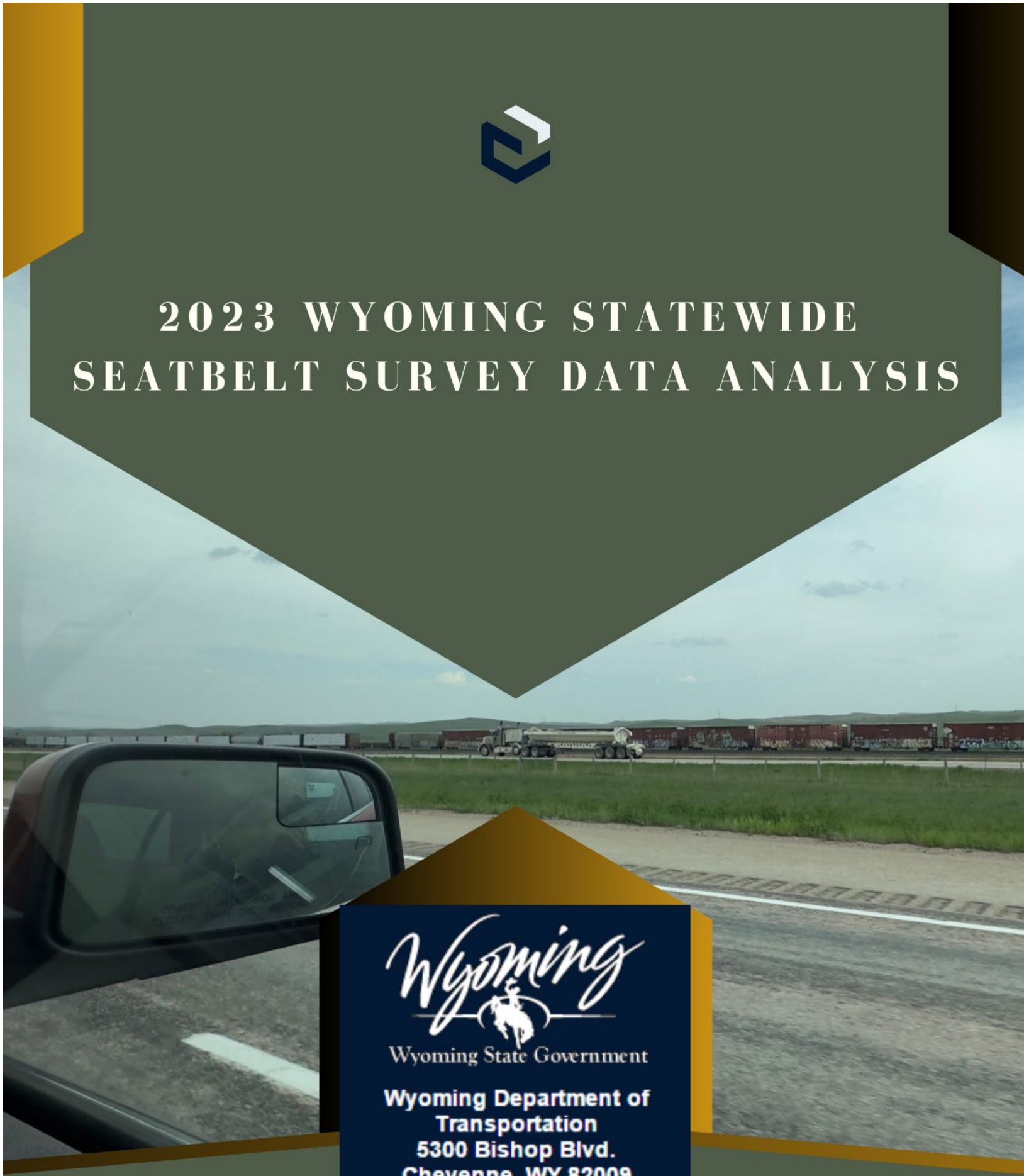
2023 WYOMING STATEWIDE SEATBELT SURVEY DATA ANALYSIS



Wyoming State Government

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

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. The 2023 survey analysis is the ninth survey conducted under the 2012 guidelines for seatbelt use in the state of Wyoming.

Cover photo credit: Taken by Lydia DeJesus while driving through the great state of Wyoming on our way to the annual seat belt survey training.

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 2023 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.
- Kacie Kostelecky helped with observer training and data compilation.
- 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:

Kim Brattis, Dixie Elder, Deb Eutsler, Sandra Gabel, Lori Geisler, Joyce Hammer, Donna Herman, Mindy McKinley, Aspen Miller, Susan Parkinson, Doug Peterson, Vicky Peterson, Rob Remele, Robert Sadler, Bryan Shannon, Diana Shannon, Patrick White, and 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

2023 Wyoming Observers

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Executive Summary

Wyoming's seat belt use rate rose 3.6 percentage points, from 78.3 percent in 2022 to 81.9 percent in 2023. Observations were held at 285 individual sites in 15 counties beginning June 5 and ending June 11, 2023. This was the second year of new site sampling that occurred in 2022.

Observers attended an in-person, comprehensive training session that covered the procedural components using audio, visual, and "hands-on" field training.

The 2023 survey resulted in observations for 17,278 drivers and 6,092 passengers, totaling 23,370 vehicle occupants. Some of the main results are as follows.[1]

- 81.9 percent of vehicle occupants were observed wearing seat belts; 18.1 percent were not belted. Belt use was uncertain for 0.898 percent of all occupants, and the standard error for the sample was 0.2 percent.
- 73.9 percent of the vehicle occupants were drivers, with an 80.0 percent rate for belt use. About a fourth of the vehicle occupants were passengers (26.1 percent), and 88.2 percent of them were wearing seat belts.
- Half of the vehicle occupants were observed in six of the fifteen counties, and eleven of the fifteen counties accounted for 85.0 percent of the observations. 15.0 percent of the observations came from the remaining four counties.
- Eight counties have seat belt use rates above the state rate of 81.9 percent. Among the seven counties below the state average, six had rates from 76.0 percent to 81.7 percent. Only one had a usage rate of less than 70.0 percent belted. Three counties had rates of more than 92 percent belted.
- Observations took place in sites designated as rural or urban. Urban observations resulted in 81.3 percent belted, while observations in rural sites resulted in 86.6 percent belted.
- 61.7 percent of the vehicle occupants were observed in vehicles registered to the state of Wyoming; 38.3 percent were in out-of-state vehicles. 79.0 percent of occupants in Wyoming vehicles wore seat belts, below the state average of 81.9 percent, but higher than the 2022 rate of 74.4 percent. The rate for those in out-of-state vehicles was 88.8 percent, a difference of 9.8 percentage points higher than in out-of-state vehicles, but an improvement over the 13.7 point differentiation in 2022.
- 63 percent of occupants were in vehicles traveling on secondary roadways, which are state or federally maintained and are typically two-lane highways. They had a seat belt usage rate of 81.8 percent. 33.6 percent of the observations on primary roadways with a usage rate of 86.2 percent. Only three percent of the observations took place on local roadways. These observations resulted in the lowest usage rate at 76.3 percent.
- The highest seat belt use rates were on Saturday and Sunday; the lowest rates were Tuesday and Wednesday.
- Males outnumber females in the sample by 14.6 percentage points, but females recorded a higher seat belt use rate: 90.2 percent for females and 75.4 percent for males, a difference of 14.8 percentage points.
- The usage rate for occupants in automobiles is exactly the same as the statewide rate of 81.9 percent. SUVs and vans have rates significantly above the statewide average. Occupants in vans buckled up the most at 88.9 percent, and those in pickup trucks, at 74.0 percent, buckled the least. These two vehicle types contained 77.4 percent of all vehicle occupants.

[1] Observers had uncertainties about belt use in less than one percent (.0898%) 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.

- About 80 percent of the male occupants were in vans and pickups compared to about 73 percent of the females in these same vehicles. Over half the males were in pickups and over half the females were in vans. Females demonstrated higher rates of seat belt use in every type of vehicle. Males dominated I pickup trucks and accounted for pickups' lowest seat belt use rate.
- Passenger rates of belt use were higher than driver use in almost all categories of all variables. Overall, 80.0 percent of drivers and 88.2 percent of passengers wore seat belts during the 2023 Wyoming survey. Drivers comprised 73.9 percent, and passengers accounted for 26.1 percent of vehicle occupants, so drivers exerted significantly more influence on the calculation of rates.
- The appendices include many of the SPSS output tables that inform the data analysis reported in this narrative.

Overall, the 2023 seat belt use rate in the state of Wyoming has improved in every category that was analyzed. The appendices include many of the output tables from which the data analysis is reported in this narrative.

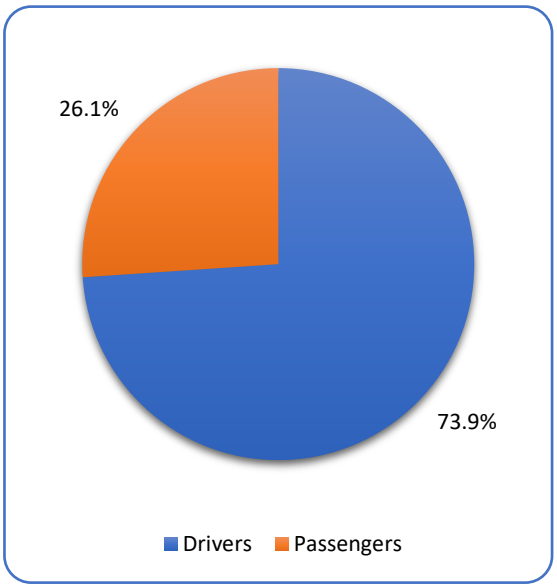
Introduction

Fifteen counties, each with nineteen sites, are currently observed in the statewide seat belt survey in Wyoming. Observers collected observations of seat belt use between June 5 and June 11, 2023 at 285 sites. Fifteen observers collected observations of 17,278 drivers and 6,092 front-seat outboard passengers, totaling 23,370 vehicle occupants. Nearly three-fourths of the vehicle occupants were drivers, and about one-fourth were passengers. The following table and graph illustrate the results.[2]

TABLE 1: FREQUENCIES BY TYPE OF VEHICLE OCCUPANCY

County	driver unweighted count	passenger unweighted count	occupant unweighted count
Albany	1412	527	1939
Campbell	2246	587	2833
Carbon	1165	458	1623
Converse	1300	278	1578
Goshen	1346	529	1875
Fremont	807	277	1084
Johnson	932	453	1385
Laramie	726	253	979
Lincoln	975	361	1336
Natrona	498	91	589
Niobrara	651	365	1016
Park	1342	361	1703
Platte	1021	398	1419
Sweetwater	1601	662	2263
Uinta	1256	492	1748
Total	17278	6092	23370

FIGURE 1: PERCENT BY TYPE OF VEHICLE OCCUPANCY, WYOMING 2023



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

Each observer was assigned to a specific county and was armed with maps showing site locations. The observer traveled to each site, observed seat belt use for forty-five minutes, and traveled to the next scheduled site. The following table lists the observers, their assigned counties, the number of occupants observed, and the percentage of the total occupants found in each county. The occupant frequencies are in Table 2 listed in descending order with cumulative percentages.

TABLE 2: UNWEIGHTED FREQUENCIES OF VEHICLE OCCUPANTS BY COUNTY AND OBSERVER, WYOMING 2023

Observer	*County*	*Unweighted Count*	*% Sample*
Bryan Shannon	Campbell	2891	12.4%
Rob Remele	Sweetwater	2263	9.7%
Sandra Gabel	Fremont	2048	8.8%
Donna Hermann	Albany	1939	8.3%
Mindy McKinley	Uinta	1748	7.5%
Robert Sadler	Park	1703	7.3%
Diana Shannon	Converse	1578	6.8%
Lori Geisler	Carbon	1565	6.7%
Doug Peterson	Platte	1419	6.1%
Dixie Elder	Johnson	1385	5.9%
Susan Parkinson	Lincoln	1336	5.7%
Joyce Hammer	Niobrara	1016	4.3%
Aspen Miller	Laramie	979	4.2%
Deb Eutsler	Goshen	911	3.9%
Kim Brattis	Natrona	589	2.5%
	Total	23370	100.0%

From the table, slightly over half of the observations were from six (40%) of the counties: Campbell, Sweetwater, Fremont, Albany, Uinta, and Park. Adding the following five counties –Converse, Carbon, Platte, Johnson, and Lincoln – the total is 85 percent of the vehicle occupants. The remaining four counties – Niobrara, Goshen, Laramie, and Natrona – account for the last 15 percent of the observations. In other words, some counties disproportionately dictate the observational outcomes in Wyoming 2023, while others contribute relatively few observations.

Observer Training, Quality Control, and Data Preparation

DLN Consulting Inc. staff, following the guidelines in the Uniform Code, developed training and quality control techniques to ensure the reliability of the data in this report. This section describes the relevant processes.[3]

DLN Consulting, Inc. relies on iPads to record seat belt use observations. The iPads are loaded with proprietary software tools to facilitate recording and reporting data compiled for analysis. Every observer, alternate observer, and quality control staff member received training on the procedural components using audio, visual, and "hands-on" instruction.

On the first training day, each participant practiced using the program in a classroom setting. Next, observers engaged in a mock data collection activity, completing four data collection sessions. Three sessions are used to calculate individual inter-accuracy ratios to determine observer readiness for field observations. A ratio of 85 percent accuracy is required for all observers.

Written tests were administered to measure knowledge of observation rules and procedures. A minimum passing score of 80 percent is required for all observers, alternates, and quality control supervisors.

Sites were randomly selected for reliability spot checks where monitoring occurs. Once in the field, quality control monitors conducted random spot checks on the reliability of observations. The monitors receive additional training in separate half-day sessions dedicated to a review of specific supervisory directives.

Once the survey began, DLN Consulting, Inc. staff were on call to assist observers with any issues. Possible issues include conditions requiring changes to alternate sites or adjustments to observational processes to ensure quality data and observer safety.

Once observers completed an electronic record of observations for a site, they transferred the data to the DLN Consulting, Inc. staff person assigned the task of compiling the data. The data was reviewed for accuracy, correcting coding errors, and working with observers to resolve any issues before proceeding.

