2015

Survey of Seat Belt Use

WYOMING

The protocols implemented for this study are in accordance with the federal guidelines established in 2012, which distinguish it from all prior surveys of seat belt use in Wyoming. The standards and protocols align with the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340. The 2014 survey analysis is the third survey conducted under the 2012 guidelines for seat belt use in the state of Wyoming

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

Acknowledgments

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

- Lydia DeJesus assisted with project coordination; supervised coding, data entry, and quality assurance procedures; and developed spreadsheets, charts, and graphs.
- Katelin Dukart compiled the data and imported the charts and graphs into the narrative
- Bridget White and Vicky Peterson conducted field monitoring.

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

Derek Bacon, Monty Byers, Tonya Dove, Dawn Edwards, Randi Egley, Jill Ellenbecker,
Melissa Garcia, Dorothy Johnstone, Donna Lucas, Doug Peterson, Kayla Schear, Daleen Sebelius,
Bill Spencer, Melissa Thomasma, Patrick White, Logan Wilson,

Finally, special thanks to the staff of the Wyoming Highway Safety Program, especially, Dalene Call, Highway Service Office Manager, for their support during the project period.

Deb Nelson, DLN President
Project Administrator

Keith Fernsler, PhD
Project Analyst

James G. Leibert, PhD
Project Statistician

Contents

Acknowledgments i

Executive Summary 1

Quality Assurance 3

Observers 3

Data Compilation 4

Introduction 5

Overall Estimate, with Standard Error and Confidence Intervals 6

Observers 7

Frequencies 8

Occupant Belt Use: 9

Occupant Gender: 10

County Frequencies: 11

Population Density: 12

Roadway Type 13

Weekday: 14

Weekday and Weekend: 15

Vehicle Type: 16

Vehicle Registration: 17

Frequencies by Observer: 18

Other Variables: 19

Vehicle Type by County 20

Estimates of Occupant Seat Belt Use 21

Type of Vehicle Occupant: 22

Occupant Gender: 23

Seat Belt Use by County: 24

Seat Belt Use by Population Density 25

Roadway Type 26

Seat Belt Use by Weekday 27

Weekdays and Weekend 28
Seat Belt Use by Vehicle Type 29
Gender and Vehicle Type 30
Vehicle Registration Type 31
Estimates of Seat Belt Use for Drivers and Passengers 32
Driver Belt Use by Gender and Vehicle Type 33
Passenger Belt Use by Gender and Vehicle Type 34
Trends 36
Trend in Frequency of Occupants 36
Trends in Estimates of Seat Belt Use, Wyoming 2012-2015 37
Overall Estimates 37
Gender and Seat Belt Use 38
Population Density 39
Roadway Type 40
Vehicle Type 41
Vehicle Registration 42
Seat Belt Use by County 43
Closing 44
Appendix A: State seat belt use reporting form 45
Appendix B: Survey design for Wyoming 48
Appendix C: NHTSA Approval and Final Review 83
Appendix D: Detailed tables of collected data 87
Frequencies 89
Occupant seat belt use 92
Driver seat belt use 95
Passenger seat belt use 98
Trend data 101
Appendix E: Observer field test rating 103
Appendix F: Unknown seat belt use 105

Appendix G: Reporting requirements 107
Appendix H: SPSS data dictionary 117

Figure 1: Frequencies with and without passengers 8
Figure 2: Frequencies by Occupant Belt Use 9
Figure 3: Frequencies by Occupant Gender 10
Figure 4: Frequencies by County 11
Figure 5: Frequencies by Population Density 12
Figure 6: Frequencies by Roadway Type 13
Figure 7: Frequencies by Day of Week 14
Figure 8: Frequencies by Weekend and Weekday 15
Figure 9: Frequencies by Vehicle Type 16
Figure 10: Frequencies by Registration Type 17
Figure 12: Percent Belted by Occupant Type 22
Figure 13: Percent Belted by Occupant Gender 23
Figure 14: Percent Belted by County of Observation 24
Figure 15: Percent Belted by Population 25
Figure 16: Percent Belted by Roadway Type 26
Figure 17: Percent Belted by the Day of the Week 27
Figure 18: Percent Belted by Weekdays vs. Weekend 28
Figure 19: Percent Belted by Vehicle Type 29
Figure 20: Percent Belted by Vehicle Gender 30
Figure 21: Percent Belted by Registration Type 31
Figure 22: Occupant Belt Use by Type of Occupant 32
Figure 23: Driver Belt Use by Gender and Vehicle Type 33
Figure 24: Passenger Belt Use by Gender and Vehicle Type 34
Figure 25: Frequencies of Vehicle Occupants, Wyoming, 2015 to 2015 36
Figure 26: Occupant Seat Belt Use Rates in Wyoming, 2012 to 2015 37
Figure 27: Occupant Seat Belt Use Rates by Gender, Wyoming 2012 to 2015 38
Figure 28: Occupant Seat Belt Use Rates by Population Density, 2012 to 2015 39
Figure 29: Occupant Seat Belt Use by Roadway Type, 2012 to 2015 40
Figure 30: Occupant Seat Belt Use by Vehicle Type, 2012 to 2015 41
Figure 31: Occupant Seat Belt Use Rates by Registration, 2012 to 2015 42

Table 1: Occupant Belt Use in Wyoming, 2015 6
Table 2: Observers by County of Observations, Wyoming 2015 7
Table 3: Observers by County and Frequency of Observations, Wyoming 2015 18
Table 4: Frequencies of Vehicle Types by County, Wyoming 2015 20
Table 5: Occupant Belt Use by County 43

Executive Summary

For the 2015 survey of seat belt use in Wyoming, the statistical estimate of seat belt use by vehicle occupants is 79.8 percent with a standard error of 2.3 percent. The 2015 overall estimate is six-tenths of a percentage point higher than the 2014 rate of 79.2 percent. The estimate was based on observations of 24,682 drivers and outboard passengers in 17,913 vehicles. The range of estimated seat belt use across the last four years of Wyoming surveys is less than five percentage points. The observations were collected in sixteen counties, one observer per county, and eighteen sites in each county, for a total of 288 sites, or intersections. The methodology that was employed was that which was approved by the National Highway Traffic Safety Administration in 2012.

