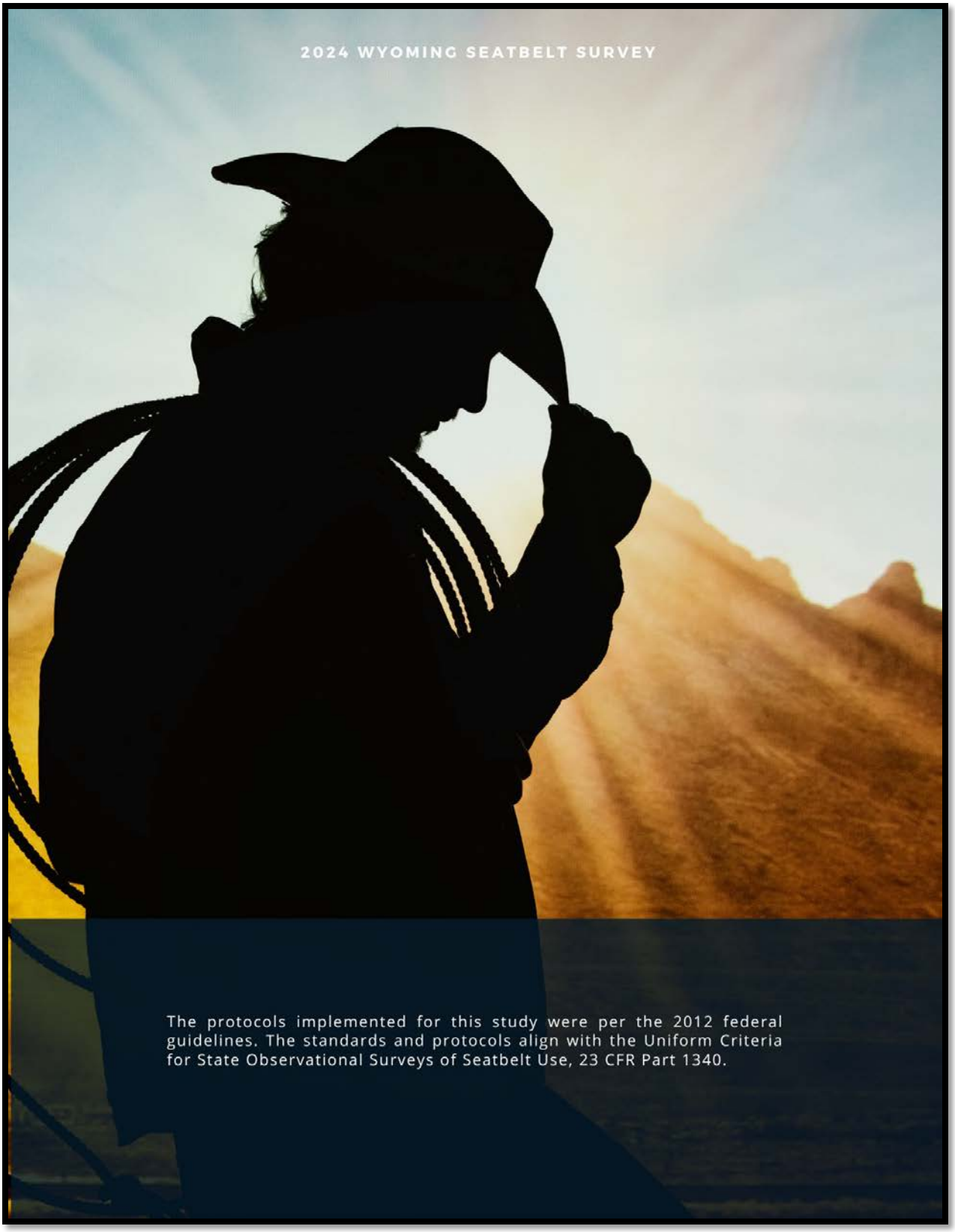
WYOMING DEPARTMENT OF TRANSPORTATION

2024 STATEWIDE SEAT BELT SURVEY ANALYSIS


2024 WYOMING SEATBELT SURVEY
The protocols implemented for this study were per the 2012 federal guidelines. The standards and protocols align with the Uniform Criteria for State Observational Surveys of Seatbelt Use, 23 CFR Part 1340.

Acknowledgments

DLN Consulting, Inc. is thankful to the individuals that work tirelessly to help make this project a success. Their efforts are essential to the completion of the 2024 Wyoming Seat Belt Survey.

- Bridget White coordinated and secured the acquisition of contractors to conduct the survey observations.
- Bridget White and Vicky Peterson conducted the field monitoring and compliance.
- Lydia DeJesus conducted the training with help from Bridget White. Ms. DeJesus led the project coordination, coding, data entry, and quality assurance procedures. She developed spreadsheets and charts.
- James G. Leibert, Ph.D., served as the project statistician and analyst.
- Ms. Julie Angert also served as a project statistician and certified the usage rate.
- Deb Nelson served as the project administrator, data analyst, and report author.

Without the dedicated people who completed all aspects of the training and who conducted the field observations, we could not have completed this survey. The following is a list of the observers, alternate observer, and quality control field monitors:

Dennis Doerr, Dixie Elder, Skyler Elder, Deb Eutsler, Sandra Gabel,
Donna Hermann, Aspen Miller, Doug Peterson, Vicky Peterson,
Rob Remele, Kayla Revell, Robert Sadler, Bryan Shannon, Amy Still,
Alex Torres, Deanne Vogel, Michelle Winans, Bridget White.

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

Deb Nelson, DLN Consulting, Inc. President
Project Administrator & Analyst

James G. Leibert, PhD
Project Statistician and Project Analyst

Ms. Julie Angert
Project Statistician

2024 WYOMING OBSERVERS

Table of Contents

Table of Figures

Executive Summary

The 2024 Wyoming statewide seat belt survey was conducted from June 3 to June 9, 2024. A total of 21,615 occupants were observed, including 16,394 drivers and 5,221 passengers. Observations were made at 285 sites across 15 counties. This year marks the third year of site sampling, which began in 2022. The seat belt usage rate 2024 was 73.4 percent, representing a significant decline from 2023.

Uncertainty about seat belt use occurred in 0.0575 percent of the observations. The sample's standard error of the mean was 0.03 percent, well within Federal requirements.[1]

Drivers accounted for 75.8 percent of all observed occupants, nearly three times the number of passengers (24.2%). Consistent with previous Wyoming surveys, passengers had a significantly higher seat belt usage rate than drivers, with 82.9 percent buckling up compared to 71.0 percent of drivers.

Eleven of the 15 counties observed had a seat belt usage rate higher than the statewide average. Four of these counties had rates exceeding 90 percent, and nine had rates above 80 percent. Three counties recorded usage rates below the state average but above 70 percent. Natrona County had the lowest rate, at 61.3 percent.

Female drivers and passengers were likelier to wear seat belts than their male counterparts. Among females, seat belt use was highest in vans, while the lowest rate was observed among female pickup drivers. The highest usage rate for males was among automobile passengers, while male drivers showed the highest compliance in vans. The lowest rates for male drivers and passengers were in pickups.

Rural drivers and passengers were likelier to buckle up than those in urban areas. Occupants of vehicles with out-of-state license plates also had higher seat belt usage compared to those in Wyoming-registered vehicles. Additionally, more occupants on primary roadways wore seat belts compared to those on secondary roads or city streets.

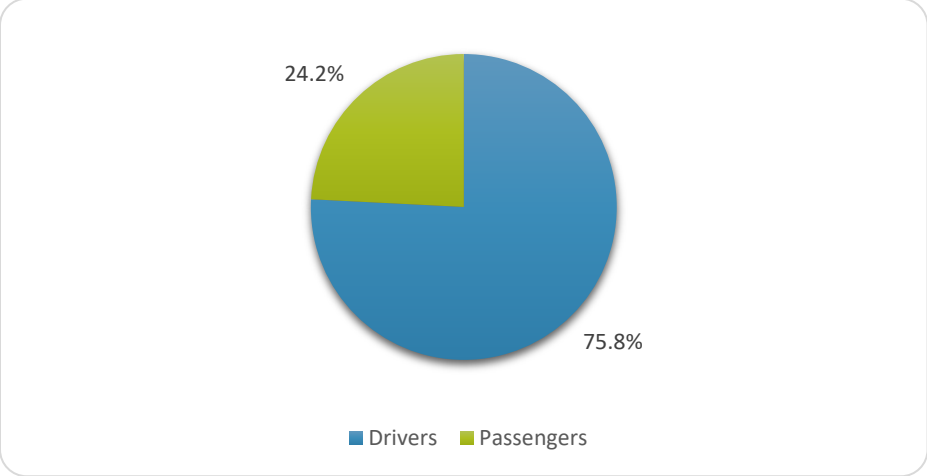
Occupants observed on Saturday had the highest seat belt usage rate, with Sunday following closely behind. In contrast, Tuesday and Friday had the lowest usage rates, falling below 70 percent.

[1] Observers had uncertainties about belt use in less than one percent (.0575%) of the observations collected, which is statistically insignificant and not included in the report's narrative. The detailed data, including the unsure observations, are in Appendix F and Appendix G of this report.

Introduction

The 2024 statewide seat belt survey in Wyoming observed seat belt use across 15 counties, each containing 19 designated sites. This year marked the third year of using the current sampling method, approved by the National Highway Traffic Safety Administration (NHTSA). Observations were conducted from June 3 to June 19, 2024, at 285 sites. In total, 15 observers recorded seat belt usage for 16,394 drivers and 5,221 front-seat passengers, bringing the total number of vehicle occupants observed to 21,165. Nearly three-fourths of the occupants were drivers, with the remaining one-fourth passengers. The table and graph below illustrate the results.[2]

Figure 1: Percent of Sample by Type of Vehicle Occupant, 2024



[2] The frequencies in many tables are described as "unweighted." This means they are the raw frequencies that are unaffected by the weighting process used to produce percentage estimates of seat belt use throughout this report. The weighting process is based on sampling probabilities for each site where observations are collected.

Each observer was assigned to a specific county and provided with both paper maps and iPads to locate their designated sites. Upon arrival at each site, the observer recorded seat belt usage for 45 minutes before moving to the following scheduled location. The table below lists the observers, their assigned counties, the number of occupants observed, and the percentage of total occupants in each county. Occupant frequencies are shown in Table 2 on page 7, ordered by descending frequency and cumulative percentages.

Table 1: Counties and Observers with Unweighted Frequency of Occupants and Percent of Sample

	Belted Weighted	Total n Unweighted	Percent Total	Cumulative Percent
Doug Peterson	80.8%	1489	6.9%	6.9%
Dixie Elder	94.5%	1005	4.6%	11.5%
Deb Eutsler	90.0%	1024	4.7%	16.3%
Skyler Elder	89.2%	814	3.8%	20.0%
Bryan Shannon	68.5%	2612	12.1%	32.1%
Sandra Gabel	70.3%	1490	6.9%	39.0%
Amy Still	94.6%	1792	8.3%	47.3%
Aspen Miller	77.5%	1049	4.9%	52.2%
Donna Hermann	85.3%	1647	7.6%	59.8%
Robert Sadler	99.6%	1457	6.7%	66.5%
Rob Remele	80.5%	2045	9.5%	76.0%
Dennis Doerr	84.8%	1343	6.2%	82.2%
Deanne Vogel	72.5%	1124	5.2%	87.4%
Alex Torres	61.3%	912	4.2%	91.6%
Michelle Winans	77.8%	1604	7.4%	99.0%
Keyla Revell	91.4%	208	1.0%	100.0%
Total	73.4%	21615	100.0%	

Observer Training, Quality Control, and Data Preparation

DLN Consulting Inc. developed training and quality control methods according to the Uniform Code guidelines, ensuring the reliability of the data presented in this report. This section describes these processes in detail.[3]

DLN Consulting, Inc. used iPads with proprietary software that facilitated data collection and reporting to record seat belt observations. Observers, alternates, and quality control staff received comprehensive procedures training, including audio, visual, and hands-on instruction.

[3] By reliability, we ensure that we measure seat belt use free of observer error. The protocols and sampling techniques ensure that the results are valid and that repeated surveys simultaneously and under the same conditions would produce the same results.

On the first training day, participants practiced using the software in a classroom setting. Observers then engaged in mock data collection exercises, completing four sessions, three of which were used to calculate individual inter-accuracy ratios. This process determined observer readiness for field observations. The inter-accuracy ratio for the 2024 survey was 95 percent, exceeding the 85 percent requirement of the Uniform Code.

Additionally, written tests were administered to assess participants' knowledge of the observation rules and procedures. The Uniform Code mandates a minimum passing score of 80 percent for observers, alternates, and quality control supervisors. In this year's training, the average quiz score was 94.7 percent, with all participants surpassing the required threshold.

To ensure the ongoing reliability of observations, randomly selected sites were subject to spot checks by quality control monitors, who received additional training in separate half-day sessions covering supervisory directives. Throughout the survey period, DLN Consulting, Inc. staff remained on-call to assist observers with issues, such as shifting to alternate sites or adjusting procedures to ensure data collection accuracy and observers' safety.

After completing observations at each site, observers electronically transferred their data to DLN Consulting, Inc., where the information was reviewed for accuracy. Any coding errors were corrected, and observers were consulted to resolve discrepancies before proceeding. Once the data was cleaned of errors, it was transferred into Excel files and reviewed for anomalies. Separate data files for drivers and passengers were combined into one comprehensive file of all vehicle occupants.

The final dataset was imported into SPSS (The Statistical Package for the Social Sciences, version 24.0). Here, codes were added, and variables required for further analysis were created. Data weighting procedures were then implemented using the Complex Samples subroutine in SPSS, after which the data was processed to produce the results presented in this report.[4]

[4] The Complex Sample directions are found in a "csaplan" that introduces the relevant sampling variables and directions for creating the weighting process for every calculation of seat belt use estimates.

Estimates of Seat Belt Use

The following estimates of seat belt use from the 2024 Wyoming seat belt survey were calculated using the Complex Samples weighting functions in *SPSS*. This procedure uses the sampling methods and probabilities associated with each site to weigh the raw data for analysis. Three different estimates are presented: The first covers all vehicle occupants; subsequent estimates are for the drivers and the outboard, front-seat passengers. Added together, the drivers and passengers are the total occupants.

The following table presents the weighted estimates for all vehicle occupants and includes standard errors and confidence interval calculations.