Once the data was cleaned of errors, it was moved to Excel files and reviewed for anomalies. Separate files for drivers and passengers were combined into a file of all vehicle occupants. The Excel files were loaded in *SPSS (The Statistical Package for the Social Sciences v. 24.0*), where codes were added, and any variables needed for computations were created. The data weighting procedures were developed and inserted in an SPSS subroutine, Complex Samples.[4] The data was then processed to produce the outcomes seen throughout this report.

[3] By reliability, we mean that we take steps to ensure that we are actually measuring seat belt use free of observer error. The protocols and sampling techniques assure that the results are valid, that repeated surveys at the same time and under the same conditions would produce the same results.
[4] The Complex Samples directions are found in a "csaplan" that introduces the relevant sampling variables and directions for creating the weighting process used for every calculation of seat belt use estimates.

Estimates of Seat Belt Use

The following estimates of seat belt use from the Wyoming seat belt survey in 2023 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 3: ESTIMATES OF SEAT BELT USE FOR DRIVERS, PASSENGERS, AND OCCUPANTS, WYOMING 2023

		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Yes	81.9%	0.2%	81.4%	82.3%	19515
	No	18.1%	0.2%	17.7%	18.6%	3855
	Total	100.0%	0.0%	100.0%	100.0%	23370

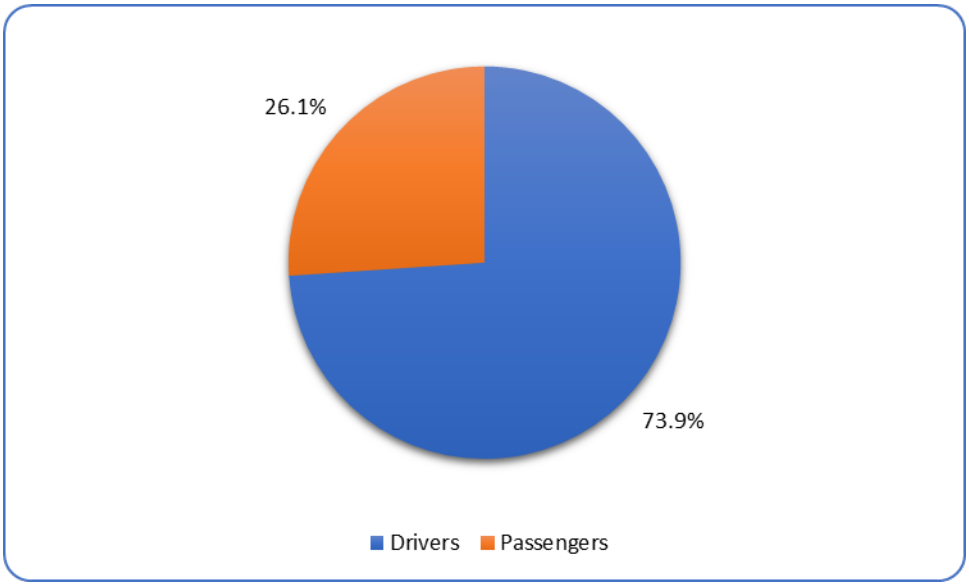
Observers collected seat belt use data on 23,370 vehicle occupants; 81.9 percent of the occupants were observed wearing seat belts, and 18.1 percent were not belted. Observers were unsure about the belt use for less than one percent (0.0898%) of the occupants. The standard error is 0.2 percent, below the allowable standard error of 2.5 percent for the survey. The 95 percent confidence intervals calculation produced a lower estimate of 81.4 percent and an upper estimate of 82.3 percent, a difference of less than one percentage point.

Drivers and Passengers

Observers collected seat belt use data on drivers and front-seat outboard passengers, who made up the total vehicle occupants. Observations did not include middle front-seat or back-seat vehicle occupants.

For Wyoming 2023, observers collected data on 17,278 drivers and 6,092 passengers for 23,370 vehicle occupants. Drivers represented 73.9 percent and passengers 26.1 percent of vehicle occupants. There were almost three drivers for every passenger. About a fourth of the vehicles had both drivers and passengers. The following graph illustrates the percentages.

FIGURE 2: PERCENT OF SAMPLE BY TYPE OF VEHICLE OCCUPANT, WYOMING 2023



The next section of this report presents seat belt use rates for drivers and passengers. Driver and passenger belt use rates are presented by county, population density, Wyoming vehicle registration, roadway type, and vehicle type and gender combination. The overall rates are also presented throughout this report.

First, here are the overall rates by type of vehicle occupant.

TABLE 4: ESTIMATES OF SEAT BELT USE FOR DRIVERS, PASSENGERS, AND ALL OCCUPANTS, WYOMING 2023

occupantBelted

		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Yes	81.9%	0.2%	81.4%	82.3%	19515
	No	18.1%	0.2%	17.7%	18.6%	3855
	Total	100.0%	0.0%	100.0%	100.0%	23370

Eighty of drivers and 88.2 percent of passengers wore seat belts in the 2023 Wyoming survey, a difference of 6.3 percentage points. The higher rate for passengers raised the overall rate to 81.9 percent, despite the smaller number of passengers (26.1 percent of the sample) compared to the number of drivers (73.9 percent of the sample).

Observers recorded seat belt use for 17,278 drivers or 73.9 percent of all vehicle occupants. Eighty percent of the drivers wore seat belts, 20.0 percent were not belted. The standard error for drivers is 0.2 percent, below the allowable rate of 2.5 percent. The confidence intervals have a lower estimate of 79.7 percent and an upper estimate of 80.3 percent, a difference of 0.6 points.

The following table presents the estimates of seat belt use for drivers.

TABLE 5: ESTIMATES OF SEAT BELT USE FOR DRIVERS, WYOMING 2023

driverBelted

		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Yes	80.0%	0.2%	79.7%	80.3%	14063
	No	20.0%	0.2%	19.7%	20.3%	3215
	Total	100.0%	0.0%	100.0%	100.0%	17278

There are 6,092 observed passengers in the survey with a belt use rate of 88.2 percent. 11.8 percent were not belted. The standard error is 0.5 percent, and the confidence interval calculation shows a lower limit of 87.2 percent and an upper limit of 89.1 percent, a difference of 1.9 percent.

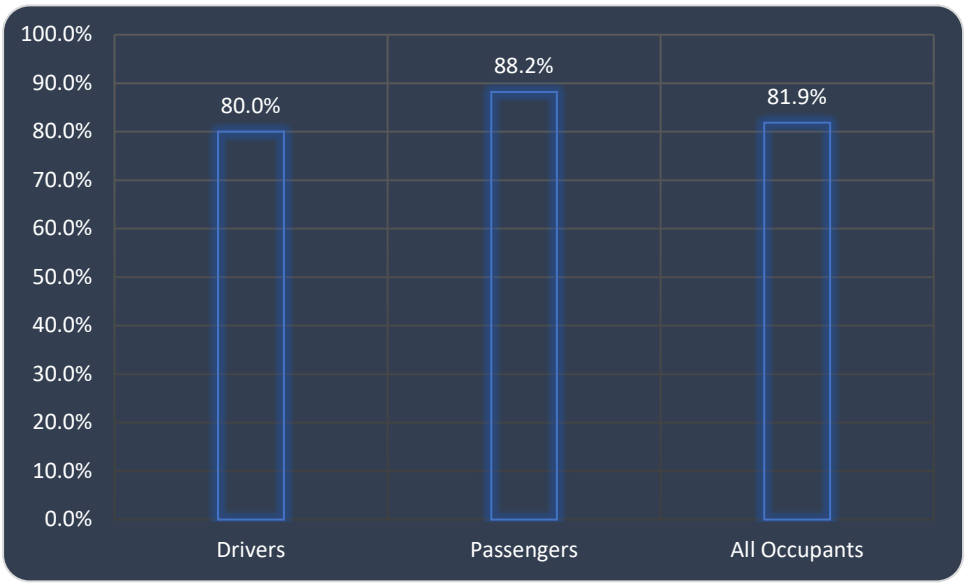
The following table presents the results for passengers.

TABLE 6: ESTIMATES OF SEAT BELT USE FOR PASSENGERS, WYOMING 2023

		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Yes	88.2%	0.5%	87.2%	89.1%	5452
	No	11.8%	0.5%	10.9%	12.8%	640
	Total	100.0%	0.0%	100.0%	100.0%	6092

The following chart summarizes the seat belt usage results for drivers, passengers, and all occupants.

FIGURE 3: ESTIMATES OF SEAT BELT USE FOR DRIVERS, PASSENGERS, AND ALL OCCUPANTS, WYOMING 2023



Estimates of Seat Belt Use by County

There are fifteen counties in the Wyoming 2023 sample. The following table lists the counties, the unweighted frequencies for each county and the percent of observed vehicle occupants sorted by the percent of the total sample of occupants.

TABLE 7: ESTIMATES OF SEAT BELT USE BY COUNTY, WYOMING 2023

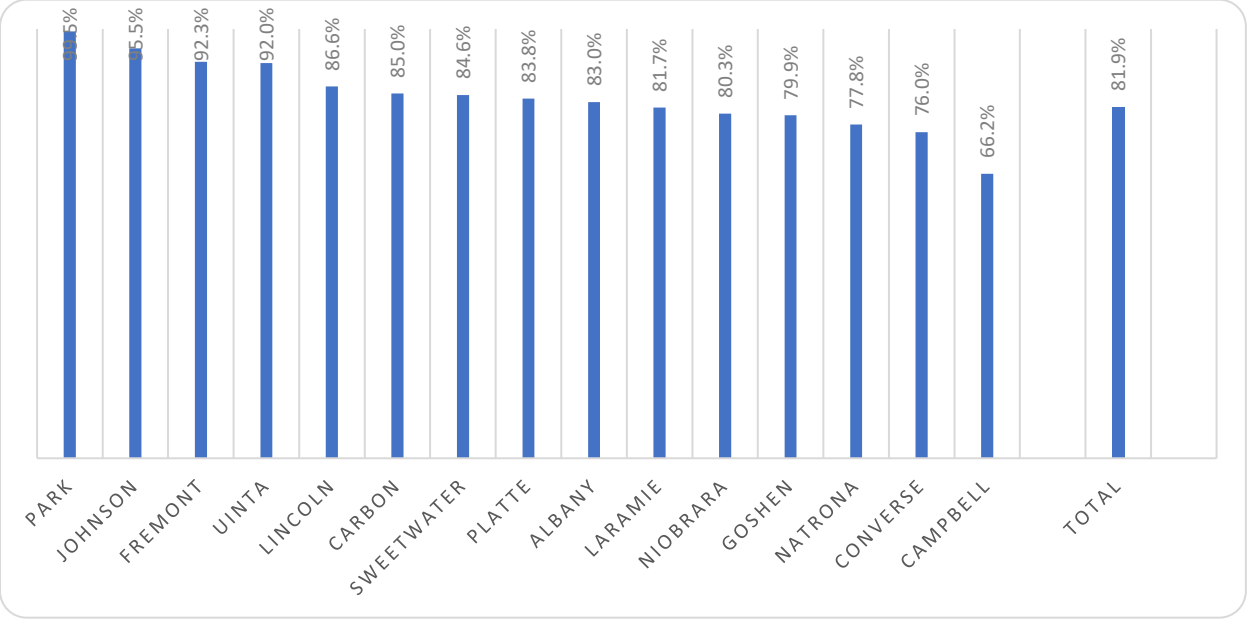
	Occupant Belted				
County	Yes	No	Total	unweighted count	unweighted % of sample
Albany	83.0%	17.0%	100.0%	1939	8.3%
Campbell	66.2%	33.8%	100.0%	2833	12.1%
Carbon	85.0%	15.0%	100.0%	1623	6.9%
Converse	76.0%	24.0%	100.0%	1578	6.8%
Goshen	79.9%	20.1%	100.0%	1875	8.0%
Fremont	92.3%	7.7%	100.0%	1084	4.6%
Johnson	95.5%	4.5%	100.0%	1385	5.9%
Laramie	81.7%	18.3%	100.0%	979	4.2%
Lincoln	86.6%	13.4%	100.0%	1336	5.7%
Natrona	77.8%	22.2%	100.0%	589	2.5%
Niobrara	80.3%	19.7%	100.0%	1016	4.3%
Park	99.5%	0.5%	100.0%	1703	7.3%
Platte	83.8%	16.2%	100.0%	1419	6.1%
Sweetwater	84.6%	15.4%	100.0%	2263	9.7%
Uinta	92.0%	8.0%	100.0%	1748	7.5%
Total	81.9%	18.1%	100.0%	23370	100.0%

As noted in the introduction of this report, six counties significantly influenced the overall seat belt use rates more than the other counties.

Among the top counties in terms of total occupants, four counties had rates of seat belt use at 90.0 percent belted or higher: Park (99.5%), Johnson (95.5%), Fremont (92.3%) and Uinta (92.0%). These counties contributed about 25 percent of the sample. Campbell County also contributed significant numbers of occupants (12.1 percent of the sample), but its observed occupants had the lowest seat belt use rate (66.2%). Five of the counties had usage rates higher than the state average, but lower than 90 percent: Lincoln (86.6%), Carbon (85.0%), Platte (83.8%), and Albany (83.0%). At 81.7 percent Laramie just missed matching the state rate of 81.9 percent. The remaining three counties all had rates below 80 percent: Goshen (79.9%), Natrona (77.8%) and Converse (76.0%).