In this report, the following is presented:

- A presentation and discussion of the unweighted frequencies for all of the salient variables in the survey. These include information of type of vehicle occupant (driver or passenger), occupant gender, county frequencies, population density, roadway type, day of the week, vehicle type, and vehicle registration status (Wyoming or out-of-state license plates). Consistent with previous surveys, 2015 results show many more drivers than passengers, more male than female vehicle occupants, county frequencies similar to those of prior years, a typical mix of vehicle types, the largest share of observations collected on weekdays, and many more occupants in Wyoming-registered vehicles than in out-of-state vehicles.

- A presentation of the estimates of seat belt use by occupants. Here are some of the findings:

    - Lower rates of seat belt use for drivers than passengers.

    - A higher rate of seat belt use for females than males.

    - Considerable variation among the counties, with the highest rate in Carbon County and the lowest rate in Sweetwater County.

    - Higher rates of seat belt use in rural sites than in urban sites.

    - The highest rate of seat belt use on primary road sites, while local / rural / city sites had the lowest rate of seat belt use.

    - Slightly higher rates of seat belt use on weekends than on weekdays.

    - Relatively high rates of seat belt use for occupants of automobiles, vans and SUVs; much lower rates of seat belt use for occupants in pickup trucks.

    - Higher rates of seat belt use for females in all types of vehicles.

    - A higher rate of seat belt use for occupants of vehicles registered with out-of-state licenses than in Wyoming-licensed vehicles.

- A discussion of seat belt rates for drivers and passengers. The differences among drivers and passengers were highlighted, broken down by gender and vehicle type. Generally, females had higher rates of seat belt use than males in all types of vehicles. As in the past, the lowest seat belt rate was found for males in pickup trucks, especially for those very few males who were passengers in pickup trucks.

- A final section of the narrative is devoted to the trends across the four years of Wyoming surveys from the baseline 2012 survey to the 2015 survey. All four surveys share the same methodology and the same sample of counties and sites. Among the highlighted trends are the following:

    - Steady increases in the number of observations, with a smaller increase for the most recent survey.

    - Steady rates of seat belt use in 2012, 2014 and 2015, with a somewhat anomalous high rate in 2013.

    - A stable trend in seat belt use for both males and females, with lower rates for males.

    - Usually higher rates of seat belt use across the years for rural sites than urban sites.

    - Consistently higher rates of seat belt use for occupants of out-of-state vehicles across the four years.

    - Considerable variation in seat belt use within counties, with some substantial variation within the same counties across the years. (We caution here that inferences from the data are tricky because of high standard errors associated with seat belt use in the individual counties across the four surveys.

Finally, the appendix contains many tables that are the source of the graphics and tables presented in the narrative of this report. Those tables serve as references for readers of this report.

Quality Assurance

Observers

All observers participated in training. The training session took place in June 2015 immediately prior to the survey. The training included both classroom instruction and field observations.

Observers participated in testing for an inter-accuracy ratio through participation in a minimum of three observation test sites. Selected test sites represented the types of sites and situations observers could expect to encounter during the actual survey. None of the practice test sites were actual sites in the sample of roadway segments. Observers worked in teams of two, observing the same vehicles but recording the observations independently on separate observation forms. Teams rotated throughout the field training to ensure that each observer was paired at least three times with a different partner. Each observer recorded type of vehicle, seat belt use, and gender data during the tests. The average inter-accuracy ratio for all observers after testing was 96.5 percent, higher than the 85 percent required by the methodology.

At the conclusion of the training, observers and quality control monitors received a post-training quiz to ensure they understood the survey terminology, the data collection protocols, and the reporting requirements. The average score for all observers after testing was 91.3 percent, significantly higher than the required 80 percent.

The non-response rate for data collected in the field was monitored with a result of 0.7 percent, well below the required ceiling of 10 percent.

Data Compilation

iPads were used to collect the 2015 seat belt survey, which required an iPad and survey tool training segment. The observers received basic iPad training related to the functions, features, and maintenance. All iPads were preloaded with the 2015 Seat Belt Survey data collection tool. All the observers and quality control staff received training on the individual components of the application in audio, visual, and tactile format. On day one each of the training participants were provided a period to practice using the program during the training session. After practicing in the classroom, the observers had an opportunity to complete a mock data collection period. On day two, the observers completed four data collection sessions. Three of the four data collection sessions were used to calculate their individual inter-accuracy ratios.

Introduction

During the week of June 8th to the 14th, 2015, sixteen observers were dispatched to the 18 sites in each of the sixteen counties, 288 sites in all, to collect observations of seat belt use by drivers and outboard, front seat passengers. Each observer was instructed to follow the specific directions and protocols that were part of their training. There were two veteran observers whose primary role was to conduct quality assurance reviews at randomly determined sites throughout the week of the survey. Additionally, two observers were trained so they could step in as alternate observers, if necessary.

This year, 2015, was the second year that observers recorded their observations directly into their iPads, bypassing paper and pencil records. As was the case in 2014, data was directly submitted electronically to the staff at DLN Consulting, Inc. DLN staff exported the data into Excel spreadsheets for drivers, passengers, and all vehicle occupants. Next, the data were imported into the *Statistical Program for the Social Sciences, v.20.0* (SPSS) software that was used to analyze the results. Throughout these processes, the data were reviewed to identify and "clean" any data errors. Once cleaned and in SPSS, the files for the drivers, passengers and total occupants received variable names, value labels for the categories of each variable, missing value codes, and other identifying information necessary to complete the data analysis. In addition, the sampling procedures and sample probabilities associated with each site became part of the "sampling plan" used to produce estimates of seat belt use. These estimates take into account the probabilities associated with each observation within each site and county in the data set. The "sampling plan" became part of the SPSS "Complex Samples" Module, which permitted the calculation of accurate, weighted estimates of seat belt use for Wyoming in 2015.

The weighted estimates of seat belt use are the most important part of this report. However, the unweighted frequencies are presented first to provide context for the estimates. The contextual variables include information like type of vehicle occupant (driver or passenger), occupant gender, vehicle type, urban or rural population density, and so on. Since these frequencies are unweighted and do not account for sampling probabilities, they are presented primarily for the purposes of full disclosure. The reader should be careful to avoid inferences from the unweighted frequencies because they do not take into account the probabilities that standardize the results and make them comparable to other surveys of seat belt use.

The weighted estimates, which take into account the effects of sampling probabilities, are reported next. In addition to the overall results on seat belt usage, including measures of standard error and statistical confidence intervals, the estimates are also presented within the categories of the contextual variables that are relevant for the assessment of seat belt use. Throughout, this narrative will attempt to provide commentary and graphics that are intended to elucidate and clarify the numbers.