Table 2: Estimated Occupant Belt Use with Standard Error, Confidence, Interval, and Unweighted Count

		Estimate	Standard Error	95% Confidence Interval Lower	Upper	Unweighted Count
% of Total	Belted	73.4%	0.3%	72.7%	74.1%	17596
	Not belted	26.6%	0.3%	25.9%	27.3%	4006
	Unsure	0.0%	0.0%	0.0%	0.0%	13
	Total	100.0%	0.0%	100.0%	100.0%	21615

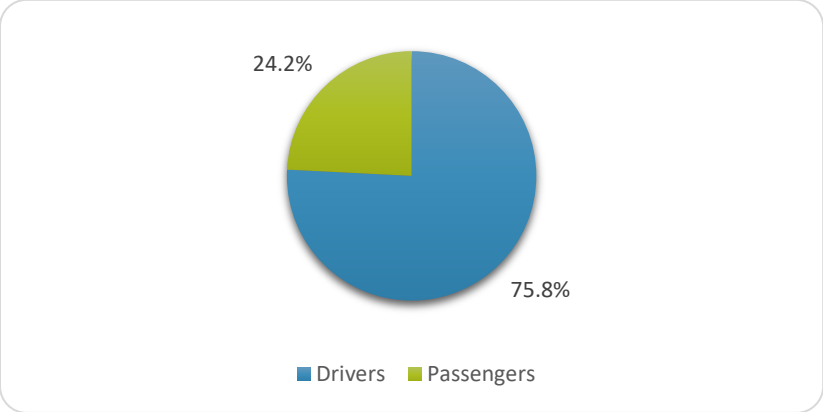
Observers collected seat belt use data on 21,615 vehicle occupants; 73.4 percent of the occupants were observed wearing seat belts, and 26.6 percent were not belted. Observers were unsure about the belt use for less than one percent (0.0601%) of the occupants. The standard error for the 2024 survey is 0.3 percent, below the allowable standard error of 2.5 percent. The 95 percent confidence interval calculation produced a lower estimate of 72.7 percent and an upper estimate of 74.1 percent, a difference of 1.4 percentage points.

Drivers and Passengers

Observers collected seat belt use data on drivers and front-seat outboard passengers; observations did not include middle front-seat or back-seat vehicle occupants.

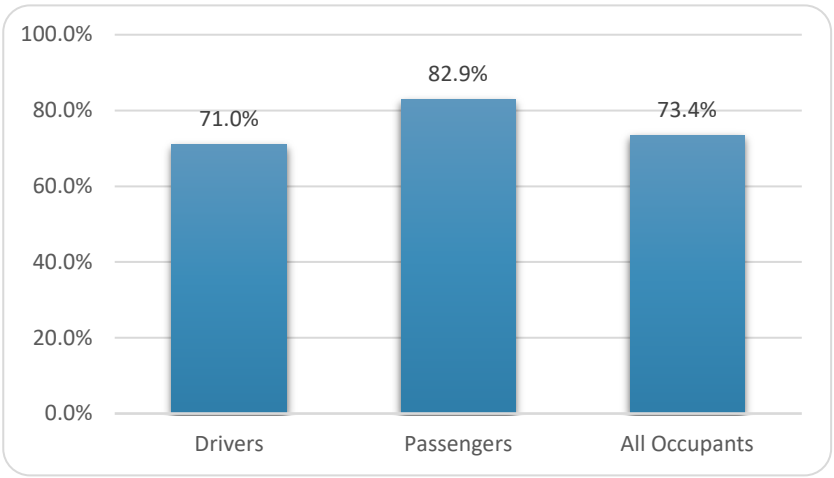
Observers collected data on 16,394 drivers and 5,221 passengers for 21,615 vehicle occupants. Drivers represented 73.4 percent, and passengers represented 26.6 percent of vehicle occupants. There were almost three drivers for every passenger. About one-fourth of the vehicles had both drivers and passengers. The following chart illustrates the percentages.

Figure 2: Percent of Sample by Type of Vehicle Occupant, 2024



The usage rate for observed drivers was 71.0 percent; the passenger rate was considerably higher at 82.9 percent. The higher rate for passengers raised the overall rate to 73.4 percent despite the smaller number of passengers (26.6% of the sample) compared to the number of drivers (73.4% of the sample).

Figure 3: Occupant Belt Use by Occupant Type, Wyoming 2024



Estimates of Seat Belt Use by County

The Wyoming sample includes fifteen counties. The following table lists the counties, the unweighted frequencies for each county, and the percentage of observed vehicle occupants sorted by the percentage of the total sample.

Table 3: Estimates of Seat Belt Use by County, Wyoming 2024[5]

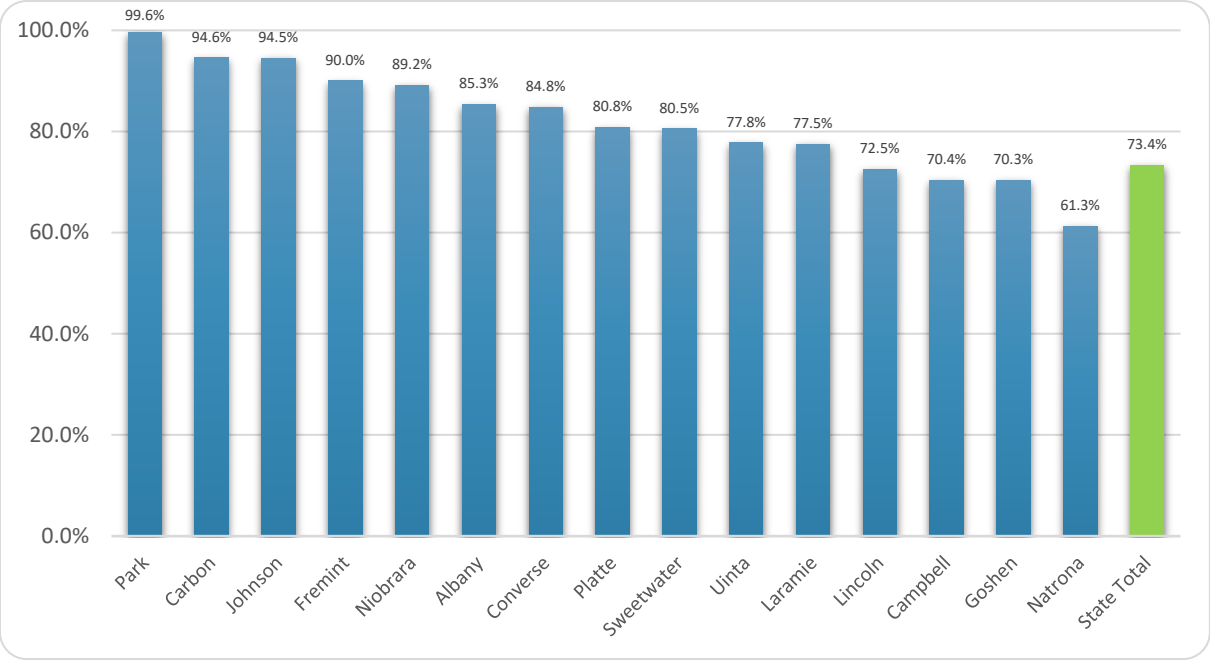
Variable	Belted	Not Belted	Unsure	Total	Unweighted Count	Unweighted % of sample
Albany	85.3%	14.7%	0.0%	100.0%	1647	7.6%
Campbell	70.4%	29.3%	0.3%	100.0%	2820	13.0%
Carbon	94.6%	5.4%	0.0%	100.0%	1792	8.3%
Converse	84.8%	15.1%	0.1%	100.0%	1343	6.2%
Goshen	70.3%	29.7%	0.0%	100.0%	1490	6.9%
Fremont	90.0%	10.0%	0.0%	100.0%	1024	4.7%
Johnson	94.5%	5.5%	0.0%	100.0%	1005	4.6%
Laramie	77.5%	22.5%	0.0%	100.0%	1049	4.9%
Lincoln	72.5%	27.5%	0.0%	100.0%	1124	5.2%
Natrona	61.3%	38.7%	0.0%	100.0%	912	4.2%
Niobrara	89.2%	10.8%	0.0%	100.0%	814	3.8%
Park	99.6%	0.4%	0.0%	100.0%	1457	6.7%
Platte	80.8%	19.2%	0.0%	100.0%	1489	6.9%
Sweetwater	80.5%	19.5%	0.0%	100.0%	2045	9.5%
Uinta	77.8%	22.0%	0.3%	100.0%	1604	7.4%
Total	73.4%	26.6%	0.6%	100.0%	21615	100.0%

As noted earlier in this report, nine counties significantly influenced the overall seat belt use rates more than the other counties.

[5] Because "Unsure" represents a statistically insignificant percentage, it will not appear in the remaining tables of this report. However, its data is included in the detailed SPSS output files in the appendices.

Among the top counties in terms of total occupants, counties had rates of seat belt use at 90.0 percent belted or higher: Park (99.6%), Carbon (94.6%), Johnson (94.5%), and Fremont (90.0%). These counties contributed 25 percent of the sample. Campbell County also contributed significant occupants (13.0% of the sample), but its observed occupants had a low seat belt use rate (70.4%). Seven of the counties had usage rates higher than the state average but lower than 90 percent: Niobrara (89.2%), Albany (85.3%), Converse (84.8%), Platte (80.8%), Sweetwater (80.5%), Uinta (77.8%), and Laramie (77.5%). The remaining four counties had rates below the state: Goshen (70.3%) and Natrona (61.3%).

Figure 4: County Seat Belt Use Rates for Vehicle Occupants Ranked in Descending Order



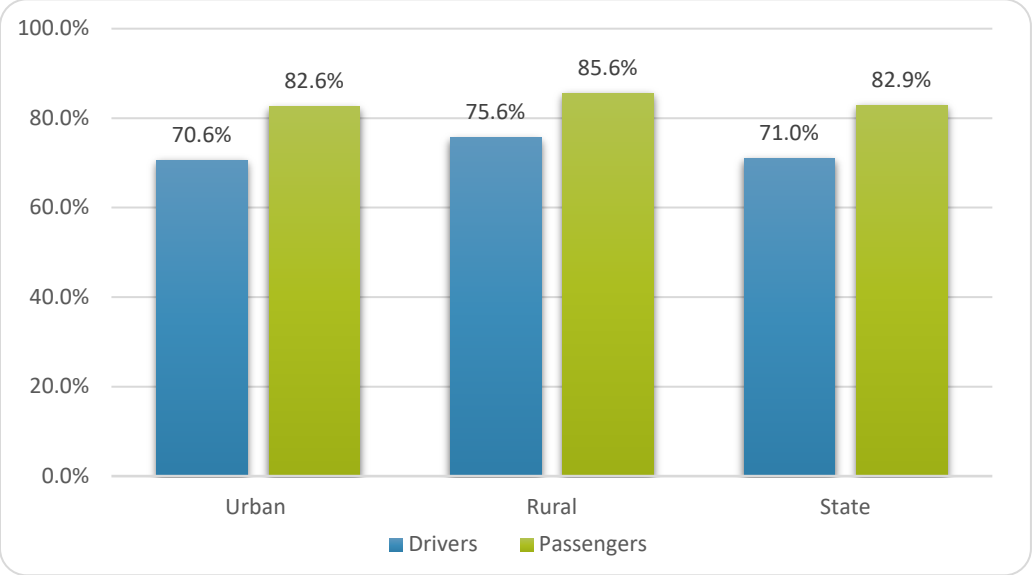
Seat Belt Use for Selected Variables

Survey observations in Wyoming are organized into variables and categories within variables. For example, sites are pre-coded for population density (urban or rural) and the type of roadway (primary, secondary, and other). Occupant gender, vehicle type registration (Wyoming or out-of-state), and the day of the week are different variables. These variables and others of interest concerning seat belt use are examined in the following section.

Population Density

Wyoming is far more rural than urban, as reflected in the survey data. More people in rural Wyoming use their seat belts than in urban areas. The 2024 seat belt usage rate for drivers in rural areas was 75.6 percent compared to 70.6 percent in urban areas. Likewise, passengers in rural areas wore their seat belts more than in urban areas. See chart below.

Figure 5: Estimates of Driver, Passenger, and All Occupants Belted by Population Density, Wyoming 2024



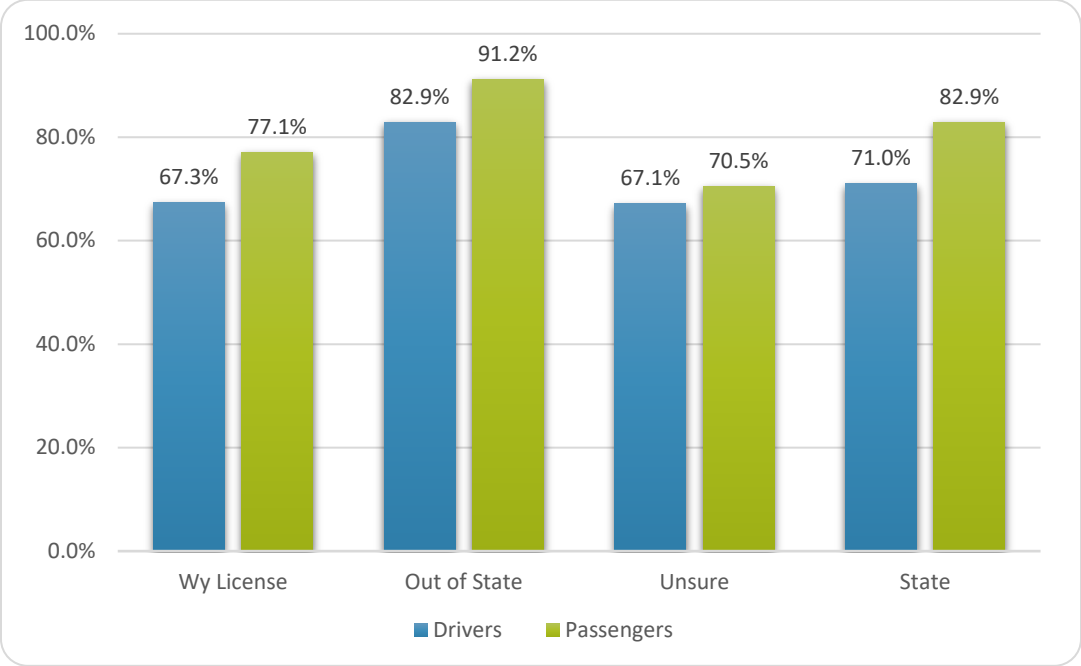
Overall, the usage rate for all occupants observed in urban areas was 82.6 percent, and for all occupants observed in rural areas, it was 85.6 percent.

Vehicle Registration

Observers recorded whether occupants were in vehicles with Wyoming-registered license plates or license plates from other states.

For the 2024 survey, 67.3 percent of the drivers and 77.1 percent of the passengers were in vehicles identified with a Wyoming license plate. Out-of-state vehicles had 82.9 percent of the drivers and 91.2 percent of the passengers wearing seat belts. The differences were 15.6 percentage points for drivers and 14.1 points for passengers. Observers could not determine the vehicle license origin in 67.8 percent of the observed vehicles. The following chart illustrates these results.