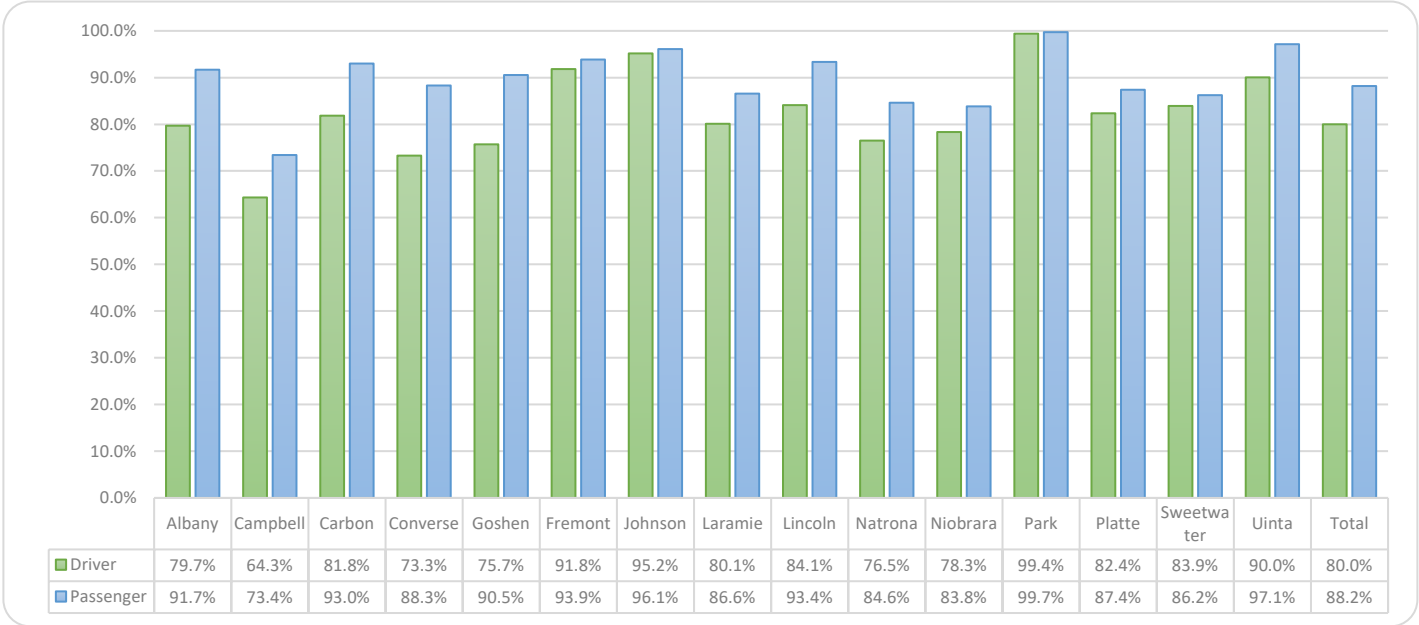
The following chart illustrates these county results.

FIGURE 4: COUNTY SEAT BELT USE RATES FOR VEHICLE OCCUPANTS RANKED IN DESCENDING ORDER



The following table presents the estimated seat belt use rates for drivers, passengers, and all vehicle occupants by county.

FIGURE 5: ESTIMATES OF DRIVER, PASSENGER, AND STATE OCCUPANT BELT USE



	Albany	Campbell	Carbon	Converse	Goshen	Fremont	Johnson	Laramie	Lincoln	Natrona	Niobrara	Park	Platte	Sweetwater	Uinta	Total
Driver	79.7%	64.3%	81.8%	73.3%	75.7%	91.8%	95.2%	80.1%	84.1%	76.5%	78.3%	99.4%	82.4%	83.9%	90.0%	80.0%
Passenger	91.7%	73.4%	93.0%	88.3%	90.5%	93.9%	96.1%	86.6%	93.4%	84.6%	83.8%	99.7%	87.4%	86.2%	97.1%	88.2%

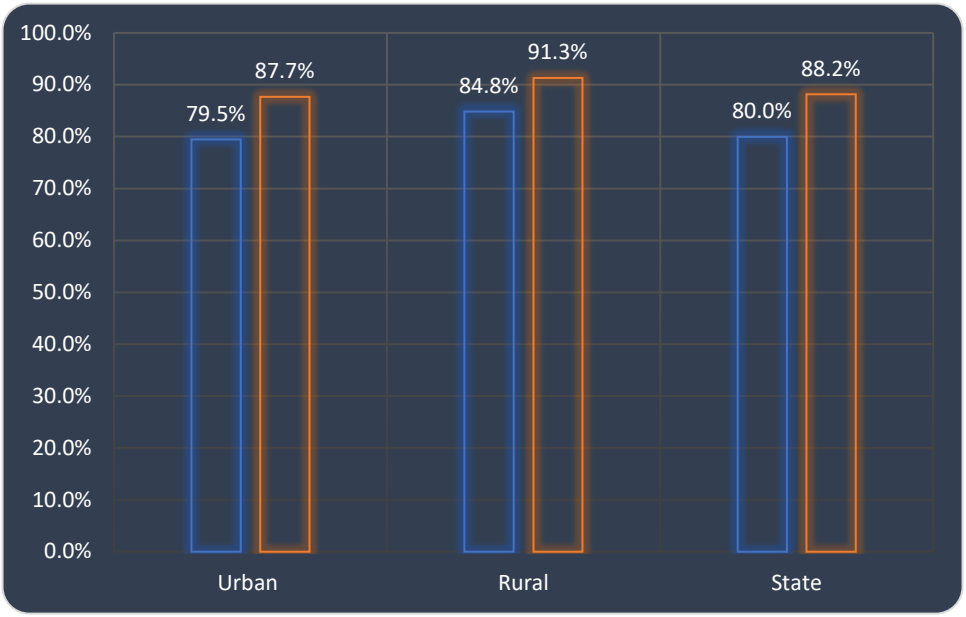
Seat Belt Use for Selected Variables

Survey observations in Wyoming are organized into variables and categories within variables. For example, some sites are pre-coded for population density (urban or rural) and the type of roadway (primary, secondary, and other). Occupant gender, vehicle type, vehicle registration (Wyoming or out-of-state), and the day of the week are other 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, and more people in rural Wyoming use their seat belts than in the more urban areas. In 2023, seat belt use for drivers in rural areas was 84.8 percent compared to 79.5 percent in urban areas. Likewise, passengers in rural areas wore their seat belts more than in urban areas. See the chart below.

FIGURE 6: ESTIMATES OF DRIVER, PASSENGER AND ALL OCCUPANTS BELTED BY POPULATION DENSITY, WYOMING 2023

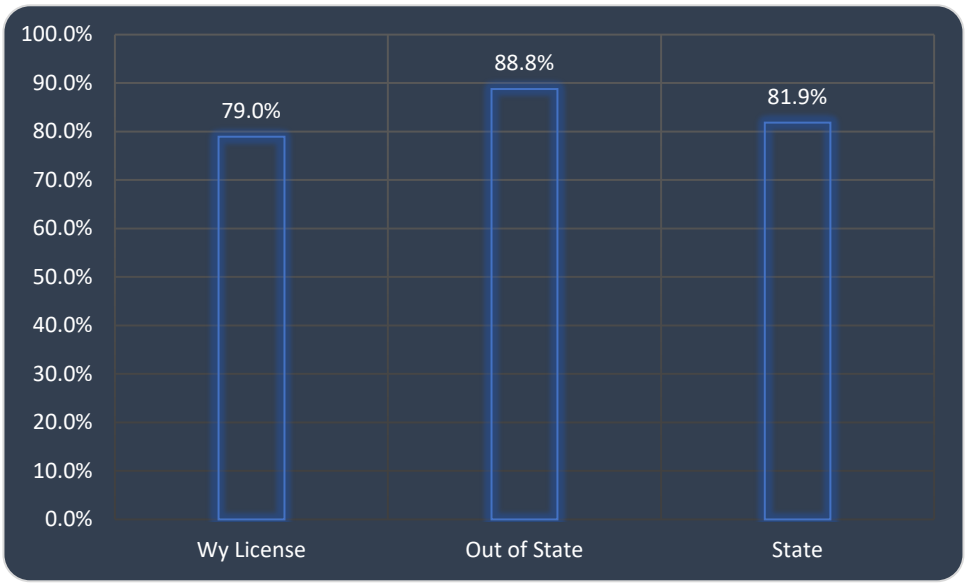


Vehicle Registration

Observers recorded whether occupants were in Wyoming-registered vehicles or in vehicles with out-of-state license plates.

For the 2023 survey, 61.7 percent of the vehicle occupants were in vehicles identified with a Wyoming registration and 38.3 percent with an out-of-state code. Belted occupants in Wyoming vehicles were observed wearing seat belts 79.0 percent of the time, compared to 88.8 percent of occupants in non-Wyoming vehicles, a difference of almost ten percentage points. The following graph illustrates these results.

FIGURE 7: ESTIMATE OF OCCUPANT SEAT BELT USE BY WYOMING REGISTRATION, WYOMING 2023



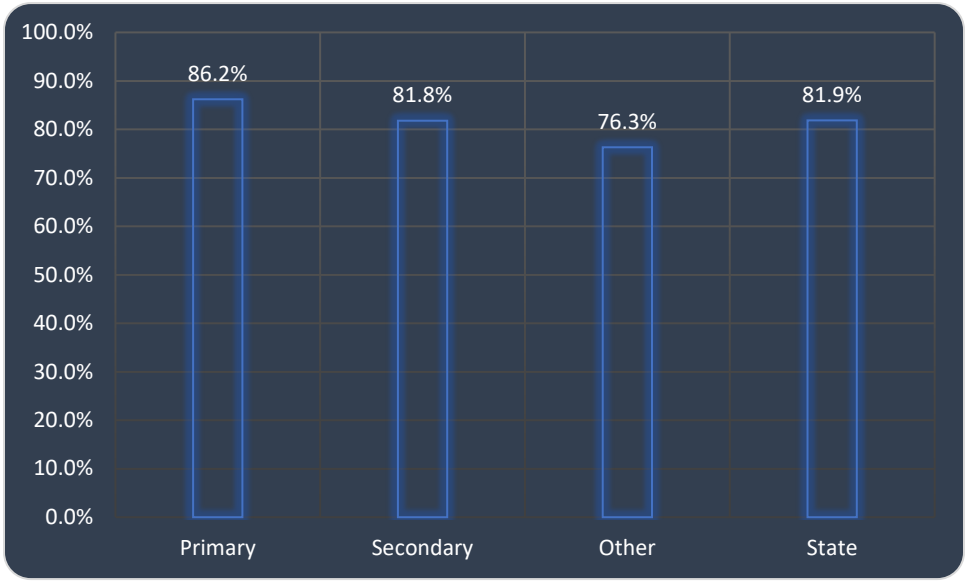
Roadway Type

The roadway types have codes consistent with NHTSA's descriptions of the various types for each site, as follows:

- S1100 primary roadways are federally or state-maintained and include interstate and other four-lane highways. For the 2023 survey, 33.6 percent of the vehicle occupants were observed on primary roadways.
- S1200 roads are secondary, which means they are state or federally maintained and are typically two-lane highways. In this survey, 63.1 percent of the vehicle occupants were in vehicles traveling on secondary roadways.
- S1400 "other" roadways are a mix of local, rural, and city roadways that are neither primary nor secondary. All are paved roads; some are two-lane and some four-lane. The fewest occupants, 3.3 percent of the total sample, were observed on these “other" roadways.

The 2023 results show seat belt use rates of 86.2 percent of the occupants observed in vehicles on primary roads, 81.8 percent belted on secondary roadways, and 76.3 percent belted on the "other" roadways. Seat belt use was 4.4 percentage points higher for occupants on primary roads than for secondary ones, but almost ten points higher than the “other” category. The following graph illustrates results broken down by driver and passenger. In this case passengers were significantly more likely to wear their seat belts on all types of roadways than were drivers.

FIGURE 8: ESTIMATES OF OCCUPANTS BELTED BY ROADWAY TYPE, WYOMING 2023



Weekdays

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.

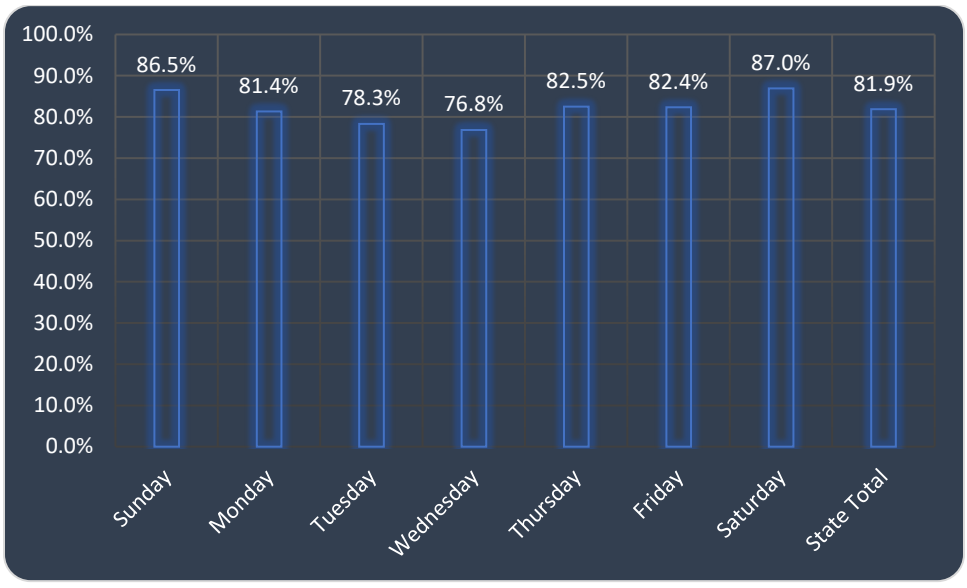
TABLE 8: ESTIMATES OF OCCUPANTS BELTED BY DAY OF WEEK, WYOMING 2023

	Estimate				*Unweighted Count*
day	Occupant Belted				Occupant Belted
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Sunday	86.5%	13.5%	100.0%	2217	9.5%
Monday	81.4%	18.6%	100.0%	2838	12.1%
Tuesday	78.3%	21.7%	100.0%	3068	13.1%
Wednesday	76.8%	23.2%	100.0%	4544	19.4%
Thursday	82.5%	17.5%	100.0%	4212	18.0%
Friday	82.4%	17.6%	100.0%	4440	19.0%
Saturday	87.0%	13.0%	100.0%	2051	8.8%
Total	81.9%	18.1%	100.0%	23370	100.0%

The highest numbers of occupants were observed on Wednesday (19.4%) and Friday (19.0%), and those two days accounted for nearly 40 percent of the observed occupants. The fewest occupants were observed on the weekend: Saturday (8.8%) and Sunday (9.5%).

