted Count	17	896
Total	% within Roadway Type	Estimate	1.0%	100.0%
		Unweighted Count	239	23775

Occupant Gender * Occupant Belt Use

Occupant Gender			Occupant Belt Use			
			Belted	Not Belted	Unsure	Total
Male	% within Occupant Gender	Estimate	81.2%	17.9%	1.0%	100.0%
		Unweighted Count	10959	2863	141	13963
Female	% within Occupant Gender	Estimate	89.9%	9.1%	1.0%	100.0%
		Unweighted Count	8615	1099	98	9812
Total	% within Occupant Gender	Estimate	84.8%	14.2%	1.0%	100.0%
		Unweighted Count	19574	3962	239	23775

Vehicle Type * Occupant Belt Use

Vehicle Type			Occupant Belt Use		
			Belted	Not Belted	Unsure
Automobile	% within Vehicle Type	Estimate	86.8%	12.4%	0.8%
		Unweighted Count	4880	916	53
Van	% within Vehicle Type	Estimate	90.5%	8.6%	0.9%

		Unweighted Count	6749	792	70
Sport Utility Vehicle	% within Vehicle Type	Estimate	87.5%	11.7%	0.8%
		Unweighted Count	1439	205	13
Pickup Truck	% within Vehicle Type	Estimate	77.6%	21.3%	1.1%
		Unweighted Count	6506	2049	103
Total	% within Vehicle Type	Estimate	84.8%	14.2%	1.0%
		Unweighted Count	19574	3962	239

Vehicle Type * Occupant Belt Use

Vehicle Type			Occupant Belt Use
			Total
Automobile	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	5849
Van	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	7611
Sport Utility Vehicle	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	1657
Pickup Truck	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	8658
Total	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	23775

Vehicle Type * Occupant Belt Use

Occupant Gender	Vehicle Type			Occupant Belt Use
				Belted
Male	Automobile	% within Vehicle Type	Estimate	84.4%
			Unweighted Count	2398
	Van	% within Vehicle Type	Estimate	88.8%
			Unweighted Count	3029
	Sport Utility Vehicle	% within Vehicle Type	Estimate	84.3%
			Unweighted Count	779
	Pickup Truck	% within Vehicle Type	Estimate	74.7%
			Unweighted Count	4753
	Total	% within Vehicle Type	Estimate	81.2%
			Unweighted Count	10959
Female	Automobile	% within Vehicle Type	Estimate	89.2%
			Unweighted Count	2482
	Van	% within Vehicle Type	Estimate	92.0%
			Unweighted Count	3720
	Sport Utility Vehicle	% within Vehicle Type	Estimate	91.6%
			Unweighted Count	660
	Pickup Truck	% within Vehicle Type	Estimate	86.3%
			Unweighted Count	1753
	Total	% within Vehicle Type	Estimate	89.9%
			Unweighted Count	8615

Vehicle Type * Occupant Belt Use

Occupant Gender	Vehicle Type			Occupant Belt Use
				Not Belted
Male	Automobile	% within Vehicle Type	Estimate	15.0%
			Unweighted Count	551
	Van	% within Vehicle Type	Estimate	10.3%
			Unweighted Count	425
	Sport Utility Vehicle	% within Vehicle Type	Estimate	14.9%
			Unweighted Count	146
	Pickup Truck	% within Vehicle Type	Estimate	24.2%
			Unweighted Count	1741
	Total	% within Vehicle Type	Estimate	17.9%
			Unweighted Count	2863
Female	Automobile	% within Vehicle Type	Estimate	9.8%
			Unweighted Count	365
	Van	% within Vehicle Type	Estimate	7.1%
			Unweighted Count	367
	Sport Utility Vehicle	% within Vehicle Type	Estimate	7.7%
			Unweighted Count	59
	Pickup Truck	% within Vehicle Type	Estimate	12.7%
			Unweighted Count	308
	Total	% within Vehicle Type	Estimate	9.1%
			Unweighted Count	1099

Vehicle Type * Occupant Belt Use

Occupant Gender	Vehicle Type			Occupant Belt Use
				Unsure
Male	Automobile	% within Vehicle Type	Estimate	0.6%
			Unweighted Count	22
	Van	% within Vehicle Type	Estimate	1.0%
			Unweighted Count	31
	Sport Utility Vehicle	% within Vehicle Type	Estimate	0.8%
			Unweighted Count	8
	Pickup Truck	% within Vehicle Type	Estimate	1.1%
			Unweighted Count	80
	Total	% within Vehicle Type	Estimate	1.0%
			Unweighted Count	141
Female	Automobile	% within Vehicle Type	Estimate	1.0%
			Unweighted Count	31
	Van	% within Vehicle Type	Estimate	0.9%
			Unweighted Count	39
	Sport Utility Vehicle	% within Vehicle Type	Estimate	0.7%
			Unweighted Count	5
	Pickup Truck	% within Vehicle Type	Estimate	1.1%
			Unweighted Count	23
	Total	% within Vehicle Type	Estimate	1.0%
			Unweighted Count	98

Vehicle Type * Occupant Belt Use

Occupant Gender	Vehicle Type			Occupant Belt Use Total
Male	Automobile	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	2971
	Van	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	3485
	Sport Utility Vehicle	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	933
	Pickup Truck	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	6574
	Total	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	13963
Female	Automobile	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	2878
	Van	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	4126
	Sport Utility Vehicle	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	724
	Pickup Truck	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	2084
	Total	% within Vehicle Type	Estimate	100.0%
			Unweighted Count	9812

State Registration * Occupant Belt Use

State Registration			Occupant Belt Use	
			Belted	Not Belted
Wyoming License	% within State Registration	Estimate	78.7%	20.2%
		Unweighted Count	10254	2851
Out-of-State License	% within State Registration	Estimate	90.7%	8.6%
		Unweighted Count	9007	1042
Unsure	% within State Registration	Estimate	81.2%	16.5%
		Unweighted Count	313	69
Total	% within State Registration	Estimate	84.8%	14.2%
		Unweighted Count	19574	3962

State Registration * Occupant Belt Use

State Registration			Occupant Belt Use	
			Unsure	Total
Wyoming License	% within State Registration	Estimate	1.1%	100.0%
		Unweighted Count	147	13252
Out-of-State License	% within State Registration	Estimate	0.8%	100.0%
		Unweighted Count	82	10131
Unsure	% within State Registration	Estimate	2.2%	100.0%
		Unweighted Count	10	392
Total	% within State Registration	Estimate	1.0%	100.0%
		Unweighted Count	239	23775

Driver Seat Belt Estimates

Driver Seat Belt Use

		Estimate	Unweighted Count
% of Total	Belted	82.7%	13940
	Not Belted	16.4%	3226
	Unsure	0.9%	176
	Total	100.0%	17342