Figure 6: Estimates of Drivers, Passengers, and All Occupants Belted by Vehicle Registration



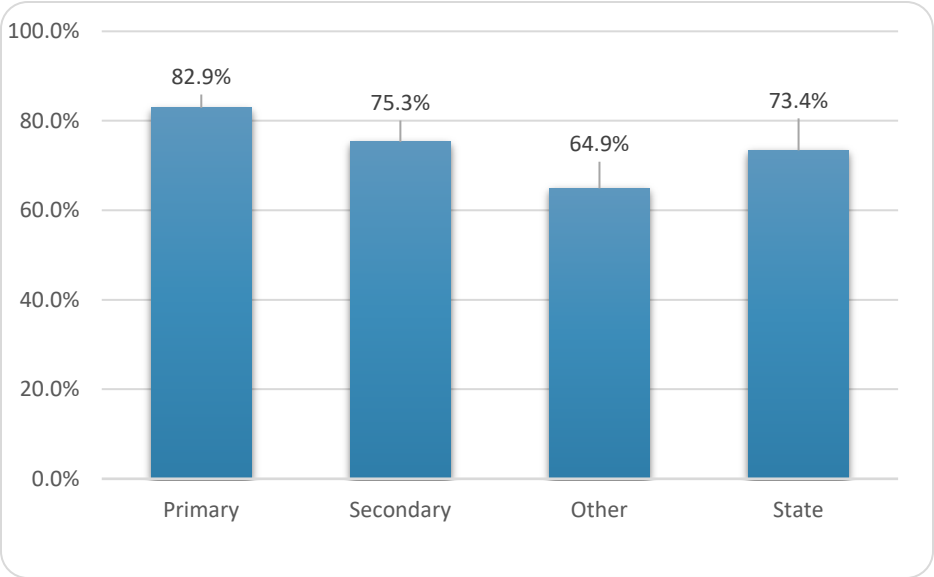
Roadway Type

The roadway types identified in the data were coded according to the roadway population assigned to Wyoming by NHTSA. Three codes were included in the roadway population, as follows:

- S1100 primary roadways are federally or state-maintained roads. They include interstate highways and other four-lane highways. For the 2024 survey, 31.6 percent of the vehicle occupants were observed on primary roadways coded as S1100.
- S1200 roads are secondary. They are state or federally maintained and typically two-lane highways. In 2024, 63.0 percent of the vehicle occupants were in vehicles traveling on roadways coded as S1200.
- S1400 roadways are, for this report, considered as "other." These roadways are a mix of local, rural, and city roads and streets that are neither primary nor secondary. All are paved roads, some of which are two-lane, and others are four-lane. The fewest occupants, 5.3 percent of the total sample, were observed on these "other" or 1400-coded roadways.

Observed occupants in vehicles on primary roads were belted at a rate of 82.9 percent. Most occupants were observed traveling on secondary roadways and had a lower seat belt use rate of 75.3 percent. The lowest usage rate on the various roadways was for occupants observed on "other" roads. These were most often within the confines of city boundaries. Only 64.9 percent of occupants driving on these roads were belted. In other words, seat belt use was 7.6 percentage points higher for occupants on primary roads than for secondary ones but 18 points higher than the "other" category. The following chart illustrates results broken down by roadway type. In this case, passengers were significantly more likely to wear seat belts on all roadways than drivers.

Figure 7: Estimates of Occupants Belted by Roadway Type, Wyoming 2024



Weekdays

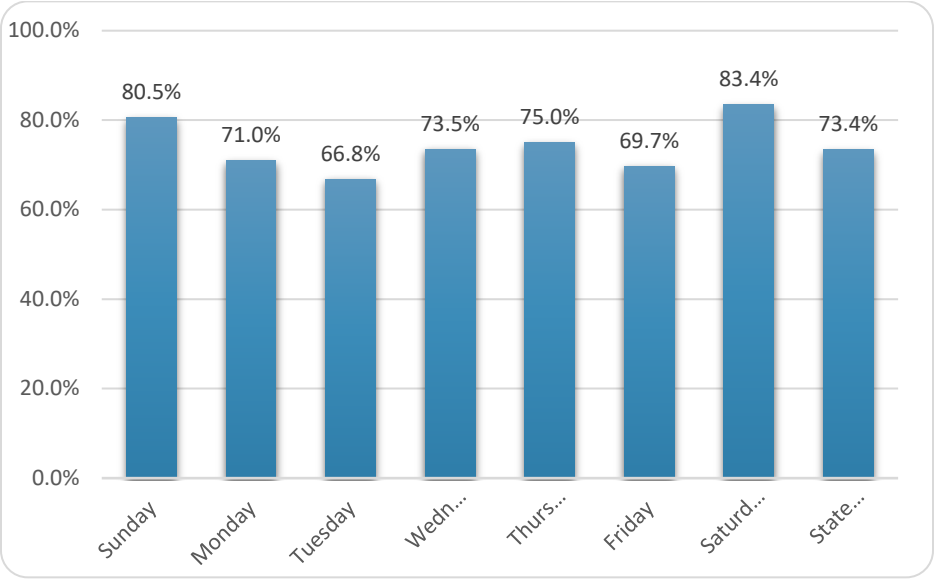
Observers coded their observations by the day of the week in which the observations were collected. During data collection, observers coded observations by the day of the week. The following table presents the results of seat belt use for occupants broken down by the days of the week.

Table 4: Occupants Belted by Day of Week, Wyoming 2024

Variable	Belted	Not Belted	Total	Unweighted Count	Unweighted % of Sample
Sunday	80.5%	19.4%	100.0%	2002	9.3%
Monday	71.0%	29.0%	100.0%	2929	13.6%
Tuesday	66.8%	33.2%	100.0%	3014	13.9%
Wednesday	73.5%	26.5%	100.0%	4470	20.7%
Thursday	75.0%	25.0%	100.0%	3216	14.9%
Friday	69.7%	30.3%	100.0%	3844	17.8%
Saturday	83.4%	16.6%	100.0%	2140	9.9%
Total	73.4%	26.6%	100.0%	21615	100.0%

Wednesday and Friday observations accounted for almost 40 percent of the week's observations. These two days and Monday's observations had the lowest observed seat belt rates during the week. The days with the highest usage rates during the week were Sunday (80.5%) and Saturday (83.4%), but the count of observations on those two weekend days was the lowest. Therefore, the days with the most occupants had the lowest usage rates.

Figure 8: Estimates of Occupants Belted by Day of Week, Wyoming 2024



Occupant Gender and Vehicle Type

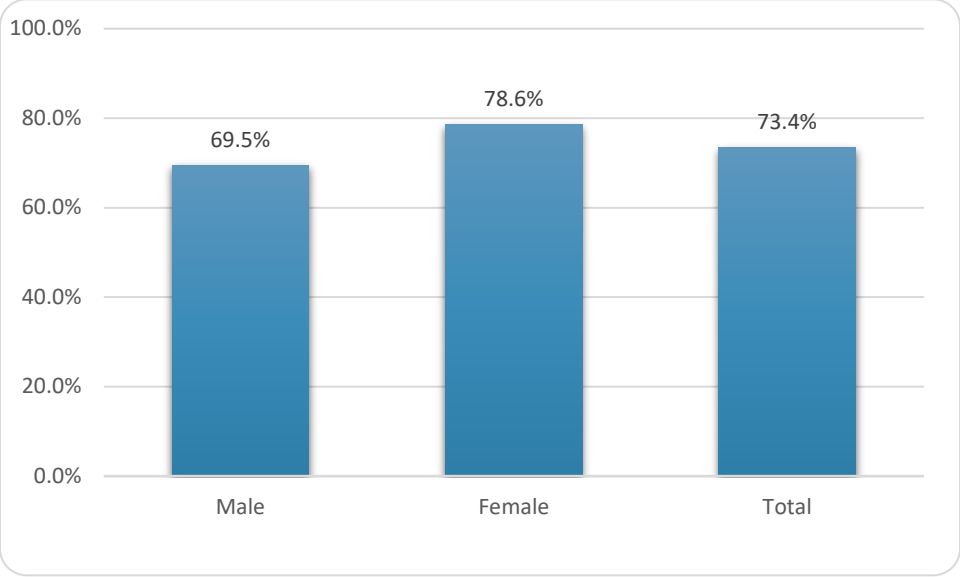
Occupant gender, vehicle type, and the combination of these variables produced consistent results in previous Wyoming seat belt surveys. Females typically have significantly higher rates of seat belt use than males. Female seat belt use tends to be higher in every type of vehicle. Males tend to have the lowest seat belt use rates as occupants in pickup trucks. The 2024 survey showed comparable results.

Table 5: Estimates of Occupants Belted by Gender, Wyoming 2024

Variable	Belted	Not Belted	Total	Unweighted Count	Unweighted % of Sample
Male	69.5%	30.5%	100.0%	12778	59.1%
Female	78.6%	21.4%	100.0%	8837	40.9%
Total	73.4%	26.6%	100.0%	21615	100.0%

Males comprised 59.1 percent of the vehicle occupants, and females were 40.9 percent, a difference of 18.2 percentage points. Of equal importance is that the male seat belt use rate was lower than the female rate. The seat belt usage rate for males was 69.5 percent; the rate for females was 78.6 percent, a difference of 9. I percentage points. Males contributed more to the seat belt use rate and had a significantly lower seat belt use rate.

Figure 9: Estimates of Occupants Belted by Occupant Gender, Wyoming 2024



Vehicle Type

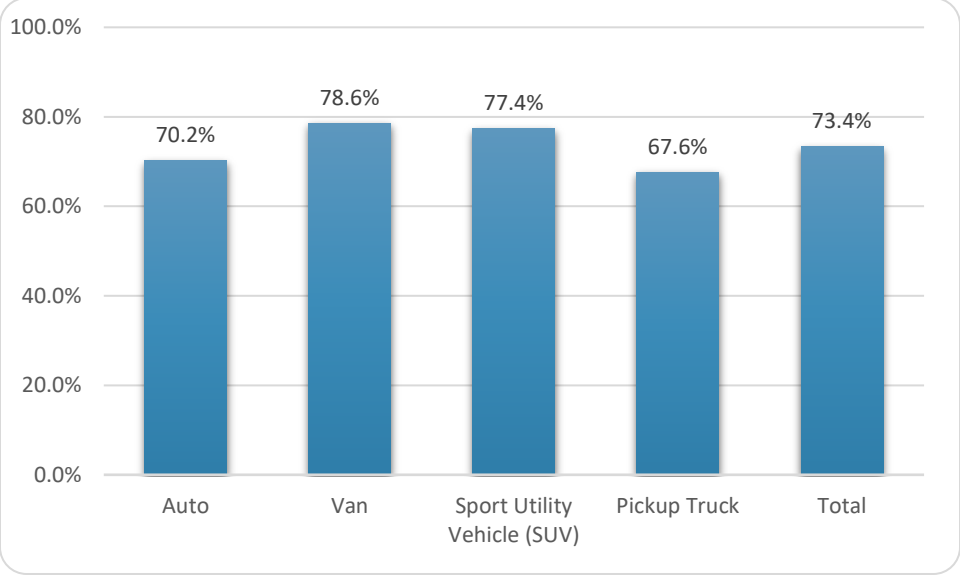
The Uniform Code requires that occupants in four vehicle categories are observed for seat belt use: automobiles, vans, sport utility vehicles (SUVs), and pickup trucks. The 2024 estimates of occupant seat belts in each vehicle type are presented in the following table.

Table 6: Estimates of Occupant Use by Vehicle Type, Wyoming 2024

Variable	Belted	Not Belted	Total	Unweighted Count	Unweighted % of Sample
Auto	70.2%	29.7%	100.0%	3503	16.2%
Van	78.6%	21.4%	100.0%	8491	39.3%
Sport Utility Vehicle (SUV)	77.4%	22.6%	100.0%	1180	5.5%
Pickup Truck	67.6%	32.4%	100.0%	8441	39.1%
Total	73.4%	26.6%	100.0%	21615	100.0%

The highest belt use rate was for occupants in vans at 78.6 percent, followed closely by SUVs at 77.4 percent. The lowest rate was for occupants of pickup trucks, 67.6 percent. To put these usage rates into perspective, vans were the vehicle for 39.3 percent of occupants, and pickup trucks contained 39.1 percent of occupants. Together, 78.4 percent of occupants were in vans and pickup trucks. However, seat belt use was quite different for these two vehicle types. The significantly lower seat belt use rate in pickups caused the rates to drop. The following chart illustrates the estimates of seat belt use by vehicle type.

Figure 10: Estimates of Occupants Belted by Vehicle Type, Wyoming 2024

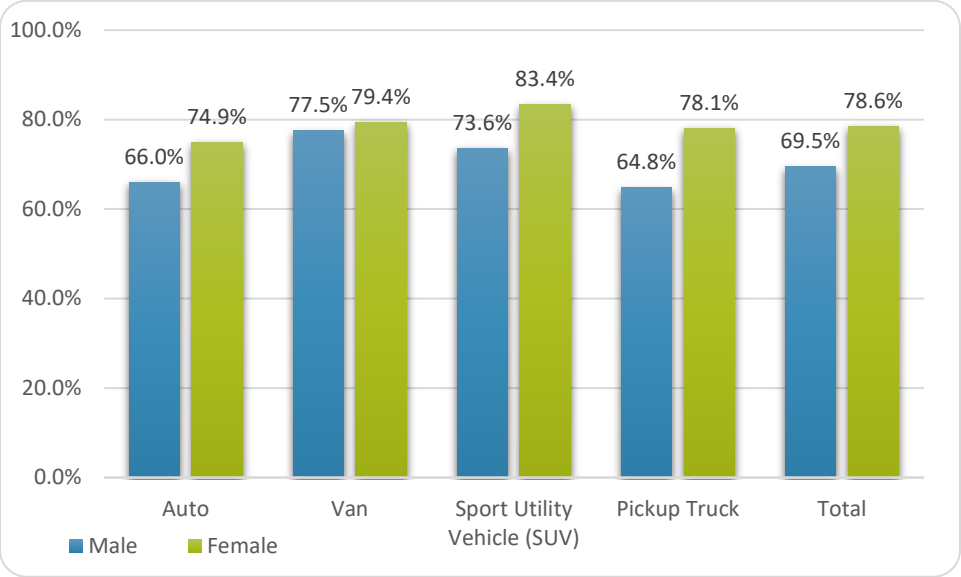


Gender and Vehicle Type

More than half of all observed male occupants were in pickups (51.2%), and over three-fourths (77.6%) of the pickup occupants were male. Females were more likely to be observed in vans (53.7% of total occupants), and over half (55.9%) were female. This is significant because more males than females were observed, more pickups than any other vehicle were observed, and more males in pickups were observed. The overall usage rate would have been higher if the numbers had been reversed.