The highest seat belt use rates were on the weekend: Saturday, 87.0 percent, and Sunday, 86.5 percent. The lowest recorded rates were Tuesday, 78.3 percent, and Wednesday, 76.8 percent. Therefore, the days that had the most occupants also had the lowest usage rates.

FIGURE 9: ESTIMATES OF OCCUPANTS BELTED BY DAY OF WEEK, WYOMING 2023



Seat belt use was also reported for other variables. For example, seat belt use was recorded by the weather during the observation, the number of road lanes observed, by the time of the observation, and the direction of the observation. The rates for these variables are presented in the appendix to this report.

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 rates of seat belt use as occupants in pickup trucks. To determine whether the 2023 survey would show similar results, we looked at gender, vehicle type, and the combination of the two.

Gender

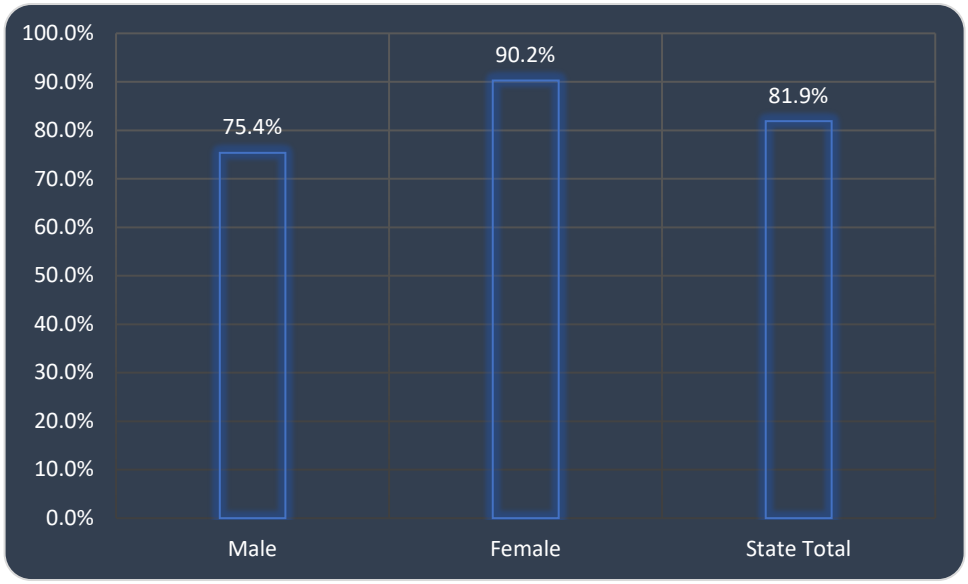
The estimates of seat belt use by occupant gender are presented in the following table.

TABLE 9: ESTIMATES OF OCCUPANTS BELTED BY GENDER, WYOMING 2023

	Estimate				
driverGender	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Male	75.4%	24.6%	100.0%	13402	57.3%
Female	90.2%	9.8%	100.0%	9968	42.7%
Total	81.9%	18.1%	100.0%	23370	100.0%

Males outnumbered females by a substantial margin this is significant to the overall usage rate: males were 57.3 percent of the vehicle occupants, and females were 42.7 percent, a difference of 14.6 percentage points. Of equal importance is that the male seat belt use rate was lower than the female rate. Males were belted at 75.0 percent, and females at a rate of 90.0 percent, a difference of 15.0 percentage points. Males contributed more to the seat belt use rate and had a significantly lower rate of seat belt use.

FIGURE 10: ESTIMATES OF OCCUPANTS BELTED BY GENDER, WYOMING 2023



Vehicle Type

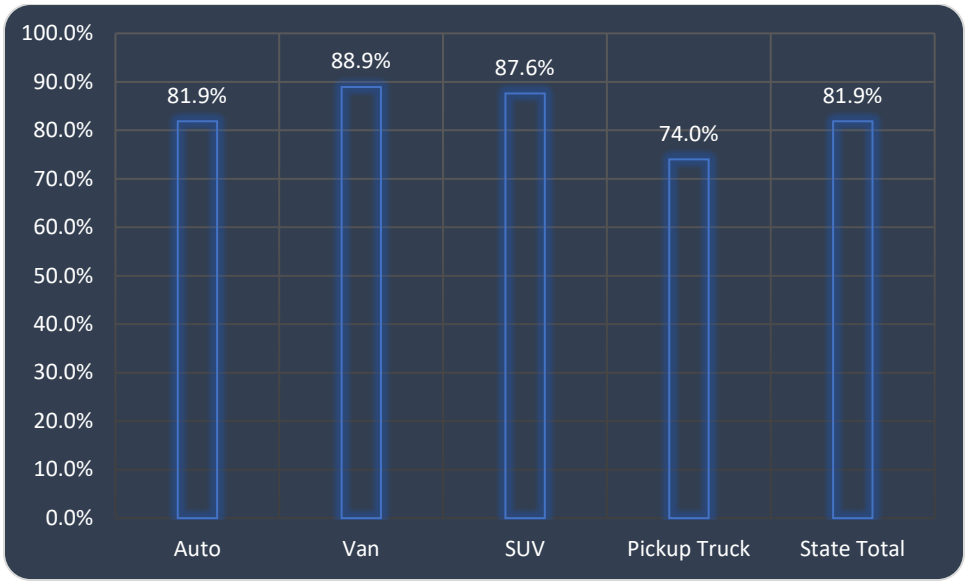
As in all surveys taken before 2023, observers recorded data for vehicles: automobiles, vans, sport utility vehicles (SUVs), and pickup trucks. The 2023 estimates of occupant seat belt use are presented in the following table.

TABLE 10: ESTIMATES OF OCCUPANTS BELTED BY VEHICLE TYPE, WYOMING 2023

	Estimate				
carType	Occupant Belted			unweighted Count	Unweighted % of Sample
	Yes	No	Total		
Auto	81.9%	18.1%	100.0%	4050	17.3%
Van	88.9%	11.1%	100.0%	8849	37.9%
SUV	87.6%	12.4%	100.0%	1236	5.3%
Pickup Truck	74.0%	26.0%	100.0%	9235	39.5%
Total	81.9%	18.1%	100.0%	23370	100.0%

The highest belt use rate was for drivers and passengers in vans, 88.9 percent belted. The lowest rate was for occupants of pickup trucks, 74.0 percent. Occupants' rates for SUVs was similar to that of vans at 87.6 percent, while those in automobiles were belted at a rate of 81.9 percent. To put these usage rates into perspective, note that vans were the vehicle for 37.9 percent of occupants, and pickup trucks contained 39.5 percent of occupants. Together, 77.4 percent of occupants were in vans and pickup trucks. However, seat belt use was very different for these two vehicle types. The significantly lower rate of seat belt use in pickups caused the rates to drop. Figure 12 illustrates the estimates of seat belt use by vehicle type.

FIGURE 11: ESTIMATES OF OCCUPANTS BELTED BY VEHICLE TYPE, WYOMING 2023



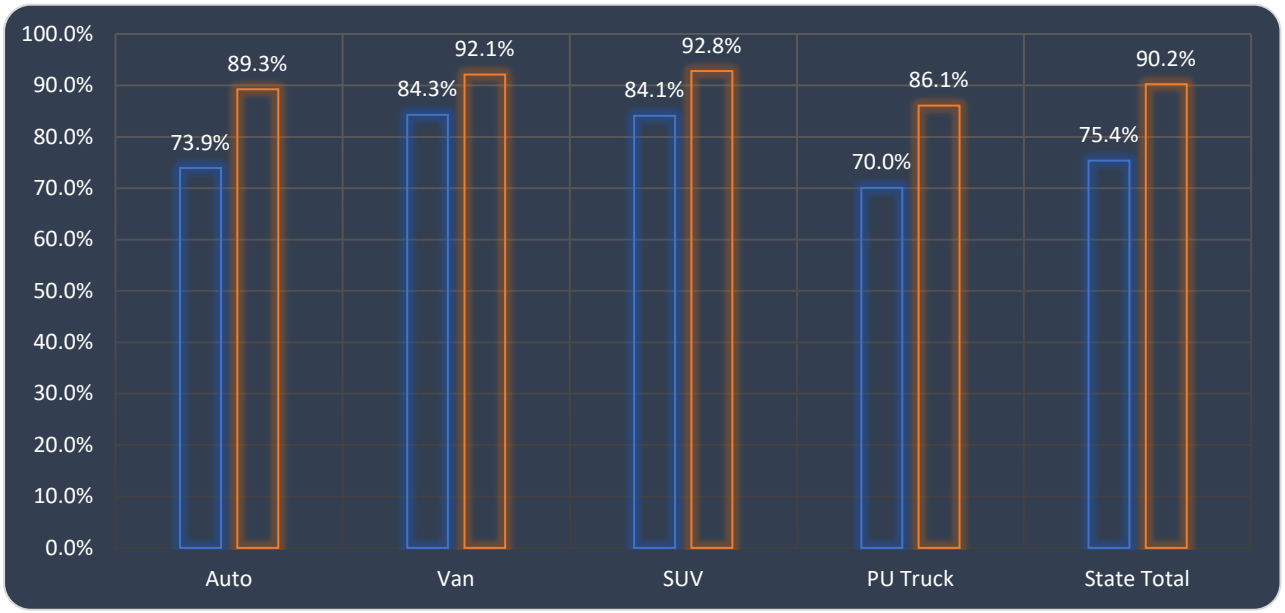
Gender and Vehicle Type

More than half of all observed male occupants were in pickups (52.4%). Females were more likely to be observed in vans (51.4% of total occupants). 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. Had the numbers been reversed, the overall usage rate would have been considerably higher.

Figure 13 illustrates the estimates of seat belt use by gender and vehicle type.

Females had higher seat belt use rates in every type of vehicle: 15.4 percentage points higher in automobiles, 7.8 points higher in vans, 8.7 points higher in SUVs, and 16.1 points higher in pickups.

FIGURE 12: ESTIMATES OF OCCUPANTS BELTED BY VEHICLE TYPE AND GENDER, WYOMING 2023



Comparison to 2022 Base Year

An almost identical number of drivers, passengers, and vehicles were observed in 2023 as in 2022.

TABLE 11: SAMPLE SIZE OF OBSERVED OCCUPANTS

	2022	*2023*
Drivers	17292	17278
Passengers	6095	6092
All Occupants	23397	23370

2023's seat belt usage rate increased 3.6 percentage points, from 78.3 percent wearing belts in 2022 to 81.9 percent in 2023. Overall, the seat belt usage rate increased in almost all categories.

In 2022, the male usage rate and the usage rate in pickup trucks brought the usage rate down. This was also the case in 2023, but the rates increased in both categories. Males were observed using seat belts 75.4 percent in 2023 compared to 73.5 percent a year ago. The usage rate by pickup truck occupants rose from 71.5 percent to this year's rate of 74 percent.

The female usage rate increased four points from 84.8 percent to 88.4 percent. The female rate in pickup trucks also rose from 79.4 percent to 86.1 percent. While this is positive, considerably fewer females were pickup truck occupants, thereby they did not have a significant impact on the overall usage rate for pickups.

Usage rates also increased for occupants in Wyoming-registered vehicles, though the rates are still lower than those observed in out-of-state registered vehicles. The rate in 2022 for Wyoming vehicles was 74.4 percent, which increased to 79.0 percent in 2023. The out-of-state vehicle rate also increased, but at a lower level than for in-state vehicles (88.1% in 2022; 88.8% in 2023).

Across the board in 2023, more drivers and passengers on Wyoming roadways were wearing their seat belts than those observed in 2022.

TABLE 12: PERCENT OF SEAT BELT USE OF KEY VARIABLES, 2022-2023

	2022	*2023*	*% Point Difference*	*% Difference*
Drivers	76.9	80.0	3.1	4.0
Passengers	83.2	88.2	5.0	6.0
Males	73.5	75.0	1.5	2.0
Females	84.8	90.0	5.2	6.1
Automobiles	78.7	81.9	3.2	4.1
Vans	85.3	88.9	3.6	4.2
SUVs	79.1	87.6	8.5	10.7
Pickups	71.5	74.0	2.5	3.5
Wyoming Vehicles	74.4	79.0	4.6	6.2
Out-of-State	88.1	88.8	0.7	0.8
Overall Rate	78.3	81.9	3.6	4.6

Concluding Remarks

The seat belt use survey in Wyoming had a new baseline in 2022. This year, 2023, is the first year that any comparisons could be made with the baseline. The methodologies and protocols have not changed. Therefore, surveys in both 2022 and 2023 represent the same level of reliability and validity as in previous surveys. It is too early to determine if the increases in the variables as well as the overall rate will demonstrate any trends, though they may emerge as future surveys use the current sample.

Summary comments are found in the Executive Summary. The data analysis that informs the narrative is included in the following appendix. There are other items in the appendices that provide additional information on the data and the analysis of the data.

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: 2023

Statewide Seat belt Use Rate: 81.9 Percent

I hereby certify that: The Governor designated Matthew D. Carlson, P.E. 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[5], 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.

Matt Carlson (Sep 29, 2023 08:32 MDT)

Signature

Sep 29, 2023

Date

Matthew D. Carlson, P.E.

Printed name of authorized signing official

[5] 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

- 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

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

Seat Belt Use Survey Design for Wyoming

Sampling, Data Collection and Estimation Plan

Revised 04-03-2012

Seat Belt Use Survey Design for Wyoming

Sampling, Data Collection and Estimation Plan

January 3, 2012
Revised March 7, 2012

Submitted to:

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

Submitted by:

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

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

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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

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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

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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]

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[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

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

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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:

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

where

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

The following equation can also be used to compute p.

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

where n is number of counties in the frame.