County * Driver Seat Belt Use

County			Driver Seat Belt Use			
			Belted	Not Belted	Unsure	Total
Albany	% within County	Estimate	81.9%	18.1%		100.0%
		Unweighted Count	886	199		1085
Big Horn	% within County	Estimate	84.5%	15.5%		100.0%
		Unweighted Count	535	98		633
Campbell	% within County	Estimate	76.9%	17.8%	5.2%	100.0%
		Unweighted Count	845	194	58	1097
Carbon	% within County	Estimate	85.6%	14.2%	0.2%	100.0%
		Unweighted Count	748	123	2	873
Converse	% within County	Estimate	80.3%	14.7%	5.0%	100.0%
		Unweighted Count	823	153	51	1027
Crook	% within County	Estimate	91.6%	8.2%	0.2%	100.0%
		Unweighted Count	1101	102	3	1206
Fremont	% within County	Estimate	73.6%	26.3%	0.1%	100.0%
		Unweighted Count	893	319	1	1213
Johnson	% within County	Estimate	91.1%	7.1%	1.8%	100.0%
		Unweighted Count	746	60	15	821
Laramie	% within County	Estimate	69.1%	28.3%	2.5%	100.0%
		Unweighted Count	266	112	10	388
Lincoln	% within County	Estimate	83.3%	15.1%	1.7%	100.0%
		Unweighted Count	796	144	16	956
Natrona	% within County	Estimate	80.7%	17.5%	1.8%	100.0%
		Unweighted Count	396	86	9	491
Niobrara	% within County	Estimate	94.5%	4.8%	0.6%	100.0%
		Unweighted Count	605	31	4	640
Park	% within County	Estimate	74.3%	25.5%	0.2%	100.0%
		Unweighted Count	744	256	2	1002

Platte	% within County	Estimate	75.9%	24.1%		100.0%
		Unweighted Count	793	256		1049
Sheridan	% within County	Estimate	76.4%	23.6%		100.0%
		Unweighted Count	827	253		1080
Sweetwater	% within County	Estimate	64.5%	35.5%		100.0%
		Unweighted Count	1032	565		1597
Teton	% within County	Estimate	87.2%	12.6%	0.2%	100.0%
		Unweighted Count	1904	275	5	2184
Total	% within County	Estimate	82.7%	16.4%	0.9%	100.0%
		Unweighted Count	13940	3226	176	17342

Roadway Type * Driver Seat Belt Use

Roadway Type			Driver Seat Belt Use	
			Belted	Not Belted
S1100 Primary Road	% within Roadway Type	Estimate	86.4%	12.4%
		Unweighted Count	4312	685
S1200 Secondary Road	% within Roadway Type	Estimate	81.4%	17.8%
		Unweighted Count	9065	2383
S1400 Local/Rual/City St	% within Roadway Type	Estimate	71.1%	27.0%
		Unweighted Count	563	158
Total	% within Roadway Type	Estimate	82.7%	16.4%
		Unweighted Count	13940	3226

Roadway Type * Driver Seat Belt Use

Roadway Type			Driver Seat Belt Use	
			Unsure	Total
S1100 Primary Road	% within Roadway Type	Estimate	1.3%	100.0%
		Unweighted Count	62	5059
S1200 Secondary Road	% within Roadway Type	Estimate	0.8%	100.0%
		Unweighted Count	100	11548
S1400 Local/Rual/City St	% within Roadway Type	Estimate	1.9%	100.0%
		Unweighted Count	14	735
Total	% within Roadway Type	Estimate	0.9%	100.0%
		Unweighted Count	176	17342

Population * Driver Seat Belt Use

Population			Driver Seat Belt Use			
			Belted	Not Belted	Unsure	Total
Urban	% within Population	Estimate	70.9%	28.6%	0.5%	100.0%
		Unweighted Count	2851	1098	24	3973
Rural	% within Population	Estimate	84.8%	14.2%	1.0%	100.0%
		Unweighted Count	11089	2128	152	13369
Total	% within Population	Estimate	82.7%	16.4%	0.9%	100.0%
		Unweighted Count	13940	3226	176	17342

Driver Gender * Driver Seat Belt Use

Driver Gender			Driver Seat Belt Use			
			Belted	Not Belted	Unsure	Total
Male	% within Driver Gender	Estimate	80.9%	18.1%	0.9%	100.0%
		Unweighted Count	9461	2508	127	12096
Female	% within Driver Gender	Estimate	87.1%	12.1%	0.9%	100.0%
		Unweighted Count	4479	718	49	5246
Total	% within Driver Gender	Estimate	82.7%	16.4%	0.9%	100.0%
		Unweighted Count	13940	3226	176	17342

Vehicle Type * Driver Seat Belt Use

Vehicle Type			Driver Seat Belt Use		
			Belted	Not Belted	Unsure
Automobile	% within Vehicle Type	Estimate	84.8%	14.4%	0.8%
		Unweighted Count	3502	741	39
Van	% within Vehicle Type	Estimate	89.0%	10.1%	0.9%
		Unweighted Count	4658	630	49
Sport Utility Vehicle	% within Vehicle Type	Estimate	85.9%	13.7%	0.5%
		Unweighted Count	952	154	7
Pickup Truck	% within Vehicle Type	Estimate	75.3%	23.5%	1.1%
		Unweighted Count	4828	1701	81
Total	% within Vehicle Type	Estimate	82.7%	16.4%	0.9%
		Unweighted Count	13940	3226	176

Vehicle Type * Driver Seat Belt Use

Vehicle Type			Driver Seat Belt Use
			Total
Automobile	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	4282
Van	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	5337
Sport Utility Vehicle	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	1113
Pickup Truck	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	6610
Total	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	17342

Vehicle Type * Driver Seat Belt Use

Driver Gender	Vehicle Type			Driver Seat Belt Use	
				Belted	Not Belted
Male	Automobile	% within Vehicle Type	Estimate	83.8%	15.5%
			Unweighted Count	2052	484
	Van	% within Vehicle Type	Estimate	88.6%	10.5%
			Unweighted Count	2552	365
	Sport Utility Vehicle	% within Vehicle Type	Estimate	84.5%	14.9%
			Unweighted Count	651	120
	Pickup Truck	% within Vehicle Type	Estimate	74.7%	24.1%
			Unweighted Count	4206	1539
	Total	% within Vehicle Type	Estimate	80.9%	18.1%
			Unweighted Count	9461	2508
Female	Automobile	% within Vehicle Type	Estimate	86.4%	12.6%
			Unweighted Count	1450	257
	Van	% within Vehicle Type	Estimate	89.6%	9.5%
			Unweighted Count	2106	265
	Sport Utility Vehicle	% within Vehicle Type	Estimate	89.2%	10.5%
			Unweighted Count	301	34
	Pickup Truck	% within Vehicle Type	Estimate	80.1%	19.3%
			Unweighted Count	622	162
	Total	% within Vehicle Type	Estimate	87.1%	12.1%
			Unweighted Count	4479	718