The chart below illustrates the differences between male and female driver and passenger usage rates for each type of vehicle. This illustration paints an even clearer picture of the differences between male and female usage rates across all vehicles.

Figure 11: Estimates of Occupants Belted by Gender and Vehicle Type



The tables below illustrate the differences between male and female driver and passenger usage rates for each type of vehicle.

Table 7: Unweighted Number & Percent of Male & Female Composition in Types of Vehicles

	Auto		Van		SUV		Pickup	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Male	1803	51.5	3748	44.1	681	57.7	6546	77.6
Female	1700	48.5	4743	55.9	499	42.3	1895	22.4
Total	3503	100	8491	100	1180	100	8441	100

Table 8: Unweighted number & percent of Males & Females by Vehicle Type

	Auto		Van		SUV		Pickup		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Male	1803	14.1	3748	29.3	681	5.3	6546	51.2	12,778	100
Female	1700	19.2	4743	53.7	499	5.6	1895	21.4	8837	100

Comparison to 2023 Survey Results

While fewer drivers, passengers, and vehicles were observed in 2024 than in 2023, the difference was insignificant.

Table 9: Sample Size of Observed Occupants

	2023	2024
Drivers	17,278	16,394
Passengers	6,092	5,221
All Occupants	23,370	21,615

The seat belt usage rate decreased 8.5 percentage points in 2024, from 81.9 percent in 2023 to 73.4 percent in 2024. Overall, the seat belt usage rate decreased in all categories.

In 2023, the male usage rate and the pickup truck usage rate brought the usage rate down. This was also the case in 2024; the lower rates lowered the seat belt use rate. Males were observed using seat belts 69.5 percent in 2024 compared to 75.4 percent a year ago. The usage rate by pickup truck occupants decreased from 74.0 percent to 64.8 percent this year, an almost ten-point difference.

The female usage rate decreased in 2024 from 88.4 percent last year to 78.6 percent in 2024, a difference of almost ten points. The female rate in pickup trucks declined from 86.1 percent to 78.1 percent. However, it is significant to note that only 22.4 percent of pickup occupants were female, which did not significantly impact the overall pickup usage rate.

Usage rates also decreased for occupants in Wyoming-registered vehicles, which are lower than those observed in out-of-state registered vehicles. The rate for Wyoming vehicles in 2023 was 79.0 percent. In 2024, that rate decreased to 68.8 percent.

Table 10: Percent of Seat Belt Use of Key Variables, 2023-2024

	2023	2024	% Point Difference	% Difference
Drivers	80.0	71.0	9.0	11.2
Passengers	88.2	82.9	5.3	6.0
Males	75.0	69.5	5.5	7.3
Females	90.0	78.6	11.4	12.7
Automobiles	81.9	70.2	11.7	14.3
Vans	88.9	78.6	10.3	11.6
SUVs	87.6	77.4	10.2	11.6
Pickups	74.0	67.6	6.4	8.6
Wyoming Vehicles	79.0	68.8	10.2	12.9
Out-of-State	88.8	85.4	3.4	3.8
Overall Rate	81.9	83.4	8.5	10.4

Concluding Remarks

One deciding factor resulted in the lowered seat belt usage rate from 2023 to 2024. Natrona County's seat belt use rate was thirteen percentage points lower than the state rate and nine percentage points lower than Goshen County's next lowest rate. Statistically, Natrona County is why Wyoming's 2024 seat belt usage rate is as low as it is.

Natrona County had the highest weight (1,428.57 compared to the next highest weight of 500 for Laramie County) and the highest gain in numbers observed. Many males and pickups were observed in Natrona County, which has low usage rates. Except for Carbon and Natrona Counties, all other counties had fewer numbers observed in 2024 than in 2023. Carbon increased by 168 observations; Natrona's increase was twice that, at 318.

All these factors caused the state's usage rate to decline significantly from 2023 to 2024. Had Natrona not been in this year's sample, the overall usage rate for the state would have been 80.9 percent instead of 73.4 percent.

Other factors for the decline in the usage rate include a decrease in the number of female drivers and passengers, a decrease in the number of passengers overall, and an increase in the number of occupants observed in pickups.

Observers noted considerable construction on the roadways during the observation period. They also noted that a noticeable amount of the vehicles in the construction areas had occupants who were not buckled. During the training session in Casper (Natrona County), observers were asked to offer their observations while conducting the mock survey for training purposes. Anecdotally, there were statements by observers who found it "interesting" or "funny" that several of the occupants in state-designated vehicles and, likewise, many of the occupants in company-owned vehicles were observed as unbelted. We have no statistical evidence for these observations, but it was enough to cause observer discussion.

The seat belt use survey in Wyoming had a new baseline in 2022. This year, 2024, is the second year that any comparisons could be made from the previous year. The methodologies and protocols have not changed. Therefore, surveys in both 2023 and 2024 represent the same level of reliability and validity as in previous surveys. It is too early to determine if the decreases in the variables and overall rate will demonstrate any trends. It is entirely possible that the rates for 2024 were an anomaly, and if so, rates may increase again next year.

The data analysis that informs the narrative is included in the following appendix. Other items in the appendices provide additional information on the data and its analysis.

APPENDICES

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: 2024

Statewide Seat belt Use Rate: 73.4 Percent

I hereby certify that: The Governor designated _____ 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.

Julie Angert[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

_____
Date

_____
Printed name of authorized 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, Julie Angert 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. Angert reviewed the SPSS output files and related data tables to confirm the data are accurate and true. A copy of Angert's abbreviated resume follows.

Julie Angert

663 Bedford Street, St. Paul, MN 55130 | (715) 523-1165 | juliekoehler94@gmail.com

Skills Summary

- **Research and Analysis:** Conduct statistical analyses of complex data from various internal and external sources
- **Communicating and Advocating:** Use quantitative and qualitative research findings to inform public officials, subject matter experts, and lay audiences about programs and services through documents, dashboards, and presentations
- **Project Management:** Lead projects by defining project parameters and working closely with contractors to ensure timelines are met, deliverables are high quality, and contracts are fulfilled

Professional Experience

Research Scientist 3 Aug 2022-Present

Minnesota Department of Human Services (DHS) - Aging and Adult Services Division

- Implement quality assurance methods and strategies for Elderly Waiver and Alternative Care to ensure compliance and accountability with federal and state regulations including reviewing waiver plan and writing communications to CMS
- Develop and document processes for gathering annual federal quality assurance data
- Research quality of HCBS programs through various data sources including NCI-AD (National Core Indicators-Aging and Disability) survey, claims, and others
- Provide data and analytic support for Assisted Living Report Card
- Serve as subject matter expert on data-related cross-division workgroups
- Conduct policy analysis of proposed federal rules and HCBS quality measure set to ensure compliance with future quality assurance expectations
- Conduct analysis to estimate cost of proposed program serving older adults with high needs
- Use Microsoft Office Suite, Tableau, SPSS, CRM

Management Analyst 4 Sep 2019-Present

DHS - Nursing Facility Rates and Policy Division

- Handle, combine, and analyze multiple large complex datasets by writing and editing SAS and SQL code
- Regularly use data sets including Minimum Data Set (MDS), DHS data warehouse, Shared Master Index, Minnesota Department of Health (MDH) Death Certificate file, MDH Health Care Directory Database, Census Bureau, and survey data
- Maintain MDS, facility, and other data to ensure timeliness and accuracy
- Produce data reports for nursing homes for the provider portal and for the public through the Nursing Home Report Card
- Develop and update dashboard-based reports in Power BI to inform data driven decision-making for the distribution of Moratorium Exception funding

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

- Use SAS, SQL, Crystal Reports/BOBI (content administrator), Power BI, Excel and other Microsoft Office programs to analyze and report data
- Share public and non-public DHS data with internal and external users securely according to DHS and MNIT standards
- Work with multiple contractors to collect survey data and to improve the performance measures used in reporting
- Participate in mentoring group to learn new and innovative ways to evaluate and improve programs

Research Analysis Specialist Senior Jul 2015-Sep 2019

DHS - Aging and Adult Services Division & Minnesota Board on Aging

- Designed and implemented analyses of state administered home and community-based services (HCBS), including waivers, using many data sources including data warehouse, National Core Indicators (NCI), Survey of Older Minnesotans, Census Bureau, and others
- Provided information to leadership to make data-driven decisions that assure long-term sustainability, high-quality outcomes, and equitable access through the NCI, HCBS Access, Survey of Older Minnesotans, and Gaps Analysis projects
- Collaborated with contractors to ensure timelines were met, excellence in deliverables, contract fulfillment, and to maintain positive ongoing relationships for multiple projects simultaneously
- Lead the implementation of a quality improvement work group with managed care organizations based on NCI data
- Translated and communicated research and evaluation products to diverse audiences including legislature, policy staff, service providers, advocacy organizations, and the general public
- Presented findings using PowerPoint, dashboard demonstrations, written reports, and other means
- Worked with and maintained positive relationships with people from different backgrounds and cultures including managed care organization staff, researchers, contractors, providers, and DHS staff
- Designed and developed interactive dashboards in Tableau that document trends in the older adult population and track older adult program status
- Completed L4 Leadership Development Program
- Participated in many equity trainings and worked on multiple projects using an equity lens by looking at disparities in service utilization and outcomes
- Used SPSS; Tableau Desktop, Public, and Server (content administrator); Microsoft Office suite

Education

Master of Public Policy May 2015

Humphrey School of Public Affairs - University of Minnesota

- Concentration: Advanced Policy Analysis, Aging & Disability Policy

Bachelor of Social Work Dec 2011

University of Wisconsin-Eau Claire

Appendix B: Survey Design

Wyoming survey design

In collaboration with DLN Consulting, Inc., the Wyoming Department of Transportation Highway Safety Program 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

6

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	273.855866	1699.565696	2098.261552
	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

8

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

$$\pi_{chi} = \pi_c \cdot \pi_{hi|c}$$

be the road segment selection probability, and

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

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

$$f_{ch} = \frac{\sum_{\forall\ i}\ w_{chi}}{\sum_{responding\ i}\ w_{chi}}$$

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:

$$p_{chi} = \frac{\sum_{\forall\ chijklmn}\ w_{chijklm}\ Length_{chi}\ y_{chijklmn}}{\sum_{\forall\ chijklmn}\ w_{chijklm}\ Length_{chi}} \tag{2}$$

where

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

15

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, $w_{jklm|chi}$ 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:

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

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.

17

Appendix A

Resumés

18

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

22

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

31

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

33

Appendix D

Training Syllabus

34

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

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

Per the required procedures, the sample first created in 2017 reached its expiration date and necessitated a new sampling. What follows is the certification form submitted for NHTSA approval.

1. Contact Information	
State/Territory	Wyoming (WY)
Name	Debra Nelson
Address	2493 4th Ave West, Ste G
City	Dickinson
State	ND
Zip Code	58601
Email	dnelson@dlnconsulting.com
Phone	701.483.2801
2. Verification	
Sample Design Verification	Yes
Date Plan Approved	4/2012
3. Road Segment Sampling Frame	
Was TIGER used as the road segment sampling frame?	Yes
Data Source Name and Year	
Road Segment Sampling Frame	Yes
4. Exclusions	
Was the optional 85% fatality exclusion implemented?	Yes
Specify data source and years of data used.	FARS
Range	2015 – 2019
Other Data Source	
Was the optional rural local roads exclusion implemented?	Yes
Were the optional road types exclusions implemented?	No

5. Stages of Selection

How many stages of selection?	2 Stages

Specify the definition of units

Select Unit	Specify your own Unit Value	Str
County	Locked for reading	No
Road segment	Locked for reading	Yes

6. Probabilities of Selection

Probabilities of selection	Probability Proportional to Size (
Specify measure of size	Number of road segments in eacl

7. Additional Information

Describe any characteristics of your design that require additional explanation.

8. Design Characteristics

If you changed the Design Plan since the 2016-2017 road segment reselection, select what you c

Road segment sample	Yes
Counties covered via the fatality exclusion	Yes
County sample	Yes
Stratification (in definition of strata, number of strata, or allocation to strata)	Yes
Other design elements (stages, MOS)	No
Attach Files	No
Attachments	Road Segment Sample and Allocation Table.xlsx

FARS (2015-2019)				
		State=Wyoming		
State	County	Average fatality counts for 5 years	Fatality percentage within the state	Cumulative fatality percentage
Wyoming	LARAMIE	9.8	11	11
Wyoming	CARBON	9.2	10.4	21.4
Wyoming	FREMONT	9	10.1	31.5
Wyoming	NATRONA	8.8	9.9	41.4
Wyoming	SWEETWATER	6.8	7.7	49.1
Wyoming	ALBANY	4.8	5.4	54.5
Wyoming	LINCOLN	4.8	5.4	59.9
Wyoming	CONVERSE	3.8	4.3	64.2
Wyoming	CAMPBELL	3.6	4.1	68.2
Wyoming	PLATTE	3.6	4.1	72.3
Wyoming	UINTA	3.6	4.1	76.4
Wyoming	JOHNSON	2.6	2.9	79.3
Wyoming	PARK	2.4	2.7	82
Wyoming	NIOBRARA	2.2	2.5	84.5
Wyoming	GOSHEN	2	2.3	86.7
Wyoming	SHERIDAN	2	2.3	89
Wyoming	WESTON	2	2.3	91.2
Wyoming	BIG HORN	1.8	2	93.2
Wyoming	HOT SPRINGS	1.6	1.8	95
Wyoming	TETON	1.4	1.6	96.6
Wyoming	SUBLETTE	1.2	1.4	98
Wyoming	WASHAKIE	1	1.1	99.1
Wyoming	CROOK	0.8	0.9	100
Wyoming	UNKNOWN	0	0	100

Appendix D: Data Tables

Detailed table of collected data

County Data

County * occupantBelt									
	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Albany	85.3%	14.7%		100.0%	1404	243		1647	7.6%
Campbell	70.4%	29.3%	0.3%	100.0%	1970	842	8	2820	13.0%
Carbon	94.6%	5.4%		100.0%	1698	94		1792	8.3%
Converse	84.8%	15.1%	0.1%	100.0%	1142	200	1	1343	6.2%
Goshen	70.3%	29.7%		100.0%	1048	442		1490	6.9%
Fremont	90.0%	10.0%		100.0%	922	102		1024	4.7%
Johnson	94.5%	5.5%		100.0%	948	57		1005	4.6%
Laramie	77.5%	22.5%		100.0%	821	228		1049	4.9%
Lincoln	72.5%	27.5%		100.0%	815	309		1124	5.2%
Natrona	61.3%	38.7%		100.0%	559	353		912	4.2%
Niobrara	89.2%	10.8%		100.0%	726	88		814	3.8%
Park	99.6%	0.4%		100.0%	1451	6		1457	6.7%
Platte	80.8%	19.2%		100.0%	1198	291		1489	6.9%
Sweetwater	80.5%	19.5%		100.0%	1646	399		2045	9.5%
Uinta	77.8%	22.0%	0.3%	100.0%	1248	352	4	1604	7.4%
Total	73.4%	26.6%	0.6%	100.0%	17596	4006	13	21615	100.0%

County * driverBelt									
	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Albany	82.7%	17.3%		100.0%	1037	218		1255	7.7%
Campbell	68.8%	31.1%	0.2%	100.0%	1514	700	4	2218	13.5%
Carbon	93.6%	6.4%		100.0%	1208	80		1288	7.9%
Converse	83.0%	16.9%	0.1%	100.0%	897	179	1	1077	6.6%
Goshen	65.7%	34.3%		100.0%	742	388		1130	6.9%
Fremont	89.4%	10.6%		100.0%	701	83		784	4.8%
Johnson	93.4%	6.6%		100.0%	678	49		727	4.4%
Laramie	74.9%	25.1%		100.0%	588	189		777	4.7%
Lincoln	67.8%	32.2%		100.0%	580	276		856	5.2%
Natrona	60.8%	39.2%		100.0%	491	317		808	4.9%
Niobrara	87.1%	12.9%		100.0%	508	75		583	3.6%
Park	99.6%	0.4%		100.0%	1085	4		1089	6.6%
Platte	79.0%	21.0%		100.0%	849	231		1080	6.6%
Sweetwater	78.7%	21.3%		100.0%	1189	322		1511	9.2%
Uinta	75.1%	24.8%	0.1%	100.0%	910	300	1	1211	7.4%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

County * passBelt									
County	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Albany	93.6%	6.4%		100.0%	367	25		392	7.5%
Campbell	76.4%	22.9%	0.7%	100.0%	456	142	4	602	11.5%
Carbon	97.1%	2.9%		100.0%	490	14		504	9.7%
Converse	92.1%	7.9%		100.0%	245	21		266	5.1%
Goshen	85.0%	15.0%		100.0%	306	54		360	6.9%
Fremint	92.1%	7.9%		100.0%	221	19		240	4.6%
Johnson	97.4%	2.6%		100.0%	270	8		278	5.3%
Laramie	85.3%	14.7%		100.0%	233	39		272	5.2%
Lincoln	87.7%	12.3%		100.0%	235	33		268	5.1%
Natrona	65.4%	34.6%		100.0%	68	36		104	2.0%
Niobrara	94.4%	5.6%		100.0%	218	13		231	4.4%
Park	99.5%	0.5%		100.0%	366	2		368	7.0%
Platte	85.7%	14.3%		100.0%	349	60		409	7.8%
Sweetwater	85.6%	14.4%		100.0%	457	77		534	10.2%
Uinta	86.0%	13.3%	0.8%	100.0%	338	52	3	393	7.5%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

Occupant Variables

occupantBelt						
		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Belted	73.4%	0.3%	72.7%	74.1%	17596
	Not belted	26.6%	0.3%	25.9%	27.3%	4006
	Unsure	0.0%	0.0%	0.0%	0.0%	13
	Total	100.0%	0.0%	100.0%	100.0%	21615

Population * occupantBelt									
% within Population									
Population	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Urban	82.6%	27.1%	0.0%	100.0%	13823	3038	11	16872	78.1%
Rural	85.6%	21.8%	0.0%	100.0%	3773	968	2	4743	21.9%
Total	82.9%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

day * occupantBelt									
% within day									
day	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Sunday	80.5%	19.4%	0.01%	100.0%	1669	332	1	2002	9.3%
Monday	71.0%	29.0%	0.02%	100.0%	2388	539	2	2929	13.6%
Tuesday	66.8%	33.2%	0.04%	100.0%	2468	542	4	3014	13.9%
Wednesday	73.5%	26.5%	0.04%	100.0%	3444	1023	3	4470	20.7%
Thursday	75.0%	25.0%	0.00%	100.0%	2697	519		3216	14.9%
Friday	69.7%	30.3%	0.03%	100.0%	3162	679	3	3844	17.8%
Saturday	83.4%	16.6%	0.00%	100.0%	1768	372		2140	9.9%
Total	73.4%	26.6%	0.02%	100.0%	17596	4006	13	21615	100.0%

observer * occupantBelt									
% within observer									
observer	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Doug Peterson	80.8%	19.2%		100.0%	1198	291		1489	6.9%
Dixie Elder	94.5%	5.5%		100.0%	948	57		1005	4.6%
Deb Eutsler	90.0%	10.0%		100.0%	922	102		1024	4.7%
Skyler Elder	89.2%	10.8%		100.0%	726	88		814	3.8%
Bryan Shannon	68.5%	31.2%	0.3%	100.0%	1780	824	8	2612	12.1%
Sandra Gabel	70.3%	29.7%		100.0%	1048	442		1490	6.9%
Amy Still	94.6%	5.4%		100.0%	1698	94		1792	8.3%
Aspen Miller	77.5%	22.5%		100.0%	821	228		1049	4.9%
Donna Hermann	85.3%	14.7%		100.0%	1404	243		1647	7.6%
Robert Sadler	99.6%	0.4%		100.0%	1451	6		1457	6.7%
Rob Remele	80.5%	19.5%		100.0%	1646	399		2045	9.5%
Dennis Doerr	84.8%	15.1%	0.1%	100.0%	1142	200	1	1343	6.2%
Deanne Vogel	72.5%	27.5%		100.0%	815	309		1124	5.2%
Alex Torres	61.3%	38.7%		100.0%	559	353		912	4.2%
Michelle Winans	77.8%	22.0%	0.3%	100.0%	1248	352	4	1604	7.4%
Keyla Revell	91.4%	8.6%		100.0%	190	18		208	1.0%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

weather * occupantBelt									
% within weather									
weather	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Clear/sunny	71.6%	28.3%	0.0%	100.0%	10749	2546	5	13300	61.5%
Cloudy	80.1%	19.8%	0.1%	100.0%	6132	1360	8	7500	34.7%
Foggy	100.0%			100.0%	5			5	0.0%
Light rain	82.3%	17.7%		100.0%	335	75		410	1.9%
Heavy rain	86.4%	13.6%		100.0%	159	25		184	0.9%
Occasional Rain	100.0%			100.0%	216			216	1.0%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

lanes * occupantBelt									
% within lanes									
lanes	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
One lane	71.8%	28.1%	0.0%	100.0%	8999	1911	7	10917	50.5%
Two lanes	75.9%	24.0%	0.0%	100.0%	8597	2095	6	10698	49.5%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

direction * occupantBelt									
% within direction									
direction	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
North	67.9%	32.1%	0.0%	100.0%	4271	1069	5	5345	24.7%
South	76.0%	24.0%	0.0%	100.0%	4616	1294	2	5912	27.4%
East	70.5%	29.5%	0.0%	100.0%	4370	809	3	5182	24.0%
West	78.4%	21.5%	0.0%	100.0%	4339	834	3	5176	23.9%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

carType * occupantBelt									
% within carType									
carType	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Auto	70.2%	29.7%	0.0%	100.0%	2808	691	4	3503	16.2%
Van	78.6%	21.4%	0.0%	100.0%	7401	1088	2	8491	39.3%
Sport Utility Vehicle (SUV)	77.4%	22.6%	0.0%	100.0%	1021	159	0	1180	5.5%
Pickup Truck	67.6%	32.4%	0.0%	100.0%	6366	2068	7	8441	39.1%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

wyPlate * occupantBelt									
% within wyPlate									
wyPlate	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Yes	68.8%	31.1%	0.0%	100.0%	9792	3086	8	12886	59.6%
No	85.4%	14.6%	0.0%	100.0%	7761	901	5	8667	40.1%
Unsure	67.8%	32.2%		100.0%	43	19		62	0.3%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

timeStamp * occupantBelt									
% within timeStamp									
timeStamp	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
7:30 - 9:30 am	65.7%	34.3%	0.0%	100.0%	2897	960	1	3858	17.8%
9:30 - 11:30 am	76.7%	23.3%	0.0%	100.0%	3304	565	4	3873	17.9%
11:30 - 1:30 pm	74.0%	25.9%	0.0%	100.0%	4426	1091	3	5520	25.5%
1:30 - 3:30 pm	79.4%	20.6%	0.0%	100.0%	4201	819	2	5022	23.2%
3:30 - 5:30 pm	77.1%	22.9%	0.0%	100.0%	2768	571	3	3342	15.5%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

RoadType * occupantBelt									
% within RoadType									
RoadType	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
S1100 Primary Road	82.9%	17.1%	0.0%	100.0%	6086	744	2	6832	31.6%
S1200 Secondary Road	75.3%	24.7%	0.0%	100.0%	10735	2881	11	13627	63.0%
S1400 Local/Rural Road	64.9%	35.1%		100.0%	775	381		1156	5.3%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

occupantGender * occupantBelt									
% within occupantGender									
occupantGender		Estimate				Unweighted Count			
		occupantBelt				occupantBelt			
		Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total
Male	Auto	66.0%	34.0%	0.0%	100.0%	1412	390	1	1803
	Van	77.5%	22.5%		100.0%	3217	531		3748
	Sport Utility Vehicle (SUV)	73.6%	26.4%		100.0%	576	105		681
	Pickup Truck	64.8%	35.2%	0.0%	100.0%	4761	1780	5	6546
Female	Auto	74.9%	25.0%	0.1%	100.0%	1396	301	3	1700
	Van	79.4%	20.6%	0.0%	100.0%	4184	557	2	4743
	Sport Utility Vehicle (SUV)	83.4%	16.6%		100.0%	445	54		499
	Pickup Truck	78.1%	21.9%	0.0%	100.0%	1605	288	2	1895
Total	Auto	70.2%	29.7%	0.0%	100.0%	2808	691	4	3503
	Van	78.6%	21.4%	0.0%	100.0%	7401	1088	2	8491
	Sport Utility Vehicle (SUV)	77.4%	22.6%		100.0%	1021	159		1180
	Pickup Truck	67.6%	32.4%	0.0%	100.0%	6366	2068	7	8441

occupantGender * occupantBelt									
% within occupantGender									
occupantGender	Estimate				Unweighted Count				
	occupantBelt				occupantBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Male	69.5%	30.5%	0.0%	100.0%	9966	2806	6	12778	59.1%
Female	78.6%	21.4%	0.0%	100.0%	7630	1200	7	8837	40.9%
Total	73.4%	26.6%	0.0%	100.0%	17596	4006	13	21615	100.0%

General Estimates for Drivers, Passengers, Occupants

County percent belted by Driver, Passenger and Occupant			
	Driver	Passenger	Occupant
Albany	82.7%	93.6%	85.3%
Campbell	68.8%	76.4%	70.4%
Carbon	93.6%	97.1%	94.6%
Converse	83.0%	92.1%	84.8%
Goshen	65.7%	85.0%	70.3%
Fremont	89.4%	92.1%	90.0%
Johnson	93.4%	97.4%	94.5%
Laramie	74.9%	85.3%	77.5%
Lincoln	67.8%	87.7%	72.5%
Natrona	60.8%	65.4%	61.3%
Niobrara	87.1%	94.4%	89.2%
Park	99.6%	99.5%	99.6%
Platte	79.0%	85.7%	80.8%
Sweetwater	78.7%	85.6%	80.5%
Uinta	75.1%	86.0%	77.8%
Total	71.0%	82.9%	73.4%

Population density percent belted by Driver, Passenger and Occupant			
	Driver	Passenger	Occupant
Urban	70.6%	82.6%	82.6%
Rural	75.6%	85.6%	85.6%
Total	71.0%	82.9%	82.9%

WY Plates percent belted by Driver, Pssenger and Occupant			
	Driver	Passenger	Occupant
Yes	67.3%	77.1%	68.8%
No	82.9%	91.2%	85.4%
Unsure	67.1%	70.5%	67.8%
Total	71.0%	82.9%	73.4%

Unweighted Frequencies of Vehicle Occupants by County and Observer				
Counties and Observers with Unweighted Frequency of Occupants and Percent of				
Sample				
	Belted - weighted	Total n - unweighted	% Total	Cum %
Doug Peterson	80.8%	1489	6.9%	6.9%
Dixie Elder	94.5%	1005	4.6%	11.5%
Deb Eutsler	90.0%	1024	4.7%	16.3%
Skyler Elder	89.2%	814	3.8%	20.0%
Bryan Shannon	68.5%	2612	12.1%	32.1%
Sandra Gabel	70.3%	1490	6.9%	39.0%
Amy Still	94.6%	1792	8.3%	47.3%
Aspen Miller	77.5%	1049	4.9%	52.2%
Donna Hermann	85.3%	1647	7.6%	59.8%
Robert Sadler	99.6%	1457	6.7%	66.5%
Rob Remele	80.5%	2045	9.5%	76.0%
Dennis Doerr	84.8%	1343	6.2%	82.2%
Deanne Vogel	72.5%	1124	5.2%	87.4%
Alex Torres	61.3%	912	4.2%	91.6%
Michelle Winans	77.8%	1604	7.4%	99.0%
Keyla Revell	91.4%	208	1.0%	100.0%
Total	73.4%	21615	100.0%	

Estimates of Seat Belt Use for Drivers, Passengers, and All Occupants, Wyoming 2024		
	Belted	Unweighted n
Driver	71.0%	12977
Passenger	82.9%	4619
Occupant	73.4%	17596

Estimate of Occupant Belt Use by Vehicle Type and Gender, Wyoming 2023			
	Male	Female	Difference
Auto	66.0%	74.9%	8.9%
Van	77.5%	79.4%	1.9%
Sport Utility Vehicle (SUV)	73.6%	83.4%	9.9%
Pickup Truck	64.8%	78.1%	13.3%

Estimate of Driver, Passenger, and All Occupants Belt Use by Vehicle Type and Gender, Wyoming 2024					
	Auto	Van	Sport Utility Vehicle (SUV)	Pickup Truck	State Total
Male - Driver	64.6%	77.5%	74.9%	65.0%	69.3%
Female - Driver	71.0%	75.5%	74.9%	70.1%	74.0%
Male - Passenger	78.2%	77.5%	65.7%	63.0%	71.2%
Female - Passenger	86.5%	90.0%	93.6%	86.4%	88.7%