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Appendix A

Resumés

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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

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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)

32

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

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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 * Occupant Belted					
% within County					
	Estimate				
	Occupant Belted				
County	Yes	No	Total	unweighted count	unweighted % of sample
Albany	83.0%	17.0%	100.0%	1939	8.3%
Campbell	66.2%	33.8%	100.0%	2833	12.1%
Carbon	85.0%	15.0%	100.0%	1623	6.9%
Converse	76.0%	24.0%	100.0%	1578	6.8%
Goshen	79.9%	20.1%	100.0%	1875	8.0%
Fremont	92.3%	7.7%	100.0%	1084	4.6%
Johnson	95.5%	4.5%	100.0%	1385	5.9%
Laramie	81.7%	18.3%	100.0%	979	4.2%
Lincoln	86.6%	13.4%	100.0%	1336	5.7%
Natrona	77.8%	22.2%	100.0%	589	2.5%
Niobrara	80.3%	19.7%	100.0%	1016	4.3%
Park	99.5%	0.5%	100.0%	1703	7.3%
Platte	83.8%	16.2%	100.0%	1419	6.1%
Sweetwater	84.6%	15.4%	100.0%	2263	9.7%
Uinta	92.0%	8.0%	100.0%	1748	7.5%
Total	81.9%	18.1%	100.0%	23370	100.0%

Unweighted Frequencies by County and Occupant Type			
County	**driver unweighted count**	**passenger unweighted count**	**occupant unweighted count**
Albany	1412	527	1939
Campbell	2246	587	2833
Carbon	1165	458	1623
Converse	1300	278	1578
Goshen	1346	529	1875
Fremont	807	277	1084
Johnson	932	453	1385
Laramie	726	253	979
Lincoln	975	361	1336
Natrona	498	91	589
Niobrara	651	365	1016
Park	1342	361	1703
Platte	1021	398	1419
Sweetwater	1601	662	2263
Uinta	1256	492	1748
Total	17278	6092	23370

Percent belted by County and Occupant Type			
County	**Driver**	**Passenger**	**Occupants**
Albany	79.7%	91.7%	83.0%
Campbell	64.3%	73.4%	66.2%
Carbon	81.8%	93.0%	85.0%
Converse	73.3%	88.3%	76.0%
Goshen	75.7%	90.5%	79.9%
Fremont	91.8%	93.9%	92.3%
Johnson	95.2%	96.1%	95.5%
Laramie	80.1%	86.6%	81.7%
Lincoln	84.1%	93.4%	86.6%
Natrona	76.5%	84.6%	77.8%
Niobrara	78.3%	83.8%	80.3%
Park	99.4%	99.7%	99.5%
Platte	82.4%	87.4%	83.8%
Sweetwater	83.9%	86.2%	84.6%
Uinta	90.0%	97.1%	92.0%
Total	80.0%	88.2%	81.9%

County * driverBelt					
% within County					
County	Estimate			Unweighted Count	
	driverBelt			driverBelt	
	Yes	No	Total	unweighted count	unweighted % of sample
Albany	79.70%	20.30%	100.00%	1412	8.20%
Campbell	64.30%	35.70%	100.00%	2246	13.00%
Carbon	81.80%	18.20%	100.00%	1165	6.70%
Converse	73.30%	26.70%	100.00%	1300	7.50%
Goshen	75.70%	24.30%	100.00%	1346	7.80%
Fremont	91.80%	8.20%	100.00%	807	4.70%
Johnson	95.20%	4.80%	100.00%	932	5.40%
Laramie	80.10%	19.90%	100.00%	726	4.20%
Lincoln	84.10%	15.90%	100.00%	975	5.60%
Natrona	76.50%	23.50%	100.00%	498	2.90%
Niobrara	78.30%	21.70%	100.00%	651	3.80%
Park	99.40%	0.60%	100.00%	1342	7.80%
Platte	82.40%	17.60%	100.00%	1021	5.90%
Sweetwater	83.90%	16.10%	100.00%	1601	9.30%
Uinta	90.00%	10.00%	100.00%	1256	7.30%

County * passBelt					
% within County					
County	Estimate			Unweighted Count	
	passBelt			passBelt	
	Yes	No	Total	unweighted count	unweighted % of sample
Albany	91.7%	8.3%	100.0%	527	8.7%
Campbell	73.4%	26.6%	100.0%	587	9.6%
Carbon	93.0%	7.0%	100.0%	458	7.5%
Converse	88.3%	11.7%	100.0%	278	4.6%
Goshen	90.5%	9.5%	100.0%	529	8.7%
Fremont	93.9%	6.1%	100.0%	277	4.5%
Johnson	96.1%	3.9%	100.0%	453	7.4%
Laramie	86.6%	13.4%	100.0%	253	4.2%
Lincoln	93.4%	6.6%	100.0%	361	5.9%
Natrona	84.6%	15.4%	100.0%	91	1.5%
Niobrara	83.8%	16.2%	100.0%	365	6.0%
Park	99.7%	0.3%	100.0%	361	5.9%
Platte	87.4%	12.6%	100.0%	398	6.5%
Sweetwater	86.2%	13.8%	100.0%	662	10.9%
Uinta	97.1%	2.9%	100.0%	492	8.1%
Total	88.2%	11.8%	100.0%	6092	100.0%

Occupant Variables

Population * Occupant Belted					
% within Population					
Population	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Urban	81.3%	18.7%	100.0%	18324	78.4%
Rural	86.6%	13.4%	100.0%	5046	21.6%
Total	81.9%	18.1%	100.0%	23370	100.0%

weather * Occupant Belted					
% within weather					
weather	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Clear/sunny	82.2%	17.8%	100.0%	14193	60.7%
Cloudy	81.2%	18.8%	100.0%	7378	31.6%
Light rain	76.2%	23.8%	100.0%	1401	6.0%
Heavy rain	86.9%	13.1%	100.0%	151	0.6%
Occasional rain	84.8%	15.2%	100.0%	247	1.1%
Total	81.9%	18.1%	100.0%	23370	100.0%

lanes * Occupant Belted					
% within lanes					
lanes	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
1 Lane	82.5%	17.5%	100.0%	11337	48.5%
2 Lanes	81.4%	18.6%	100.0%	12033	51.5%
Total	81.9%	18.1%	100.0%	23370	100.0%

direction * Occupant Belted					
% within direction					
direction	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
North	82.5%	17.5%	100.0%	5851	25.1%
South	81.6%	18.4%	100.0%	5857	25.1%
East	80.1%	19.9%	100.0%	6166	26.4%
West	84.1%	15.9%	100.0%	5471	23.4%
Total	81.9%	18.1%	100.0%	23345	100.0%

driverGender * Occupant Belted					
% within driverGender					
driverGender	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Male	75.4%	24.6%	100.0%	13402	57.3%
Female	90.2%	9.8%	100.0%	9968	42.7%
Total	81.9%	18.1%	100.0%	23370	100.0%

carType * Occupant Belted					
% within carType					
carType	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Auto	81.9%	18.1%	100.0%	4050	17.3%
Van	88.9%	11.1%	100.0%	8849	37.9%
SUV	87.6%	12.4%	100.0%	1236	5.3%
Pickup Truck	74.0%	26.0%	100.0%	9235	39.5%
Total	81.9%	18.1%	100.0%	23370	100.0%

wyPlate * Occupant Belted					
% within wyPlate					
wyPlate	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Yes	79.0%	21.0%	100.0%	14430	61.7%
No	88.8%	11.2%	100.0%	8940	38.3%
Total	81.9%	18.1%	100.0%	23370	100.0%

timeStamp * Occupant Belted					
% within timeStamp					
timeStamp	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
7.30-9.30 am	79.2%	20.8%	100.0%	4238	18.1%
9.30-11.30 am	81.9%	18.1%	100.0%	4593	19.7%
11.30-1.30 pm	83.3%	16.7%	100.0%	5459	23.4%
1.30 - 3.30 pm	82.5%	17.5%	100.0%	5360	22.9%
3.30 - 5.30 pm	84.3%	15.7%	100.0%	3720	15.9%
Total	81.9%	18.1%	100.0%	23370	100.0%

RoadType * Occupant Belted					
% within RoadType					
RoadType	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
S1100 - Primary Road	86.2%	13.8%	100.0%	7861	33.6%
S1200 - Secondary Road	81.8%	18.2%	100.0%	14742	63.1%
S1400 - Local/Rural Road	76.3%	23.7%	100.0%	767	3.3%
Total	81.9%	18.1%	100.0%	23370	100.0%

day * Occupant Belted					
% within day					
day	Estimate			Unweighted Count	
	Occupant Belted			Occupant Belted	
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Sunday	86.5%	13.5%	100.0%	2217	9.5%
Monday	81.4%	18.6%	100.0%	2838	12.1%
Tuesday	78.3%	21.7%	100.0%	3068	13.1%
Wednesday	76.8%	23.2%	100.0%	4544	19.4%
Thursday	82.5%	17.5%	100.0%	4212	18.0%
Friday	82.4%	17.6%	100.0%	4440	19.0%
Saturday	87.0%	13.0%	100.0%	2051	8.8%
Total	81.9%	18.1%	100.0%	23370	100.0%

General Estimates for Drivers, Passengers, Occupants

Occupant Belted						
		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Yes	81.9%	0.2%	81.4%	82.3%	19515
	No	18.1%	0.2%	17.7%	18.6%	3855
	Total	100.0%	0.0%	100.0%	100.0%	23370

driverBelt						
		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Yes	80.0%	0.2%	79.7%	80.3%	14063
	No	20.0%	0.2%	19.7%	20.3%	3215
	Total	100.0%	0.0%	100.0%	100.0%	17278

passBelt						
		Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
% of Total	Yes	88.2%	0.5%	87.2%	89.1%	5452
	No	11.8%	0.5%	10.9%	12.8%	640
	Total	100.0%	0.0%	100.0%	100.0%	6092

Estimates of Seat Belt Use for Drivers, Passengers, and All Occupants, Wyoming 2023			
	Drivers	Passengers	All Occupants
Percent Belted	80.0%	88.2%	81.9%
Unweighted Total	17278	6092	23370
% of Occupants	73.9%	26.1%	100.0%

Vehicle Type and Gender

Estimate of Occupant Belt Use by Vehicle Type and Occupant Gender, Wyoming 2023							
carType * Occupant Belted							
% within carType							
driverGender		Estimate			Unweighted Count		
		Occupant Belted			Occupant Belted		
		Yes	No	Total	Total	% of Full Sample	% of Subsample
Male	Auto	73.9%	26.1%	100.0%	1970	8.4%	14.7%
	Van	84.3%	15.7%	100.0%	3721	15.9%	27.8%
	SUV	84.1%	15.9%	100.0%	689	2.9%	5.1%
	Pickup Truck	70.0%	30.0%	100.0%	7022	30.0%	52.4%
	Male subtotal	75.4%	24.6%	100.0%	13402	57.3%	100.0%
Female	Auto	89.3%	10.7%	100.0%	2080	8.9%	20.9%
	Van	92.1%	7.9%	100.0%	5128	21.9%	51.4%
	SUV	92.8%	7.2%	100.0%	547	2.3%	5.5%
	Pickup Truck	86.1%	13.9%	100.0%	2213	9.5%	22.2%
	Female subtotal	90.2%	9.8%	100.0%	9968	42.7%	100.0%
					23370		

Estimate of Occupant Belt Use by Vehicle Type and Gender, Wyoming 2023			
	Male	Female	Difference
Auto	73.9%	89.3%	15.4%
Van	84.3%	92.1%	7.8%
SUV	84.1%	92.8%	8.7%
Pickup Truck	70.0%	86.1%	16.0%
Total	75.4%	90.2%	14.9%

Estimate of Driver, Passenger and All Occupants Belt Use by Vehicle Type and Gender, Wyoming 2023					
	Auto	Van	SUV	Pickup Truck	State Total
Male - Driver	74.1%	83.7%	82.2%	70.6%	75.4%
Female - Driver	88.0%	90.7%	90.4%	79.4%	88.4%
Male- Passenger	72.3%	88.2%	96.0%	65.4%	75.5%
Female - Passenger	92.5%	95.0%	95.4%	91.4%	93.4%

driverGender * Occupant Belted					
% within driverGender					
driverGender	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Male	75%	25%	100%	13402	57.3%
Female	90%	10%	100%	9968	42.7%
Total	82%	18%	100%	23370	100.0%

carType * Occupant Belted					
% within carType					
carType	Estimate				
	Occupant Belted				
	Yes	No	Total	unweighted Count	Unweighted % of Sample
Auto	81.9%	18.1%	100%	4050	17.3%
Van	88.9%	11.1%	100%	8849	37.9%
SUV	87.6%	12.4%	100%	1236	5.3%
Pickup Truck	74.0%	26.0%	100%	9235	39.5%
Total	81.9%	18.1%	100%	23370	100.0%

carType * driverGender Crosstabulation				
				% within carType
		driverGender		
		Male	Female	difference
carType	Auto	48.6%	51.4%	2.7%
	Van	42.0%	58.0%	15.9%
	SUV	55.7%	44.3%	-11.5%
	Pickup Truck	76.0%	24.0%	-52.1%
Total		57.3%	42.7%	-14.7%

Drivers and Passenger Variables

Estimates of Driver, Passenger and All Occupants Belted, Wyoming 2023			
County	**Driver**	**Passenger**	**Occupants**
Albany	79.7%	91.7%	83.0%
Campbell	64.3%	73.4%	66.2%
Carbon	81.8%	93.0%	85.0%
Converse	73.3%	88.3%	76.0%
Goshen	75.7%	90.5%	79.9%
Fremont	91.8%	93.9%	92.3%
Johnson	95.2%	96.1%	95.5%
Laramie	80.1%	86.6%	81.7%
Lincoln	84.1%	93.4%	86.6%
Natrona	76.5%	84.6%	77.8%
Niobrara	78.3%	83.8%	80.3%
Park	99.4%	99.7%	99.5%
Platte	82.4%	87.4%	83.8%
Sweetwater	83.9%	86.2%	84.6%
Uinta	90.0%	97.1%	92.0%
Total	80.0%	88.2%	81.9%