Vehicle Type * Driver Seat Belt Use

Driver Gender	Vehicle Type			Driver Seat Belt Use	
				Unsure	Total
Male	Automobile	% within Vehicle Type	Estimate	0.6%	100.0%
			Unweighted Count	20	2556
	Van	% within Vehicle Type	Estimate	0.9%	100.0%
			Unweighted Count	26	2943
	Sport Utility Vehicle	% within Vehicle Type	Estimate	0.5%	100.0%
			Unweighted Count	6	777
	Pickup Truck	% within Vehicle Type	Estimate	1.2%	100.0%
			Unweighted Count	75	5820
	Total	% within Vehicle Type	Estimate	0.9%	100.0%
			Unweighted Count	127	12096
Female	Automobile	% within Vehicle Type	Estimate	0.9%	100.0%
			Unweighted Count	19	1726
	Van	% within Vehicle Type	Estimate	1.0%	100.0%
			Unweighted Count	23	2394
	Sport Utility Vehicle	% within Vehicle Type	Estimate	0.3%	100.0%
			Unweighted Count	1	336
	Pickup Truck	% within Vehicle Type	Estimate	0.6%	100.0%
			Unweighted Count	6	790
	Total	% within Vehicle Type	Estimate	0.9%	100.0%
			Unweighted Count	49	5246

State Registration * Driver Seat Belt Use

State Registration			Driver Seat Belt Use	
			Belted	Not Belted
Wyoming License	% within State Registration	Estimate	77.3%	21.5%
		Unweighted Count	7961	2371
Out-of-State License	% within State Registration	Estimate	89.0%	10.5%
		Unweighted Count	5761	805
Unsure	% within State Registration	Estimate	79.3%	17.5%
		Unweighted Count	218	50
Total	% within State Registration	Estimate	82.7%	16.4%
		Unweighted Count	13940	3226

State Registration * Driver Seat Belt Use

State Registration			Driver Seat Belt Use	
			Unsure	Total
Wyoming License	% within State Registration	Estimate	1.2%	100.0%
		Unweighted Count	125	10457
Out-of-State License	% within State Registration	Estimate	0.5%	100.0%
		Unweighted Count	41	6607
Unsure	% within State Registration	Estimate	3.2%	100.0%
		Unweighted Count	10	278
Total	% within State Registration	Estimate	0.9%	100.0%
		Unweighted Count	176	17342

Passenger Seat Belt Estimates

Passenger Seat Belt Use

		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	1	90.0%	0.2%	89.6%	90.4%	5634
	2	8.9%	0.2%	8.5%	9.3%	736
	3	1.1%	0.1%	0.9%	1.2%	63
	Total	100.0%	0.0%	100.0%	100.0%	6433

County * Passenger Seat Belt Use

County			Passenger Seat Belt Use			
			Belted	Not Belted	Unsure	Total
Albany	% within County	Estimate	95.2%	4.3%	0.5%	100.0%
		Unweighted Count	391	19	2	412
Big Horn	% within County	Estimate	92.0%	8.0%		100.0%
		Unweighted Count	229	20		249
Campbell	% within County	Estimate	83.3%	13.0%	3.8%	100.0%
		Unweighted Count	266	40	12	318
Carbon	% within County	Estimate	89.8%	10.2%		100.0%
		Unweighted Count	362	41		403
Converse	% within County	Estimate	91.0%	8.3%	0.7%	100.0%
		Unweighted Count	130	12	1	143
Crook	% within County	Estimate	96.1%	3.7%	0.2%	100.0%
		Unweighted Count	571	23	1	595
Fremont	% within County	Estimate	77.2%	22.8%		100.0%
		Unweighted Count	353	104		457
Johnson	% within County	Estimate	94.0%	2.5%	3.5%	100.0%
		Unweighted Count	321	9	12	342
Laramie	% within County	Estimate	81.2%	17.9%	0.8%	100.0%
		Unweighted Count	91	21	1	113
Lincoln	% within County	Estimate	88.4%	10.7%	0.8%	100.0%
		Unweighted Count	313	38	3	354
Natrona	% within County	Estimate	77.8%	20.0%	2.2%	100.0%
		Unweighted Count	70	18	2	90
Niobrara	% within County	Estimate	95.7%	4.0%	0.3%	100.0%
		Unweighted Count	288	12	1	301
Park	% within County	Estimate	81.6%	17.5%	1.0%	100.0%
		Unweighted Count	252	54	3	309

Platte	% within County	Estimate	83.3%	16.7%		100.0%
		Unweighted Count	335	69		404
Sheridan	% within County	Estimate	89.2%	10.4%	0.4%	100.0%
		Unweighted Count	227	26	1	254
Sweetwater	% within County	Estimate	64.1%	35.3%	0.6%	100.0%
		Unweighted Count	339	186	3	528
Teton	% within County	Estimate	94.4%	3.8%	1.8%	100.0%
		Unweighted Count	1096	44	21	1161
Total	% within County	Estimate	90.0%	8.9%	1.1%	100.0%
		Unweighted Count	5634	736	63	6433

Roadway Type * Passenger Seat Belt Use

Roadway Type			Passenger Seat Belt Use	
			Belted	Not Belted
S1100 Primary Road	% within Roadway Type	Estimate	92.0%	7.2%
		Unweighted Count	1715	160
S1200 Secondary Road	% within Roadway Type	Estimate	89.4%	9.5%
		Unweighted Count	3794	543
S1400 Local/Rual/City St	% within Roadway Type	Estimate	77.5%	21.0%
		Unweighted Count	125	33
Total	% within Roadway Type	Estimate	90.0%	8.9%
		Unweighted Count	5634	736

Roadway Type * Passenger Seat Belt Use

Roadway Type			Passenger Seat Belt Use	
			Unsure	Total
S1100 Primary Road	% within Roadway Type	Estimate	0.8%	100.0%
		Unweighted Count	17	1892
S1200 Secondary Road	% within Roadway Type	Estimate	1.1%	100.0%
		Unweighted Count	43	4380
S1400 Local/Rual/City St	% within Roadway Type	Estimate	1.5%	100.0%
		Unweighted Count	3	161
Total	% within Roadway Type	Estimate	1.1%	100.0%
		Unweighted Count	63	6433

Population * Passenger Seat Belt Use

Population			Passenger Seat Belt Use			
			Belted	Not Belted	Unsure	Total
Urban	% within Population	Estimate	77.8%	21.8%	0.4%	100.0%
		Unweighted Count	783	228	5	1016
Rural	% within Population	Estimate	91.4%	7.5%	1.1%	100.0%
		Unweighted Count	4851	508	58	5417
Total	% within Population	Estimate	90.0%	8.9%	1.1%	100.0%
		Unweighted Count	5634	736	63	6433

Passenger Gender * Passenger Seat Belt Use

Passenger Gender			Passenger Seat Belt Use			
			Belted	Not Belted	Unsure	Total
Male	% within Passenger Gender	Estimate	82.9%	16.2%	1.0%	100.0%
		Unweighted Count	1498	355	14	1867
Female	% within Passenger Gender	Estimate	92.7%	6.2%	1.1%	100.0%
		Unweighted Count	4136	381	49	4566
Total	% within Passenger Gender	Estimate	90.0%	8.9%	1.1%	100.0%
		Unweighted Count	5634	736	63	6433

Vehicle Type * Passenger Seat Belt Use

Vehicle Type	Passenger Seat Belt Use		
	Belted	Not Belted	Unsure

Automobile	% within Vehicle Type	Estimate	91.5%	7.6%	0.9%
		Unweighted Count	1378	175	14
Van	% within Vehicle Type	Estimate	93.7%	5.4%	1.0%
		Unweighted Count	2091	162	21
Sport Utility Vehicle	% within Vehicle Type	Estimate	90.6%	7.9%	1.4%
		Unweighted Count	487	51	6
Pickup Truck	% within Vehicle Type	Estimate	84.3%	14.5%	1.2%
		Unweighted Count	1678	348	22
Total	% within Vehicle Type	Estimate	90.0%	8.9%	1.1%
		Unweighted Count	5634	736	63

Vehicle Type * Passenger Seat Belt Use

Vehicle Type			Passenger Seat Belt Use
			Total
Automobile	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	1567
Van	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	2274
Sport Utility Vehicle	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	544
Pickup Truck	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	2048
Total	% within Vehicle Type	Estimate	100.0%
		Unweighted Count	6433

State Registration * Passenger Seat Belt Use

State Registration			Passenger Seat Belt Use	
			Belted	Not Belted
Wyoming License	% within State Registration	Estimate	83.8%	15.4%
		Unweighted Count	2293	480
Out-of-State License	% within State Registration	Estimate	93.6%	5.1%
		Unweighted Count	3246	237
Unsure	% within State Registration	Estimate	85.6%	14.4%
		Unweighted Count	95	19
Total	% within State Registration	Estimate	90.0%	8.9%
		Unweighted Count	5634	736

State Registration * Passenger Seat Belt Use

State Registration			Passenger Seat Belt Use	
			Unsure	Total
Wyoming License	% within State Registration	Estimate	0.8%	100.0%
		Unweighted Count	22	2795
Out-of-State License	% within State Registration	Estimate	1.2%	100.0%
		Unweighted Count	41	3524
Unsure	% within State Registration	Estimate		100.0%
		Unweighted Count		114
Total	% within State Registration	Estimate	1.1%	100.0%
		Unweighted Count	63	6433

Driver & Passenger Comparisons

County	Drivers	Passengers	Difference
Albany	81.9%	95.2%	13.3%
Big Horn	84.5%	92.0%	7.5%
Campbell	76.9%	83.3%	6.4%
Carbon	85.6%	89.8%	4.2%
Converse	80.3%	91.0%	10.7%
Crook	91.6%	96.1%	4.5%
Fremont	73.6%	77.2%	3.6%
Johnson	91.1%	94.0%	2.9%
Laramie	69.1%	81.2%	12.1%
Lincoln	83.3%	88.4%	5.1%
Natrona	80.7%	77.8%	-2.9%
Niobrara	94.5%	95.7%	1.2%
Park	74.3%	81.6%	7.3%
Platte	75.9%	83.3%	7.4%
Sheridan	76.4%	89.2%	12.8%
Sweetwater	64.5%	64.1%	-0.4%
Teton	87.2%	94.4%	7.2%
Total	82.7%	90.0%	7.3%

Population	Drivers	Passengers	Difference
Urban	70.9%	77.8%	6.9%
Rural	84.8%	91.4%	6.6%
Total	82.7%	90.0%	7.3%

State Registration			
	Drivers	Passengers	Difference
Wyoming License	77.3%	83.8%	6.5%
Out-of-State License	89.0%	93.6%	4.6%
Unsure	79.3%	85.6%	6.3%
Total	82.7%	90.0%	7.3%

Type of Roadway			
	Drivers	Passengers	Difference
S1100 Primary Road	86.4%	92.0%	5.6%
S1200 Secondary Road	81.4%	89.4%	8.0%
S1400 Local/Rural/City	71.1%	77.5%	6.4%
Total	82.7%	90.0%	7.3%

Gender			
	Drivers	Passengers	Difference
Male	80.9%	82.9%	2.0%
Female	87.1%	92.7%	5.6%
Total	82.7%	90.0%	7.3%

Vehicle Type			
	Drivers	Passengers	Difference
Automobile	84.8%	91.5%	6.7%
Van	89.0%	93.7%	4.7%
Sport Utility Vehicle	85.9%	90.6%	4.7%
Pickup Truck	75.3%	84.3%	9.0%
Total	82.7%	90.0%	7.3%

Gender				
Vehicle Type		Driver	Passenger	Difference
Male	Automobile	83.8%	87.7%	3.9%
	Van	88.6%	90.0%	1.4%
	Sport Utility Vehicle	84.5%	82.9%	-1.6%
	Pickup Truck	74.7%	74.3%	-0.4%
	Total	80.9%	82.9%	2.0%
Female	Automobile	86.4%	92.7%	6.3%
	Van	89.6%	94.8%	5.2%
	Sport Utility Vehicle	89.2%	93.4%	4.2%
	Pickup Truck	80.1%	89.6%	9.5%
	Total	87.1%	92.7%	5.6%

Appendix E: Observer Field Test Ratings

Field Test Scores by Observer

Observer Field Test Ratings

Written Exam & Field Observations

	Written	Practice	1	2	3	Field Avg
Monty Byers	100%	98.35%	93.26%	92.26%	96.60%	95.12%
Brooke Darden	100%	78.13%	99.94%	86.75%	98.33%	90.79%
Jaclyn Davison	100%	77.99%	99.95%	98.25%	98.25%	93.61%
Peggy Dowers	100%	82.71%	93.22%	99.36%	93.68%	92.24%
Dawn Edwards	85%	98.88%	99.95%	95.49%	91.51%	96.46%
Dixie Elder	90%	99.07%	88.51%	96.10%	93.75%	94.36%
Deb Eutsler	100%	77.77%	94.59%	86.67%	89.29%	87.08%
Candy Hunter	100%	97.85%	94.23%	95.00%	96.28%	95.84%
Molly Laidlaw	100%	98.87%	99.95%	95.90%	100.00%	98.68%
Russell Loestcher	100%	98.21%	96.48%	99.89%	88.29%	95.72%
Donna Lucas	100%	82.89%	98.36%	98.33%	100.00%	94.90%
Derald Maddison	95%	98.28%	96.43%	95.53%	96.12%	96.59%
Susan Parkinson	100%	99.48%	98.33%	97.67%	82.89%	94.59%
Doug Peterson	100%	97.98%	97.67%	84.35%	75.00%	88.75%
Vicky Peterson	100%	100.00%	89.03%	91.98%	88.29%	92.33%
Cindy Pope	100%	98.28%	82.36%	97.64%	79.00%	89.32%
Kayla Schear	100%	99.30%	82.10%	96.36%	96.19%	93.49%
Daleen-Dee Sebelius	100%	82.25%	97.06%	95.24%	98.18%	93.18%
Kris Smith	95%	75.00%	98.33%	99.87%	96.50%	92.43%
Bill Spencer	100%	99.10%	96.48%	95.73%	79.85%	92.79%
Bridget White	100%	100.00%	71.96%	91.92%	91.82%	88.93%

Appendix F: SBU Unknown Rate

Seat Belt Survey Unknown Rates

County	County Code	Unknown Driv+Pass	Total Obsv. Driv+Pass	County Rate
Albany	01	2	1497	0.0013
Big Horn	03	0	882	0.0000
Campbell	05	70	1415	0.0495
Carbon	07	2	1276	0.0016
Converse	09	52	1170	0.0444
Crook	11	4	1801	0.0022
Fremont	13	1	1670	0.0006
Johnson	19	27	1163	0.0232
Laramie	21	11	501	0.0220
Lincoln	23	19	1310	0.0145
Natrona	25	11	581	0.0189
Niobrara	27	5	941	0.0053
Park	29	5	1311	0.0038
Platte	31	0	1453	0.0000
Sheridan	33	1	1334	0.0007
Sweetwater	37	3	2125	0.0014
Teton	39	26	3345	0.0078
State		240	23,775	0.01009

Appendix G: Reporting requirements

Data Collected at Observation Sites

1. Standard Error of Statewide Belt Use Rate: 0.1 percent
2. Nonresponse Rate as provided in §1340.9 (f)
    a. Nonresponse rate for the survey variable seat belt use: 1.0095 percent

PART B-DATA COLLECTED AT OBSERVATION SITES

Site ID	Site type[1]	Date observed	Sample weight	Number of drivers	Number of front passengers	Number of occupants[2] belted	Number of occupants unbelted	Number of occupants with unknown belt use
168744812	1b- Alternate	6/10/2017	0.001650855	148	65	191	22	0
604506604	2b-Alternate	6/10/2017	0.001650855	150	57	171	35	1
604518733	3-Original	6/7/2017	0.001650855	128	58	176	10	0
618090887	4-Original	6/9/2017	0.001650855	264	85	305	44	0
168721954	5-Original	6/6/2017	0.00536996	2	1	3	0	0
168724202	6-Original	6/5/2017	0.00536996	25	12	29	8	0
168736409	7-Original	6/7/2017	0.00536996	4	1	4	1	0
168736812	8-Original	6/8/2017	0.00536996	1	0	1	0	0
168736818	9-Original	6/8/2017	0.00536996	4	0	3	1	0
168739458	10-Original	6/9/2017	0.00536996	78	25	71	31	1
168744758	11-Original	6/10/2017	0.00536996	34	16	42	8	0
168755794	12-Original	6/10/2017	0.00536996	30	9	31	8	0
168756946	13-Original	6/9/2017	0.00536996	40	10	39	11	0
168759492	14-Original	6/9/2017	0.00536996	27	8	33	2	0
604505737	15-Original	6/11/2017	0.00536996	70	33	87	16	0
604508028	16-Original	6/11/2017	0.00536996	72	30	83	19	0
639960821	17-Original	6/6/2017	0.00536996	8	2	8	2	0
180485518	1-Original	6/8/2017	0.00675	43	17	53	7	0
180488087	2-Original	6/7/2017	0.00675	11	8	19	0	0
180490194	3-Original	6/6/2017	0.00675	52	27	69	10	0
180496628	4-Original	6/8/2017	0.00675	62	17	64	15	0
180498297	5-Original	6/92017	0.00675	21	8	27	2	0
180499677	6-Original	6/11/2017	0.00675	40	20	53	7	0
180499711	7-Original	6/10/2017	0.00675	17	6	20	3	0
180499713	8-Original	6/10/2017	0.00675	38	18	55	1	0
180500800	9-Original	6/5/2017	0.00675	44	24	66	2	0
180502805	10-Original	6/7/2017	0.00675	95	21	91	25	0
605615639	11-Original	6/6/2017	0.00675	21	7	21	7	0
605622874	12-Original	6/7/2017	0.00675	7	0	5	2	0
605628846	13-Original	6/6/2017	0.00675	36	14	40	10	0
605634311	14-Original	6/11/2017	0.00675	5	2	6	1	0
605635819	15-Original	6/6/2017	0.00675	43	16	46	13	0
629140276	16-Original	6/9/2017	0.00675	50	25	71	4	0
640075201	17-Original	6/8/2017	0.00675	48	19	58	9	0
146322365	1-Original	6/6/2017	0.00122368	120	54	151	12	11

607412531	2-Original	6/6/2017	0.00122368	68	24	76	11	5
635167239	3-Original	6/8/2017	0.00122368	125	43	140	17	11
146318474	4-Original	6/11/2017	0.00570204	10	4	11	3	0
146328862	5-Original	6/6/2017	0.00570204	31	8	31	6	2
146332262	6-Original	6/7/2017	0.00570204	96	22	84	28	6
146339526	7-Original	6/10/2017	0.00570204	31	14	44	0	1
146342003	8-Original	6/9/2017	0.00570204	14	6	20	0	0
146343481	9-Original	6/10/2017	0.00570204	58	19	67	1	9
146347374	10-Original	6/5/2017	0.00570204	6	4	6	4	0
146350916	11-Original	6/8/2017	0.00570204	95	11	75	28	3
146351033	12-Original	6/7/2017	0.00570204	203	45	153	84	11
146353423	13-Original	6/8/2017	0.00570204	86	22	91	14	3
607412366	14-Original	6/9/2017	0.00570204	17	5	19	1	2
624031392	15-Original	6/11/2017	0.00570204	12	5	14	3	0
633856780	16-Original	6/7/2017	0.00570204	74	21	81	9	5
637303141	17-Original	6/7/2017	0.00570204	51	11	48	13	1
611196911	1-Original	6/5/2017	0.0012506	116	54	161	9	0
611197521	2-Original	6/9/2017	0.0012506	136	75	184	27	0
611197813	3-Original	6/9/2017	0.0012506	57	31	84	4	0
611197839	4-Original	6/8/2017	0.0012506	117	59	164	12	0
148697142	5-Original	6/10/2017	0.004063325	88	45	118	15	0
148703998	6-Original	6/9/2017	0.004063325	13	5	11	7	0
148709091	7-Original	6/8/2017	0.004063325	35	13	39	7	2
148715351	8-Original	6/7/2017	0.004063325	14	7	18	3	0
148715791	9-Original	6/6/2017	0.004063325	15	4	17	2	0
148729069	10-Original	6/5/2017	0.004063325	45	15	46	14	0
148729548	11-Original	6/10/2017	0.004063325	117	52	147	22	0
610950022	12-Original	6/7/2017	0.004063325	7	2	6	3	0
622138132	13-Original	6/11/2017	0.004063325	58	24	66	16	0
622152589	14-Original	6/11/2017	0.004063325	16	5	11	10	0
634320706	15-Original	6/8/2017	0.004063325	31	11	34	8	0
636227437	16-Original	6/6/2017	0.004063325	3	1	0	4	0
638995814	17-Original	6/6/2017	0.004063325	5	0	4	1	0
146991744	1-Original	6/7/2017	0.00232162	117	0	106	2	9
147011297	2-Original	6/8/2017	0.00232162	122	26	144	2	2
606576236	3-Original	6/6/2017	0.00232162	151	0	134	5	12
638018831	4-Original	6/8/2017	0.00232162	101	37	123	10	5
639999220	5-Original	6/11/2017	0.00232162	96	12	103	5	0
146973757	6-Original	6/7/2017	0.00558606	37	7	38	0	6
146990064	7-Original	6/8/2017	0.00558606	45	7	35	6	11
146992776	8-Original	6/6/2017	0.00558606	40	3	31	5	7
146999066	9-Original	6/5/2017	0.00558606	23	9	25	7	0

147014316	10-Original	6/5/2017	0.00558606	3	1	3	1	0
147015716	11-Original	6/10/2017	0.00558606	97	4	40	61	0
606568024	12-Original	6/10/2017	0.00558606	41	6	40	7	0
606572349	13-Original	6/9/2017	0.00558606	75	15	71	19	0
606573014	14-Original	6/9/2017	0.00558606	70	16	52	34	0
635660664	15-Original	6/11/2017	0.00558606	6	0	5	1	0
635660675	16-Original	6/9/2012	0.00558606	0	0	0	0	0
638996176	17-Original	6/7/2017	0.00558606	3	0	3	0	0
147162757	1-Original	6/10/2017	0.002206125	132	72	200	4	0
610821880	2-Original	6/8/2017	0.002206125	166	68	228	6	0
610821966	3-Original	6/8/2017	0.002206125	162	74	234	2	0
610822060	4-Original	6/8/2017	0.002206125	147	75	214	8	0
634779349	5-Original	6/10/2017	0.002206125	111	47	156	2	0
147156838	6-Original	6/5/2017	0.00527425	57	43	100	0	0
147158424	7-Original	6/9/2017	0.00527425	36	18	52	2	0
147159706	8-Original	6/5/2017	0.00527425	19	13	31	1	0
147159927	9-Original	6/11/2017	0.00527425	30	14	39	5	0
147160775	10-Original	6/11/2017	0.00527425	46	29	59	15	1
147172557	11-Original	6/6/2017	0.00527425	95	24	65	53	1
147177000	12-Original	6/7/2017	0.00527425	58	47	100	3	2
610822469	13-Original	6/9/2017	0.00527425	48	17	58	7	0
610824002	14-Original	6/6/2017	0.00527425	14	4	12	6	0
610824055	15-Original	6/6/2017	0.00527425	37	20	54	3	0
610824506	16-Original	6/7/2017	0.00527425	13	7	19	1	0
636266007	17-Original	6/7/2017	0.00527425	35	23	51	7	0
148431519	1-Original	6/11/2017	0.00525	96	30	98	28	0
148433356	2-Original	6/8/2017	0.00525	106	32	89	49	0
148434220	3-Original	6/7/2017	0.00525	0	0	0	0	0
148436040	4-Original	6/10/2017	0.00525	54	11	51	14	0
148444989	5-Original	6/11/2017	0.00525	181	84	219	46	0
148448765	6-Original	6/6/2017	0.00525	0	0	0	0	0
148470147	7-Original	6/6/2017	0.00525	0	0	0	0	0
148470268	8-Original	6/6/2017	0.00525	24	10	25	9	0
148472074	9-Original	6/7/2017	0.00525	31	19	42	8	0
148472781	10-Original	6/6/2017	0.00525	50	17	44	23	0
148483099	11-Original	6/6/2017	0.00525	45	10	38	17	0
628693352	12-Original	6/9/2017	0.00525	95	21	90	25	1
633721362	13-Original	6/10/2017	0.00525	173	54	152	75	0
635524645	14-Original	6/5/2017	0.00525	67	36	83	20	0
638997913	15-Original	6/9/2017	0.00525	93	40	108	25	0
639777342	16-Original	6/11/2017	0.00525	128	63	141	50	0
641181527	17b-Alternate	6/5/2017	0.00525	70	30	66	34	0

147299629	1-Original	6/10/2017	0.002652	60	14	64	10	0
147364555	2-Original	6/6/2017	0.002652	81	23	95	8	1
147364574	3-Original	6/7/2017	0.002652	67	25	90	2	0
147364598	4-Original	6/6/2017	0.002652	60	26	81	4	1
147364618	5-Original	6/8/2017	0.002652	71	19	89	1	0
635199539	6-Original	6/9/2017	0.002652	111	46	153	0	4
635832919	7-Original	6/5/2017	0.002652	89	51	126	3	11
641441511	8-Original	6/8/2017	0.002652	46	20	63	1	2
147304101	9-Original	6/10/2017	0.0029853	3	1	2	2	0
147307397	10-Original	6/7/2017	0.0029853	11	2	0	13	0
147307449	11-Original	6/7/2017	0.0029853	12	6	12	6	0
147318882	12-Original	6/6/2017	0.0029853	0	0	0	0	0
147326253	13-Original	6/11/2017	0.0029853	66	43	104	5	0
147326365	14-Original	6/11/2017	0.0029853	48	23	61	10	0
147328662	15-Original	6/9/2017	0.0029853	3	0	1	2	0
147375707	16-Original	6/8/2017	0.0029853	76	35	107	1	3
635127767	17-Original	6/5/2017	0.0029853	17	8	19	1	5
606515905	1-Original	6/9/2017	0.00003458	75	24	75	22	2
160144721	2-Original	6/8/2017	0.00003325	49	18	43	21	3
160143522	3-Original	6/6/2017	0.00053826	0	0	0	0	0
160145521	4a-Alternate	6/8/2017	0.00053826	1	0	1	0	0
160147391	5-Original	6/5/2017	0.00053826	0	0	0	0	0
160149538	6b-Alternate	6/9/2017	0.00053826	2	0	1	1	0
160154128	7-Original	6/5/2017	0.00053826	0	0	0	0	0
160158288	8-Original	6/5/2017	0.00053826	16	8	17	7	0
160158469	9-Original	6/10/2017	0.00053826	0	0	0	0	0
160163562	10-Original	6/10/2017	0.00053826	184	48	171	60	1
160167119	11-Original	6/7/2017	0.00053826	23	10	22	7	4
160169067	12-Original	6/11/2017	0.00053826	1	0	1	0	0
604943907	13-Original	6/6/2017	0.00053826	35	5	25	14	1
604970409	14-Original	6/11/2017	0.00053826	0	0	0	0	0
606518225	15-Original	6/10/2017	0.00053826	1	0	1	0	0
624678718	16b-Alternate	6/8/2017	0.00053826	0	0	0	0	0
641616454	17-Original	6/6/2017	0.00053826	1	0	0	1	0
130301448	1-Original	6/10/2017	0.00595	29	11	24	16	0
130306325	2-Original	6/10/2017	0.00595	22	11	33	0	0
130309542	3-Original	6/5/2017	0.00595	33	17	45	5	0
130310021	4-Original	6/11/2017	0.00595	9	6	9	6	0
130314658	5-Original	6/5/2017	0.00595	21	13	33	1	0
130315195	6-Original	6/7/2017	0.00595	29	15	38	6	0
130320929	7-Original	6/11/2017	0.00595	16	12	25	3	0
130326826	8-Original	6/7/2017	0.00595	115	32	123	21	3

611004677	9-Original	6/9/2017	0.00595	8	1	4	5	0
611005970	10-Original	6/7/2017	0.00595	76	20	80	14	2
611009251	11-Original	6/6/2017	0.00595	149	49	181	12	5
611012866	12-Original	6/9/2017	0.00595	52	37	83	5	1
619637622	13-Original	6/8/2017	0.00595	22	6	14	14	0
621121926	14-Original	6/8/2017	0.00595	115	48	142	21	0
625338589	15-Original	6/11/2017	0.00595	20	12	27	5	0
626692093	16-Original	6/6/2017	0.00595	128	27	122	29	4
635537076	17-Original	6/6/2017	0.00595	112	37	126	19	4
607714377	1-Original	6/10/2017	0.000002245	20	0	17	3	0
149001635	2-Original	6/8/2017	0.00004725	1	1	2	0	0
149002674	3-Original	6/5/2017	0.00004725	11	7	17	1	0
149003362	4a-Alternate	6/5/2017	0.00004725	5	1	4	2	0
149005355	5-Original		0.0004725	0	0	0	0	0
149011906	6-Original	6/6/2017	0.00004725	82	18	95	2	3
149022917	7a-Alternate	6/10/2017	0.00004725	28	8	25	9	2
149023334	8-Original	6/9/2017	0.00004725	4	1	2	3	0
149027199	9-Original	6/11/2017	0.00004725	6	2	3	5	0
607713464	10-Original	6/7/2017	0.00004725	2	0	2	0	0
607730056	11-Original	6/10/2017	0.00004725	294	44	266	68	4
607752291	12-Original	6/6/2017	0.00004725	14	2	11	4	1
607765363	13-Original	6/10/2017	0.0004725	0	0	0	0	0
617964312	14-Original	6/9/2017	0.00004725	16	3	16	2	1
633093763	15-Original	6/8/2017	0.00004725	6	3	6	3	0
639002442	16-Original	6/6/2017	0.0004725	0	0	0	0	0
640696510	17-Original	6/9/2017	0.00004725	2	0	0	2	0
160334094	1-Original	6/10/2017	0.01715	7	1	6	2	0
160336972	2-Original	6/11/2017	0.01715	51	28	76	2	1
160337605	3-Original	6/5/2017	0.01715	120	83	195	8	0
160344999	4-Original	6/6/2017	0.01715	74	36	107	3	0
160345686	5-Original	6/7/2017	0.01715	64	30	88	3	3
160347161	6-Original	6/6/2017	0.01715	43	15	52	5	1
160348581	7-Original	6/9/2017	0.01715	6	0	3	3	0
160348895	8-Original	6/9/2017	0.01715	5	1	6	0	0
160349055	9-Original	6/9/2017	0.01715	3	0	0	3	0
160351946	10-Original	6/6/2017	0.01715	87	45	131	1	0
160353063	11-Original	6/10/2017	0.01715	12	3	15	0	0
160353822	12-Original	6/5/2017	0.01715	53	25	75	3	0
607001764	13-Original	6/8/2017	0.01715	4	1	5	0	0
607027600	14-Original	6/11/2017	0.01715	2	0	2	0	0
607028034	15-Original	6/11/2017	0.01715	6	5	5	6	0
607029627	16-Original	6/7/2017	0.01715	30	8	37	1	0

629141429	17-Original	6/8/2017	0.01715	73	20	90	3	0
149193090	1-Original	6/9/2017	0.00545	94	26	83	37	0
149201740	2-Original	6/10/2017	0.00545	34	7	30	11	0
149201930	3-Original	6/10/2017	0.00545	51	22	59	14	0
149202730	4-Original	6/10/2017	0.00545	19	10	19	10	0
149211406	5-Original	6/5/2017	0.00545	45	37	66	15	1
149216185	6-Original	6/7/2017	0.00545	154	9	125	37	1
611835705	7-Original	6/7/2017	0.00545	117	38	109	46	0
611870412	8-Original	6/6/2017	0.00545	15	5	13	7	0
611874198	9-Original	6/8/2017	0.00545	117	38	115	40	0
611879443	10-Original	6/8/2017	0.00545	111	18	106	21	2
612517261	11-Original	6/6/2017	0.00545	43	28	63	8	0
612522792	12-Original	6/11/2017	0.00545	16	10	25	1	0
612523438	13-Original	6/11/2017	0.00545	21	14	32	3	0
612523439	14-Original	6/5/2017	0.00545	16	4	9	11	0
612525148	15-Original	6/6/2017	0.00545	78	25	90	13	0
612525641	16-Original	6/9/2017	0.00545	55	16	44	26	1
614771184	17-Original	6/7/2017	0.00545	16	2	8	10	0
160436335	1-Original	6/7/2017	0.002666965	72	20	82	10	0
604830837	2-Original	6/6/2017	0.002666965	138	60	163	35	0
604831395	3-Original	6/9/2017	0.002666965	139	72	176	35	0
606895018	4-Original	6/10/2017	0.002666965	114	47	143	18	0
635826409	5-Original	6/11/2017	0.002666965	138	57	161	34	0
638080329	6-Original	6/12/2017	0.002666965	95	35	95	35	0
160424975	7-Original	6/13/2017	0.00488151	3	1	2	2	0
160427396	8-Original	6/14/2017	0.00488151	16	7	14	9	0
160433447	9-Original	6/15/2017	0.00488151	70	24	65	29	0
160434518	10-Original	6/16/2017	0.00488151	13	5	14	4	0
604821382	11-Original	6/17/2017	0.00488151	94	20	73	41	0
604823624	12-Original	6/18/2017	0.00488151	23	9	19	13	0
634659728	13-Original	6/19/2017	0.00488151	8	5	11	2	0
635549418	14-Original	6/20/2017	0.00488151	65	14	40	39	0
638072853	15-Original	6/21/2017	0.00488151	7	3	6	4	0
635549382	16-Original	6/22/2017	0.00488151	2	0	2	0	0
638522178	17-Original	6/23/2017	0.00488151	52	25	62	15	0
608774680	1a-Alternate	6/9/2017	0.0006118	119	43	148	14	0
639689837	2-Original	6/8/2017	0.0006118	90	22	92	20	0
147401116	3-Original	6/6/2017	0.00455175	20	6	17	9	0
147403821	4-Original	6/10/2017	0.00455175	172	43	171	44	0
147404413	5-Original	6/9/2017	0.00455175	111	23	108	26	0
147410535	6-Original	6/7/2017	0.00455175	9	1	7	3	0
147411652	7-Original	6/7/2017	0.00455175	16	3	12	7	0

147413279	8-Original	6/9/2017	0.00455175	149	25	139	35	0
147419984	9-Original	6/6/2017	0.00455175	20	5	19	6	0
605374149	10-Original	6/8/2017	0.00455175	172	28	147	53	0
605388659	11-Original	6/5/2017	0.00455175	9	3	11	1	0
605396189	12-Original	6/11/2017	0.00455175	17	4	18	3	0
608774654	13-Original	6/2/2017	0.00455175	5	3	7	0	1
618572901	14-Original	6/11/2017	0.00455175	15	3	16	2	0
629142524	15-Original	6/8/2017	0.00455175	19	1	9	11	0
637972373	16-Original	6/10/2017	0.00455175	124	36	119	41	0
638535884	17-Original	6/7/2017	0.00455175	13	5	14	4	0
618327492	1-Original	6/6/2017	0.001504	213	80	239	54	0
618328108	2-Original	6/7/2017	0.001504	114	27	68	72	1
634704011	3-Original	6/11/2017	0.001504	182	69	166	85	0
637926770	4-Original	6/7/2017	0.001504	111	42	94	59	0
641460901	5-Original	6/7/2017	0.001504	140	54	119	74	1
149462214	6-Original	6/5/2017	0.003604	24	16	25	15	0
149462365	7-Original	6/5/2017	0.003604	81	45	83	43	0
149462690	8-Original	6/11/2017	0.003604	18	11	18	11	0
149475167	9-Original	6/8/2017	0.003604	41	13	34	20	0
149475533	10-Original	6/8/2017	0.003604	34	8	28	14	0
149498901	11-Original	6/9/2017	0.003604	2	0	1	1	0
149503682	12-Original	6/6/2017	0.003604	150	36	107	79	0
612218179	13-Original	6/6/2017	0.003604	71	12	41	42	0
618324746	14-Original	6/10/2017	0.003604	20	5	16	9	0
618324787	15-Original	6/10/2017	0.003604	53	16	34	35	0
618325371	16b-Alternate	6/10/2017	0.003604	325	93	286	131	1
636258685	17-Original	6/9/2017	0.003604	18	1	12	7	0
130412723	1-Original	6/8/2017	0.0138	132	50	167	13	2
130415393	2-Original	6/11/2017	0.0138	123	88	181	25	5
130422037	3-Original	6/9/2017	0.0138	196	65	227	34	0
130422578	4-Original	6/7/2017	0.0138	190	84	244	29	1
130427569	5-Original	6/7/2017	0.0138	303	106	361	48	0
130435783	6-Original	6/8/2017	0.0138	173	64	186	49	2
130437592	7-Original	6/6/2017	0.0138	37	19	51	4	1
130437880	8-Original	6/6/2017	0.0138	60	38	94	3	1
130438888	9-Original	6/10/2017	0.0138	131	116	233	12	2
130441420	10-Original	6/10/2017	0.0138	65	56	117	3	1
130450400	11-Original	6/9/2017	0.0138	47	25	69	2	2
130450450	12-Original	6/10/2017	0.0138	60	32	85	7	0
235938924	13-Original	6/5/2017	0.0138	101	83	169	12	3
235940231	14-Original	6/11/2017	0.0138	83	71	138	13	3
618913726	15-Original	6/7/2017	0.0138	186	108	267	27	0

635879991	16-Original	6/5/2017	0.0138	124	98	201	18	3
637241907	17-Original	6/8/2017	0.0138	173	58	210	20	1
Total				17,342	6,433	19,574	3,962	240

Standard Error of Statewide Belt Use Rate[3]: 0.1 percent
Nonresponse Rate as provided in §1340.9 (f)
Nonresponse rate for the survey variable seat belt use: 1.0095 percent

---

[1]Identify if the observation site is an original observation site or an alternate observation site.
[2]Occupants refer to both drivers and passengers
[3]The standard error may not exceed 2.5 percent

Appendix H: SPSS Data Codes

SPSS Data Dictionary

DISPLAY DICTIONARY.

Variable Values

Value		Label
County	1	Albany
	3	Big Horn
	5	Campbell
	7	Carbon
	9	Converse
	11	Crook
	13	Fremont
	19	Johnson
	21	Laramie
	23	Lincoln
	25	Natrona
	27	Niobrara
	29	Park
	31	Platte
	33	Sheridan
	37	Sweetwater
	39	Teton
Population	1	Urban
	2	Rural
Roadway	11	S1100 Primary Road
	12	S1200 Secondary Road
	14	S1400 Local/Rual/City St
day	1	Sunday
	2	Monday
	3	Tuesday
	4	Wednesday
	5	Thursday
	6	Friday
	7	Saturday

	1	Donna Lucas
	7	Bridget White
	14	Vicky Peterson
	23	Monty Byers
	30	Bill Spencer
	35	Kayla Schear
	39	Dee Sebelius
	42	Dawn Edwards
	44	Doug Peterson
	47	Dixie Elder
observer	48	Deb Eutsler
	50	Brooke Darden
	51	Susan Parkinson
	52	Russel Loestcher
	53	Kris Smith
	54	Derald Maddison
	55	Jaclyn Davison
	56	Molly Laidlaw
	57	Candy Hunter
	58	Cindy Pope
	59	Peggy Dowers
	1	Clear Sunny
	2	Cloudy
	3	Foggy
weather	4	Light Rain
	5	Snow Ice
	6	Heavy Rain
	7	Occasional Rain
lanes	1	One Lane
	2	Two Lanes
direction	1	North
	2	South
	3	East
	4	West
OccupGender	1	Male
	2	Female
OccupBelt	1	Belted
	2	Not Belted
	3	Unsure

carType	1	Automobile
	2	Van
	3	Sport Utility Vehicle
	4	Pickup Truck
wyPlate	1	Wyoming License
	2	Out-of-State License
	9	Unsure
timeStamp	1	7:30-9:30
	2	9:30-11:30
	3	11:30-1:30
	4	1:30-3:30
	5	3:30-5:30
Roadwaytype	11	S1100 Primary Road
	12	S1200 Secondary Road
	14	S1400 Local/Rural/City St
Weekend	1	Weekend
	2	Weekday