Other Variables:

Additional information was collected about observations, but it has not usually been included in the narrative of the report. (Note that all the frequency tables are presented in full in the appendix to this report.) One such variable is the direction in which the vehicles travel for the site. Generally, the vehicles heading west and south had a slight edge over the other directions in the 2015 survey, but there did not seem to be any systematic differences by direction.

Another variable is the number of lanes covered by the observer in any given site. For the 2015 survey, almost equal numbers of occupants were observed across one lane or two lanes. The former, one lane, typically means a two-lane highway and the observer is collecting data going in one direction. For "two lanes," the most common situation is that the observer is collecting observations from two lanes of a four-lane highway. No observers collected data across three or four lanes, which can occur in more urban, "freeway" sites.

In addition, the frequencies by the time of day and the observers' classification of weather conditions when data was collected are presented in the appendix at the end of this report.

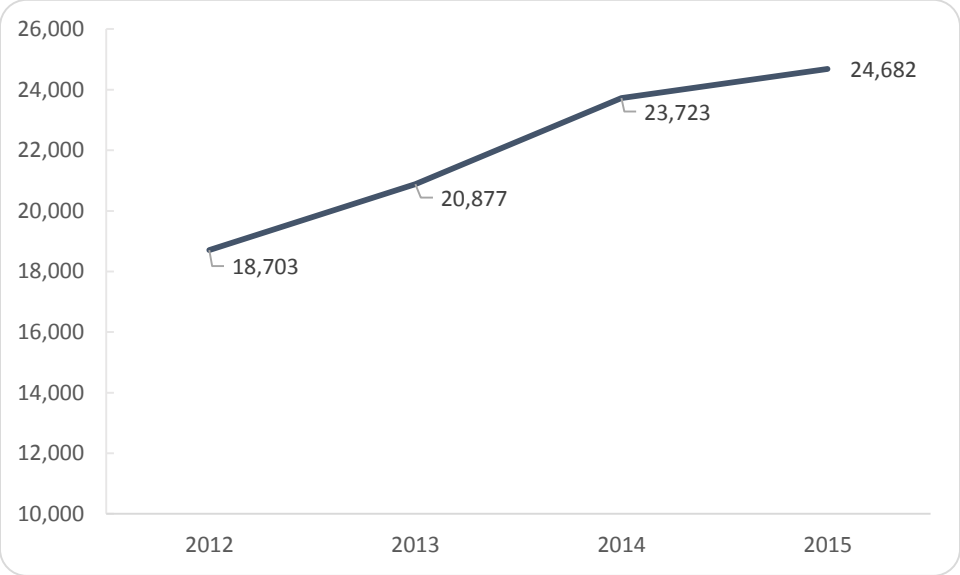
Trends

For this section, we compiled selected tables across the years from 2012 to 2015. These surveys reflect the new methodology developed and first implemented in 2012. Since then, the sample sites and the procedures for data collection have been the same. One exception is that the method of recording observations has moved to direct data entry in iPads using an application developed for this process. That method was introduced last year and enhanced for this year's survey. This change simplified the process of downloading the data files into Excel and uploading the data files into SPSS. The Complex Samples module in SPSS permitted the calculation of seat belt use estimates for occupants, drivers and passengers in separate files.

Trend in Frequency of Occupants

The number of observed vehicle occupants has increased substantially over the last four years. Figure 25 illustrates these increases.

Figure 24: Frequencies of Vehicle Occupants, Wyoming, 2015 to 2015



The number of observed occupants increased from 18,703 in 2012 to 20,877 in 2013. The number increased again in 2014 to 23,723 in 2014, an increase of 2,846 occupants. The number of occupants in the 2015 survey was 24,682, an increase of 959 vehicle occupants over the number in 2014.

It is possible that these increases are due to increases in traffic. However, in last year's survey, we speculated that the change between 2013 and 2014 might be a consequence of the change from "paper and pencil" recording to the direct recording system using iPads. Once observers were trained and tested the new system, increased simplicity and efficiency of the new system may have increased the number of observations. This methodological effect should be running its course as observers reach the point of diminishing returns from the new recording process.

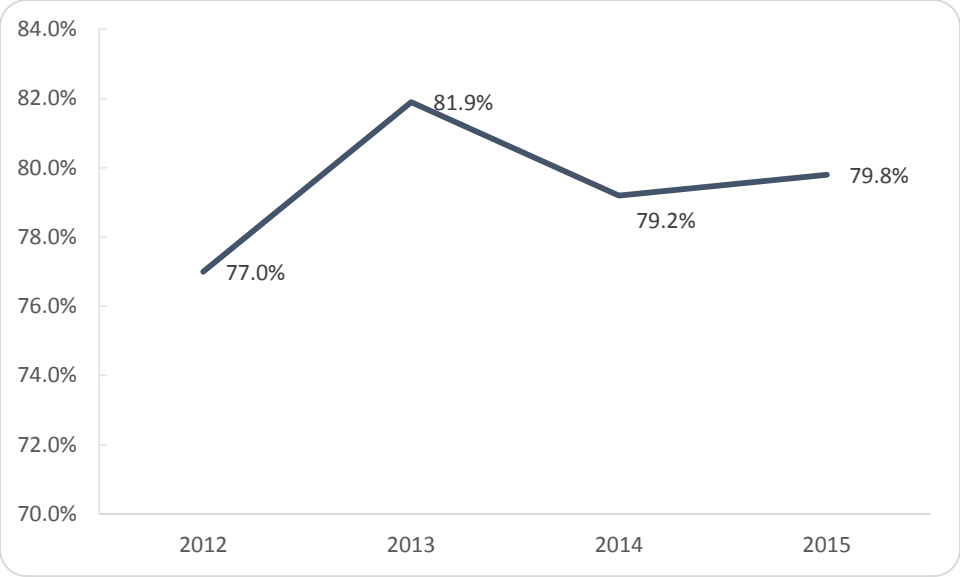
The effects of this new direct recording arrangement would likely benefit from an evaluative study comparing the different methods. However, we can say, anecdotally, that there seem to be fewer errors that need to be addressed when the data is "cleaned." This year, there were very few errors and almost no missing cases. The new system seems to have significant advantages.

Trends in Estimates of Seat Belt Use, Wyoming 2012-2015

Overall Estimates

For all vehicle occupants, the rate of seat belt use has generally been in the high seventies. The estimates across the years are illustrated by the following chart.

Figure 25: Occupant Seat Belt Use Rates in Wyoming, 2012 to 2015



The major change over the years was the increase from 77.0 percent in the baseline year of 2012 to 81.9 percent in 2013, an increase of 4.9 percent. That increase now appears to be an anomaly, given the rate of 79.2 percent in 2014, a decline of 2.7 percentage points. This year, the rate increased to 79.8 percent, a 0.6 percentage point increase in the estimate of seat belt use.

Although large numbers of observations tend to make even small changes statistically significant, the variation in these results is not large enough to warrant major inferences, other than the fact that the overall estimate seemed to have settled at a rate just below the eighty percent mark. Given Wyoming's wide open spaces, relatively low traffic density, a lot of vehicles that are perceived as "work" rather than "family" vehicles, and secondary seat belt laws, it is not surprising that the rates are lower than in some other states.

Many factors might account for the relatively unstable trends in seat belt use by county. Traffic patterns can change from year to year, as can events associated with the timing of the surveys, or weather patterns, or road construction factors, and so on. Most of these effects fall into the category of spurious factors in that there is not enough information to determine if they have any systematic consequences for seat belt use.

On the other hand, the variations – increases in some county rates, decreases in others – tend to cancel each other out in such a way as to give us a reliable, overall estimate of seat belt use, or, at least an estimate that falls within acceptable parameters when it comes to standard errors. Those standard errors tend to be very high when it comes to individual counties, so not put much stock should be put in any inferences from the county rates. We are on our most stable footing when we are examining overall rates that are not broken down by large numbers of variable categories, as is the case with county rates.

Closing

The rest of this report offers a considerable appendix where the reader will find detailed tables summarizing the results. In particular, the details of seat belt use by drivers and passengers are offered but are not reviewed extensively in the narrative.

Occupant Seat Belt Use Rates by Registration Type, Wyoming 2012-2015					
	Year	2012	2013	2014	2015
Registration	Wyoming	72.2%	76.2%	75.7%	75.0%
	Out of State	86.3%	91.1%	86.7%	86.6%

Observational Frequencies of Vehicle Occupants, Wyoming Seat Belt Survey, 2012-2015.					
Occupants	Year	2012	2013	2014	2015
	Frequencies	18,703	20,877	23,723	24,682

Appendix E: Observer field test rating

	F-Test 1	F-Test 2	F-Test 3	Avg. Field Test	Written
Monty Beyers	97.10%	98.02%	96.03%	97.05%	90.00%
Dorothy Johnstone	97.18%	87.50%	95.12%	93.27%	90.00%
Daleen Sebelius	97.32%	98.08%	98.28%	97.89%	90.00%
Bill Spencer	99.07%	93.17%	95.93%	96.06%	90.00%
Melissa Garcia	100.00%	100.00%	90.91%	96.97%	85.00%
Derek Bacon	97.00%	94.33%	99.08%	96.80%	95.00%
Patrick White	97.26%	95.05%	98.19%	96.83%	95.00%
Dawn Edwards	92.24%	97.24%	96.77%	95.42%	90.00%
Jill Ellenbecker	99.07%	99.26%	96.48%	98.27%	95.00%
Donna Lucas	100.00%	97.98%	95.87%	97.95%	90.00%
Doug Peterson	96.66%	92.67%	94.74%	94.69%	100.00%
Logan Wilson	96.58%	85.71%	90.00%	90.76%	95.00%
Tonya Dove	98.45%	98.04%	95.76%	97.42%	95.00%
Kayla Schear	98.25%	97.51%	99.09%	98.28%	85.00%
Melissa Thomasma	96.93%	100.00%	98.22%	98.38%	100.00%
Randi Egley	98.21%	94.63%	98.31%	97.05%	90.00%
Carolyn Waldron	96.84%	95.10%	94.87%	95.60%	70.00%
Cary Ingerle	96.55	98.47%	99.26%	98.09%	95.00%
Vicky Peterson	96.69%	97.65%	95.00%	96.45%	90.00%
Bridget White	96.21%	96.88%	96.60%	96.56%	95.00%
	97.73%	95.88%	96.03%	96.49%	91.25%
				Field Test Overall Average	96.49%
				Written Overall Average	91.25%

Appendix F: Unknown seat belt use

County	County Code	Unknown Driv+Pass	Total Obsv. Driv+Pass	County Rate
Albany	1	0	1760	0.000000
Big Horn	3	4	513	0.007797
Campbell	5	27	1902	0.014196
Carbon	7	2	1383	0.001446
Fremont	13	10	1145	0.008734
Johnson	19	5	1873	0.002670
Laramie	21	8	726	0.011019
Lincoln	23	66	1362	0.048458
Natrona	25	0	1011	0.000000
Park	29	9	1662	0.005415
Platte	31	0	1695	0.000000
Sheridan	33	1	1267	0.000789
Sublette	35	13	594	0.021886
Sweetwater	37	10	1829	0.005467
Teton	39	0	3824	0.000000
Uinta	41	14	1783	0.007852
State		169	24329	0.006946

Appendix G: Reporting requirements – data collected at observation sites

1. Standard Error of Statewide Belt Use Rate: 2.3 percent

2. Nonresponse Rate as provided in §1340.9 (f)

    a. Nonresponse rate for the survey variable seat belt use: 0.6946 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
168749730	1: Original	6/12/2015	7.657718121	182	86	251	17	0
604512124	2: Original	6/10/2015	7.657718121	62	20	74	8	0
604516236	3: Original	6/11/2015	1.150201613	172	56	186	42	0
168748704	4: Original	6/8/2015	1.150201613	138	44	139	43	0
168722835	5: Original	6/9/2015	1.150201613	8	6	11	3	0
604506806	6: Original	6/8/2015	1.150201613	140	30	139	31	0
168750353	7: Original	6/9/2015	1.150201613	30	11	34	7	0
168757040	8: Original	6/8/2015	1.150201613	88	14	75	27	0
168722017	9: Original	6/11/2015	1.150201613	8	0	6	2	0
604510122	10: Original	6/12/2015	1.150201613	110	36	118	28	0
168738815	11: Original	6/10/2015	1.150201613	37	10	45	2	0
168744760	12: Original	6/13/2015	1.150201613	12	7	18	1	0
168756901	13: Original	6/8/2015	1.150201613	235	54	251	38	0
168745008	14: Original	6/14/2015	1.150201613	5	3	6	2	0
168737539	15: Original	6/11/2015	1.150201613	41	22	60	3	0
168755506	16: Original	6/9/2015	1.150201613	2	0	0	2	0
604505747	17: Original	6/12/2015	1.150201613	22	7	29	0	0
168755958	18: Original	6/11/2015	1.150201613	41	22	60	3	0
605633431	1: Original	6/11/2015	1	22	15	33	4	0
180494288	2: Original	6/9/2015	1	16	8	21	2	1
180493968	3: Original	6/9/2015	1	37	17	44	7	3
605624056	4: Original	6/8/2015	1	25	6	26	5	0
180493545	5: Original	6/10/2015	1	5	2	7	0	0
605621594	6: Original	6/10/2015	1	4	1	5	0	0
180484672	7: Original	6/11/2015	1	38	18	44	12	0
605616914	8: Original	6/12/2015	1	12	3	10	5	0
180505210	9: Original	6/8/2015	1	36	9	28	17	0
626936823	10: Original	6/9/2015	1	7	4	10	1	0
180500795	11b: Alternate	6/14/2015	1	32	13	30	15	0
180501932	12: Original	6/8/2015	1	34	10	30	14	0
180490602	13: Original	6/8/2015	1	34	10	40	4	0
180506937	14: Original	6/10/2015	1	2	0	2	0	0
180507017	15: Original	6/13/2015	1	5	1	5	1	0

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
180508412	16: Original	6/13/2015	1	4	3	2	5	0
180499656	17: Original	6/13/2015	1	7	4	8	3	0
180485070	18: Original	6/12/2015	1	59	13	37	35	0
607415957	1: Original	6/8/2015	4.898876404	159	78	212	24	1
607413318	2: Original	6/8/2015	4.898876404	143	20	139	20	4
146326960	3: Original	6/8/2015	4.898876404	162	31	175	16	2
146347844	4: Original	6/8/2015	4.898876404	132	48	168	11	1
146348156	5: Original	6/12/2015	1.25648415	48	12	51	8	1
146325159	6: Original	6/10/2015	1.25648415	144	27	140	28	3
146349851	7: Original	6/10/2015	1.25648415	197	32	188	34	7
146329404	8: Original	6/10/2015	1.25648415	39	6	41	4	0
146334309	9: Original	6/11/2015	1.25648415	38	16	51	3	0
146353809	10: Original	6/10/2015	1.25648415	42	8	42	7	1
607396191	11: Original	6/9/2015	1.25648415	65	16	71	8	2
146333806	12: Original	6/13/2015	1.25648415	15	5	17	2	1
146321054	13: Original	6/12/2015	1.25648415	30	6	35	1	0
146353348	14: Original	6/11/2015	1.25648415	56	11	60	6	1
607406131	15: Original	6/8/2015	1.25648415	140	55	181	14	0
146346688	16: Original	6/12/2015	1.25648415	185	33	179	38	1
635532528	17: Original	6/9/2015	1.25648415	96	31	117	10	0
146342308	18: Original	6/14/2015	1.25648415	57	21	72	4	2
611197576	1: Original	6/11/2015	6.905405405	115	37	151	1	0
148702972	2: Original	6/11/2015	6.905405405	184	75	256	3	0
148729076	3: Original	6/12/2015	6.905405405	142	59	196	5	0
622138133	4: Original	6/12/2015	1.169336384	93	31	96	26	2
148737136	5: Original	6/8/2015	1.169336384	17	4	19	2	0
148752555	6: Original	6/8/2015	1.169336384	24	13	32	5	0
148712671	7: Original	6/10/2015	1.169336384	48	10	53	5	0
148715207	8: Original	6/10/2015	1.169336384	24	10	31	3	0
148718040	9: Original	6/9/2015	1.169336384	10	3	10	3	0
148695417	10: Original	6/14/2015	1.169336384	76	44	120	0	0
148729803	11: Original	6/12/2015	1.169336384	156	66	164	58	0
148707454	12: Original	6/11/2015	1.169336384	4	0	4	0	0
148702076	13: Original	6/13/2015	1.169336384	8	0	7	1	0
148743798	14: Original	6/9/2015	1.169336384	9	2	9	2	0

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
148736405	15: Original	6/8/2015	1.169336384	38	13	46	5	0
148714894	16: Original	6/9/2015	1.169336384	34	13	40	7	0
148727630	17: Original	6/13/2015	1.169336384	13	5	17	1	0
148716025	18: Original	6/10/2015	1.169336384	3	0	3	0	0
148435993	1: Original	6/12/2015	1.000528821	21	4	21	4	0
148440001	2: Original	6/10/2015	1.000528821	22	8	28	2	0
148435866	3: Original	6/11/2015	1.000528821	71	11	46	34	2
634121244	4: Original	6/8/2015	1.000528821	15	4	18	1	0
148495718	5: Original	6/9/2015	1.000528821	52	12	56	7	1
148494149	6: Original	6/8/2015	1.000528821	45	26	62	9	0
148486152	7: Original	6/9/2015	1.000528821	80	37	106	9	2
148473776	8: Original	6/8/2015	1.000528821	33	12	24	21	0
148485578	9: Original	6/11/2015	1.000528821	32	24	46	10	0
148433925	10: Original	6/12/2015	1.000528821	2	1	3	0	0
148495394	11: Original	6/10/2015	1.000528821	28	15	41	2	0
148468455	12: Original	6/13/2015	1.000528821	79	30	104	5	0
148486961	13: Original	6/8/2015	1.000528821	23	12	34	1	0
148429899	14: Original	6/14/2015	1.000528821	20	10	25	5	0
148448781	15: Original	6/11/2015	1.000528821	82	39	116	4	1
148470962	16: Original	6/9/2015	1.000528821	12	3	13	2	0
148433053	17: Original	6/12/2015	1.000528821	97	16	92	18	3
148432511	18: Original	6/11/2015	1.000528821	133	34	122	44	1
624034874	1: Original	6/11/2015	2.23495702	42	18	46	14	0
147364609	2: Original	6/9/2015	2.23495702	58	22	69	11	0
147364620	3: Original	6/9/2015	2.23495702	69	29	78	19	1
635203226	4: Original	6/10/2015	2.23495702	86	51	112	25	0
635203662	5: Original	6/10/2015	2.23495702	110	61	136	32	3
147347862	6: Original	6/10/2015	2.23495702	98	46	124	20	0
147364484	7: Original	6/10/2015	2.23495702	102	57	134	24	1
147365807	8: Original	6/10/2015	2.23495702	65	24	71	18	0
147321002	9: Original	6/14/2015	1.80974478	6	2	3	5	0
147312456	10: Original	6/13/2015	1.80974478	104	45	97	52	0
147299440	11: Original	6/12/2015	1.80974478	235	86	223	98	0
147375368	12: Original	6/11/2015	1.80974478	5	2	4	3	0
147320405	13: Original	6/9/2015	1.80974478	6	1	3	4	0

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
147301635	14: Original	6/8/2015	1.80974478	30	22	45	7	0
147301707	15: Original	6/8/2015	1.80974478	23	17	32	8	0
147330545	16: Original	6/12/2015	1.80974478	180	60	183	57	0
617881865	17: Original	6/13/2015	1.80974478	77	30	61	46	0
147320871	18: Original	6/14/2015	1.80974478	3	1	2	2	0
622388802	1: Original	6/12/2015	27.25055928	174	32	179	24	3
624043730	2: Original	6/12/2015	12.60973085	37	10	34	12	1
160176358	3: Original	6/9/2015	1.13122214	0	0	0	0	0
160145448	4: Original	6/9/2015	1.13122214	7	1	6	2	0
160162024	5: Original	6/14/2015	1.13122214	0	0	0	0	0
160151376	6: Original	6/10/2015	1.13122214	100	17	77	40	0
160148179	7: Original	6/11/2015	1.13122214	3	0	1	2	0
160171828	8: Original	6/11/2015	1.13122214	2	0	2	0	0
160148102	9: Original	6/11/2015	1.13122214	0	0	0	0	0
160148214	10: Original	6/11/2015	1.13122214	12	3	12	3	0
160149935	11a: Alternate	6/9/2015	1.13122214	2	0	1	1	0
160172654	12: Original	6/13/2015	1.13122214	17	7	16	8	0
160147641	13: Original	6/12/2015	1.13122214	4	3	3	4	0
160152283	14: Original	6/10/2015	1.13122214	4	2	1	5	0
160160311	15: Original	6/10/2015	1.13122214	22	5	21	6	0
160176882	16: Original	6/8/2015	1.13122214	0	0	0	0	0
160179037	17: Original	6/12/2015	1.13122214	204	57	226	31	4
608318324	18: Original	6/8/2015	1.13122214	3	0	2	1	0
611001502	1: Original	6/8/2015	14.95744681	18	10	23	4	1
130299361	2: Original	6/11/2015	1.071646341	26	4	25	5	0
130309240	3: Original	6/10/2015	1.071646341	42	8	33	17	0
130324547	4: Original	6/13/2015	1.071646341	66	36	84	17	1
130316044	5: Original	6/13/2015	1.071646341	141	64	160	29	16
130316740	6: Original	6/14/2015	1.071646341	107	52	141	4	14
611004110	7: Original	6/11/2015	1.071646341	27	8	29	6	0
611001556	8: Original	6/8/2015	1.071646341	28	9	25	4	8
611004390	9: Original	6/11/2015	1.071646341	19	6	21	3	1
130297921	10: Original	6/11/2015	1.071646341	19	4	19	3	1
619637613	11: Original	6/12/2015	1.071646341	30	7	29	6	2
130324450	12: Original	6/10/2015	1.071646341	31	18	39	7	3

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
611008956	13: Original	6/12/2015	1.071646341	115	56	160	9	2
130301475	14: Original	6/9/2015	1.071646341	10	2	9	3	0
130301732	15: Original	6/10/2015	1.071646341	38	19	48	5	4
130316677	16: Original	6/14/2015	1.071646341	80	40	111	6	3
611008950	17: Original	6/12/2015	1.071646341	159	66	195	21	9
130303332	18: Original	6/9/2015	1.071646341	19	1	16	3	1
149010081	1: Original	6/14/2015	33.4278607	134	56	159	31	0
149022110	2: Original	6/8/2015	8.864116095	207	52	187	72	0
149038958	3: Original	6/11/2015	8.864116095	42	8	33	17	0
149017131	4: Original	6/13/2015	1.166493056	0	0	0	0	0
607727858	5: Original	6/12/2015	1.166493056	18	6	18	6	0
617962807	6: Original	6/10/2015	1.166493056	10	3	7	6	0
149021251	7: Original	6/10/2015	1.166493056	0	0	0	0	0
149019867	8: Original	6/10/2015	1.166493056	19	2	12	9	0
607699609	9: Original	6/9/2015	1.166493056	17	7	17	7	0
149024110	10: Original	6/12/2015	1.166493056	197	42	152	87	0
149026356	11: Original	6/11/2015	1.166493056	39	5	27	17	0
607739973	12: Original	6/10/2015	1.166493056	5	2	5	2	0
607727056	13: Original	6/8/2015	1.166493056	6	3	9	0	0
607699508	14: Original	6/9/2015	1.166493056	34	15	46	3	0
607718345	15: Original	6/12/2015	1.166493056	5	1	2	4	0
149039592	16: Original	6/14/2015	1.166493056	0	0	0	0	0
607701450	17: Original	6/9/2015	1.166493056	16	4	17	3	0
617963960	18: Original	6/8/2015	1.166493056	49	7	41	15	0
612523424	1: Original	6/10/2015	1	20	20	36	4	0
612522810	2: Original	6/10/2015	1	10	4	12	1	1
627160085	3: Original	6/8/2015	1	46	43	85	4	0
149194387	4: Original	6/11/2015	1	17	7	20	4	0
149206406	5: Original	6/8/2015	1	17	15	32	0	0
626966347	6: Original	6/8/2015	1	158	41	118	81	0
612520875	7: Original	6/9/2015	1	142	70	182	26	4
612522765	8: Original	6/13/2015	1	30	16	29	17	0
624469118	9: Original	6/13/2015	1	82	32	85	29	0
612517654	10: Original	6/12/2015	1	22	4	15	11	0
149194643	11: Original	6/12/2015	1	173	52	151	73	1

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
612521823	12: Original	6/11/2015	1	155	44	135	64	0
149212941	13: Original	6/9/2015	1	36	16	46	6	0
149202036	14: Original	6/11/2015	1	10	1	11	0	0
612468763	15: Original	6/13/2015	1	18	7	24	1	0
612523179	16: Original	6/14/2015	1	1	0	1	0	0
625076103	17: Original	6/12/2015	1	176	58	152	79	3
612522218	18: Original	6/12/2015	1	95	26	78	43	0
160436166	1: Original	6/14/2015	2.880299252	195	99	252	42	0
606897806	2: Original	6/12/2015	2.880299252	150	68	159	59	0
604828586	3: Original	6/10/2015	2.880299252	128	50	160	18	0
606897551	4: Original	6/10/2015	2.880299252	178	75	220	33	0
620601368	5: Original	6/13/2015	2.880299252	156	92	233	15	0
618035322	6: Original	6/8/2015	2.880299252	127	40	120	47	0
604823280	7: Original	6/9/2015	1.531830239	2	1	3	0	0
160432353	8: Original	6/11/2015	1.531830239	20	13	19	14	0
604817760	9: Original	6/11/2015	1.531830239	12	8	12	8	0
624031047	10: Original	6/12/2015	1.531830239	56	29	61	24	0
604820352	11: Original	6/11/2015	1.531830239	94	36	66	64	0
160445492	12: Original	6/8/2015	1.531830239	18	5	13	10	0
160445589	13: Original	6/8/2015	1.531830239	16	1	8	9	0
160431220	14: Original	6/14/2015	1.531830239	3	2	5	0	0
160441567	15: Original	6/11/2015	1.531830239	5	3	4	4	0
604820453	16: Original	6/13/2015	1.531830239	7	4	10	1	0
160442550	17: Original	6/9/2015	1.531830239	1	0	0	1	0
160425201	18: Original	6/10/2015	1.531830239	1	0	0	1	0
629143491	1: Original	6/12/2015	7.447368421	116	54	151	19	0
634774573	2: Original	6/10/2015	7.447368421	114	61	161	13	1
147411270	3: Original	6/14/2015	1.155102041	28	13	41	0	0
147421444	4: Original	6/13/2015	1.155102041	53	20	64	9	0
605384408	5: Original	6/12/2015	1.155102041	66	39	94	11	0
147398734	6: Original	6/9/2015	1.155102041	31	13	38	6	0
147408472	7: Original	6/11/2015	1.155102041	101	33	106	28	0
147409609	8: Original	6/14/2015	1.155102041	24	13	36	1	0
147400215	9: Original	6/9/2015	1.155102041	18	9	27	0	0
147396185	10: Original	6/8/2015	1.155102041	12	4	11	5	0

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
147420545	11: Original	6/10/2015	1.155102041	17	11	23	5	0
605368387	12: Original	6/11/2015	1.155102041	19	7	23	3	0
147419891	13: Original	6/10/2015	1.155102041	5	0	4	1	0
147399687	14: Original	6/13/2015	1.155102041	63	30	77	16	0
147408335	15: Original	6/11/2015	1.155102041	68	18	78	8	0
147398523	16: Original	6/9/2015	1.155102041	27	18	42	3	0
614721355	17: Original	6/12/2015	1.155102041	72	23	86	9	0
147417308	18: Original	6/8/2015	1.155102041	44	23	49	18	0
149346148	1: Original	6/8/2015	1	7	1	5	2	1
149347154	2: Original	6/8/2015	1	5	0	4	1	0
149330874	3: Original	6/12/2015	1	10	5	10	4	1
149342158	4: Original	6/13/2015	1	22	13	22	10	3
617103316	5: Original	6/11/2015	1	109	41	120	26	4
614284845	6: Original	6/14/2015	1	52	31	74	9	0
631784199	7: Original	6/12/2015	1	14	3	14	3	0
149328921	8b: Alternate	6/9/2015	1	3	0	2	1	0
149319272	9: Original	6/9/2015	1	1	0	1	0	0
149327486	10: Original	6/8/2015	1	7	0	5	2	0
611631792	11: Original	6/11/2015	1	13	3	9	7	0
149335729	12: Original	6/10/2015	1	20	6	14	12	0
149349722	13: Original	6/8/2015	1	0	0	0	0	0
149348298	14: Original	6/13/2015	1	8	3	7	4	0
624696401	15: Original	6/11/2015	1	17	1	12	6	0
149341811	16: Original	6/14/2015	1	62	31	91	1	1
149343493	17: Original	6/10/2015	1	1	1	2	0	0
611631778	18: Original	6/11/2015	1	72	36	89	16	3
624231944	1: Original	6/9/2015	4.531914894	122	30	89	61	2
633104230	2: Original	6/8/2015	4.531914894	157	35	101	88	3
149499689	3a: Alternate	6/11/2015	4.531914894	3	1	4	0	0
149487238	4: Original	6/9/2015	4.531914894	108	47	104	51	0
618328344	5: Original	6/10/2015	1.28313253	68	39	80	27	0
149511333	6: Original	6/11/2015	1.28313253	63	13	44	31	1
618324181	7: Original	6/11/2015	1.28313253	297	70	206	158	3
149464554	8: Original	6/14/2015	1.28313253	35	20	38	17	0
149493695	9: Original	6/10/2015	1.28313253	18	7	13	12	0

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
149491956	10: Original	6/10/2015	1.28313253	11	3	11	3	0
149503912	11: Original	6/12/2015	1.28313253	293	73	192	174	0
149496622	12: Original	6/12/2015	1.28313253	55	16	44	27	0
611877695	13: Original	6/12/2015	1.28313253	128	36	99	65	0
149458823	14: Original	6/13/2015	1.28313253	6	0	5	1	0
149461346	15: Original	6/8/2015	1.28313253	16	7	21	2	0
149499742	16: Original	6/11/2015	1.28313253	14	2	10	6	0
149502711	17: Original	6/12/2015	1.28313253	33	8	21	19	1
149457693	18: Original	6/13/2015	1.28313253	2	0	2	0	0
130447128	1: Original	6/13/2015	1	121	103	198	26	0
130412425	2: Original	6/10/2015	1	81	44	102	23	0
626815081	3: Original	6/9/2015	1	348	133	380	101	0
130414136	4: Original	6/8/2015	1	171	66	182	55	0
130440602	5: Original	6/11/2015	1	107	78	161	24	0
235945248	6: Original	6/10/2015	1	76	22	83	15	0
130449024	7: Original	6/9/2015	1	277	159	348	88	0
130410308	8: Original	6/13/2015	1	86	66	125	27	0
130442142	9: Original	6/11/2015	1	32	27	50	9	0
130414163	10: Original	6/8/2015	1	181	53	184	50	0
130416881	11: Original	6/11/2015	1	35	26	51	10	0
625696810	12: Original	6/12/2015	1	44	29	67	6	0
633121288	13: Original	6/8/2015	1	132	63	144	51	0
130435259	14: Original	6/14/2015	1	119	94	186	27	0
130421972	15: Original	6/9/2015	1	266	65	209	122	0
626815080	16: Original	6/9/2015	1	302	109	319	92	0
130430099	17: Original	6/8/2015	1	41	21	44	18	0
130438888	18: Original	6/12/2015	1	140	107	210	37	0
160262564	1: Original	6/8/2015	3.798206278	113	56	158	8	3
160262989	2: Original	6/8/2015	3.798206278	74	32	103	2	1
160263878	3: Original	6/8/2015	3.798206278	86	33	108	7	4
160276521	4: Original	6/8/2015	3.798206278	117	50	154	12	1
625848180	5: Original	6/10/2015	3.798206278	58	15	49	22	2
160278118	6: Original	6/13/2015	1.357371795	129	43	114	57	1
160256726	7: Original	6/12/2015	1.357371795	65	37	99	3	0
160278610	8: Original	6/10/2015	1.357371795	122	47	98	70	1

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
160276641	9: Original	6/10/2015	1.357371795	39	15	31	22	1
160259758	10: Original	6/12/2015	1.357371795	108	46	116	38	0
160269401	11: Original	6/9/2015	1.357371795	6	2	8	0	0
160258496	12: Original	6/11/2015	1.357371795	6	2	7	1	0
160266210	13: Original	6/10/2015	1.357371795	3	2	3	2	0
160257875	14: Original	6/14/2015	1.357371795	27	13	39	1	0
160258469	15: Original	6/11/2015	1.357371795	11	4	14	1	0
160269069	16: Original	6/9/2015	1.357371795	14	7	18	3	0
606738273	17: Original	6/13/2015	1.357371795	171	70	173	68	0
160275943	18: Original	6/12/2015	1.357371795	130	39	108	61	0
Total				17913	6769	19613	4900	169

Standard Error of Statewide Belt Use Rate[3]: 2.3 percent

Nonresponse Rate as provided in §1340.9 (f)

Nonresponse rate for the survey variable seat belt use: 0.6946 percent

---

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

Appendix H: SPSS data dictionary

```
GET
  FILE='B:\495-WYDOT Seat Belt Survey\SPSS 2015\Occupants\occupants wy 2015.s
av'.
DATASET NAME DataSet2 WINDOW=FRONT.
DISPLAY DICTIONARY.
```

File Information

```
[DataSet2] B:\495-WYDOT Seat Belt Survey\SPSS 2015\Occupants\occupants wy 201
5.sav
```

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment
InclProbOfRoadType	1	InclProbOfRoadType	Scale	Input	12	Right
TLID	2	TLID	Scale	Input	12	Right
SRSWOR	3	SRSWOR	Scale	Input	12	Right
County	4	County	Nominal	Input	12	Right
observer	5	Observer	Nominal	Input	12	Right
Site#	6	Site #	Nominal	Input	10	Left
Population	7	Population Density	Nominal	Input	12	Right
Roadway	8	Roadway Type	Scale	Input	12	Right
Weekday	9	Weekday	Nominal	Input	12	Right
Roaddirection	10	Road direction	Nominal	Input	12	Right
lanes	11	Lanes	Nominal	Input	12	Right
weather	12	Weather	Nominal	Input	12	Right
timeStamp	13	Time Stamp	Nominal	Input	12	Right
Case#	14	Case#	Nominal	Input	6	Left
Vehicle	15	Vehicle Type	Nominal	Input	12	Right
License	16	License Type	Nominal	Input	12	Right
OccupSex	17	Occ Gender	Nominal	Input	12	Right
Occup	18	Occ Belted	Nominal	Input	12	Right
Roadway2	19	Roadway Type 2	Nominal	Input	10	Right
Weekend	20	Weekend	Nominal	Input	10	Right

Variable Information

Variable	Print Format	Write Format	Missing Values
InclProbOfRoadType	F12.7	F12.7	
TLID	F12	F12	
SRSWOR	F12.9	F12.9	
County	F12	F12	99
observer	F12	F12	99
Site#	A3	A3	
Population	F12	F12	9
Roadway	F12	F12	99
Weekday	F12	F12	9
Roaddirection	F12	F12	9
lanes	F12	F12	9
weather	F12	F12	9
timeStamp	F12	F12	9
Case#	A6	A6	
Vehicle	F12	F12	9
License	F12	F12	
OccupSex	F12	F12	9
Occup	F12	F12	9
Roadway2	F8	F8	99
Weekend	F8	F8	9

Variables in the working file

Variable Values

Value		Label
County	1	Albany
	3	Big Horn
	5	Campbell
	7	Carbon
	13	Fremont
	19	Johnson
	21	Laramie
	23	Lincoln
	25	Natrona
	29	Park
	31	Platte
	33	Sheridan
	35	Sublette
	37	Sweetwater
	39	Teton
	41	Uinta
observer	1	Donna Lucas
	20	Randi Egley
	23	Monty Byers
	27	Dorothy Johnstone
	30	Bill Spencer
	35	Kayla Shear
	38	Derek Bacon
	39	Daleen Sebelius
	40	Melissa Garcia
	41	Patrick White
	42	Dawn Edwards
	43	Jill Ellenbecker
	44	Doug Peterson
	45	Logan Wilson
	46	Tonya Dove
	47	Melissa Thomasma
Population	1	Urban
	2	Rural

Variable Values

Value		Label
Roadway	11	Primary
	12	Secondary
	14	Loc-Rur-City
Weekday	1	Sunday
	2	Monday
	3	Tuesday
	4	Wednesday
	5	Thursday
	6	Friday
	7	Saturday
Roaddirection	1	North
	2	South
	3	East
	4	West
lanes	1	One Lane
	2	Two Lanes
	3	Three lanes
	4	Four Lanes
weather	1	Clear / Sunny
	2	Cloudy
	3	Foggy
	4	Light Rain
	5	Snow / Ice
	6	Heavy Rain
	7	Occasional Rain
timeStamp	1	7:30 - 9:30 AM
	2	9:30 - 11:00 AM
	3	11:30 AM - 1:30 PM
	4	1:30 - 3:30 PM
	5	3:30 -5:30 PM
Vehicle	1	Auto
	2	Van
	3	SUV
	4	Pickup

Variable Values

Value		Label
License	1	Wyoming License
	2	Out-of-State License
	9	Unsure
OccupSex	1	Male
	2	Female
Occup	1	Belted
	2	Not Belted
	3	Unsure
Roadway2	11	Primary
	12	Secondary
	14	Loc-Rur-City
Weekend	1	Weekend
	2	Weekday