Estimates of Driver, Passenger and All Occupants Belted by Population Density, Wyoming 2023			
	Drivers	**Passengers**	**Occupants**
Urban	79.5%	87.70%	81.3%
Rural	84.8%	91.30%	86.6%
Total	80.0%	88.20%	81.9%

Estimates of Drivers, Passengers and All Occupants Belted by Registration Type, Wyoming 2023			
	Drivers	**Passengers**	**Occupants**
Wy License	77.6%	84.6%	81.3%
Out of State	86.7%	93.2%	86.6%
State	80.0%	88.2%	81.9%

Estimates of Drivers, Passengers and All Occupants Belted by Roadway Type, Wyoming 2023			
Roadway	**Drivers**	**Passengers**	**Occupants**
Primary	84.4%	91.4%	86.2%
Secondary	79.7%	88.6%	81.8%
Other	75.0%	81.7%	76.3%
State	80.0%	88.2%	81.9%

Driver Variables

Population * driverBelt					
% within Population					
Population	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Urban	79.5%	20.5%	100.0%	13720	79.4%
Rural	84.8%	15.2%	100.0%	3558	20.6%
Total	80.0%	20.0%	100.0%	17278	100.0%

day * driverBelt					
% within day					
day	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Sunday	84.8%	15.2%	100.0%	1537	8.9%
Monday	79.0%	21.0%	100.0%	2053	11.9%
Tuesday	77.1%	22.9%	100.0%	2265	13.1%
Wednesday	75.3%	24.7%	100.0%	3583	20.7%
Thursday	80.9%	19.1%	100.0%	3128	18.1%
Friday	79.9%	20.1%	100.0%	3296	19.1%
Saturday	85.5%	14.5%	100.0%	1416	8.2%
Total	80.0%	20.0%	100.0%	17278	100.0%

weather * driverBelt					
% within weather					
weather	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Clear/sunny	80.20%	19.80%	100.00%	10547	61.0%
Cloudy	79.60%	20.40%	100.00%	5413	31.3%
Light rain	72.90%	27.10%	100.00%	1049	6.1%
Heavy rain	84.30%	15.70%	100.00%	106	0.6%
Occasional rain	84.40%	15.60%	100.00%	163	0.9%
Total	80.00%	20.00%	100.00%	17278	100.0%

lanes * driverBelt					
				% within lanes	
lanes	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
1 Lane	81.3%	18.7%	100.0%	8291	48.0%
2 Lanes	79.1%	20.9%	100.0%	8987	52.0%
Total	80.0%	20.0%	100.0%	17278	100.0%

direction * driverBelt					
% within direction					
direction	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
North	81.10%	18.90%	100.00%	4393	25.5%
South	79.70%	20.30%	100.00%	4290	24.9%
East	77.70%	22.30%	100.00%	4520	26.2%
West	82.50%	17.50%	100.00%	4055	23.5%
Total	80.00%	20.00%	100.00%	17258	100.0%

carType * driverBelt					
				% within carType	
carType	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Auto	80.6%	19.4%	100.0%	3074	17.8%
Van	87.4%	12.6%	100.0%	6283	36.4%
SUV	84.6%	15.4%	100.0%	854	4.9%
Pickup Truck	71.9%	28.1%	100.0%	7067	40.9%
Total	80.0%	20.0%	100.0%	17278	100.0%

wyPlate * driverBelt					
				% within wyPlate	
wyPlate	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Yes	77.6%	22.4%	100.0%	11291	65.3%
No	86.7%	13.3%	100.0%	5987	34.7%
Total	80.0%	20.0%	100.0%	17278	100.0%

timeStamp * driverBelt					
				% within timeStamp	
timeStamp	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
7.30-9.30 am	77.9%	22.1%	100.0%	3373	19.5%
9.30-11.30 am	79.8%	20.2%	100.0%	3300	19.1%
11.30-1.30 pm	81.0%	19.0%	100.0%	4005	23.2%
1.30 - 3.30 pm	81.3%	18.7%	100.0%	3887	22.5%
3.30 - 5.30 pm	82.3%	17.7%	100.0%	2713	15.7%
Total	80.0%	20.0%	100.0%	17278	100.0%

RoadType * driverBelt					
				% within RoadType	
RoadType	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
S1100 - Primary Road	84.4%	15.6%	100.0%	5645	32.7%
S1200 - Secondary Road	79.7%	20.3%	100.0%	11018	63.8%
S1400 - Local/Rural Road	75.0%	25.0%	100.0%	615	3.6%
Total	80.0%	20.0%	100.0%	17278	100.0%

driverGender * driverBelt					
				% within driverGender	
driverGender	Estimate				
	driverBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Male	75.4%	24.6%	100.0%	11695	67.7%
Female	88.4%	11.6%	100.0%	5583	32.3%
Total	80.0%	20.0%	100.0%	17278	100.0%

Passenger Variables

% within Population					
Population	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Urban	87.70%	12.30%	100.00%	4604	75.6%
Rural	91.30%	8.70%	100.00%	1488	24.4%
Total	88.20%	11.80%	100.00%	6092	100.0%

% within day					
day	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Sunday	90.1%	9.9%	100.0%	680	11.2%
Monday	88.3%	11.7%	100.0%	785	12.9%
Tuesday	82.5%	17.5%	100.0%	803	13.2%
Wednesday	81.9%	18.1%	100.0%	961	15.8%
Thursday	89.6%	10.4%	100.0%	1084	17.8%
Friday	92.2%	7.8%	100.0%	1144	18.8%
Saturday	90.0%	10.0%	100.0%	635	10.4%
Total	88.2%	11.8%	100.0%	6092	100.0%

weather * passBelt					
% within weather					
weather	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Clear/sunny	89.00%	11.00%	100.00%	3646	59.8%
Cloudy	86.40%	13.60%	100.00%	1965	32.3%
Light rain	86.50%	13.50%	100.00%	352	5.8%
Heavy rain	91.30%	8.70%	100.00%	45	0.7%
Occasional rain	85.50%	14.50%	100.00%	84	1.4%
Total	88.20%	11.80%	100.00%	6092	100.0%

% within lanes					
lanes	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
1 Lane	86.3%	13.7%	100.0%	3046	50.0%
2 Lanes	89.7%	10.3%	100.0%	3046	50.0%
Total	88.2%	11.8%	100.0%	6092	100.0%

% within direction					
direction	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
North	87.1%	12.9%	100.0%	1458	24.0%
South	88.0%	12.0%	100.0%	1567	25.7%
East	88.7%	11.3%	100.0%	1646	27.0%
West	88.9%	11.1%	100.0%	1416	23.3%
Total	88.2%	11.8%	100.0%	6087	100.0%

% within carType					
carType	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Auto	86.8%	13.2%	100.0%	976	16.0%
Van	93.5%	6.5%	100.0%	2566	42.1%
SUV	95.6%	4.4%	100.0%	382	6.3%
Pickup Truck	81.6%	18.4%	100.0%	2168	35.6%
Total	88.2%	11.8%	100.0%	6092	100.0%

% within wyPlate					
wyPlate	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Yes	84.6%	15.4%	100.0%	3139	51.5%
No	93.2%	6.8%	100.0%	2953	48.5%
Total	88.2%	11.8%	100.0%	6092	100.0%

% within passGender					
passGender	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
Male	75.5%	24.5%	100.0%	1707	28.0%
Female	93.4%	6.6%	100.0%	4385	72.0%
Total	88.2%	11.8%	100.0%	6092	100.0%

% within timeStamp					
timeStamp	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
7.30-9.30 am	86.3%	13.7%	100.0%	865	14.2%
9.30-11.30 am	88.7%	11.3%	100.0%	1293	21.2%
11.30-1.30 pm	90.1%	9.9%	100.0%	1454	23.9%
1.30 - 3.30 pm	86.0%	14.0%	100.0%	1473	24.2%
3.30 - 5.30 pm	89.9%	10.1%	100.0%	1007	16.5%
Total	88.2%	11.8%	100.0%	6092	100.0%

% within RoadType					
RoadType	Estimate				
	passBelt				
	Yes	No	Total	Unweighted Count	% of Sample
S1100 - Primary Road	91.4%	8.6%	100.0%	2216	36.4%
S1200 - Secondary Road	88.6%	11.4%	100.0%	3724	61.1%
S1400 - Local/Rural Road	81.7%	18.3%	100.0%	152	2.5%
Total	88.2%	11.8%	100.0%	6092	100.0%

Occupant Data by Observer and County

observer * Occupant Belted					
			% within observer		
	Estimate				
	Occupant Belted				
observer	Yes	No	Total	Total	% Sample
Doug Peterson, Platte	83.8%	16.2%	100.0%	1419	6.1%
Dixie Elder, Johnson	95.5%	4.5%	100.0%	1385	5.9%
Deb Euster, Goshen	92.4%	7.6%	100.0%	911	3.9%
Susan Parkinson, Lincoln	86.6%	13.4%	100.0%	1336	5.7%
Bryan Shannon, Campbell	66.4%	33.6%	100.0%	2891	12.4%
Sandra Gabel, Fremont	80.6%	19.4%	100.0%	2048	8.8%
Mindy McKinley, Uinta	92.0%	8.0%	100.0%	1748	7.5%
Aspen Miller, Laramie	81.7%	18.3%	100.0%	979	4.2%
Kim Brattis, Natrona	77.8%	22.2%	100.0%	589	2.5%
Donna Hermann, Albany	83.0%	17.0%	100.0%	1939	8.3%
Lori Geisler, Carbon	85.5%	14.5%	100.0%	1565	6.7%
Diana Shannon, Converse	76.0%	24.0%	100.0%	1578	6.8%
Joyce Hammer, Niobrara	80.3%	19.7%	100.0%	1016	4.3%
Robery Sadler, Park	99.5%	0.5%	100.0%	1703	7.3%
Rob Remele, Sweetwater	84.6%	15.4%	100.0%	2263	9.7%
Total	81.9%	18.1%	100.0%	23370	100.0%

Counties and Observers with Unweighted Frequency of Occupants and Percent of Sample				
observer	% Belted - weighted	Unweighted Count	% Sample	Cum %
Bryan Shannon, Campbell	66.4%	2891	12.4%	12.4%
Rob Remele, Sweetwater	84.6%	2263	9.7%	22.1%
Sandra Gabel, Fremont	80.6%	2048	8.8%	30.8%
Donna Hermann, Albany	83.0%	1939	8.3%	39.1%
Mindy McKinley, Uinta	92.0%	1748	7.5%	46.6%
Robery Sadler, Park	99.5%	1703	7.3%	53.9%
Diana Shannon, Converse	76.0%	1578	6.8%	60.6%
Lori Geisler, Carbon	85.5%	1565	6.7%	67.3%
Doug Peterson, Platte	83.8%	1419	6.1%	73.4%
Dixie Elder, Johnson	95.5%	1385	5.9%	79.3%
Susan Parkinson, Lincoln	86.6%	1336	5.7%	85.0%
Joyce Hammer, Niobrara	80.3%	1016	4.3%	89.4%
Aspen Miller, Laramie	81.7%	979	4.2%	93.6%
Deb Euster, Goshen	92.4%	911	3.9%	97.5%
Kim Brattis, Natrona	77.8%	589	2.5%	100.0%
Total	81.9%	23370	100.0%	

observer * driverBelt						
						% within observer
observer	Estimate			Unweighted Count		
	driverBelt			driverBelt		
	Yes	No	Total	Yes	No	Total
Doug Peterson, Platte	82.4%	17.6%	100.0%	836	185	1021
Dixie Elder, Johnson	95.2%	4.8%	100.0%	885	47	932
Deb Euster, Goshen	91.6%	8.4%	100.0%	619	57	676
Susan Parkinson, Lincoln	84.1%	15.9%	100.0%	820	155	975
Bryan Shannon, Campbell	64.4%	35.6%	100.0%	1461	819	2280
Sandra Gabel, Fremont	76.7%	23.3%	100.0%	1141	336	1477
Mindy McKinley, Uinta	90.0%	10.0%	100.0%	1131	125	1256
Aspen Miller, Laramie	80.1%	19.9%	100.0%	589	137	726
Kim Brattis, Natrona	76.5%	23.5%	100.0%	381	117	498
Donna Hermann, Albany	79.7%	20.3%	100.0%	1126	286	1412
Lori Geisler, Carbon	82.3%	17.7%	100.0%	932	199	1131
Diana Shannon, Converse	73.3%	26.7%	100.0%	954	346	1300
Joyce Hammer, Niobrara	78.3%	21.7%	100.0%	510	141	651
Robery Sadler, Park	99.4%	0.6%	100.0%	1334	8	1342
Rob Remele, Sweetwater	83.9%	16.1%	100.0%	1344	257	1601
Total	80.0%	20.0%	100.0%	14063	3215	17278

observer * passBelt						
						% within observer
observer	Estimate			Unweighted Count		
	passBelt			passBelt		
	Yes	No	Total	Yes	No	Total
Doug Peterson, Platte	87.4%	12.6%	100.0%	346	52	398
Dixie Elder, Johnson	96.1%	3.9%	100.0%	434	19	453
Deb Euster, Goshen	94.9%	5.1%	100.0%	223	12	235
Susan Parkinson, Lincoln	93.4%	6.6%	100.0%	337	24	361
Bryan Shannon, Campbell	73.7%	26.3%	100.0%	446	165	611
Sandra Gabel, Fremont	90.4%	9.6%	100.0%	516	55	571
Mindy McKinley, Uinta	97.1%	2.9%	100.0%	478	14	492
Aspen Miller, Laramie	86.6%	13.4%	100.0%	221	32	253
Kim Brattis, Natrona	84.6%	15.4%	100.0%	77	14	91
Donna Hermann, Albany	91.7%	8.3%	100.0%	483	44	527
Lori Geisler, Carbon	93.8%	6.2%	100.0%	408	26	434
Diana Shannon, Converse	88.3%	11.7%	100.0%	246	32	278
Joyce Hammer, Niobrara	83.8%	16.2%	100.0%	306	59	365
Robery Sadler, Park	99.7%	0.3%	100.0%	360	1	361
Rob Remele, Sweetwater	86.2%	13.8%	100.0%	571	91	662
Total	88.2%	11.8%	100.0%	5452	640	6092