Estimates of Drivers, Passengers, and All Occupants Belted by Roadway Type, Wyoming 2024			
	Driver	Passenger	Occupant
S1100 Primary Road	80.6%	91.5%	82.9%
S1200 Secondary Road	72.7%	83.8%	75.3%
S1400 Local/Rural Road	63.4%	73.3%	64.9%
Total	71.0%	82.9%	73.4%

carType * occupantGender Crosstabulation				
% within carType				
		occupantGender		Total
		Male	Female	
carType	Auto	51.5%	48.5%	-2.9%
	Van	44.1%	55.9%	11.7%
	Sport Utility Vehicle (SUV)	57.7%	42.3%	-15.4%
	Pickup Truck	77.6%	22.4%	-55.1%
Total		59.1%	40.9%	-18.2%

Drivers Variables

driverBelt						
		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Belted	71.0%	0.3%	70.4%	71.6%	12977
	Not belted	29.0%	0.3%	28.4%	29.5%	3411
	Unsure	0.0%	0.0%	0.0%	0.0%	6
	Total	100.0%	0.0%	100.0%	100.0%	16394

County * driverBelt									
	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Albany	82.7%	17.3%		100.0%	1037	218		1255	7.7%
Campbell	68.8%	31.1%	0.2%	100.0%	1514	700	4	2218	13.5%
Carbon	93.6%	6.4%		100.0%	1208	80		1288	7.9%
Converse	83.0%	16.9%	0.1%	100.0%	897	179	1	1077	6.6%
Goshen	65.7%	34.3%		100.0%	742	388		1130	6.9%
Fremint	89.4%	10.6%		100.0%	701	83		784	4.8%
Johnson	93.4%	6.6%		100.0%	678	49		727	4.4%
Laramie	74.9%	25.1%		100.0%	588	189		777	4.7%
Lincoln	67.8%	32.2%		100.0%	580	276		856	5.2%
Natrona	60.8%	39.2%		100.0%	491	317		808	4.9%
Niobrara	87.1%	12.9%		100.0%	508	75		583	3.6%
Park	99.6%	0.4%		100.0%	1085	4		1089	6.6%
Platte	79.0%	21.0%		100.0%	849	231		1080	6.6%
Sweetwater	78.7%	21.3%		100.0%	1189	322		1511	9.2%
Uinta	75.1%	24.8%	0.1%	100.0%	910	300	1	1211	7.4%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

Population * driverBelt									
% within Population									
Population	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Urban	70.6%	29.4%	0.0%	100.0%	10287	2607	5	12899	78.7%
Rural	75.6%	24.4%	0.0%	100.0%	2690	804	1	3495	21.3%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

day * driverBelt									
% within day									
day	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Sunday	77.2%	22.8%		100.0%	1162	277		1439	8.8%
Monday	68.2%	31.8%	0.0%	100.0%	1726	466	1	2193	13.4%
Tuesday	64.9%	35.1%	0.0%	100.0%	1826	481	3	2310	14.1%
Wednesday	71.2%	28.8%	0.0%	100.0%	2670	870	1	3541	21.6%
Thursday	73.6%	26.4%		100.0%	2044	453		2497	15.2%
Friday	67.7%	32.3%	0.0%	100.0%	2301	562	1	2864	17.5%
Saturday	81.3%	18.7%		100.0%	1248	302		1550	9.5%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

observer * driverBelt									
% within observer									
observer	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Doug Peterson	79.0%	21.0%		100.0%	849	231		1080	6.6%
Dixie Elder	93.4%	6.6%		100.0%	678	49		727	4.4%
Deb Eutsler	89.4%	10.6%		100.0%	701	83		784	4.8%
Skyler Elder	87.1%	12.9%		100.0%	508	75		583	3.6%
Bryan Shannon	66.8%	33.0%	0.2%	100.0%	1365	683	4	2052	12.5%
Sandra Gabel	65.7%	34.3%		100.0%	742	388		1130	6.9%
Amy Still	93.6%	6.4%		100.0%	1208	80		1288	7.9%
Aspen Miller	74.9%	25.1%		100.0%	588	189		777	4.7%
Donna Hermann	82.7%	17.3%		100.0%	1037	218		1255	7.7%
Robert Sadler	99.6%	0.4%		100.0%	1085	4		1089	6.6%
Rob Remele	78.7%	21.3%		100.0%	1189	322		1511	9.2%
Dennis Doerr	83.0%	16.9%	0.1%	100.0%	897	179	1	1077	6.6%
Deanne Vogel	67.8%	32.2%		100.0%	580	276		856	5.2%
Alex Torres	60.8%	39.2%		100.0%	491	317		808	4.9%
Michelle Winans	75.1%	24.8%	0.1%	100.0%	910	300	1	1211	7.4%
Keyla Revell	89.8%	10.2%		100.0%	149	17		166	1.0%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

weather * driverBelt									
% within weather									
weather	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Clear/sunny	69.4%	30.6%	0.0%	100.0%	8082	2204	4	10290	62.8%
Cloudy	77.8%	22.2%	0.0%	100.0%	4422	1123	2	5547	33.8%
Foggy	100.0%			100.0%	3			3	0.0%
Light rain	83.4%	16.6%		100.0%	239	62		301	1.8%
Heavy rain	83.1%	16.9%		100.0%	108	22		130	0.8%
Occasional Rain	100.0%			100.0%	123			123	0.8%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

lanes * driverBelt									
% within lanes									
lanes	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
One lane	69.6%	30.3%	0.0%	100.0%	6607	1624	3	8234	50.2%
Two lanes	73.4%	26.6%	0.0%	100.0%	6370	1787	3	8160	49.8%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

direction * driverBelt									
% within direction									
direction	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
North	65.8%	34.1%	0.0%	100.0%	3203	941	2	4146	25.3%
South	73.6%	26.4%		100.0%	3385	1070		4455	27.2%
East	68.0%	32.0%	0.0%	100.0%	3213	692	2	3907	23.8%
West	76.4%	23.6%	0.0%	100.0%	3173	706	2	3881	23.7%
Total	71.0%	28.9%	0.0%	100.0%	12974	3409	6	16389	100.0%

driverGender * driverBelt									
% within driverGender									
driverGender	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Male	69.3%	30.7%	0.0%	100.0%	8717	2515	5	11237	68.5%
Female	74.0%	26.0%	0.0%	100.0%	4260	896	1	5157	31.5%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

carType * driverBelt									
% within carType									
carType	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Auto	67.4%	32.6%	0.0%	100.0%	2127	583	1	2711	16.5%
Van	76.4%	23.6%		100.0%	5249	916		6165	37.6%
Sport Utility Vehicle (SUV)	74.9%	25.1%		100.0%	709	126		835	5.1%
Pickup Truck	65.6%	34.3%	0.0%	100.0%	4892	1786	5	6683	40.8%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

wyPlate * driverBelt									
% within wyPlate									
wyPlate	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
Yes	67.3%	32.7%	0.0%	100.0%	7708	2665	3	10376	63.3%
No	82.9%	17.1%	0.0%	100.0%	5235	731	3	5969	36.4%
Unsure	67.1%	32.9%		100.0%	34	15		49	0.3%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

timeStamp * driverBelt									
% within timeStamp									
timeStamp	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
7:30 - 9:30 am	64.4%	35.6%	0.0%	100.0%	2292	854	1	3147	19.2%
9:30 - 11:30 am	75.3%	24.7%	0.0%	100.0%	2337	473	2	2812	17.2%
11:30 - 1:30 pm	71.5%	28.5%	0.0%	100.0%	3240	908	1	4149	25.3%
1:30 - 3:30 pm	76.5%	23.4%	0.0%	100.0%	3027	688	1	3716	22.7%
3:30 - 5:30 pm	75.0%	25.0%	0.0%	100.0%	2081	488	1	2570	15.7%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

roadType * driverBelt									
% within roadType									
roadType	Estimate				Unweighted Count				
	driverBelt				driverBelt				
	Belted	Not belted	Unsure	Total	Belted	Not belted	Unsure	Total	unweighted % of sample
S1100 Primary Road	80.6%	19.4%	0.0%	100.0%	4424	644	1	5069	30.9%
S1200 Secondary Road	72.7%	27.3%	0.0%	100.0%	7917	2431	5	10353	63.2%
S1400 Local/Rural Road	63.4%	36.6%		100.0%	636	336		972	5.9%
Total	71.0%	29.0%	0.0%	100.0%	12977	3411	6	16394	100.0%

Passenger Variables

passBelt						
		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Belted	82.9%	0.5%	82.0%	83.8%	4619
	Not Belted	17.0%	0.5%	16.1%	18.0%	595
	Unsure	0.1%	0.0%	0.0%	0.1%	7
	Total	100.0%	0.0%	100.0%	100.0%	5221

County * passBelt									
County	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Albany	93.6%	6.4%		100.0%	367	25		392	7.5%
Campbell	76.4%	22.9%	0.7%	100.0%	456	142	4	602	11.5%
Carbon	97.1%	2.9%		100.0%	490	14		504	9.7%
Converse	92.1%	7.9%		100.0%	245	21		266	5.1%
Goshen	85.0%	15.0%		100.0%	306	54		360	6.9%
Fremont	92.1%	7.9%		100.0%	221	19		240	4.6%
Johnson	97.4%	2.6%		100.0%	270	8		278	5.3%
Laramie	85.3%	14.7%		100.0%	233	39		272	5.2%
Lincoln	87.7%	12.3%		100.0%	235	33		268	5.1%
Natrona	65.4%	34.6%		100.0%	68	36		104	2.0%
Niobrara	94.4%	5.6%		100.0%	218	13		231	4.4%
Park	99.5%	0.5%		100.0%	366	2		368	7.0%
Platte	85.7%	14.3%		100.0%	349	60		409	7.8%
Sweetwater	85.6%	14.4%		100.0%	457	77		534	10.2%
Uinta	86.0%	13.3%	0.8%	100.0%	338	52	3	393	7.5%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

carType * passBelt									
% within carType									
carType	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Auto	84.0%	15.8%	0.2%	100.0%	681	108	3	792	15.2%
Van	86.4%	13.5%	0.0%	100.0%	2152	172	2	2326	44.6%
Sport Utility Vehicle (SUV)	84.4%	15.6%		100.0%	312	33		345	6.6%
Pickup Truck	76.8%	23.2%	0.1%	100.0%	1474	282	2	1758	33.7%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

Population * passBelt									
% within Population									
Population	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Urban	82.6%	17.4%	0.1%	100.0%	3536	431	6	3973	76.1%
Rural	85.6%	14.4%	0.1%	100.0%	1083	164	1	1248	23.9%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

day * passBelt									
% within day									
day	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Sunday	87.7%	12.2%	0.0%	100.0%	507	55	1	563	10.8%
Monday	84.2%	15.7%	0.1%	100.0%	662	73	1	736	14.1%
Tuesday	75.1%	24.9%	0.1%	100.0%	642	61	1	704	13.5%
Wednesday	82.4%	17.5%	0.1%	100.0%	774	153	2	929	17.8%
Thursday	84.2%	15.8%		100.0%	653	66		719	13.8%
Friday	78.5%	21.4%	0.1%	100.0%	861	117	2	980	18.8%
Saturday	88.7%	11.3%		100.0%	520	70		590	11.3%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

observer * passBelt									
% within observer									
observer	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Doug Peterson	85.7%	14.3%		100.0%	349	60		409	7.8%
Dixie Elder	97.4%	2.6%		100.0%	270	8		278	5.3%
Deb Eutsler	92.1%	7.9%		100.0%	221	19		240	4.6%
Skyler Elder	94.4%	5.6%		100.0%	218	13		231	4.4%
Bryan Shannon	74.6%	24.7%	0.7%	100.0%	415	141	4	560	10.7%
Sandra Gabel	85.0%	15.0%		100.0%	306	54		360	6.9%
Amy Still	97.1%	2.9%		100.0%	490	14		504	9.7%
Aspen Miller	85.3%	14.7%		100.0%	233	39		272	5.2%
Donna Hermann	93.6%	6.4%		100.0%	367	25		392	7.5%
Robert Sadler	99.5%	0.5%		100.0%	366	2		368	7.0%
Rob Remele	85.6%	14.4%		100.0%	457	77		534	10.2%
Dennis Doerr	92.1%	7.9%		100.0%	245	21		266	5.1%
Deanne Vogel	87.7%	12.3%		100.0%	235	33		268	5.1%
Alex Torres	65.4%	34.6%		100.0%	68	36		104	2.0%
Michelle Winans	86.0%	13.3%	0.8%	100.0%	338	52	3	393	7.5%
Keyla Revell	97.6%	2.4%		100.0%	41	1		42	0.8%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

weather * passBelt									
% within weather									
weather	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Clear/sunny	81.5%	18.5%	0.0%	100.0%	2667	342	1	3010	57.7%
Cloudy	87.1%	12.6%	0.2%	100.0%	1710	237	6	1953	37.4%
Foggy	100.0%			100.0%	2			2	0.0%
Light rain	79.6%	20.4%		100.0%	96	13		109	2.1%
Heavy rain	94.4%	5.6%		100.0%	51	3		54	1.0%
Occasional Rain	100.0%			100.0%	93			93	1.8%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

lanes * passBelt									
% within lanes									
lanes	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
One lane	81.5%	18.4%	0.1%	100.0%	2392	287	4	2683	51.4%
Two lanes	84.9%	15.1%	0.1%	100.0%	2227	308	3	2538	48.6%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

direction * passBelt									
% within direction									
direction	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
North	76.7%	23.2%	0.1%	100.0%	1068	128	3	1199	23.0%
South	85.0%	15.0%	0.1%	100.0%	1226	222	2	1450	27.8%
East	82.2%	17.8%	0.0%	100.0%	1157	117	1	1275	24.4%
West	85.8%	14.2%	0.0%	100.0%	1166	128	1	1295	24.8%
Total	82.9%	17.1%	0.1%	100.0%	4617	595	7	5219	100.0%

wyPlate * passBelt									
% within wyPlate									
wyPlate	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Yes	77.1%	22.8%	0.1%	100.0%	2084	421	5	2510	48.1%
No	91.2%	8.8%	0.0%	100.0%	2526	170	2	2698	51.7%
Unsure	70.5%	29.5%		100.0%	9	4		13	0.2%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

passGender * passBelt									
% within passGender									
passGender	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
Male	71.2%	28.8%	0.0%	100.0%	1249	291	1	1541	29.5%
Female	88.7%	11.2%	0.1%	100.0%	3370	304	6	3680	70.5%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

timeStamp * passBelt									
% within timeStamp									
timeStamp	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
7:30 - 9:30 am	75.7%	24.3%		100.0%	605	106		711	13.6%
9:30 - 11:30 am	81.8%	18.2%	0.1%	100.0%	967	92	2	1061	20.3%
11:30 - 1:30 pm	83.5%	16.4%	0.1%	100.0%	1186	183	2	1371	26.3%
1:30 - 3:30 pm	87.0%	13.0%	0.0%	100.0%	1174	131	1	1306	25.0%
3:30 - 5:30 pm	84.7%	15.1%	0.1%	100.0%	687	83	2	772	14.8%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

roadType * passBelt									
% within roadType									
roadType	Estimate				Unweighted Count				
	passBelt				passBelt				
	Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total	unweighted % of sample
S1100 Primary Road	91.5%	8.4%	0.0%	100.0%	1673	103	1	1777	34.0%
S1200 Secondary Road	83.8%	16.1%	0.1%	100.0%	2807	447	6	3260	62.4%
S1400 Local/Rural Road	73.3%	26.7%		100.0%	139	45		184	3.5%
Total	82.9%	17.0%	0.1%	100.0%	4619	595	7	5221	100.0%

passGender * passBelt									
% within passGender									
passGender		Estimate				Unweighted Count			
		passBelt				passBelt			
		Belted	Not Belted	Unsure	Total	Belted	Not Belted	Unsure	Total
Male	Auto	78.2%	21.6%	0.2%	100.0%	165	38	1	204
	Van	77.5%	22.5%		100.0%	475	68		543
	Sport Utility Vehicle (SUV)	65.7%	34.3%		100.0%	85	14		99
	Pickup Truck	63.0%	37.0%		100.0%	524	171		695
Female	Auto	86.5%	13.3%	0.2%	100.0%	516	70	2	588
	Van	90.0%	10.0%	0.0%	100.0%	1677	104	2	1783
	Sport Utility Vehicle (SUV)	93.6%	6.4%		100.0%	227	19		246
	Pickup Truck	86.4%	13.5%	0.1%	100.0%	950	111	2	1063
Total	Auto	84.0%	15.8%	0.2%	100.0%	681	108	3	792
	Van	86.4%	13.5%	0.0%	100.0%	2152	172	2	2326
	Sport Utility Vehicle (SUV)	84.4%	15.6%		100.0%	312	33		345
	Pickup Truck	76.8%	23.2%	0.1%	100.0%	1474	282	2	1758