Appendix E: Observer Field Test Ratings

Field Test Scores by Observer

Observer Written Exam & Field Observations

	Observer	Written	Practice	Test 1	Test 2	Test 3	AVG T1-T3
Albany	**Donna Hermann**	90.00	97.73	100.00	46.76	97.32	86.36
Campbell	**Bryan Shannon**	100.00	100.00	100.00	97.47	94.12	98.32
Carbon	**Lori Geisler**	95.00	93.14	95.00	97.78	93.50	94.88
Converse	**Diana Shannon**	95.00	97.98	98.26	88.51	99.21	95.79
Fremont	**Sandra Gabel**	100.00	97.73	99.31	100.00	99.16	99.24
Goshen	**Deb Eutsler**	100.00	75.86	99.16	98.61	90.32	92.79
Johnson	**Dixie Elder**	100.00	100.00	98.18	86.81	99.22	96.84
Laramie	**Aspen Miller**	90.00	97.70	98.55	99.29	93.62	95.83
Lincoln	**Susan Parkinson**	100.00	99.96	97.25	96.00	92.66	97.17
Natrona	**Kim Brattis**	100.00	100.00	98.54	98.49	91.84	97.77
Niobrara	**Joyce Hammer**	90.00	100.00	99.16	99.23	95.24	96.73
Park	**Robert Sadler**	90.00	87.80	99.31	87.50	93.55	91.63
Platte	**Doug Peterson**	100.00	88.89	97.25	87.84	89.13	92.62
Sweetwater	**Rob Remele**	95.00	100.00	99.31	86.62	93.62	94.91
Uinta	**Mindy MicKinley**	100.00	100.00	94.12	87.87	93.97	95.19
WY Cor	**Bridget White**	100.00	97.50	98.20	100.00	93.94	97.93
QC2	**Vicky Peterson**	100.00	93.00	98.26	96.08	99.14	97.30
	State Averages	**96.76**	95.72	98.23	91.46	94.68	**95.37**

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	1939	0.000000
Campbell	5	16	2849	0.005616
Carbon	7	0	1623	0.000000
Converse	9	0	1578	0.000000
Fremont	13	0	1875	0.000000
Goshen	15	0	1084	0.000000
Johnson	19	0	1385	0.000000
Laramie	21	0	981	0.000000
Lincoln	23	0	1336	0.000000
Natrona	25	2	591	0.003384
Niobrara	27	2	1017	0.001967
Park	29	1	1703	0.000587
Platte	31	0	1419	0.000000
Sweetwater	37	0	2263	0.000000
Uinta	41	0	1748	0.000000
State		21	23391.00	0.000898
				0.0898%

Appendix G: Reporting requirements

Data Collected at Observation Sites

1. Standard Error of Statewide Belt Use Rate: 0.2 percent
2. Nonresponse Rate as provided in §1340.9 (f)
    a. Nonresponse rate for the survey variable seat belt use: 0.0898 percent

PART B-DATA COLLECTED AT OBSERVATION SITES

Site ID	Site type[1]	Date observed	Sample weight	Number of drivers	Number of front passengers	Number of occupants[2] belted	Number of occupants unbelted	Number of occupants with unknown belt use
168738863.00	Original	6/8/2023	155.47	61	28	82	7	0
618090881.00	Original	6/9/2023	583.09	194	51	202	43	0
168738951.00	Original	6/10/2023	155.47	90	39	112	17	0
168738951.00	Original	6/10/2023	155.47	29	9	26	12	0
168743933.00	Original	6/9/2023	155.47	126	43	137	32	0
604510122.00	Original	6/7/2023	155.47	56	17	56	17	0
636266628.00	Original	6/10/2023	155.47	38	19	46	11	0
168727108.00	Original	6/5/2023	155.47	17	5	21	1	0
639960014.00	Original	6/6/2023	155.47	6	1	6	1	0
647793927.00	Original	6/8/2023	155.47	83	34	93	24	0
168722890.00	Original	6/11/2023	155.47	54	32	65	21	0
636738163.00	Original	6/7/2023	583.09	138	53	167	24	0
168745002	Original	6/11/2023	155.4726368	5	2	6	1	0
604510697.00	Original	6/7/2023	155.47	39	12	42	9	0
604511968.00	Original	6/6/2023	583.09	108	54	142	20	0
618003358.00	Original	6/8/2023	155.47	70	21	77	14	0
638770241.00	Original	6/9/2023	155.47	118	57	148	27	0
604518973.00	Original	6/6/2023	583.09	152	45	153	44	0
604511219.00	Original	6/5/2023	155.47	28	5	28	5	0
146318369	Original	6/11/2023	148.5398532	7	4	7	4	0
146318928	Original	6/10/2023	148.5398532	9	3	8	4	0
146325041	Original	6/7/2023	148.5398532	344	70	259	153	2
146332284	Original	6/5/2023	148.5398532	106	23	81	46	2
146346598	Original	6/7/2023	148.5398532	349	86	253	182	0
146351640	Original	6/7/2023	148.5398532	295	74	210	155	4
146353423	Original	6/5/2023	148.5398532	94	28	82	40	0
607392873	Original	6/9/2023	792.4244225	188	57	179	66	0
607394482	Original	6/5/2023	148.5398532	48	15	38	25	0
607397168	Original	6/6/2023	148.5398532	24	9	25	7	1
607399730	Original	6/6/2023	148.5398532	49	16	51	14	0
607414582	Original	6/8/2023	792.4244225	149	72	173	47	1
607420517	Original	6/10/2023	148.5398532	27	12	31	8	0
607422111	Original	6/11/2023	148.5398532	6	5	11	0	0
607423196	Original	6/8/2023	148.5398532	24	7	19	12	0
641839236	Original	6/9/2023	792.4244225	125	64	153	36	0
643208992	Original	6/7/2023	148.5398532	342	34	226	145	5
643426599	Original	6/10/2023	148.5398532	21	5	15	11	0
652125140	Original	6/6/2023	148.5398532	46	12	44	13	1
148701934	Original	6/10/2023	226.711102	13	7	17	3	0
148702564	Original	6/10/2023	226.711102	18	7	12	13	0
148718040	Original	6/7/2023	226.711102	13	0	11	2	0
148722817	Original	6/11/2023	226.711102	31	18	41	8	0
148725602	Original	6/11/2023	226.711102	34	24	42	16	0
148731116	Original	6/5/2023	635.1626016	128	46	159	15	0

148751796	Original	6/7/2023	226.711102	9	5	13	1	0
148752599	Original	6/6/2023	226.711102	23	9	29	3	0
611192000	Original	6/6/2023	226.711102	6	1	7	0	0
617621426	Original	6/5/2023	226.711102	126	28	108	46	0
619629104	Original	6/9/2023	635.1626016	179	75	215	39	0
619629110	Original	6/9/2023	635.1626016	156	80	202	34	0
634320705	Original	6/8/2023	226.711102	46	12	53	5	0
636227537	Original	6/6/2023	226.711102	14	3	15	2	0
637994487	Original	6/10/2023	226.711102	23	17	30	10	0
638994654	Original	6/8/2023	226.711102	27	13	40	0	0
639992876	Original	6/9/2023	635.1626016	153	65	197	21	0
639993367	Original	6/5/2023	226.711102	78	13	78	13	0
639993412	Original	6/9/2023	635.1626016	88	35	113	10	0
146971717	Original	6/9/2023	162.1192225	43	18	56	5	0
146980885	Original	6/11/2023	162.1192225	43	12	42	13	0
146980941	Original	6/11/2023	162.1192225	62	22	61	23	0
146984416	Original	6/11/2023	162.1192225	22	8	22	8	0
146990132	Original	6/10/2023	162.1192225	42	13	46	9	0
146993382	Original	6/7/2023	162.1192225	4	2	3	3	0
146995457	Original	6/10/2023	162.1192225	47	6	27	26	0
146999038	Original	6/8/2023	162.1192225	144	41	143	42	0
147014967	Original	6/6/2023	162.1192225	0	0	0	0	0
606571356	Original	6/7/2023	350.6557262	133	17	105	45	0
606571652	Original	6/6/2023	350.6557262	110	8	67	51	0
606572602	Original	6/8/2023	162.1192225	9	1	7	3	0
606575905	Original	6/6/2023	162.1192225	52	9	43	18	0
606578118	Original	6/5/2023	162.1192225	6	0	4	2	0
606586736	Original	6/8/2023	350.6557262	188	32	187	33	0
626153799	Original	6/8/2023	350.6557262	154	43	149	48	0
633115075	Original	6/9/2023	350.6557262	201	42	209	34	0
636229512	Original	6/5/2023	162.1192225	18	1	13	6	0
649775037	Original	6/10/2023	162.1192225	22	3	16	9	0
148431962	Original	6/6/2023	172.4137931	1	1	2	0	0
148441014	Original	6/7/2023	172.4137931	1	0	0	1	0
148441775	Original	6/9/2023	172.4137931	31	10	40	1	0
148441785	Original	6/9/2023	172.4137931	14	4	18	0	0
148445311	Original	6/6/2023	172.4137931	49	22	69	2	0
148454705	Original	6/7/2023	172.4137931	117	38	141	14	0
148456852	Original	6/7/2023	172.4137931	112	28	122	18	0
148463881	Original	6/5/2023	172.4137931	10	2	11	1	0
148472048	Original	6/11/2023	172.4137931	93	45	133	5	0
148475885	Original	6/11/2023	172.4137931	120	41	152	9	0
148475919	Original	6/10/2023	172.4137931	49	12	58	3	0
148477019	Original	6/11/2023	172.4137931	8	7	13	2	0
631779194	Original	6/9/2023	172.4137931	30	15	41	4	0
635177424	Original	6/5/2023	172.4137931	6	1	3	4	0
636257484	Original	6/10/2023	172.4137931	19	5	18	6	0
636257605	Alternate	6/8/2023	172.4137931	121	38	152	7	0
641079375	Alternate	6/8/2023	172.4137931	1	1	2	0	0
641181863	Original	6/5/2023	172.4137931	10	3	12	1	0
649865571	Original	6/10/2023	172.4137931	15	4	14	5	0
159764187	Original	6/11/2023	111.7318436	51	21	34	38	0
159764392	Original	6/11/2023	111.7318436	6	1	5	2	0

159771454	Original	6/5/2023	111.7318436	25	8	31	2	0
159772596	Original	6/6/2023	111.7318436	35	22	55	2	0
159772678	Original	6/6/2023	111.7318436	54	34	81	7	0
159773125	Original	6/6/2023	111.7318436	26	5	26	5	0
159774918	Original	6/7/2023	111.7318436	30	11	36	5	0
159775310	Original	6/9/2023	111.7318436	34	20	46	8	0
159775373	Original	6/8/2023	111.7318436	102	56	136	22	0
159781512	Original	6/7/2023	111.7318436	131	66	184	13	0
159782598	Original	6/5/2023	111.7318436	124	45	147	22	0
604867100	Original	6/11/2023	111.7318436	98	33	101	30	0
604880877	Original	6/10/2023	111.7318436	75	45	117	3	0
604881016	Original	6/10/2023	111.7318436	62	29	71	20	0
604888294	Original	6/8/2023	111.7318436	39	12	41	10	0
606772650	Original	6/7/2023	111.7318436	284	49	192	141	0
619631067	Original	6/6/2023	111.7318436	121	45	123	43	0
634917921	Original	6/10/2023	111.7318436	48	27	71	4	0
647671818	Original	6/9/2023	111.7318436	1	0	1	0	0
147285886	Original	6/9/2023	268.4924151	2	1	2	1	0
147290433	Original	6/11/2023	268.4924151	78	40	114	4	0
147298892	Original	6/5/2023	268.4924151	25	17	37	5	0
147300370	Original	6/6/2023	268.4924151	26	10	29	7	0
147309909	Original	6/9/2023	268.4924151	4	1	3	2	0
147313872	Original	6/8/2023	368.8063582	66	30	91	5	0
147319715	Original	6/11/2023	268.4924151	2	1	3	0	0
147320451	Original	6/10/2023	268.4924151	5	2	7	0	0
147324875	Original	6/6/2023	268.4924151	14	2	14	2	0
147331905	Original	6/11/2023	268.4924151	1	0	1	0	0
147332534	Original	6/8/2023	268.4924151	9	4	11	2	0
147345807	Original	6/7/2023	368.8063582	109	53	152	10	0
147364519	Original	6/6/2023	368.8063582	67	27	93	1	0
147364534	Original	6/9/2023	368.8063582	100	47	143	4	0
147364570	Original	6/8/2023	368.8063582	83	44	122	5	0
624033356	Original	6/8/2023	368.8063582	67	31	95	3	0
635204131	Original	6/7/2023	368.8063582	99	59	154	4	0
638998128	Original	6/5/2023	268.4924151	92	34	119	7	0
641989342	Original	6/10/2023	368.8063582	83	50	129	4	0
160141886	Original	6/5/2023	1703.722634	0	0	0	0	0
160145209	Original	6/5/2023	1703.722634	7	2	4	5	0
160147996	Original	6/8/2023	1703.722634	125	30	132	23	0
160148711	Original	6/9/2023	1703.722634	3	0	3	0	0
160156099	Original	6/7/2023	1703.722634	13	5	7	10	1
160157250	Original	6/11/2023	1703.722634	0	0	0	0	0
160157704	Original	6/10/2023	28571.42857	166	91	237	20	0
160160330	Original	6/10/2023	29325.5132	4	1	1	4	0
160166319	Original	6/11/2023	1703.722634	1	0	0	1	0
160157020	Alternate	6/6/2023	1703.722634	0	0	0	0	0
160172171	Original	6/8/2023	1703.722634	4	1	5	0	0
160174678	Original	6/8/2023	1703.722634	140	18	118	40	0
636255571	Original	6/7/2023	1703.722634	1	1	2	0	0
604965044	Alternate	6/11/2023	1703.722634	84	41	106	19	0
636729272	Original	6/7/2023	1703.722634	120	51	135	35	1
636730637	Original	6/10/2023	1703.722634	3	1	3	1	0
637803008	Original	6/6/2023	1703.722634	7	1	7	1	0