Appendix E: Observer Field Test Ratings

Field Test Scores by Observer

Observer Written Exam & Field Observations

				Written	Practice	Test 1	Test 2	Test 3	AVG 1-3
1	Donna Hermann	Albany		95.00	100.00	100.00	99.47	99.38	98.77
2	Bryan Shannon	Campbell		95.00	97.00	98.74	95.00	100.00	97.15
3	Amy Still	Carbon		100.00	77.60	99.50	94.95	97.47	93.90
4	Dennis Doerr	Converse		95.00	78.57	94.81	100.00	98.18	93.31
5	Sandra Gabel	Fremont		90.00	91.30	100.00	95.33	99.39	95.20
6	Deb Eutsler	Goshen		95.00	91.00	95.00	94.29	100.00	95.06
7	Dixie Elder	Johnson		100.00	98.00	98.29	94.29	98.98	97.91
8	Aspen Miller	Laramie		95.00	97.14	98.74	88.39	96.23	95.10
9	Deanne Vogel	Lincoln		95.00	91.30	82.31	91.94	98.28	91.77
10	Alex Torres	Natrona		85.00	97.06	100.00	99.47	96.43	95.59
11	Skyler Elder	Niobrara		100.00	98.00	100.00	97.54	96.46	98.40
12	Robert Sadler	Park		97.00	100.00	68.85	95.00	97.53	91.68
13	Doug Peterson	Platte		95.00	97.00	71.21	87.96	96.72	89.58
14	Rob Remele	Sweetwater		97.00	100.00	98.28	100.00	96.49	98.35
15	Michelle Winans	Uinta		90.00	97.18	100.00	94.79	96.12	95.62
18	Kayla Revell	Alternate 1		80.00	100.00	100.00	97.50	92.59	94.02
19	Bridget White	WY Cor		100.00	96.23	99.52	92.31	93.10	96.23
20	Vicky Peterson	QC2		100.00	91.00	82.17	90.05	98.95	92.43
	State Averages			94.67	94.35	93.75	94.90	97.35	95.00

Appendix F: SBU Unknown Rate

Seat belt Survey Unknown Rates

County	County Code	Unknown Driv+Pass	Total Obsv. Driv+Pass	County Rate
Albany	1	0	1647	0.000000
Campbell	5	8	2816	0.002841
Carbon	7	0	1792	0.000000
Converse	9	1	1343	0.000745
Fremont	13	0	1490	0.000000
Goshen	15	0	1024	0.000000
Johnson	19	0	1005	0.000000
Laramie	21	0	1554	0.000000
Lincoln	23	0	1707	0.000000
Natrona	25	0	808	0.000000
Niobrara	27	0	814	0.000000
Park	29	0	1457	0.000000
Platte	31	0	1489	0.000000
Sweetwater	37	0	2045	0.000000
Uinta	41	4	1601	0.002498
State		13	22592	0.000575

Appendix G: Reporting Requirements

Data Collected at Observation Sites

1. Standard Error of Statewide Belt Use Rate: 0.3 percent
2. Nonresponse Rate as provided in §1340.9 (f)
    a. Nonresponse rate for the survey variable seat belt use: 0.3429 percent

PART B-DATA COLLECTED AT OBSERVATION SITES

Site ID	Site type	Date observed	Sample weight	Number of drivers	Number of front passengers	Number of occupants belted	Number of occupants unbelted	Number of occupants with unknown belt use
168738863.00	Original	6/6/2024	155.47	57	14	56	15	0
618090881.00	Original	6/6/2024	583.09	145	45	171	19	0
168738951.00	Original	6/8/2024	155.47	77	20	87	10	0
168738951.00	Original	6/8/2024	155.47	30	11	35	6	0
168743933.00	Original	6/7/2024	155.47	122	39	155	6	0
604510122.00	Original	6/5/2024	155.47	58	17	54	21	0
636266628.00	Original	6/8/2024	155.47	41	14	51	4	0
168727108.00	Original	6/3/2024	155.47	27	6	30	3	0
639960014.00	Original	6/4/2024	155.47	5	1	4	2	0
647793927.00	Original	6/6/2024	155.47	61	23	72	12	0
168722890.00	Original	6/9/2024	155.47	34	13	40	7	0
636738163.00	Original	6/5/2024	583.09	111	26	114	23	0
168745002	Original	6/9/2024	155.4726	5	0	5	0	0
604510697.00	Original	6/5/2024	155.47	70	12	70	12	0
604511968.00	Original	6/4/2024	583.09	85	32	94	23	0
618003358.00	Original	6/6/2024	155.47	61	15	62	14	0
638770241.00	Original	6/7/2024	155.47	122	59	156	25	0
604518973.00	Original	6/4/2024	583.09	116	37	116	37	0
604511219.00	Original	6/3/2024	155.47	28	8	32	4	0
146318369	Original	6/9/2024	148.5399	11	3	11	3	0
146318928	Original	6/8/2024	148.5399	19	9	16	12	0
146325041	Original	6/5/2024	148.5399	381	101	301	180	1
146332284	Original	6/6/2024	148.5399	104	22	86	40	0
146346598	Original	6/3/2024	148.5399	383	111	303	190	1
146351640	Original	6/5/2024	148.5399	235	46	180	101	0
146353423	Original	6/3/2024	148.5399	77	23	73	26	1
607392873	Original	6/7/2024	792.4244	206	59	204	61	0
607394482	Original	6/3/2024	148.5399	55	13	54	14	0
607397168	Original	6/4/2024	148.5399	29	12	32	8	1
607399730	Original	6/4/2024	148.5399	37	11	43	5	0
607414582	Original	6/6/2024	792.4244	147	39	171	15	0
607420517	Original	6/8/2024	148.5399	20	10	22	8	0
607422111	Original	6/9/2024	148.5399	12	5	11	6	0
607423196	Original	6/6/2024	148.5399	19	3	19	3	0
641839236	Original	6/7/2024	792.4244	151	86	204	31	2
643208992	Original	6/4/2024	148.5399	274	28	180	121	1
643426599	Original	6/8/2024	148.5399	0	0	0	0	1
652125140	Original	6/4/2024	148.5399	58	21	60	18	0

148701934	Original	6/8/2024	226.7111	17	9	25	1	0
148702564	Original	6/8/2024	226.7111	15	4	17	2	0
148718040	Original	6/5/2024	226.7111	20	6	24	2	0
148722817	Original	6/9/2024	226.7111	46	10	52	4	0
148725602	Original	6/9/2024	226.7111	28	13	40	1	0
148731116	Original	6/3/2024	635.1626	221	88	304	5	0
148751796	Original	6/5/2024	226.7111	24	13	35	2	0
148752599	Original	6/4/2024	226.7111	11	4	15	0	0
611192000	Original	6/4/2024	226.7111	8	2	9	1	0
617621426	Original	6/3/2024	226.7111	150	52	189	13	0
619629104	Original	6/7/2024	635.1626	183	75	257	1	0
619629110	Original	6/7/2024	635.1626	135	62	194	3	0
634320705	Original	6/6/2024	226.7111	72	26	74	24	0
636227537	Original	6/4/2024	226.7111	3	0	2	1	0
637994487	Original	6/8/2024	226.7111	16	9	24	1	0
638994654	Original	6/6/2024	226.7111	19	8	23	4	0
639992876	Original	6/7/2024	635.1626	151	64	210	5	0
639993367	Original	6/3/2024	226.7111	88	22	90	20	0
639993412	Original	6/7/2024	635.1626	81	37	114	4	0
146971717	Original	6/7/2024	162.1192	28	9	33	4	0
146980885	Original	6/9/2024	162.1192	42	11	47	6	0
146980941	Original	6/9/2024	162.1192	51	15	54	12	0
146984416	Original	6/9/2024	162.1192	41	20	56	5	0
146990132	Original	6/8/2024	162.1192	41	20	56	5	0
146993382	Original	6/5/2024	162.1192	8	3	11	0	0
146995457	Original	6/8/2024	162.1192	41	4	29	16	0
146999038	Original	6/6/2024	162.1192	8	2	5	5	0
147014967	Original	6/4/2024	162.1192	57	6	35	27	1
606571356	Original	6/5/2024	350.6557	146	20	144	22	0
606571652	Original	6/4/2024	350.6557	114	22	118	18	0
606572602	Original	6/6/2024	162.1192	12	3	9	6	0
606575905	Original	6/4/2024	162.1192	41	4	42	3	0
606578118	Original	6/3/2024	162.1192	1	0	1	0	0
606586736	Original	6/15/2024	350.6557	139	48	157	30	0
626153799	Original	6/6/2024	350.6557	131	37	149	19	0
633115075	Original	6/7/2024	350.6557	122	36	149	9	0
636229512	Original	6/3/2024	162.1192	37	4	34	7	0
649775037	Original	6/8/2024	162.1192	17	2	13	6	0
148431962	Original	6/4/2024	172.4138	2	0	2	0	0
148441014	Original	6/5/2024	172.4138	3	2	5	0	0
148441775	Original	6/7/2024	172.4138	28	13	40	1	0
148441785	Original	6/7/2024	172.4138	18	2	19	1	0
148445311	Original	6/4/2024	172.4138	48	25	70	3	0
148454705	Original	6/5/2024	172.4138	108	40	132	16	0
148456852	Original	6/5/2024	172.4138	133	28	137	24	0
148463881	Original	6/3/2024	172.4138	9	1	5	5	0
148472048	Original	6/9/2024	172.4138	67	27	88	6	0
148475885	Original	6/9/2024	172.4138	105	26	125	6	0
148475919	Original	6/8/2024	172.4138	43	15	46	12	0

148477019	Original	6/9/2024	172.4138	10	3	12	1	0
631779194	Original	6/7/2024	172.4138	32	11	42	1	0
635177424	Original	6/3/2024	172.4138	3	0	3	0	0
636257484	Original	6/8/2024	172.4138	19	1	12	8	0
636257605	Alternate	6/6/2024	172.4138	117	33	143	7	0
641079375	Alternate	6/6/2024	172.4138	9	2	6	5	0
641181863	Original	6/3/2024	172.4138	19	9	23	5	0
649865571	Original	6/8/2024	172.4138	11	2	12	1	0
159764187	Original	6/9/2024	111.7318	45	12	20	37	0
159764392	Original	6/9/2024	111.7318	20	3	16	7	0
159771454	Original	6/3/2024	111.7318	13	4	13	4	0
159772596	Original	6/4/2024	111.7318	32	16	42	6	0
159772678	Original	6/4/2024	111.7318	55	16	50	21	0
159773125	Original	6/4/2024	111.7318	20	9	27	2	0
159774918	Original	6/5/2024	111.7318	39	4	35	8	0
159775310	Original	6/7/2024	111.7318	35	6	29	12	0
159775373	Original	6/6/2024	111.7318	117	52	120	49	0
159781512	Original	6/5/2024	111.7318	143	64	143	64	0
159782598	Original	6/3/2024	111.7318	1	10	0	1	0
604867100	Original	6/9/2024	111.7318	77	35	46	41	0
604880877	Original	6/18/2024	111.7318	64	4	85	14	0
604881016	Original	6/8/2024	111.7318	44	25	29	19	0
604888294	Original	6/6/2024	111.7318	66	29	62	29	0
606772650	Original	6/5/2024	111.7318	78	21	79	28	0
619631067	Original	6/4/2024	111.7318	115	28	86	50	0
634917921	Original	6/8/2024	111.7318	58	22	68	18	0
647671818	Original	6/7/2024	111.7318	108	0	98	32	0
147285886	Original	6/7/2024	268.4924	15	3	17	1	0
147290433	Original	6/9/2024	268.4924	1	11	1	0	0
147298892	Original	6/3/2024	268.4924	18	0	26	3	0
147300370	Original	6/4/2024	268.4924	22	8	20	10	0
147309909	Original	6/7/2024	268.4924	1	1	2	0	0
147313872	Original	6/6/2024	368.8064	62	19	75	6	0
147319715	Original	6/9/2024	268.4924	5	4	9	0	0
147320451	Original	6/8/2024	268.4924	68	26	85	9	0
147324875	Original	6/4/2024	268.4924	5	2	7	0	0
147331905	Original	6/9/2024	268.4924	8	5	13	0	0
147332534	Original	6/6/2024	268.4924	94	35	124	5	0
147345807	Original	6/5/2024	368.8064	0	0	0	0	0
147364519	Original	6/4/2024	368.8064	87	27	110	4	0
147364534	Original	6/7/2024	368.8064	87	31	114	4	0
147364570	Original	6/6/2024	368.8064	101	36	134	3	0
624033356	Original	6/6/2024	368.8064	21	3	18	6	0
635204131	Original	6/5/2024	368.8064	60	34	92	2	0
638998128	Original	6/3/2024	268.4924	4	1	5	0	0
641989342	Original	6/8/2024	368.8064	68	32	96	4	0
160141886	Original	6/3/2024	1703.723	1	0	0	1	0
160145209	Original	6/3/2024	1703.723	6	2	5	3	0
160147996	Original	6/6/2024	1703.723	118	25	114	29	0

160148711	Original	6/7/2024	1703.723	5	0	2	3	0
160156099	Original	6/5/2024	1703.723	11	4	10	5	0
160157250	Original	6/9/2024	1703.723	0	0	0	0	0
160157704	Original	6/8/2024	28571.43	163	88	220	31	0
160160330	Original	6/8/2024	29325.51	9	5	11	3	0
160166319	Original	6/9/2024	1703.723	5	2	5	2	0
160157020	Alternate	6/4/2024	1703.723	4	0	0	4	0
160172171	Original	6/6/2024	1703.723	4	0	2	2	0
160174678	Original	6/6/2024	1703.723	232	80	235	77	0
636255571	Original	6/5/2024	1703.723	2	1	0	3	0
604965044	Alternate	6/9/2024	1703.723	0	0	0	0	0
636729272	Original	6/5/2024	1703.723	141	51	153	39	0
636730637	Original	6/8/2024	1703.723	2	0	1	1	0
637803008	Original	6/4/2024	1703.723	5	2	3	4	0
641124702	Original	6/7/2024	1703.723	26	4	24	6	0
644921860	Original	6/4/2024	1703.723	43	8	36	15	0
130298740	Original	6/7/2024	150.3759	180	33	98	115	0
130299908	Original	6/6/2024	150.3759	41	17	55	3	0
130303875	Original	6/6/2024	150.3759	14	5	8	11	0
130306292	Original	6/4/2024	150.3759	18	5	15	8	0
130308829	Original	6/4/2024	150.3759	9	5	12	2	0
130310824	Original	6/3/2024	150.3759	37	9	25	21	0
130314675	Original	6/3/2024	150.3759	3	1	2	2	0
130319689	Original	6/3/2024	150.3759	2	0	0	2	0
611002737	Original	6/5/2024	150.3759	15	3	14	4	0
611004068	Original	6/7/2024	150.3759	134	37	122	49	0
611004702	Original	6/5/2024	150.3759	8	4	8	4	0
611008709	Original	6/9/2024	150.3759	113	46	152	7	0
611008801	Original	6/9/2024	150.3759	130	54	159	25	0
611010520	Original	6/4/2024	150.3759	18	3	12	9	0
611010998	Original	6/3/2024	150.3759	42	16	54	4	0
611011332	Original	6/8/2024	150.3759	13	5	14	4	0
611011802	Original	6/9/2024	150.3759	18	6	11	13	0
627036887	Original	6/3/2024	150.3759	43	14	38	19	0
636283143	Original	6/8/2024	150.3759	18	5	16	7	0
149015741	Original	6/9/2024	3023.432	1	1	2	0	0
149017914	Original	6/9/2024	3023.432	20	7	19	8	0
149021284	Original	6/7/2024	3023.432	31	2	18	15	0
149021340	Original	6/7/2024	3023.432	143	19	91	71	0
149023224	Original	6/5/2024	3023.432	12	2	4	10	0
149025690	Original	6/5/2024	3023.432	17	0	10	7	0
149026050	Original	6/3/2024	3023.432	55	6	43	18	0
149036602	Original	6/4/2024	3023.432	123	20	78	65	0
607701209	Original	6/8/2024	3023.432	15	4	15	4	0
607706998	Original	6/8/2024	3023.432	0	0	0	0	0
607725194	Original	6/5/2024	3023.432	15	1	9	7	0
607745764	Original	6/6/2024	3023.432	185	13	138	60	0
607752264	Original	6/8/2024	3023.432	6	0	3	3	0
616592941	Original	6/4/2024	3023.432	25	7	19	13	0

619767525	Original	6/5/2024	3023.432	14	1	9	6	0
645248806	Original	6/6/2024	3023.432	11	3	9	5	0
645250521	Original	6/3/2024	3023.432	100	12	66	46	0
645429047	Original	6/3/2024	3023.432	27	5	21	11	0
649767068	Original	6/4/2024	3023.432	8	1	5	4	0
160334025	Original	6/7/2024	52.91005	5	1	3	3	0
160334140	Original	6/7/2024	52.91005	3	2	5	0	0
160335469	Original	6/4/2024	52.91005	19	5	20	4	0
160337121	Original	6/7/2024	52.91005	8	1	7	2	0
160337706	Original	6/6/2024	52.91005	60	12	51	21	0
160337890	Original	6/6/2024	52.91005	165	63	205	23	0
160340671	Original	6/5/2024	52.91005	11	3	12	2	0
160343402	Original	6/3/2024	52.91005	30	11	37	4	0
160343488	Original	6/3/2024	52.91005	23	9	30	2	0
160345307	Original	6/3/2024	52.91005	78	35	108	5	0
160345416	Original	6/4/2024	52.91005	49	26	70	5	0
160347401	Original	6/4/2024	52.91005	36	22	54	4	0
160348556	Original	6/8/2024	52.91005	2	1	3	0	0
160348563	Original	6/8/2024	52.91005	0	0	0	0	0
160348662	Original	6/9/2024	52.91005	4	1	4	1	0
160349376	Original	6/9/2024	52.91005	4	1	5	0	0
160351777	Original	6/6/2024	52.91005	51	29	78	2	0
607029259	Original	6/5/2024	52.91005	17	2	17	2	0
629141912	Original	6/5/2024	52.91005	18	7	17	8	0
149180660	Original	6/7/2024	173.913	29	10	39	0	0
149185417	Original	6/4/2024	173.913	67	48	115	0	0
149186709	Original	6/6/2024	173.913	29	4	33	0	0
149193121	Original	6/9/2024	173.913	75	22	97	0	0
149194246	Original	6/8/2024	173.913	13	6	19	0	0
149194593	Original	6/9/2024	173.913	16	5	21	0	0
149195125	Original	6/8/2024	173.913	43	5	48	0	0
149195916	Original	6/7/2024	173.913	68	10	78	0	0
149215207	Original	6/3/2024	173.913	63	50	113	0	0
149204979	Original	6/5/2024	173.913	103	14	117	0	0
149210530	Original	6/6/2024	173.913	48	14	62	0	0
149214639	Original	6/6/2024	173.913	106	36	142	0	0
612521051	Original	6/7/2024	173.913	46	5	51	0	0
612521597	Original	6/5/2024	173.913	103	25	128	0	0
612521622	Original	6/5/2024	173.913	78	29	104	3	0
614772268	Original	6/8/2024	173.913	65	14	78	1	0
636258227	Original	6/3/2024	173.913	60	43	103	0	0
625177708	Original	6/4/2024	173.913	31	12	43	0	0
639001485	Original	6/9/2024	173.913	46	16	60	2	0
160423647	Original	6/4/2024	366.2668	126	49	149	26	0
160423732	Original	6/4/2024	366.2668	119	33	140	12	0
160425500	Original	6/3/2024	168.9617	2	0	1	1	0
160429210	Original	6/6/2024	168.9617	1	0	0	1	0
160432818	Original	6/9/2024	168.9617	32	18	39	11	0
160433472	Original	6/8/2024	168.9617	79	41	94	26	0

160437396	Original	6/6/2024	366.2668	133	49	160	22	0
160441132	Original	6/8/2024	168.9617	75	40	77	38	0
160445645	Original	6/5/2024	168.9617	37	11	15	33	0
604817624	Original	6/9/2024	168.9617	37	19	48	8	0
604821509	Original	6/7/2024	168.9617	29	10	23	16	0
604824280	Original	6/4/2024	366.2668	89	22	88	23	0
604828880	Original	6/3/2024	168.9617	5	1	4	2	0
604832972	Original	6/5/2024	168.9617	17	4	10	11	0
606896274	Original	6/4/2024	168.9617	20	3	16	7	0
633079056	Original	6/6/2024	366.2668	113	38	133	18	0
636250523	Original	6/7/2024	168.9617	22	4	17	9	0
638072672	Original	6/9/2024	168.9617	14	7	20	1	0
639807648	Original	6/5/2024	366.2668	130	60	164	26	0
149464552	Original	6/6/2024	254.6311	27	16	32	11	0
149464581	Original	6/6/2024	254.6311	76	40	98	18	0
149475478	Original	6/7/2024	254.6311	84	34	78	40	0
149479278	Original	6/7/2024	254.6311	78	31	88	21	0
149485073	Original	6/4/2024	553.4341	23	5	25	3	0
149491408	Original	6/9/2024	254.6311	7	2	8	1	0
149493811	Original	6/8/2024	254.6311	230	30	180	80	0
149502295	Original	6/5/2024	254.6311	157	65	175	47	0
149504310	Original	6/3/2024	553.4341	7	3	7	3	0
149513299	Original	6/9/2024	254.6311	43	14	35	22	0
618327230	Original	6/7/2024	254.6311	117	44	127	34	0
618327614	Original	6/3/2024	553.4341	84	37	82	39	0
618328315	Original	6/7/2024	254.6311	20	8	20	8	0
618328331	Original	6/6/2024	254.6311	0	0	0	0	0
618328388	Original	6/8/2024	553.4341	179	73	222	30	0
633104861	Original	6/4/2024	553.4341	155	50	191	14	0
634701819	Original	6/4/2024	553.4341	149	47	185	11	0
637958402	Original	6/3/2024	254.6311	15	5	10	10	0
646130968	Original	6/5/2024	254.6311	60	30	83	7	0
160257919	Original	6/6/2024	132.1964	35	19	49	5	0
160260118	Original	6/3/2024	368.7724	114	45	132	27	0
160260328	Original	6/5/2024	368.7724	76	34	94	16	0
160263191	Original	6/8/2024	132.1964	60	16	41	35	0
160265104	Original	6/5/2024	132.1964	13	0	12	1	0
160268998	Original	6/9/2024	132.1964	16	8	22	2	0
160269191	Original	6/9/2024	132.1964	64	31	83	11	1
160277885	Original	6/3/2024	132.1964	59	11	58	11	1
160278319	Original	6/4/2024	132.1964	122	12	91	43	0
160278593	Original	6/7/2024	132.1964	40	14	37	16	1
606036141	Original	6/3/2024	132.1964	138	36	100	74	0
606039533	Original	6/5/2024	368.7724	139	60	183	16	0
623883922	Original	6/7/2024	132.1964	28	8	26	10	0
627006231	Original	6/7/2024	132.1964	131	42	122	51	0
636254190	Original	6/6/2024	368.7724	99	33	125	7	0
637983427	Original	6/8/2024	132.1964	9	1	8	2	0
638334180	Original	6/8/2024	132.1964	26	14	19	21	0

638525027	Original	6/4/2024	132.1964	12	4	13	2	1
647556320	Original	6/6/2024	368.7724	30	5	33	2	0
				16,394	5,221	17,596	4,006	13

Standard Error of Statewide Belt Use Rate[3]: 0.03

Nonresponse Rate as provided in §1340.9 (f)

Nonresponse rate for the survey variable seat belt use: 0.3429 percent

---

[1]Identify whether the observation site is original or alternate.

[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

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment	Print Format	Write Format
InclProbOfRoadType	1	<none>	Scale	Input	12	Right	F32.15	F32.15
TLID	2	<none>	Scale	Input	12	Right	F10	F10
SRSWOR	3	<none>	Scale	Input	12	Right	F32.15	F32.15
County	4	County	Nominal	Input	12	Right	F7	F7
Site#	5	Site #	Nominal	Input	12	Right	F7	F7
Population	6	<none>	Nominal	Input	12	Right	F10	F10
Roadway	7	<none>	Scale	Input	12	Right	F7	F7
weight	8	<none>	Scale	Input	14	Right	F20.15	F20.15
day	9	<none>	Nominal	Input	12	Right	F3	F3
observer	10	<none>	Scale	Input	12	Right	F8	F8
weather	11	<none>	Nominal	Input	12	Right	F7	F7
lanes	12	<none>	Nominal	Input	12	Right	F5	F5
direction	13	<none>	Nominal	Input	12	Right	F9	F9
driverGender	14	<none>	Nominal	Input	12	Right	F12	F12
driverBelt	15	<none>	Nominal	Input	12	Right	F10	F10
carType	16	<none>	Nominal	Input	12	Right	F7	F7
wyPlate	17	<none>	Nominal	Input	12	Right	F7	F7
passBelt	18	<none>	Nominal	Input	12	Right	F8	F8
passGender	19	<none>	Nominal	Input	12	Right	F10	F10
timeStamp	20	<none>	Nominal	Input	12	Right	F9	F9

Variables in the working file

Variable Values

Value		Label
County	1	Albany
	5	Campbell
	7	Carbon
	9	Converse
	13	Goshen
	15	Fremint
	19	Johnson
	21	Laramie
	23	Lincoln
	25	Natrona
	27	Niobrara
	29	Park
	31	Platte
	37	Sweetwater
	41	Uinta
Population	1	Urban
	2	Rural
Roadway	11	S1100 Primary Road
	12	S1200 Secondary Road
	14	S1400 Local/Rural Road
day	1	Sunday
	2	Monday
	3	Tuesday
	4	Wednesday
	5	Thursday
	6	Friday
	7	Saturday
observer	7	Bridget White
	14	Vicky Peterson
	44	Doug Peterson
	47	Dixie Elder
	48	Deb Eutsler
	67	Skyler Elder
	80	Bryan Shannon
	81	Sandra Gabel
	86	Amy Still
	87	Aspen Miller
	91	Donna Hermann
	95	Robert Sadler

	96	Rob Remele
	97	Dennis Doerr
	98	Deanne Vogel
	99	Alex Torres
	100	Michelle Winans
	101	Keyla Revell
weather	1	Clear/sunny
	2	Cloudy
	3	Foggy
	4	Light rain
	5	Sone/ice
	6	Heavy rain
	7	Occasional Rain
lanes	1	One lane
	2	Two lanes
direction	1	North
	2	South
	3	East
	4	West
driverGender	1	Male
	2	Female
driverBelt	1	Belted
	2	Not belted
	3	Unsure
carType	1	Auto
	2	Van
	3	Sport Utility Vehicle (SUV)
	4	Pickup Truck
wyPlate	1	Yes
	2	No
	9	Unsure
passBelt	1	Belted
	2	Not Belted
	3	Unsure
	99	No passenger
passGender	1	Male
	2	Female
	3	No passenger
timeStamp	1	7:30 - 9:30 am
	2	9:30 - 11:30 am
	3	11:30 - 1:30 pm

4	1:30 - 3:30 pm
5	3:30 - 5:30 pm

Report prepared by:

DLN CONSULTING INC