641124702	Original	6/9/2023	1703.722634	12	2	13	1	0
644921860	Original	6/6/2023	1703.722634	38	8	37	9	0
130298740	Original	6/9/2023	150.3759398	231	71	247	55	0
130299908	Original	6/8/2023	150.3759398	37	19	56	0	0
130303875	Original	6/8/2023	150.3759398	10	5	11	4	0
130306292	Original	6/6/2023	150.3759398	15	5	20	0	0
130308829	Original	6/6/2023	150.3759398	16	5	20	1	0
130310824	Original	6/5/2023	150.3759398	38	10	39	9	0
130314675	Original	6/5/2023	150.3759398	8	2	7	3	0
130319689	Original	6/9/2023	150.3759398	4	1	4	1	0
611002737	Original	6/7/2023	150.3759398	20	5	22	3	0
611004068	Original	6/9/2023	150.3759398	169	52	192	29	0
611004702	Original	6/7/2023	150.3759398	7	3	4	6	0
611008709	Original	6/11/2023	150.3759398	131	63	186	8	0
611008801	Original	6/11/2023	150.3759398	160	72	200	32	0
611010520	Original	6/6/2023	150.3759398	20	6	24	2	0
611010998	Original	6/5/2023	150.3759398	31	12	41	2	0
611011332	Original	6/10/2023	150.3759398	7	1	5	3	0
611011802	Original	6/11/2023	150.3759398	10	3	3	10	0
627036887	Original	6/5/2023	150.3759398	36	16	48	4	0
636283143	Original	6/10/2023	150.3759398	25	10	28	7	0
149015741	Original	6/11/2023	3023.431595	2	0	1	1	0
149017914	Original	6/11/2023	3023.431595	18	12	25	4	1
149021284	Original	6/9/2023	3023.431595	2	1	3	0	0
149021340	Original	6/9/2023	3023.431595	177	28	157	48	0
149023224	Original	6/7/2023	3023.431595	8	2	5	5	0
149025690	Original	6/7/2023	3023.431595	7	1	5	3	0
149026050	Original	6/5/2023	3023.431595	1	0	1	0	0
149036602	Original	6/6/2023	3023.431595	0	0	0	0	0
607701209	Original	6/10/2023	3023.431595	10	3	11	2	0
607706998	Original	6/10/2023	3023.431595	1	0	0	1	0
607725194	Original	6/7/2023	3023.431595	2	1	3	0	0
607745764	Original	6/8/2023	3023.431595	178	31	175	34	0
607752264	Original	6/10/2023	3023.431595	2	0	1	1	0
616592941	Original	6/6/2023	3023.431595	21	3	13	11	0
619767525	Original	6/7/2023	3023.431595	11	1	8	4	0
645248806	Original	6/8/2023	3023.431595	7	0	4	3	0
645250521	Original	6/5/2023	3023.431595	4	1	4	1	0
645429047	Original	6/5/2023	3023.431595	33	7	32	7	1
649767068	Original	6/6/2023	3023.431595	15	1	10	6	0
160334025	Original	6/9/2023	52.91005291	11	8	12	7	0
160334140	Original	6/9/2023	52.91005291	3	1	2	2	0
160335469	Original	6/6/2023	52.91005291	30	10	40	0	0
160337121	Original	6/9/2023	52.91005291	9	3	5	7	0
160337706	Original	6/8/2023	52.91005291	59	19	40	38	0
160337890	Original	6/8/2023	52.91005291	162	91	185	68	0
160340671	Original	6/7/2023	52.91005291	13	6	16	3	0
160343402	Original	6/5/2023	52.91005291	34	19	44	9	0
160343488	Original	6/5/2023	52.91005291	12	6	17	1	0
160345307	Original	6/5/2023	52.91005291	78	50	120	7	1
160345416	Original	6/6/2023	52.91005291	55	33	88	0	0
160347401	Original	6/6/2023	52.91005291	82	47	129	0	0
160348556	Original	6/10/2023	52.91005291	1	1	1	1	0

160348563	Original	6/10/2023	52.91005291	1	1	2	0	0
160348662	Original	6/11/2023	52.91005291	3	3	0	6	0
160349376	Original	6/11/2023	52.91005291	12	9	12	9	0
160351777	Original	6/8/2023	52.91005291	56	38	71	23	0
607029259	Original	6/7/2023	52.91005291	11	6	13	4	0
629141912	Original	6/7/2023	52.91005291	19	15	19	15	0
149180660	Original	6/9/2023	173.9130435	47	17	64	0	0
149185417	Original	6/6/2023	173.9130435	63	18	80	1	0
149186709	Original	6/8/2023	173.9130435	41	8	49	0	0
149193121	Original	6/11/2023	173.9130435	78	21	98	1	0
149194246	Original	6/10/2023	173.9130435	13	2	15	0	0
149194593	Original	6/11/2023	173.9130435	28	7	35	0	0
149195125	Original	6/10/2023	173.9130435	25	2	27	0	0
149195916	Original	6/9/2023	173.9130435	175	8	182	1	0
149215207	Original	6/5/2023	173.9130435	71	56	127	0	0
149204979	Original	6/7/2023	173.9130435	100	23	123	0	0
149210530	Original	6/8/2023	173.9130435	40	12	51	1	0
149214639	Original	6/8/2023	173.9130435	95	36	131	0	0
612521051	Original	6/9/2023	173.9130435	62	3	64	1	0
612521597	Original	6/7/2023	173.9130435	125	17	141	1	0
612521622	Original	6/7/2023	173.9130435	130	40	169	1	0
614772268	Original	6/10/2023	173.9130435	80	12	92	0	0
636258227	Original	6/5/2023	173.9130435	59	51	110	0	0
625177708	Original	6/6/2023	173.9130435	25	11	36	0	0
639001485	Original	6/11/2023	173.9130435	85	17	100	2	0
160423647	Original	6/6/2023	366.2668254	121	44	150	15	0
160423732	Original	6/6/2023	366.2668254	122	48	157	13	0
160425500	Original	6/5/2023	168.9617302	2	0	1	1	0
160429210	Original	6/8/2023	168.9617302	2	1	0	3	0
160432818	Original	6/11/2023	168.9617302	17	7	16	8	0
160433472	Original	6/10/2023	168.9617302	59	30	73	16	0
160437396	Original	6/8/2023	366.2668254	130	57	167	20	0
160441132	Original	6/10/2023	168.9617302	56	30	60	26	0
160445645	Original	6/7/2023	168.9617302	44	13	17	40	0
604817624	Original	6/11/2023	168.9617302	21	10	27	4	0
604821509	Original	6/9/2023	168.9617302	29	10	21	18	0
604824280	Original	6/6/2023	366.2668254	113	34	136	11	0
604828880	Original	6/5/2023	168.9617302	8	1	5	4	0
604832972	Original	6/7/2023	168.9617302	13	0	10	3	0
606896274	Original	6/6/2023	168.9617302	16	7	8	15	0
633079056	Original	6/8/2023	366.2668254	115	42	143	14	0
636250523	Original	6/9/2023	168.9617302	13	3	8	8	0
638072672	Original	6/11/2023	168.9617302	13	10	23	0	0
639807648	Original	6/7/2023	366.2668254	127	51	160	18	0
149464552	Original	6/8/2023	254.6311032	38	22	60	0	0
149464581	Original	6/8/2023	254.6311032	0	0	0	0	0
149475478	Original	6/9/2023	254.6311032	78	33	104	7	0
149479278	Original	6/9/2023	254.6311032	77	32	88	21	0
149485073	Original	6/6/2023	553.4340583	113	55	81	87	0
149491408	Original	6/11/2023	254.6311032	22	9	31	0	0
149493811	Original	6/10/2023	254.6311032	19	8	25	2	0
149502295	Original	6/7/2023	254.6311032	256	33	256	33	0
149504310	Original	6/5/2023	553.4340583	158	75	158	75	0

149513299	Original	6/11/2023	254.6311032	8	3	11	0	0
618327230	Original	6/9/2023	254.6311032	50	25	69	6	0
618327614	Original	6/5/2023	553.4340583	125	45	118	52	0
618328315	Original	6/9/2023	254.6311032	86	48	126	8	0
618328331	Original	6/8/2023	254.6311032	28	14	35	7	0
618328388	Original	6/10/2023	553.4340583	191	112	292	11	0
633104861	Original	6/6/2023	553.4340583	131	59	186	4	0
634701819	Original	6/6/2023	553.4340583	137	54	176	15	0
637958402	Original	6/5/2023	254.6311032	13	6	9	10	0
646130968	Original	6/7/2023	254.6311032	71	29	90	10	0
160257919	Original	6/8/2023	132.1964439	23	8	31	0	0
160260118	Original	6/5/2023	368.7723568	123	60	176	7	0
160260328	Original	6/7/2023	368.7723568	70	27	78	19	0
160263191	Original	6/10/2023	132.1964439	60	26	82	4	0
160265104	Original	6/6/2023	132.1964439	24	6	30	0	0
160268998	Original	6/11/2023	132.1964439	21	11	31	1	0
160269191	Original	6/11/2023	132.1964439	57	40	97	0	0
160277885	Original	6/5/2023	132.1964439	75	20	89	6	0
160278319	Original	6/6/2023	132.1964439	101	20	104	17	0
160278593	Original	6/9/2023	132.1964439	49	15	58	6	0
606036141	Original	6/5/2023	132.1964439	149	35	155	29	0
606039533	Original	6/7/2023	368.7723568	76	32	95	13	0
623883922	Original	6/9/2023	132.1964439	26	12	34	4	0
627006231	Original	6/9/2023	132.1964439	146	54	180	20	0
636254190	Original	6/8/2023	368.7723568	108	50	157	1	0
637983427	Original	6/10/2023	132.1964439	13	4	12	5	0
638334180	Original	6/10/2023	132.1964439	0	0	0	0	0
638525027	Original	6/6/2023	132.1964439	11	3	12	2	0
647556320	Original	6/8/2023	368.7723568	124	69	188	5	0
				17288	6103	19515	3855	21

Standard Error of Statewide Belt Use Rate[3]: 0.2 percent

Nonresponse Rate as provided in §1340.9 (f)

Nonresponse rate for the survey variable seat belt use: 0.0898 percent

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

[2]Occupants refer to both drivers and passengers

[3]The standard error may not exceed 2.5 percent

Appendix H: SPSS Data Codes

SPSS Data Dictionary

Variable Information									
Variable	Position	Label	Measurement Level	Role	Column Width	Alignment	Print Format	Write Format	Missing Values
InclProbOfRoadType	1	<none>	Scale	Input	12	Right	F32.4	F32.4	
TLID	2	<none>	Scale	Input	12	Right	F9	F9	
SRSWOR	3	<none>	Scale	Input	12	Right	F9.4	F9.4	
County	4	<none>	Nominal	Input	12	Right	F2	F2	
Site#	5	Site #	Nominal	Input	12	Right	F2	F2	
Population	6	<none>	Nominal	Input	12	Right	F1	F1	
Roadway	7	<none>	Nominal	Input	12	Right	F2	F2	
weight	8	<none>	Scale	Input	12	Right	F19.4	F19.4	
day	9	<none>	Nominal	Input	8	Left	A1	A1	
observer	10	<none>	Scale	Input	12	Right	F2	F2	
weather	11	<none>	Nominal	Input	12	Right	F1	F1	
lanes	12	<none>	Nominal	Input	12	Right	F1	F1	
direction	13	<none>	Nominal	Input	12	Right	F1	F1	
driverGender	14	<none>	Nominal	Input	12	Right	F1	F1	
driverBelt	15	<none>	Nominal	Input	12	Right	F1	F1	
carType	16	<none>	Nominal	Input	12	Right	F1	F1	
wyPlate	17	<none>	Nominal	Input	12	Right	F1	F1	3
passBelt	18	<none>	Nominal	Input	12	Right	F2	F2	99
passGender	19	<none>	Nominal	Input	12	Right	F1	F1	3
timeStamp	20	<none>	Nominal	Input	12	Right	F2	F2	
SRSWORinvert	21	<none>	Scale	Input	14	Right	F8.2	F8.2	
RoadType	22	<none>	Nominal	Input	10	Right	F8.2	F8.2	

Variable Values		
Value		Label
County	1	Albany
	5	Campbell
	7	Carbon
	9	Converse
	13	Goshen
	15	Fremont
	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	1	Donna Lucas
	7	Bridget White, Wy Cor
	14	Vickey Peterson, QC2

	23	Monty Byers
	35	Kayla Schear
	41	Patrick White
	44	Doug Peterson, Platte
	47	Dixie Elder, Johnson
	48	Deb Euster, Goshen
	51	Susan Parkinson, Lincoln
	69	Lori Cole
	80	Bryan Shannon, Campbell
	81	Sandra Gabel, Fremont
	83	Mindy McKinley, Uinta
	86	Amy Sitll
	87	Aspen Miller, Laramie
	89	Kim Brattis, Natrona
	90	Malina Boardman
	91	Donna Hermann, Albany
	92	Lori Geisler, Carbon
	93	Diana Shannon, Converse
	94	Joyce Hammer, Niobrara

	95	Robery Sadler, Park
	96	Rob Remele, Sweetwater
weather	1	Clear/sunny
	2	Cloudy
	3	Foggy
	4	Light rain
	5	Snow / ice
	6	Heavy rain
	7	Occasional rain
lanes	1	1 Lane
	2	2 Lanes
direction	1	North
	2	South
	3	East
	4	West
driverGender	1	Male
	2	Female
driverBelt	1	Yes
	2	No
	3	Unsure
carType	1	Auto
	2	Van
	3	SUV
	4	Pickup Truck
wyPlate	1	Yes
	2	No
	9	Unsure
passBelt	1	Yes
	2	No
	3	Unsure
	4	No Passenger
passGender	1	Male
	2	Female
	3[a]	Unsure

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
RoadType	11.00	S1100 - Primary Road
	12.00	S1200 - Secondary Road
	14.00	S1400 - Local/Rural Road
a. Missing value		

Report prepared by: