

SEAT BELT USE IN NORTH DAKOTA



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Thank you to North Dakota Tourism and Gerald Blank for the use
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EXECUTIVE SUMMARY

North Dakota's seat belt use study provides statistically reliable data from a field survey of driver and right front-seat passenger seat belt use. These data can be used to develop generalizations, comparative analyses, and recommendations. This National Occupant Protection Use Survey (NOPUS) is based on national standards for survey design and field observation protocol. It provides the North Dakota Department of Transportation (NDDOT) with a systematic evaluation of seat belt use rates within the state. The National Highway Traffic Safety Administration (NHTSA) funds NOPUS through NDDOT's Highway Safety Division.

During the week of June 7–13, 2026, trained observers visited 320 sites across 16 counties to collect seat belt use observations for drivers and right front-seat passengers in vehicles with gross vehicle weights up to 10,000 lbs. Data were collected for 14,822 drivers and 2,076 right front-seat passengers for a total of 16,898 vehicle occupants. Based on the sampling methodology weighting procedures, the final estimate for statewide seat belt use was 85.8%.

A summary of major findings from the 2026 survey regarding seat belt use in North Dakota follows:

- **County.** Weighted rates of seat belt use by county ranged from 94.8% in Burleigh County to 66.0% in Stutsman County. Eight counties improved when comparing the 2024–2026 three-year average with the 2021–2023 average. Three counties—McLean, Rolette, and Walsh—were added to the sampling frame with the 2022 reselection and therefore do not have comparable 2021–2023 averages. Thirteen of the 16 counties had three-year average rates above 80% in the most recent period.
- **Vehicle Occupant.** Unweighted seat belt use was 86.0% for drivers and 94.1% for passengers, with an overall use rate of 87.0%. At the county level, driver restraint use ranged from 71.3% in Stutsman County to 93.8% in Burleigh County. Passenger use ranged from 84.2% in Stutsman County to 100% in McLean, Stark, and Walsh counties.
- **Region.** In the 2026 survey, 61.1% of vehicle occupants were observed in the west and 38.9% in the east. Seat belt use was 84.1% in the east and 88.9% in the west. Compared with 2025, the east rate decreased by approximately 3.4 percentage points, while the west rate increased by approximately 1.3 percentage points. Three-year averages increased in both regions, from 83.4% to 84.1% in the east and from 84.5% to 88.4% in the west.
- **Vehicle Type.** Trucks represented 45.2% of vehicles in the west and 39.6% in the east. At the statewide level, trucks accounted for 43.0% of occupants, followed by SUVs at 39.0%, cars at 13.1%, and vans at 4.9%. Truck occupants had the lowest statewide restraint use at 82.8%, while SUV occupants had the highest at 91.9%. Seat belt use was 85.1% among car occupants and 90.9% among van occupants.
- **Gender.** Seat belt use continued to be higher among female occupants. Females demonstrated 92.5% use in 2026, compared with 84.0% among males. Female use decreased slightly from

92.9% in 2025, while male use was essentially unchanged from 2025. Across the 2024–2026 period, the three-year averages were 92.1% for females and 83.2% for males.

- **Gender and Vehicle Type.** Female occupants had higher seat belt use than male occupants in every vehicle type in 2026. Female use ranged from 89.0% in cars to 93.8% in SUVs, while male use ranged from 81.6% in trucks to 89.5% in vans. The largest gender difference occurred among truck occupants, where female use was approximately 8.3 percentage points higher than male use. Males accounted for approximately 85.4% of truck occupants, compared with 14.6% female.
- **Road Type.** Vehicle occupants traveling primary roadways in 2026 were belted at 88.8%, compared with 82.2% on secondary roads and 79.5% on local roads. Compared with 2025, use decreased on all three roadway types, with the largest decline on local roads. Three-year averages increased from 87.1% to 88.4% on primary roads, from 81.1% to 83.3% on secondary roads, and from 78.1% to 79.1% on local roads. In metropolitan statistical area (MSA) counties, restraint use was 92.9% on primary roads and 85.9% on secondary roads, compared with 88.2% and 82.4%, respectively, in non-MSA counties. Local-road sites were sampled only in MSA counties, where use was 79.5%.

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Introduction

The Upper Great Plains Transportation Institute (UGPTI), a research, education, and outreach center at North Dakota State University (NDSU) in Fargo, ND, was contracted by the North Dakota Department of Transportation (NDDOT) to conduct a field survey of seat belt use in 2026. The study replicates the sampling methodology previously approved by the National Highway Traffic Safety Administration (NHTSA) and NDDOT for the 2012 survey. That methodology was a redesign of an earlier method to yield a more statistically robust estimate of seat belt use on all North Dakota roadways. In 2022, survey researchers implemented an NHTSA-mandated review of state crash-related fatalities that resulted in modifications to county inclusion and selection, and a complete reselection of observation sites. This reselection is certified for five years. Requirements for conducting statewide seat belt surveys are published in the Federal Register, Vol. 76 No. 63, April 1, 2011, Rules and Regulations, pp. 18,042 – 18,059.

The objective of this study was to estimate the statewide rate of seat belt use among drivers and right front-seat passengers in North Dakota.

Additional analyses estimated seat belt use rates in the following categories:

- Occupant position (driver, passenger)
- Gender (male, female)
- Type of vehicle (car, van, sport utility vehicle, truck)
- Region of state (east, west)
- Roadway type (primary, secondary, local)
- Population density/economic activity (MSA, non-MSA)

A description of the tasks involved in conducting the statewide seat belt survey, which includes general information about the methods and protocols, is provided in this report. Survey sample design methods were employed to ensure the results were representative of the behavior statewide. One exception to this was that local roads were only sampled in metropolitan statistical area (MSA) counties per NHTSA protocol.

Seat Belt Survey Results

Statewide Results

Sample Size by Year

Table 1: Survey Sample by Occupant Position

Occupants Observed	Driver		Passenger		Total
	<i>n</i>	%	<i>n</i>	%	<i>N</i>
2022	13,541	85.4%	2,318	14.6%	15,859
2023	14,087	84.7%	2,535	15.3%	16,622
2024	13,664	83.3%	2,738	16.7%	16,402
2025	14,319	86.4%	2,262	13.6%	16,581
2026	14,822	87.8%	2,076	12.3%	16,898

Table 1 shows the sample size of annual seat belt surveys from 2022 to 2026 by occupant position. Within observations collected in 2026, there were 16,898 occupants: 14,822 drivers, which represented 87.8% of the sample, and 2,076 passengers, which represented 12.3% of the sample. The driver-to-passenger ratio can influence overall use rates because use rates among passengers are typically higher than drivers. In 2026, the ratio was 7.13 drivers for every passenger. Table 1 shows slight fluctuations in the share of drivers and passengers, with differences ranging at under 4.5 percentage points over time. These figures include only vehicle occupants where protection status could be determined per survey protocol. Total sample size can vary from year to year depending on site locations and traffic flow. It is common to have several individual sites capture only a limited number of vehicles. However, these sites are included each year because they are important to an inclusive and representative sample in the aggregate measurement of statewide seat belt use.

Table 2: Ratio of Drivers to Passengers, 2022–2026

Occupants Observed	<i>Drivers: Passengers</i>	<i>Drivers as % of Sample</i>
2022	5.8:1	85.4%
2023	5.6:1	84.7%
2024	5.0:1	83.3%
2025	6.3:1	86.4%
2026	7.1:1	87.7%

Overall unweighted results of the 2026 statewide survey indicate that 87.0% of observed vehicle occupants were wearing seat belts on North Dakota roads. Because the survey employs a two-stage stratified random sampling scheme, a more appropriate estimate of statewide seat belt use is found by weighting the unadjusted rate. Using those formulas, the overall weighted rate of seat belt use in North

Dakota was 85.8% for 2026. Figure 1 shows annual seat belt use since implementation of the amended methodology in 2012. The graph also includes national use as reported by NHTSA¹; the most recent national rate available in the workbook is 91.3% for 2025.

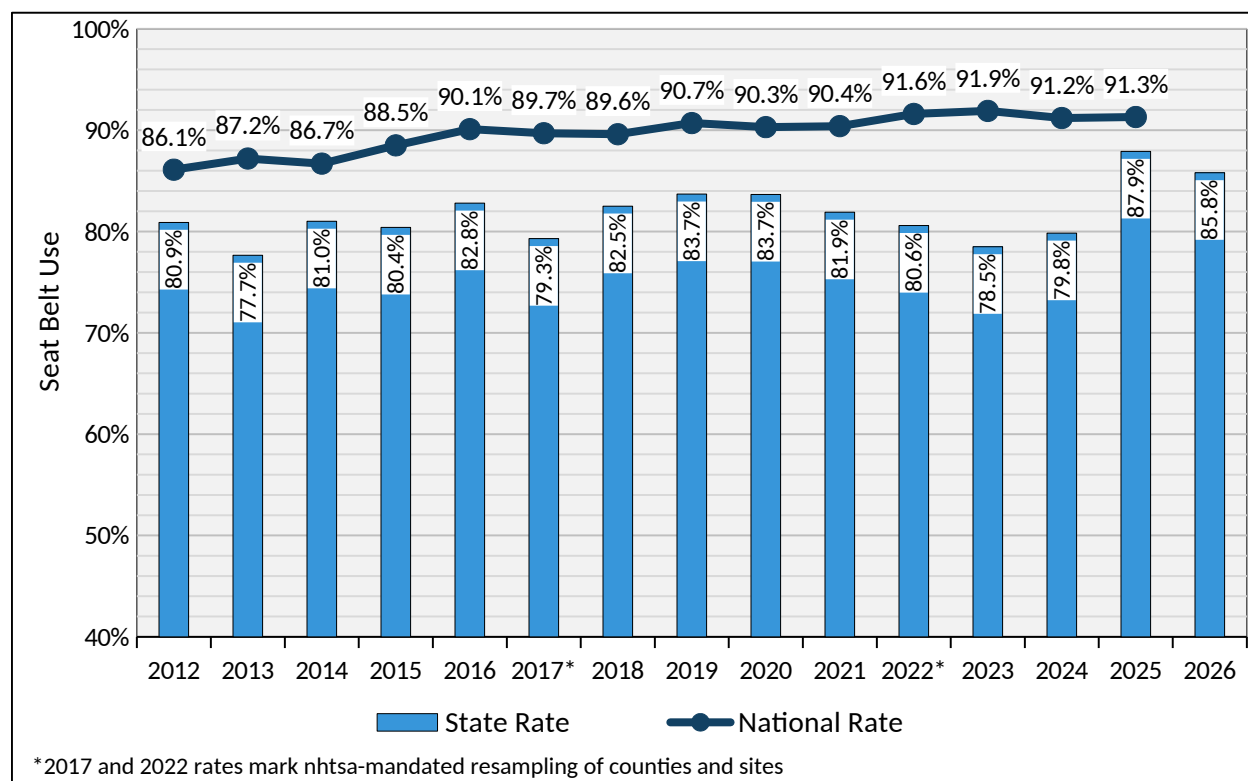


Figure 1: Statewide Seat Belt Use, Weighted

Considerable effort has been made to address seat belt use in North Dakota. A primary seat belt law went into effect in North Dakota on August 1, 2023. The 2026 statewide weighted rate of 85.8% remains below the national rate, as shown in Figure 1. This report examines differences in seat belt use among counties, regions of the state, occupant position, gender, vehicle type, and roadway type to provide additional insight into where restraint use is higher or lower.

County Results

The 2026 weighted seat belt rates by county are shown in Figure 2. Restraint use ranged from a high of 94.8% in Burleigh County to a low of 66.0% in Stutsman County. Counties without interstate corridors averaged 85.0% seat belt use, compared with 80.9% among counties with interstate corridors. This reverses the pattern noted in some earlier surveys and illustrates the year-to-year variability that can occur at the county level.

¹ National Center for Statistics and Analysis. (2026, May). *Seat Belt Use in 2025 – Overall Results* (Traffic Safety Facts Research Note. Report No. DOT HS 813 799). National Highway Traffic Safety Administration. [Research Note: Seat Belt Use in 2025 - Overall Results](#)

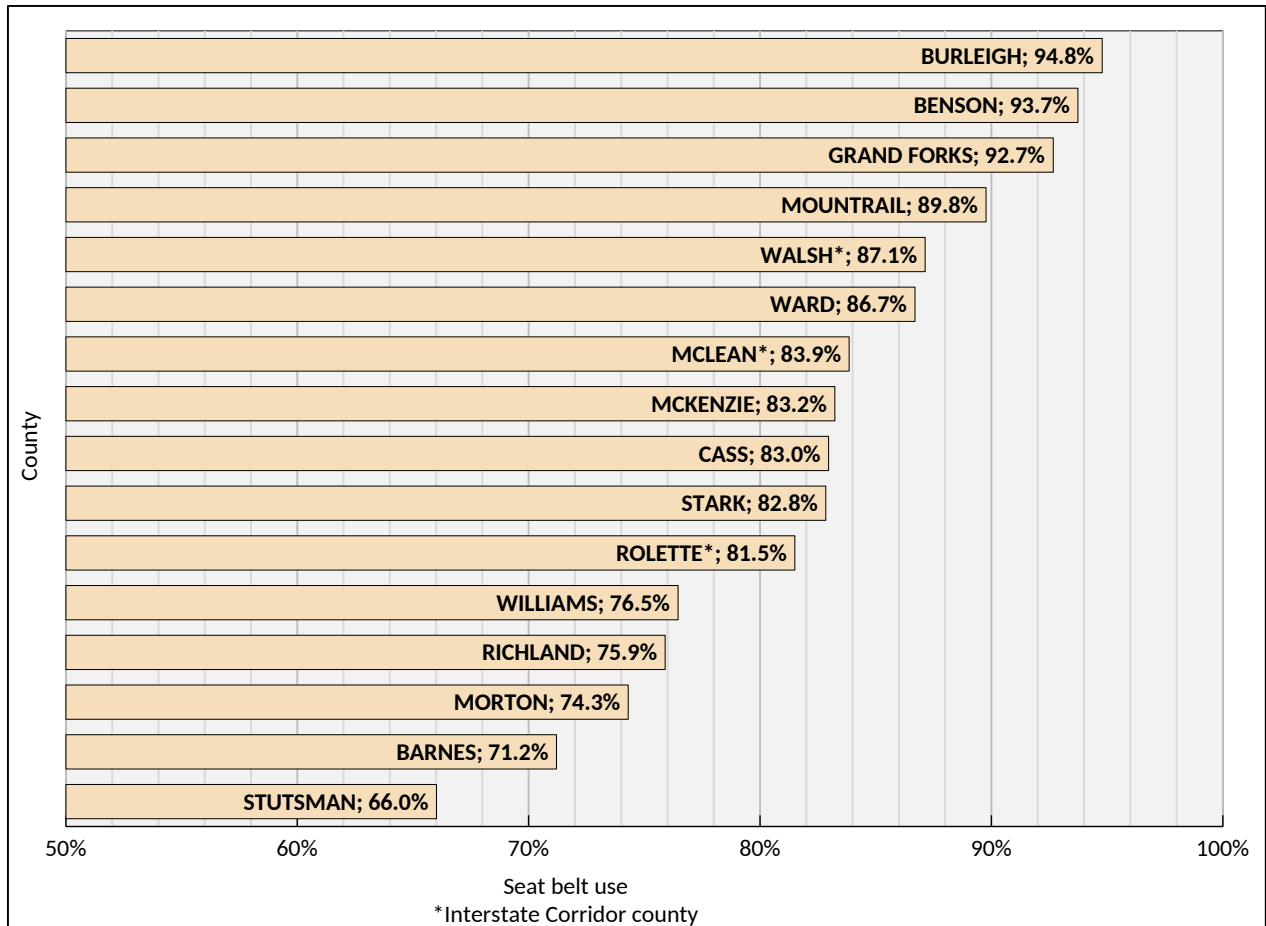


Figure 2: Seat Belt Use by County, 2026, Weighted

Rates vary from year to year at the county level. The changes can reflect sampling differences or special event effects, especially for counties where there are fewer total observations. However, even rates for counties with more observations may exhibit noticeable change from one year to the next.

To smooth annual variability, the three-year averages in Figure 3 provide a more stable representation of county rates. The 2021–2023 and 2024–2026 averages allow comparison for the 13 counties that were included in both time periods. In the most recent three-year period, Benson County had the highest average seat belt use at 93.1%, followed by Burleigh County at 89.4% and Grand Forks County at 89.0%. The largest improvement among the comparable counties occurred in Burleigh County, which increased 17.2 percentage points, from 72.2% in 2021–2023 to 89.4% in 2024–2026. Grand Forks County also increased substantially, from 78.0% to 89.0%, while Benson County increased from 82.3% to 93.1%.

Of the 13 comparable counties, eight increased in average seat belt use between the two periods and five decreased. McKenzie County experienced the largest decline, decreasing 11.1 percentage points from 94.3% in 2021–2023 to 83.2% in 2024–2026. The three counties added to the sampling frame with the 2022 reselection—McLean, Rolette, and Walsh—do not have 2021 observations; their earlier values are therefore based on 2022–2023 averages. Those averages were 71.2%, 78.8%, and 81.6%,

respectively, compared with 81.8%, 82.3%, and 85.9% in 2024–2026. The national rate remained unchanged at 91.3% across the two comparison periods.

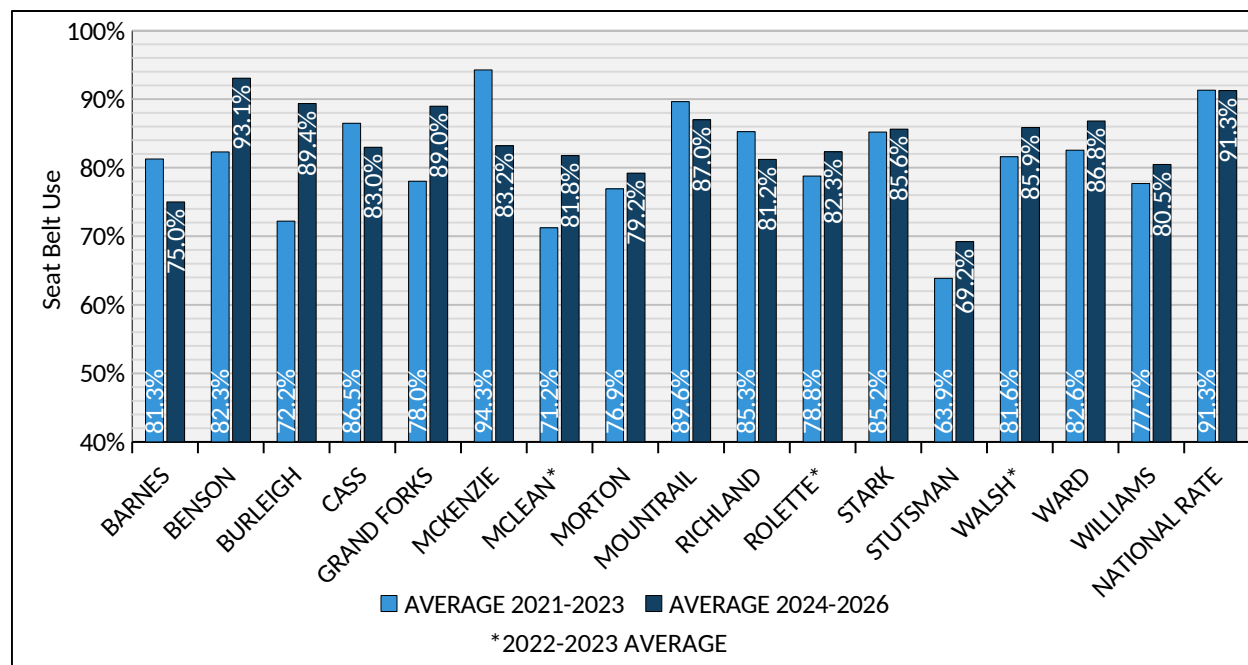


Figure 3: Seat Belt Use by County, Three-Year Averages, Weighted

The preceding statewide data are based on the weighted county sampling frame. However, the following sections of this report describe strata frequencies that are unadjusted because of survey design. Note that the county rates are based on the sites visited as part of the statewide rate sample, and thus may not statistically represent seat belt use in a county.

Results for Vehicle Occupants by Position

Figure 4 illustrates seat belt use by occupant position in 2026. At the county level, driver use ranged from a low of 71.3% in Stutsman County to a high of 93.8% in Burleigh County. Passenger use ranged from 84.2% in Stutsman County to 100% in McLean, Stark, and Walsh counties. As in previous surveys, passengers were observed using seat belts at higher rates than drivers in every county.

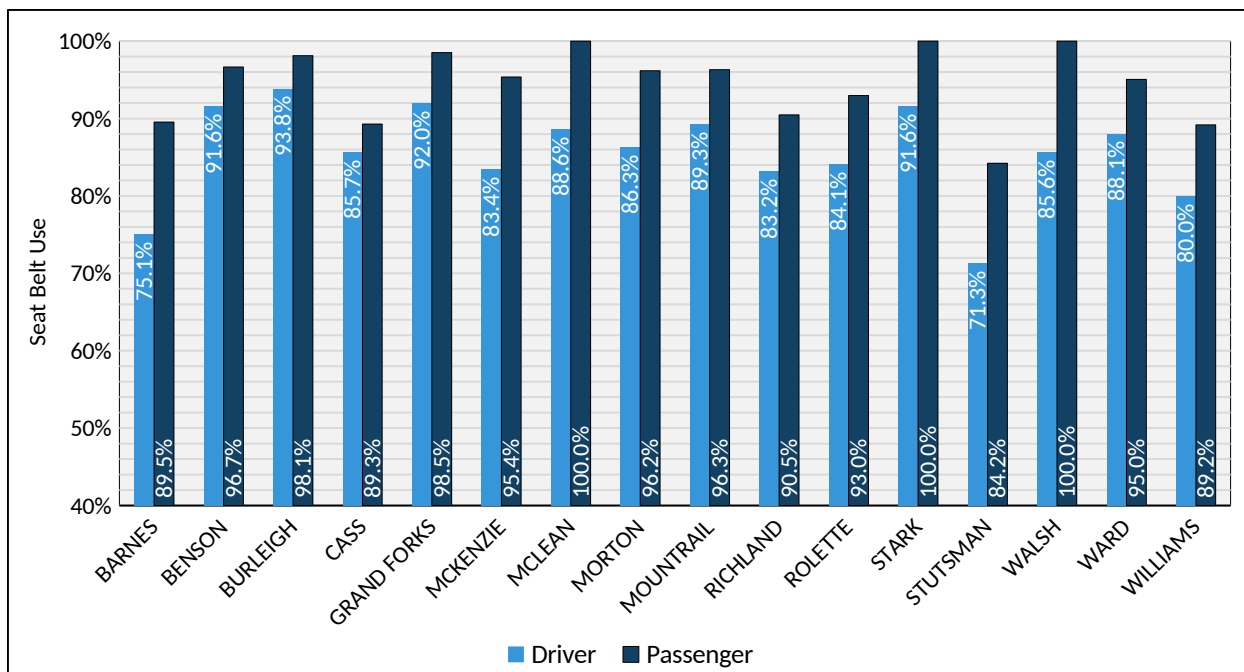


Figure 4: Percent Belted by Occupant Position & County, Unweighted, 2026

Considering the state as a whole, the unweighted estimates of seat belt use in 2026 were 86.0% for drivers and 94.1% for passengers, with an overall seat belt use rate of 87.0% for drivers and passengers combined (Figure 5). Compared with 2025, driver use decreased by approximately 0.4 percentage points, passenger use decreased by approximately 0.3 percentage points, and the combined rate decreased by approximately 0.5 percentage points.

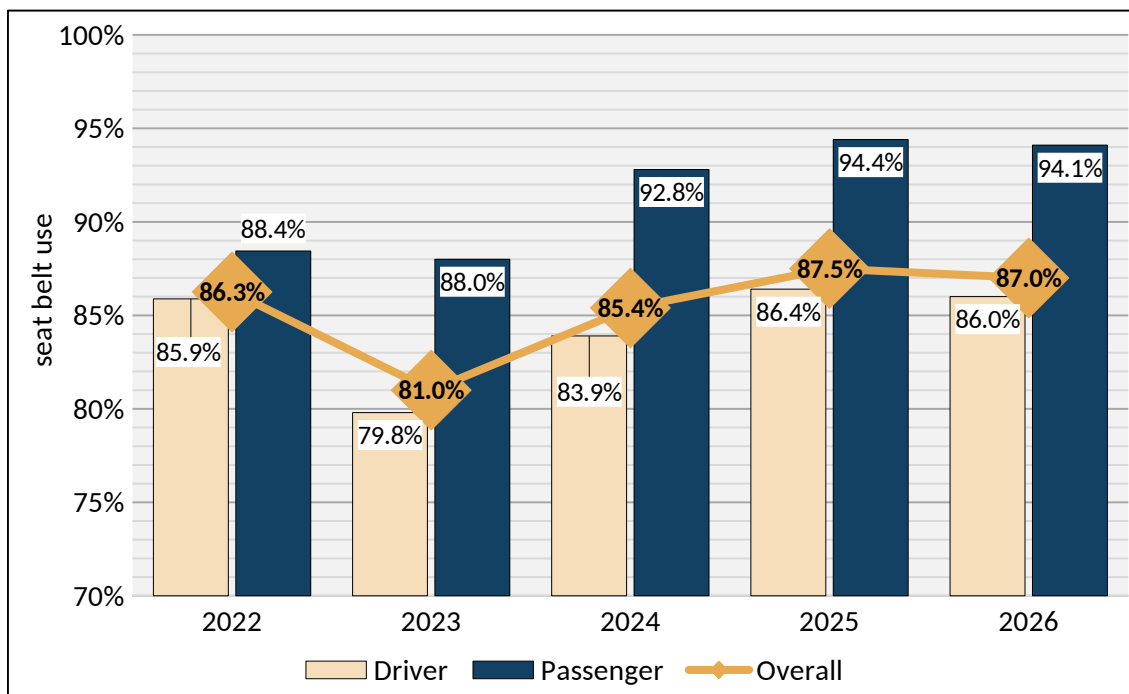


Figure 5: Percent Belted by Position, Annual, Unweighted

Results by North Dakota Regions

The survey sampling methodology groups the state into east and west regions (Figure 6). Each region is represented by eight counties. Both east and west regions contain “certainty” counties, five in the east and seven in the west, with the rest selected from the remaining counties in each region².

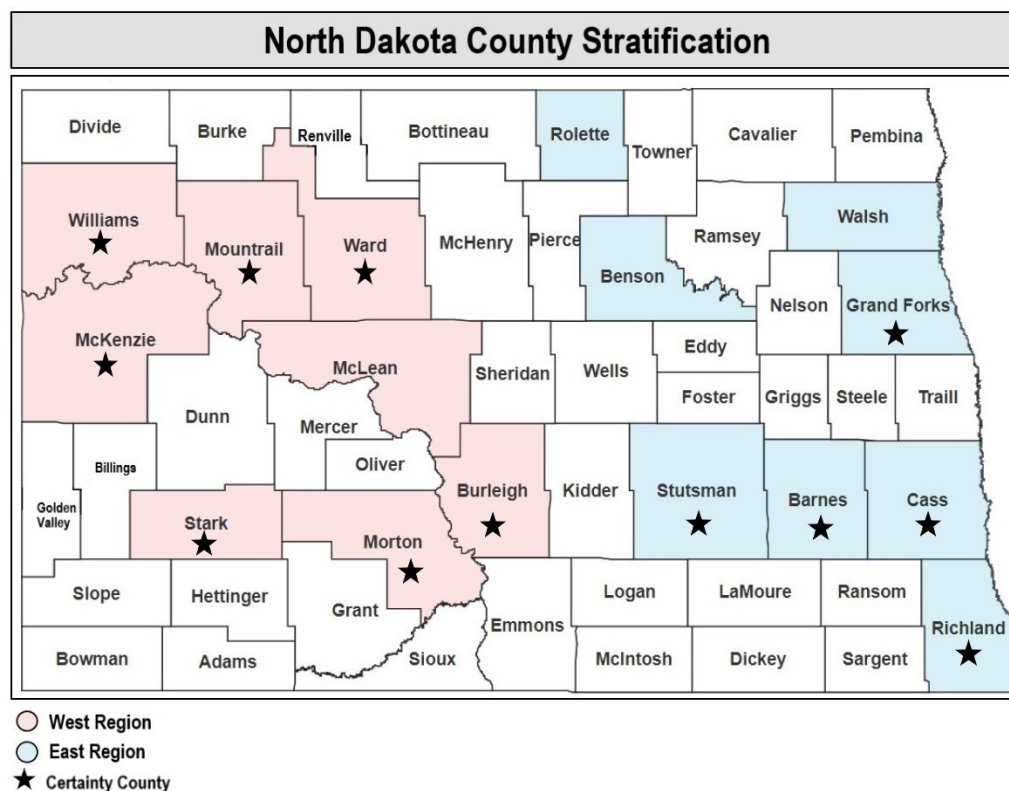


Figure 6: North Dakota County Stratification

Year-to-year variations in sample size may be associated with revised sites and/or changes in travel levels and patterns. Table 3 shows a proportionate sample distribution between regions throughout the five-year period. In 2026, 61.1% of the sample was collected in western North Dakota from 10,332 occupants, while 38.9% was observed in eastern North Dakota among 6,566 occupants.

Table 3: Sample Size by Region

Occupants Observed	East		West		Total N
	n	%	n	%	
2022	6,349	40.0%	9,510	60.0%	15,859
2023	6,552	39.4%	10,070	60.6%	16,622
2024	6,878	41.9%	9,524	58.1%	16,402
2025	6,439	38.8%	10,142	61.2%	16,581

²For details on methodology, certainty counties, and the selection processes, contact NDDOT Safety Division.

2026	6,566	38.9%	10,332	61.1%	16,898
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Historically, seat belt use has fluctuated in the east and west regions, as shown in Figure 7. In 2026, the west region recorded a higher use rate than the east, at 88.9% compared with 84.1%. The east rate decreased from 87.5% in 2025, while the west rate increased from 87.6%. Figure 8 shows that the three-year average increased from 83.4% in 2021–2023 to 84.1% in 2024–2026 in the east, and from 84.5% to 88.4% in the west.

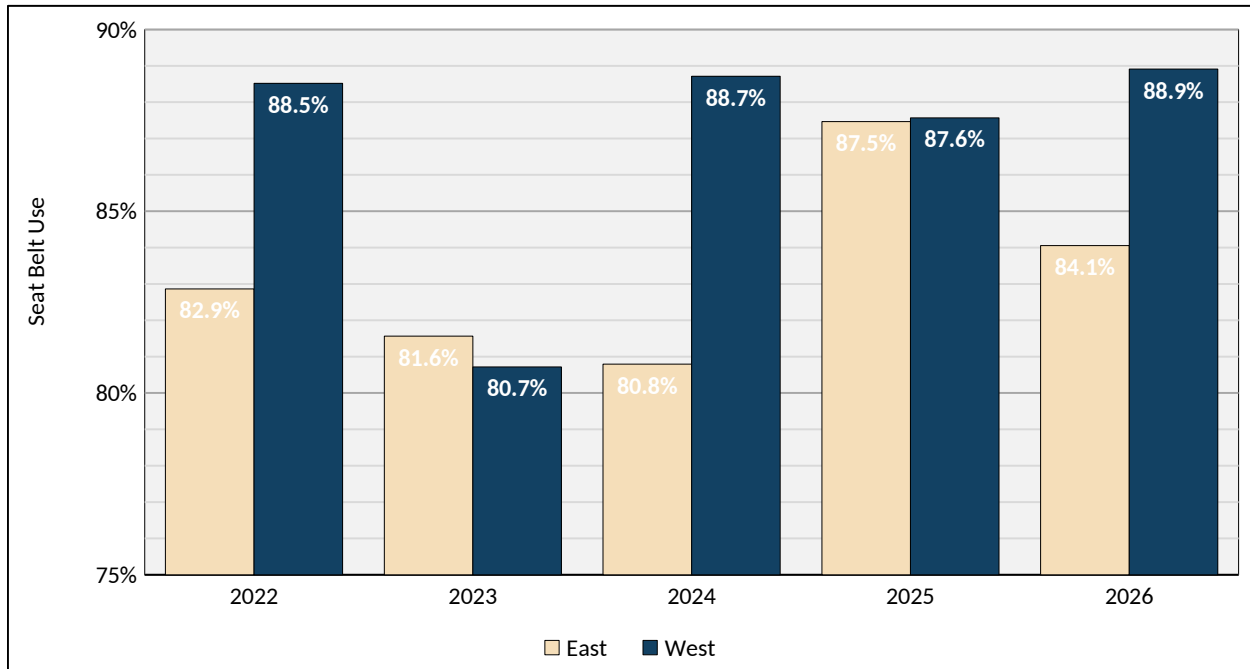


Figure 7: Percent Belted by Region, Unweighted

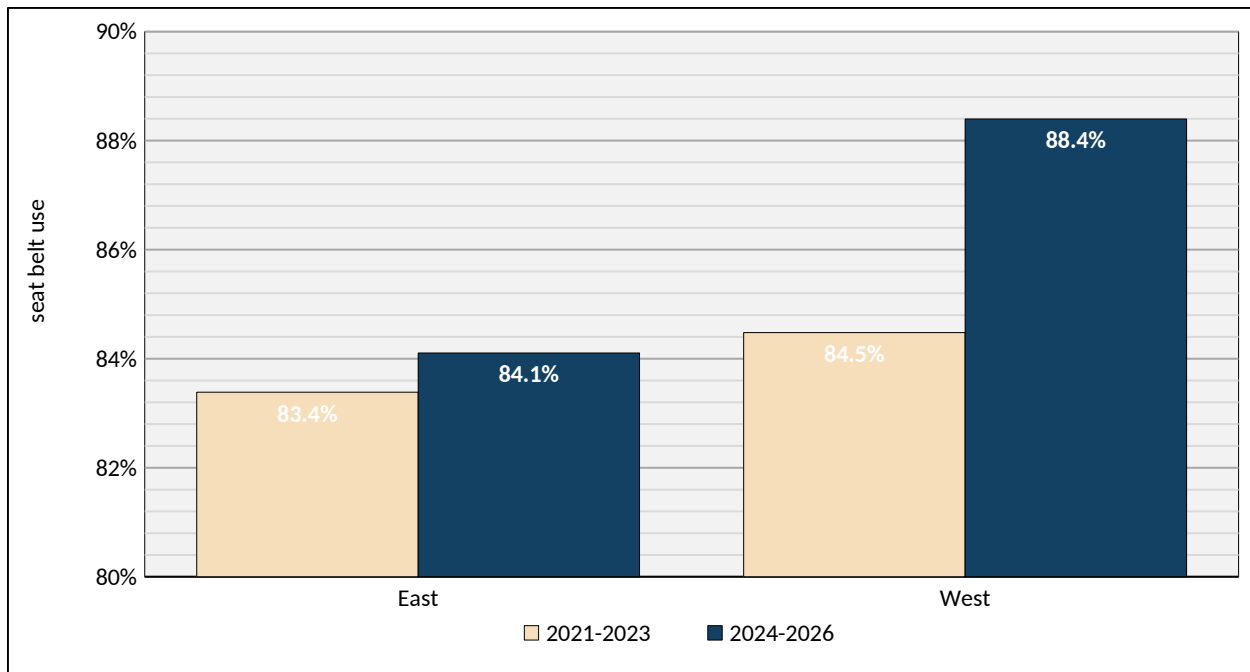


Figure 8: Seat Belt Use by Region, Three Year Averages, Unweighted

Figure 9 shows the further breakdown of driver and passenger use by region over the five-year span. In 2026, driver belt use was 82.8% in the east and 88.1% in the west. Passenger use was 92.4% in the east and 95.3% in the west. Compared with 2025, driver use decreased in the east but increased in the west, while passenger use decreased slightly in the east and increased in the west.

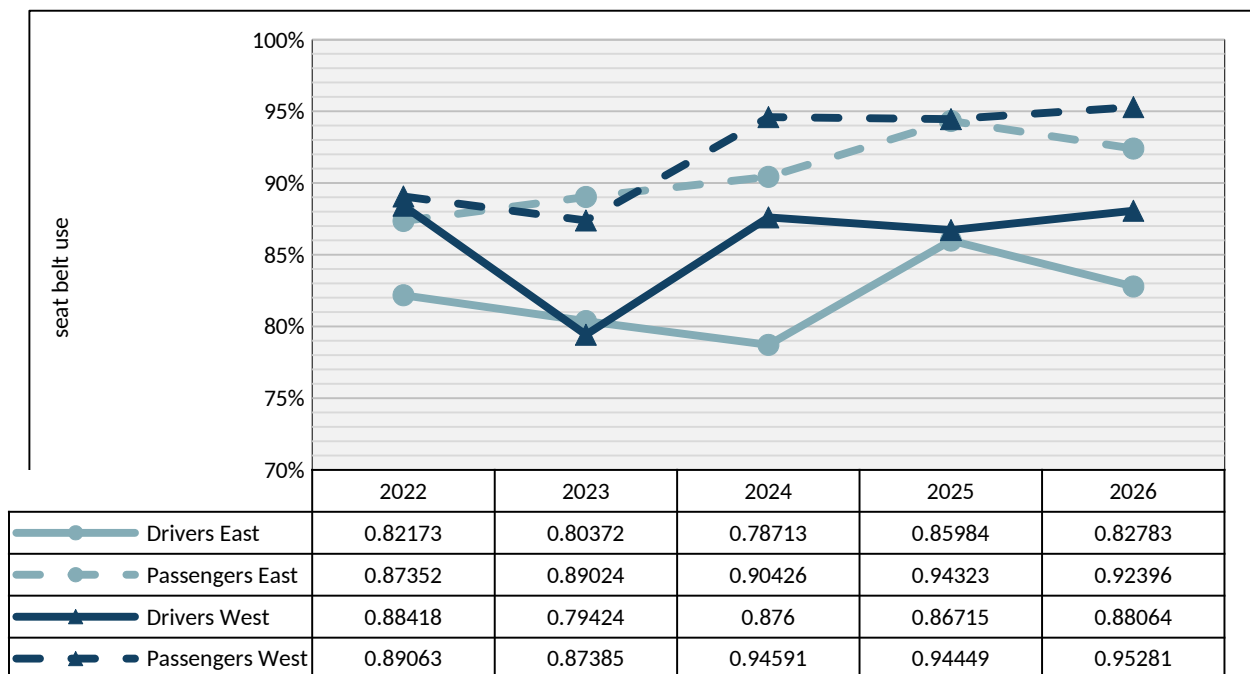


Figure 9: Percent Belted by Region & Occupant Position, Annual, Unweighted

Historically, lower seat belt usage in the west region was explained by the high prevalence of truck occupants, who have typically exhibited the lowest rate of use among vehicle types. For example, large truck volume of greater than 50% was observed in McKenzie, Mountrail, and Williams counties. Overall, the west region accounts for 64.3% of the statewide share of occupants in this vehicle type. While use rates in the west have risen, the disproportionate influence of truck occupants is still apparent, as noted in the following section.

Results by Vehicle Type

Table 4 shows the fleet distribution annually from 2022 through 2026. In 2026, trucks represented 43.0% of the statewide occupant sample and SUVs represented 39.0%. Cars accounted for 13.1% and vans 4.9%. Compared with 2025, the truck share increased slightly, while the shares of cars and vans decreased slightly.

Table 4: Sample by Vehicle Type

Occupant s	Car		Truck		SUV		Van		Total
Observed	n	%	n	%	n	%	n	%	N
2022	3,015	19.0%	6,404	40.4%	5,623	35.5%	817	5.2%	15,859
2023	2,657	16.0%	7,306	44.0%	5,810	35.0%	849	5.1%	16,622
2024	2,346	14.3%	6,983	42.6%	6,275	38.3%	798	4.9%	16,402
2025	2,301	13.9%	7,017	42.3%	6,372	38.4%	891	5.4%	16,581
2026	2,215	13.1%	7,272	43.0%	6,583	38.9%	828	4.9%	16,898

Beginning with the 2012 statewide seat belt survey, North Dakota incorporated the expanded uniform criteria vehicle eligibility to define a fleet that included all passenger vehicles with a gross vehicle weight up to 10,000 lbs. This change necessitated the inclusion of various small trucks, e.g., flatbed, utility service, small box trucks, etc. Trucks with commercial use indicated by logos on doors or truck bodies are within the survey scope.

In 2025, NHTSA found the national rate of observed seat belt use for truck occupants was 85.6%, compared with 91.5% in cars and 93.3% in SUVs and vans combined (reference on page 3). According to a 2024 NHTSA report³, 60.0% of pickup occupants killed in rural areas were unrestrained, the highest percentage of any passenger vehicle occupants killed among both rural and urban areas.

Regionally, trucks represented 45.2% of vehicles observed in the west and 39.6% in the east. Prior to the 2022 reselection, the west region generally exhibited lower overall seat belt use, a pattern that was often attributed, in part, to the higher proportion of trucks and the historically lower restraint use among truck occupants. Since the reselection, however, that pattern has shifted. Although the west region continues to have the larger share of trucks, truck occupant belt use in 2026 was higher in the west (85.2%) than in the east (78.3%). At the county level, the highest proportions of trucks were

³ National Center for Statistics and Analysis. (2026, July). Rural/urban traffic fatalities: 2024 data (Traffic Safety Facts. Report No. DOT HS 813 828). National Highway Traffic Safety Administration. [2024 Traffic Safety Facts: Rural/Urban Traffic Fatalities](#)

observed in McKenzie County (74.6%), Mountrail County (58.2%), and Williams County (54.8%). Truck occupant seat belt use ranged from 65.0% in Stutsman County to 93.8% in Benson County.

North Dakota's annual results for seat belt use by vehicle type are shown in Figure 10. SUV occupants demonstrated the highest use rate at 91.9%, followed by van occupants at 90.9%. Car occupants were belted at a rate of 85.1%, while truck occupants continued to have the lowest restraint use at 82.8%.

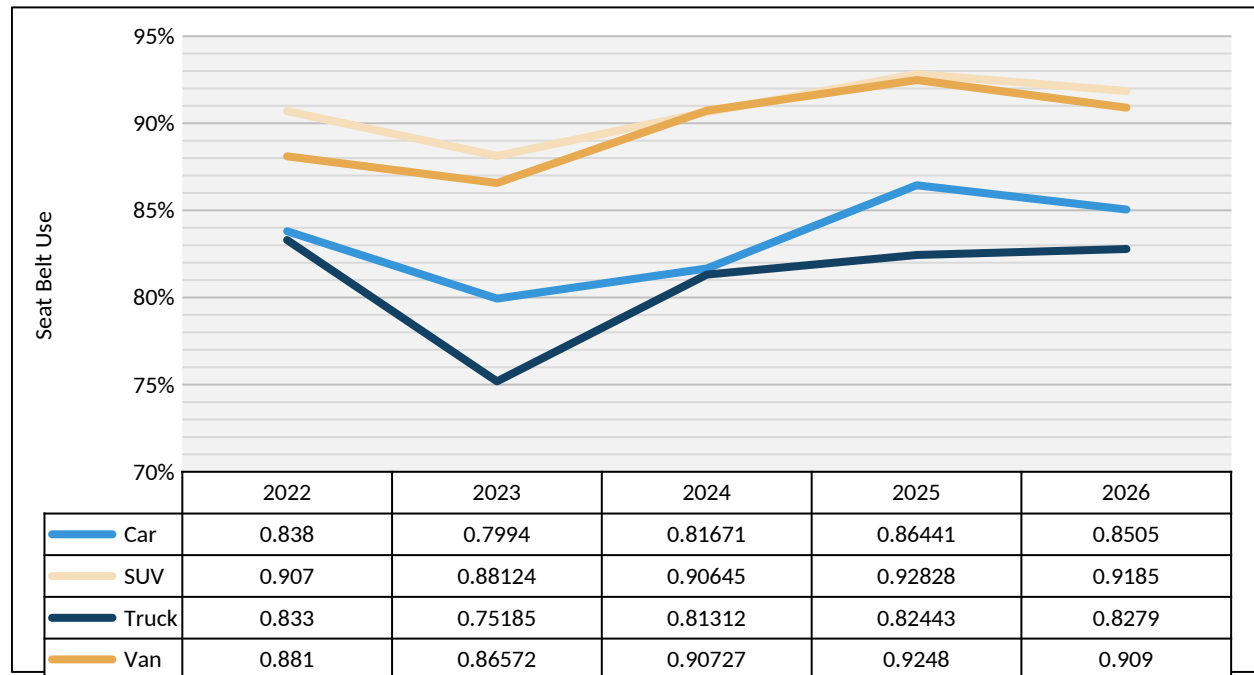


Figure 10: Percent Belted by Vehicle Type, Annual, Unweighted

The three-year averages of seat belt use by vehicle type showed improvement across all four vehicle categories between the 2021–2023 and 2024–2026 periods (Figure 11). SUV occupants continued to demonstrate the highest average seat belt use, increasing from 89.8% to 91.8%, while van occupants had the largest improvement, increasing from 87.9% to 91.4%. Car occupants showed a more modest increase, from 82.8% to 84.4%, and truck occupants improved from 79.3% to 82.2%. Despite improvement across all vehicle types, truck occupants continued to have the lowest average seat belt use.

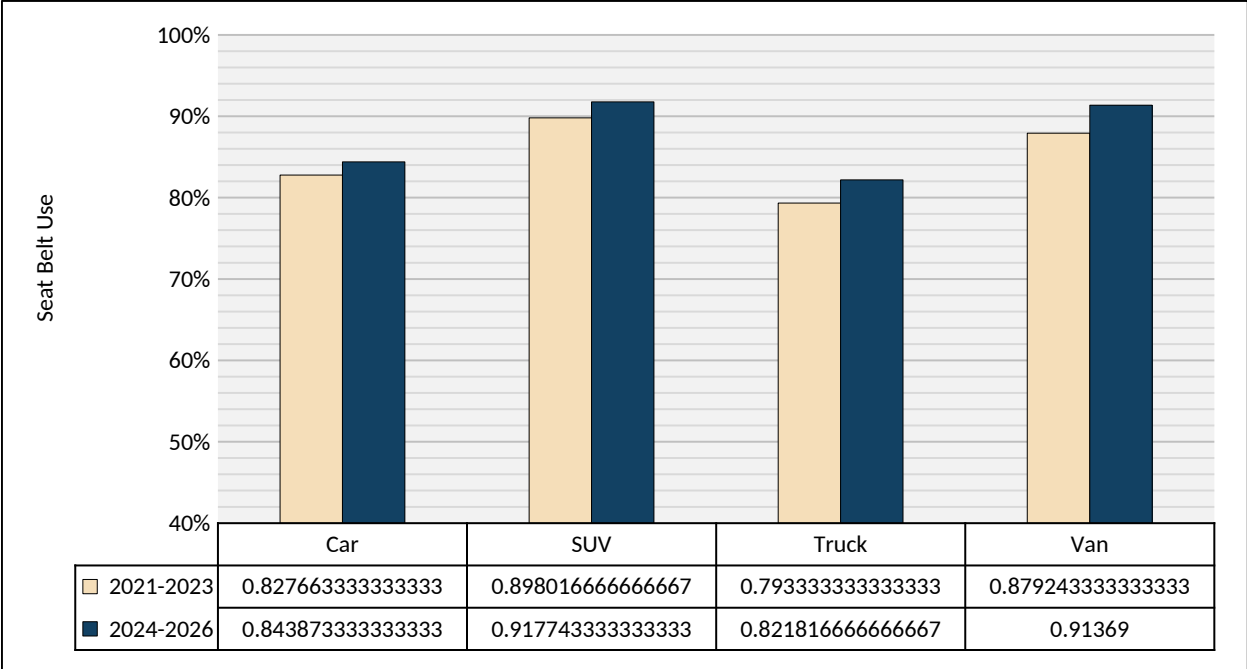


Figure 11: Seat Belt Use by Vehicle Type, Three-Year Averages, Unweighted

While seat belt use among truck occupants has improved in recent years, Table 5 shows that truck occupants continue to have the lowest belt use rates across vehicle types in most counties. In 2026, truck occupant belt use reached 90% or higher in only two counties—Benson (93.8%) and Stark (90.4%)—while the lowest rate, 65.0%, was observed in Stutsman County. Lower truck belt use, combined with the relatively large proportion of trucks observed in several western counties, can influence both county-level and statewide seat belt use rates. Among van occupants, the highest belt use rate was observed in both Grand Forks and Walsh counties at 100.0%.

Table 5: Percent Belted by County & Vehicle Type, 2026, Unweighted

2026					
Car		SUV		Truck	
Barnes	77.8%	Barnes	87.5%	Barnes	66.6%
Benson	84.3%	Benson	94.5%	Benson	93.8%
				Van	
Barnes		Barnes		Barnes	84.1%
Benson		Benson		Benson	93.2%

Burleigh	93.5%	Burleigh	98.6%	Burleigh	88.2%	Burleigh	96.2%
Cass	80.3%	Cass	87.8%	Cass	85.0%	Cass	89.8%
Grand Forks	96.6%	Grand Forks	97.4%	Grand Forks	85.4%	Grand Forks	100.0%
Mckenzie	90.9%	Mckenzie	89.8%	Mckenzie	83.1%	Mckenzie	85.7%
Mclean	89.6%	Mclean	96.3%	Mclean	83.2%	Mclean	90.4%
Morton	85.2%	Morton	91.5%	Morton	81.4%	Morton	96.1%
Mountrail	85.9%	Mountrail	95.7%	Mountrail	88.2%	Mountrail	96.2%
Richland	83.3%	Richland	89.3%	Richland	76.0%	Richland	94.9%
Rolette	85.1%	Rolette	90.1%	Rolette	82.5%	Rolette	81.8%
Stark	89.0%	Stark	94.1%	Stark	90.4%	Stark	94.2%
Stutsman	71.4%	Stutsman	81.5%	Stutsman	65.0%	Stutsman	81.1%
Walsh	95.7%	Walsh	95.6%	Walsh	78.0%	Walsh	100.0%
Ward	81.9%	Ward	93.5%	Ward	85.2%	Ward	97.8%
Williams	83.0%	Williams	84.8%	Williams	81.1%	Williams	68.9%

Results by Occupant Gender and Position

The gender composition of the sample shifted in 2026, with males representing 63.0% and females 35.5% of the sample, compared with 59.4% and 38.9%, respectively, in 2025. In a small percentage of observations, 1.5%, occupant gender could not be determined, but occupant protection was still recorded. These cases are included in all analyses except where gender is one of the variables of interest. Removing these observations for these parts of the analyses has no effect on the overall numbers but is mentioned here for comprehensive reporting.

Table 6: Sample by Gender

Occupants Observed	Female		Male		Unknown		Total
	n	%	n	%	n	%	N
2022	6,091	38.4%	9,693	61.1%	75	0.5%	15,859
2023	6,201	37.3%	10,299	62.0%	122	0.7%	16,622
2024	6,245	38.1%	9,902	60.4%	255	1.6%	16,402
2025	6,452	38.9%	9,889	59.4%	240	1.4%	16,581
2026	5,993	35.5%	10,654	63.0%	251	1.5%	16,898

Survey results for seat belt use by gender continued the trend of higher use among female occupants. Females demonstrated 92.5% use in 2026, compared with 84.0% among males. Female use decreased slightly from 2025, while male use was essentially unchanged.

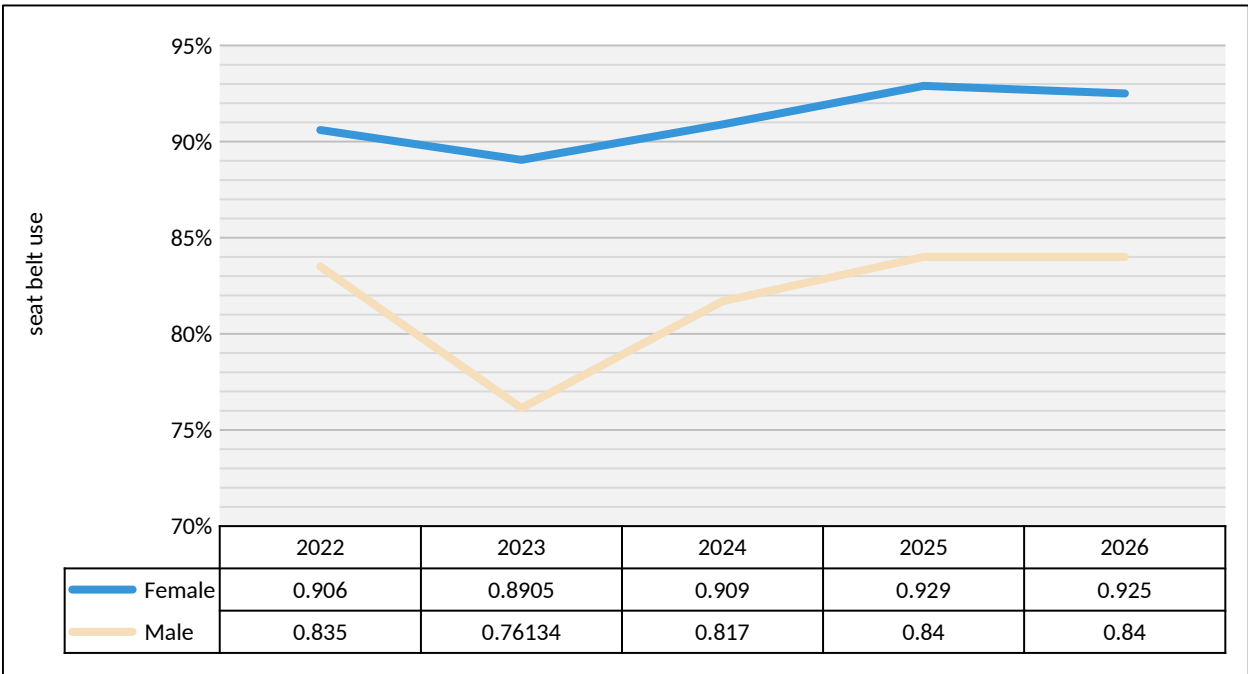


Figure 12: Percent Belted by Gender, Annual, Unweighted

Table 7: Sample by Gender & Position

Table 1. Occupancy by Gender and Position												
Occupants Observed	Male				Female				Unknown		Total N	
	Driver		Passenger		Driver		Passenger		All Positions			
	n	%	n	%	n	%	n	%	n	%		
2022	8,833	55.7%	860	5.4%	4,683	29.5%	1,408	8.9%	75	0.5%	15,859	
2023	9,431	56.7%	868	5.2%	4,588	27.6%	1,613	9.7%	122	0.7%	16,622	
2024	8,980	54.7%	922	5.6%	4,553	27.8%	1,692	10.3%	255	1.6%	16,402	
2025	9,193	55.4%	696	4.2%	5,003	30.2%	1,449	8.7%	240	1.4%	16,581	
2026	9,972	59.0%	682	4.0%	4,721	27.9%	1,272	7.5%	251	1.5%	16,898	

The sample by gender and occupant position continued to show a consistent pattern in 2026. In 2026, drivers were more than twice as likely to be male than female (9,972 compared with 4,721). In contrast, passengers were more likely to be female than male (1,272 compared with 682).

Survey results corroborate higher rates of seat belt use by females regardless of occupant position (Figure 13). Female passengers used restraints at a rate of 96.6%, while female drivers were at 91.4%. Male rates were lower for both positions, at 83.5% for drivers and 90.5% for passengers. Compared with 2025, female driver and passenger use decreased slightly, male driver use was essentially unchanged, and male passenger use increased.

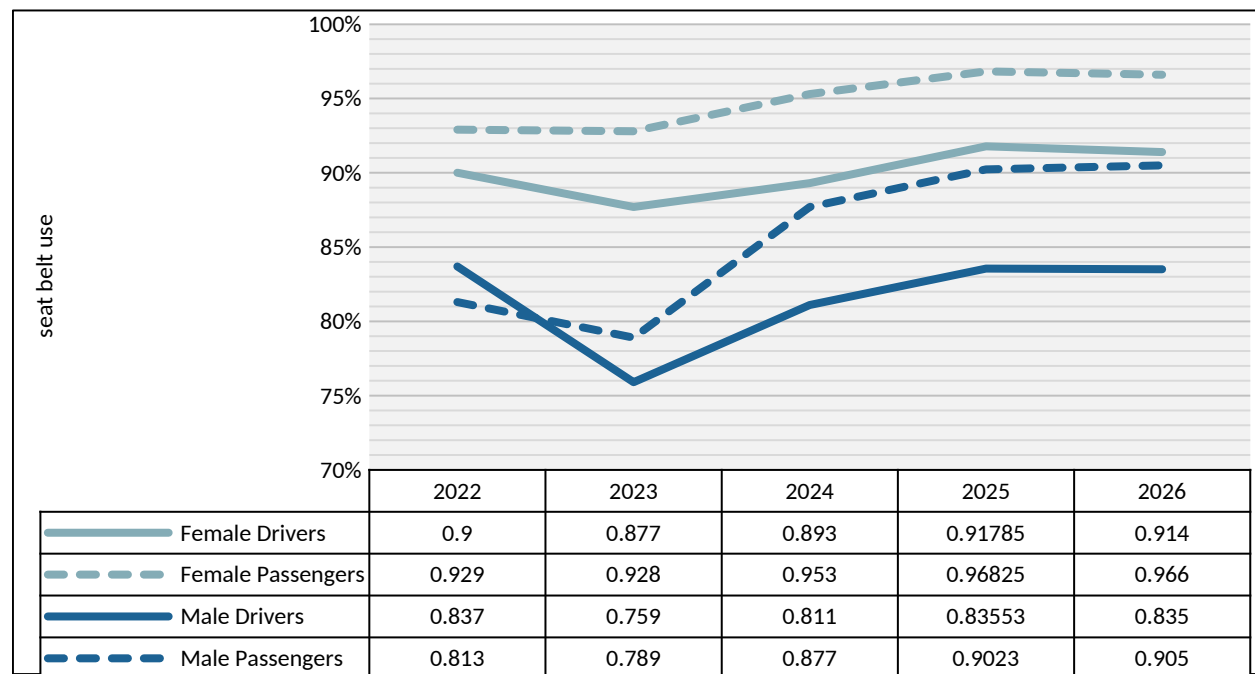
**Figure 13: Percent Belted by Gender & Position, Annual, Unweighted**

Figure 14 shows a comparison of three-year averages. Female driver use increased from 89.0% in 2021–2023 to 90.8% in 2024–2026, while female passenger use increased from 93.8% to 96.2%. Male driver use increased from 80.1% to 82.7%, and male passenger use increased from 81.8% to 89.5%. The largest improvement was among male passengers.

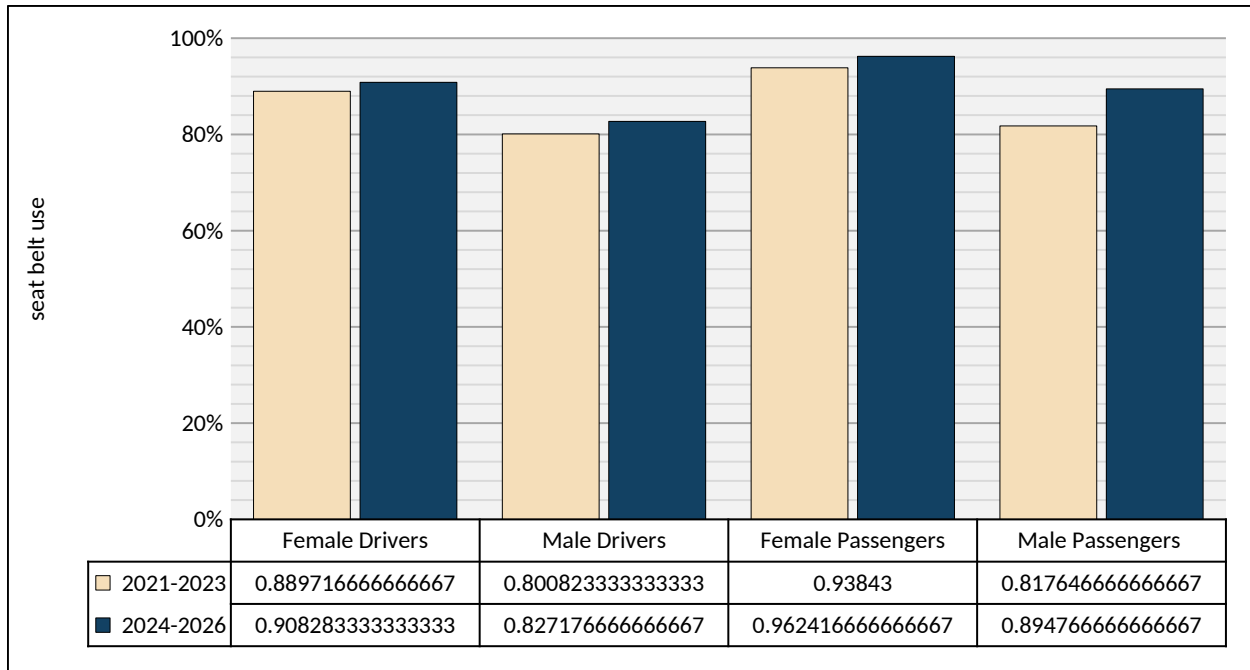


Figure 14: Seat Belt Use by Gender & Position, Three-Year Averages, Unweighted

There are wide-ranging seat belt use rates in individual counties in all occupant positions (Table 9). Female driver rates ranged from 79.2% in Stutsman County to 98.4% in Walsh County. Male driver rates ranged from 67.9% in Stutsman County to 91.6% in Benson County. Female passenger rates were generally high, ranging from 91.7% in Cass County to 100% in several counties. Male passenger rates ranged from 73.0% in Stutsman County to 100% in McLean, Stark, and Walsh counties.

Table 8: Percent Belted by Gender & Position by County, 2026, Unweighted

2026							
FEMALE DRIVERS		FEMALE PASSENGERS		MALE DRIVERS		MALE PASSENGERS	
Barnes	84.9%	Barnes	93.9%	Barnes	70.2%	Barnes	75.9%
Benson	91.5%	Benson	99.3%	Benson	91.6%	Benson	96.7%
Burleigh	97.4%	Burleigh	98.5%	Burleigh	90.9%	Burleigh	96.6%
Cass	88.0%	Cass	91.7%	Cass	84.3%	Cass	84.6%
Grand Forks	95.9%	Grand Forks	100.0%	Grand Forks	90.1%	Grand Forks	96.3%
Mckenzie	92.6%	Mckenzie	100.0%	Mckenzie	81.7%	Mckenzie	95.2%
McLean	96.3%	McLean	100.0%	McLean	84.8%	McLean	100.0%
Morton	91.2%	Morton	95.2%	Morton	84.1%	Morton	97.8%
Mountrail	97.3%	Mountrail	97.0%	Mountrail	86.9%	Mountrail	95.1%
Richland	90.2%	Richland	94.6%	Richland	80.2%	Richland	84.0%
Rolette	87.5%	Rolette	97.1%	Rolette	82.0%	Rolette	86.4%
Stark	93.0%	Stark	100.0%	Stark	90.9%	Stark	100.0%
Stutsman	79.2%	Stutsman	93.0%	Stutsman	67.9%	Stutsman	73.0%
Walsh	98.4%	Walsh	100.0%	Walsh	80.0%	Walsh	100.0%
Ward	93.1%	Ward	97.9%	Ward	84.6%	Ward	89.7%
Williams	86.3%	Williams	92.1%	Williams	77.6%	Williams	86.1%

Results by Gender and Vehicle Type

When considering vehicle type, males showed lower representation in SUVs, but higher shares of the overall sample in the other vehicle types. A large gender imbalance continued in the truck category, where males accounted for approximately 85.4% of truck occupants in 2026.

Table 9: Sample by Vehicle Type & Gender

Occupants Observed	<u>2022</u>		<u>2023</u>		<u>2024</u>		<u>2025</u>		<u>2026</u>	
	n	%	n	%	n	%	n	%	n	%
Male										
Car	1,722	10.9%	1,460	8.8%	1,285	7.8%	1,273	7.7%	1,320	8.0%
SUV	2,170	13.7%	2,167	13.0%	2,398	14.6%	2,396	14.5%	2,714	16.4%
Truck	5,363	33.8%	6,184	37.2%	5,769	35.2%	5,728	34.5%	6,135	37.0%
Van	438	2.8%	488	2.9%	450	2.7%	492	3.0%	485	2.9%
Female										
Car	1,270	8.0%	1,157	7.0%	1,012	6.2%	988	6.0%	840	5.1%
SUV	3,432	21.6%	3,599	21.7%	3,759	22.9%	3,866	23.3%	3,770	22.7%
Truck	1,017	6.4%	1,091	6.6%	1,144	7.0%	1,216	7.3%	1,049	6.3%
Van	372	2.3%	354	2.1%	330	2.0%	382	2.3%	334	2.0%
Unknown										
All	75	0.5%	122	0.7%	255	1.6%	240	1.4%	251	1.5%
Total	15,859	100.0%	16,622	100.0%	16,402	100.0%	16,581	100.0%	16,898	100.0%

Differences in seat belt use by gender varied across vehicle types (Figure 15). In the 2026 survey, male occupants were belted at rates ranging from a low of 81.6% in trucks to a high of 89.5% in vans. Females were belted at higher rates in every vehicle type, ranging from 89.0% in cars to 93.8% in SUVs.

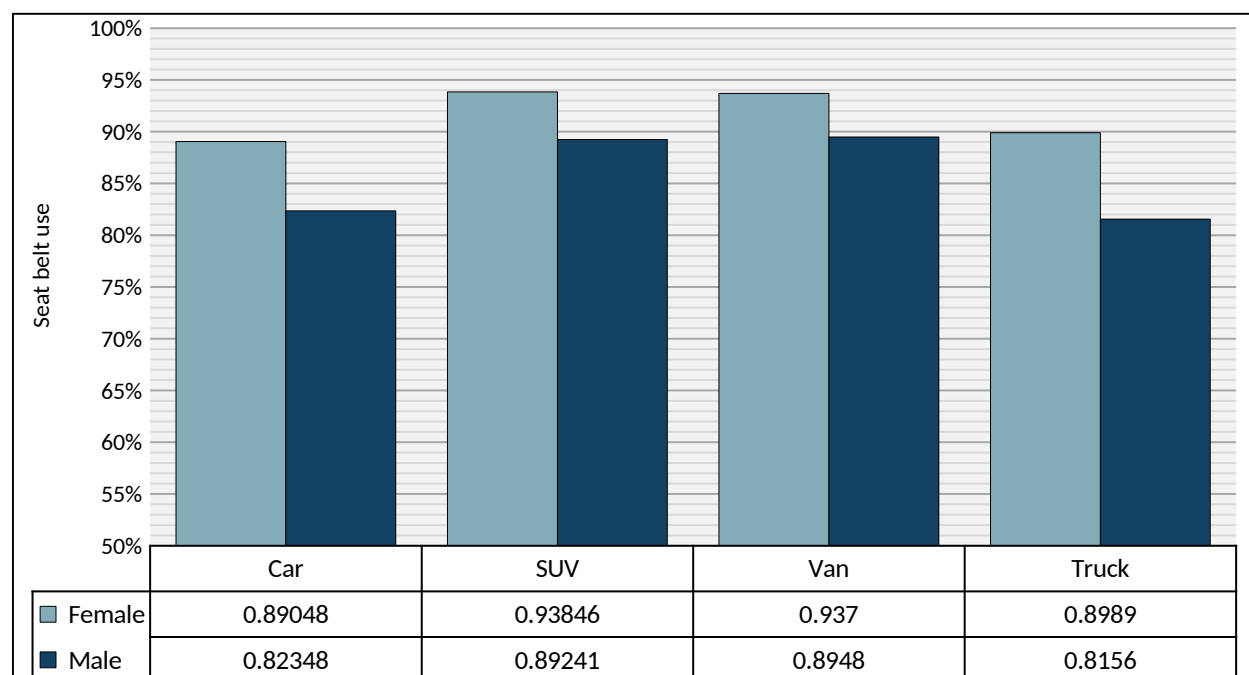


Figure 15: Percent Belted by Gender & Vehicle Type, 2026, Unweighted

Although the size of the gender disparity shifts from year to year, male use was lower than female use in every vehicle type throughout the five-year period. In 2026, the largest difference occurred among truck occupants, where female use was 89.9% compared with 81.6% among males. Across the 2022–2026 period, female rates remained consistently high, while male rates showed more year-to-year variation.

Table 10: Annual Percent Belted by Gender & Vehicle Type, Unweighted

	2022	2023	2024	2025	2026
Male					
Car	82.2%	75.8%	77.9%	83.7%	82.3%
SUV	87.9%	83.9%	88.1%	90.5%	89.2%
Van	85.4%	83.2%	87.1%	90.7%	89.5%
Truck	81.9%	72.9%	79.5%	80.8%	81.6%
Female					
Car	85.9%	85.0%	86.0%	90.6%	89.0%
SUV	92.4%	90.5%	92.1%	94.3%	93.8%
Van	91.1%	91.0%	95.2%	95.3%	93.7%
Truck	90.4%	87.9%	90.0%	89.6%	89.9%

The three-year averages of seat belt use by gender and vehicle type (Figure 16) show improvement across all male vehicle types and all female vehicle types except trucks, which remained unchanged between the two periods. Among male occupants, seat belt use increased across all vehicle types, with the largest improvement observed among van occupants, whose average belt use increased from 85.0% to 89.1%. Male truck occupants also demonstrated a notable increase, from 77.4% to 80.6%, although truck occupants continued to have the lowest belt use among males.

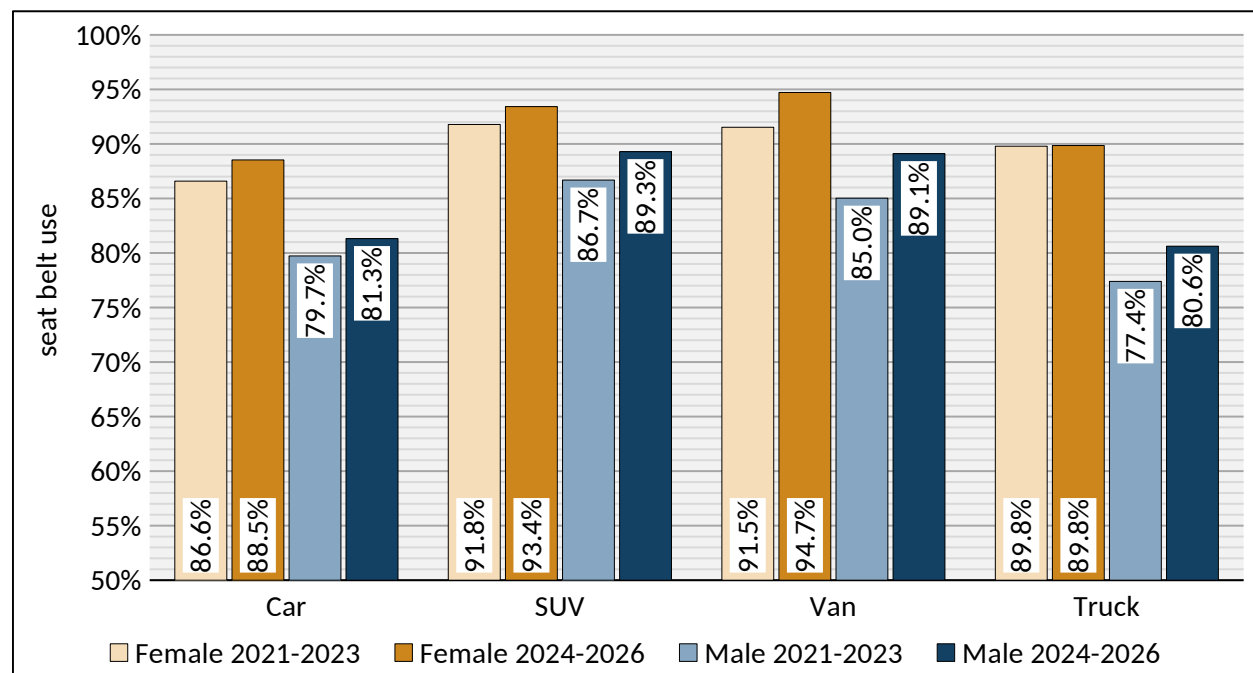


Figure 16: Seat Belt Use by Gender & Vehicle Type, Three-Year Averages, Unweighted

Among female occupants, seat belt use remained consistently higher than among males across every vehicle type. Female van occupants recorded the highest average belt use, increasing from 91.5% in 2021–2023 to 94.7% in 2024–2026. Female SUV occupants also maintained high restraint use, increasing from 91.8% to 93.4%, while female car occupants improved from 86.6% to 88.5%. Belt use among female truck occupants remained unchanged at 89.8% across both three-year periods. Overall, the findings indicate continued improvement in seat belt use across most vehicle types while reinforcing the persistent gap between male and female occupants, particularly among truck occupants. The stable female truck rate, together with the increase among male truck occupants, indicates that recent improvement in overall truck occupant belt use is being driven primarily by male occupants.

Results by Road Type

Roadways are classified into three road types and broadly described as follows:

- Primary road: divided, limited-access, e.g., interstates
- Secondary road: main arteries usually in the U.S./state/county highway system
- Local neighborhood road/rural road/city street: paved, non-arterial streets

There were 6,566 observations collected from the east region and 10,332 from the west during the 2026 survey. Primary, secondary, and local roadways accounted for 63.7%, 34.6%, and 2.0% of the vehicle occupants, respectively. Sample distribution by road type and region is diverse, as shown in Table 12. Sample variations are associated with revisions in the number of sites drawn in each road type when NHTSA-mandated reselection of sites occurs at five-year intervals. Contrasting traffic volume in newly selected counties and site locations are factors as well.

Table 11: Sample by Road Type

Occupants Observed	<u>2022</u>		<u>2023</u>		<u>2024</u>		<u>2025</u>		<u>2026</u>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
East										
Primary	3,995	25.2%	4,159	25.0%	4,389	26.8%	3,972	24.0%	4,322	25.6%
Secondary	2,096	13.2%	2,179	13.1%	2,323	14.2%	2,246	13.5%	2,083	12.3%
Local	258	1.6%	214	1.3%	166	1.0%	221	1.3%	161	1.0%
All	6,349	40.0%	6,552	39.4%	6,878	41.9%	6,439	38.8%	6,566	38.9%
West										
Primary	5,658	35.7%	6,018	36.2%	5,782	35.3%	6,202	37.4%	6,429	38.0%
Secondary	3,671	23.1%	3,943	23.7%	3,595	21.9%	3,824	23.1%	3,742	22.1%
Local	181	1.1%	109	0.7%	147	0.9%	116	0.7%	161	1.0%
All	9,510	60.0%	10,070	60.6%	9,524	58.1%	10,142	61.2%	10,332	61.1%
				100.0				100.0		
Total	15,859	100.0%	16,622	%	16,402	100.0%	16,581	%	16,898	100.0%

Figure 17 provides contextual information, which identifies the proportion of sites by road type established with the amended methodology in 2012 followed by the reselections in 2017 and 2022. These sample disparities, along with diverse habits of restraint use, factor into the regional differences in rates. Although the weighted results do include adjustments for changes to road site characteristics, the unweighted results may be influenced by the site mix and underlying characteristics, such as higher use rates on interstate corridors.

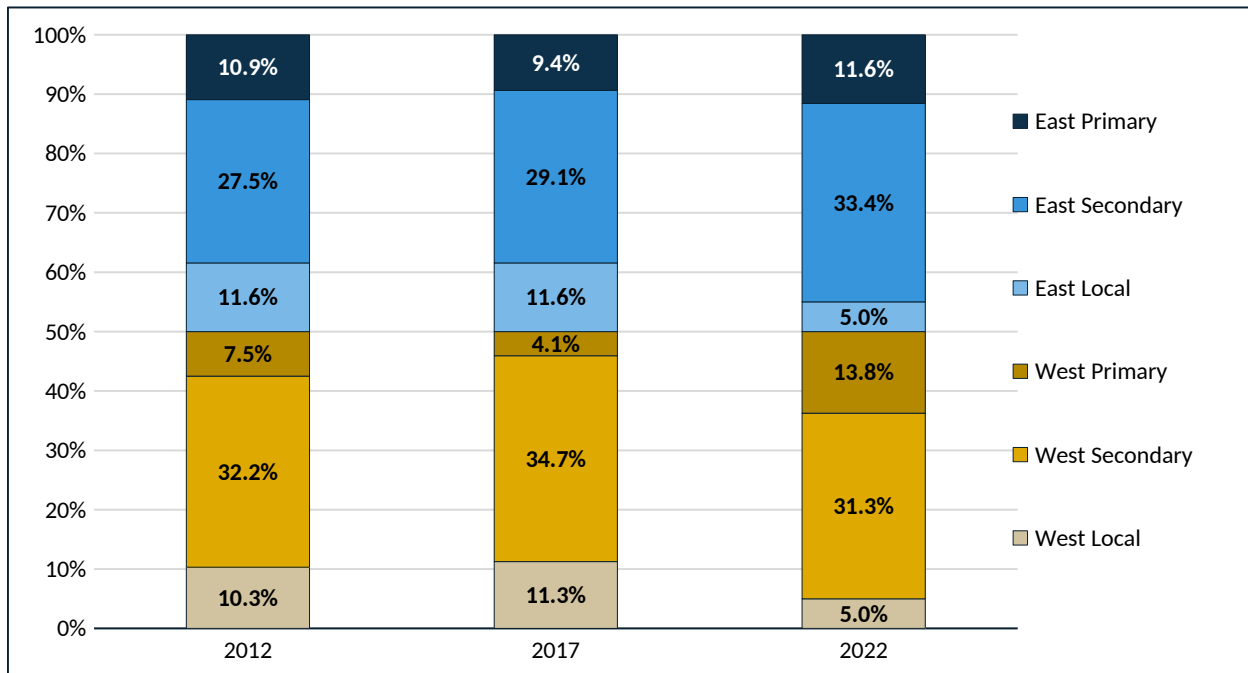


Figure 17: Percent of Survey Sites by Road Type, 2012, 2017, and 2022

Figure 18 shows that vehicle occupants traveling primary roadways in 2026 were belted at a higher rate (88.8%) than occupants on secondary (82.2%) and local roads (79.5%). Compared with 2025, use decreased on primary roads by approximately 0.2 percentage points, on secondary roads by 3.0 points, and on local roads by 6.3 points. Across the 2022–2026 period, restraint use on primary roadways remained the highest of the three road types in most years.

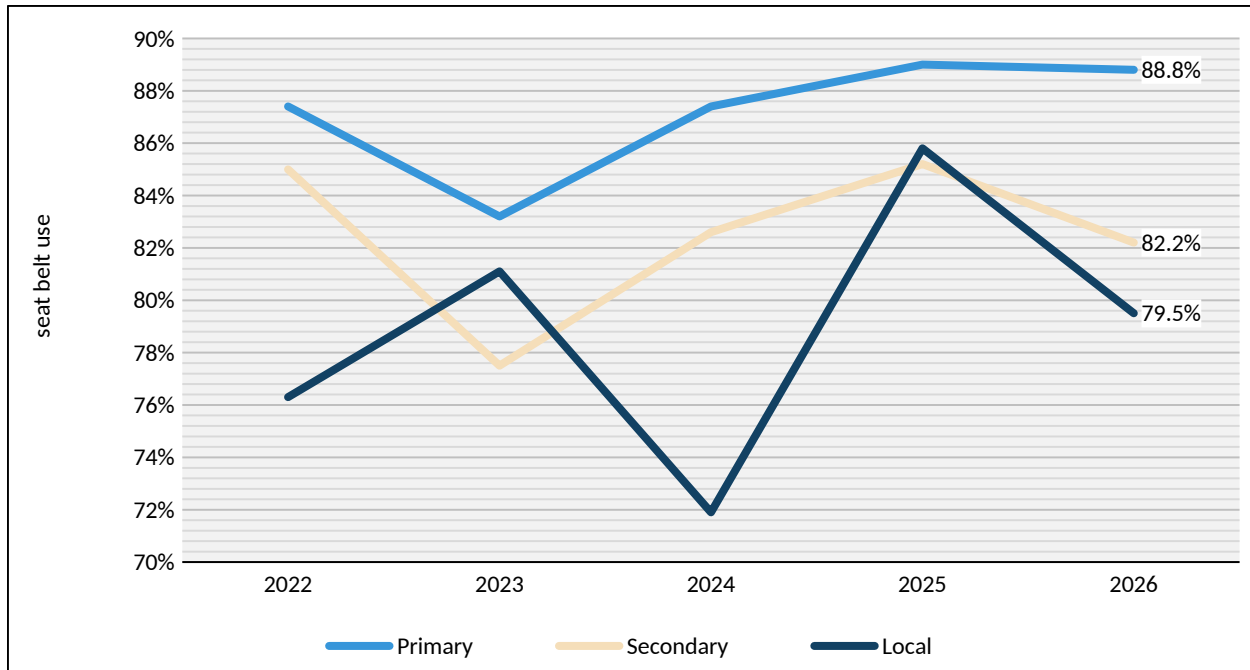


Figure 18: Percent Belted by Road Type, Annual, Unweighted

Annual rates stratified by region and road type over the five-year period are identified in Table 13. In 2026, primary-road restraint use was 86.7% in the east and 91.0% in the west. Secondary-road use was 78.5% in the east and 86.0% in the west. Local-road use was 85.1% in the east and 73.9% in the west. Generally, higher rates of use have been observed on primary and secondary roads in the west compared with the east. On local roads, the east region continued to have higher use than the west.

Table 12: Percent Belted by Region & Road Type, Unweighted

	2022	2023	2024	2025	2026
East					
Primary	84.1%	83.5%	83.1%	87.8%	86.7%
Secondary	80.5%	77.6%	77.0%	86.8%	78.5%
Local	83.3%	85.0%	73.5%	89.1%	85.1%
West					
Primary	89.8%	83.0%	90.7%	89.7%	91.0%
Secondary	87.6%	77.4%	86.2%	84.3%	86.0%
Local	66.3%	73.4%	70.1%	79.3%	73.9%
Total					
Primary	87.4%	83.2%	87.4%	89.0%	88.8%
Secondary	85.0%	77.5%	82.6%	85.2%	82.2%
Local	76.3%	81.1%	71.9%	85.8%	79.5%

When balancing year-to-year variability in each road type (Figure 19), the 2024–2026 three-year averages were higher than the 2021–2023 averages for all three road types statewide. The largest statewide increase was on secondary roads, from 81.1% to 83.3%. Regional differences were also evident: the west exceeded the east by approximately 4.6 percentage points on primary roads and 4.7 points on secondary roads in the most recent period, while the east exceeded the west on local roads by approximately 8.1 points.

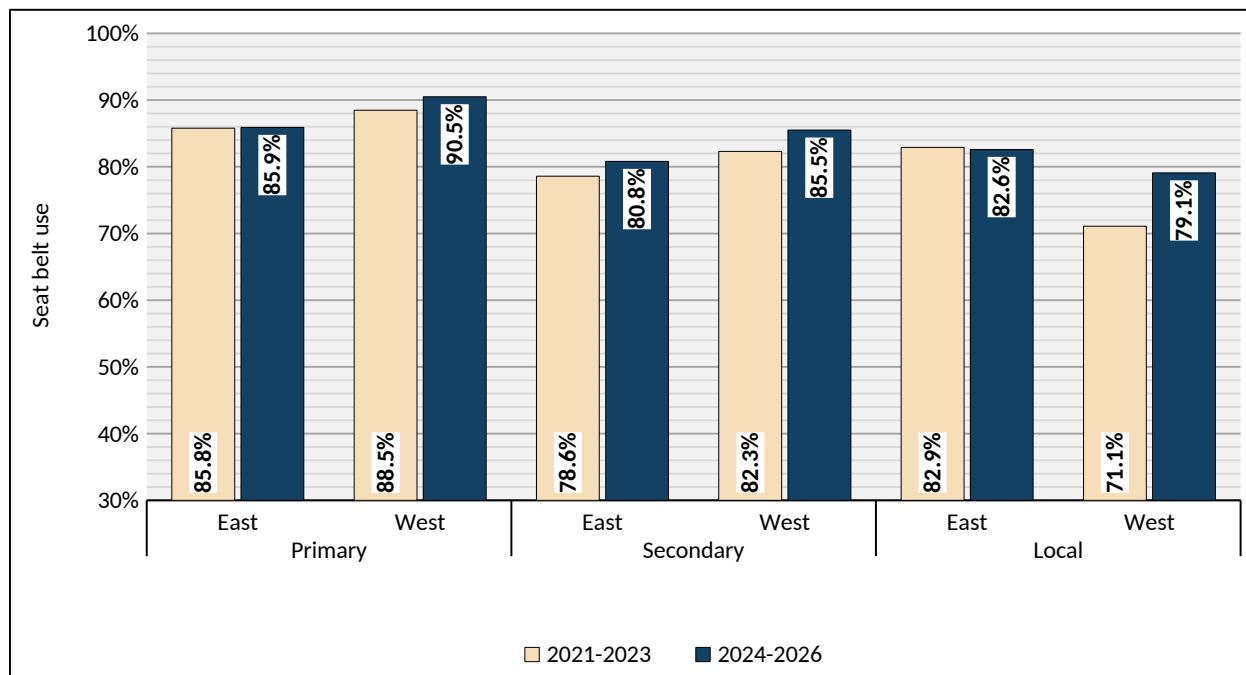


Figure 19: Seat Belt Use by Roadway Type, Three-Year Averages, Unweighted

Additional insight is found in delineating restraint use by road type and MSAs. MSA counties are defined as a core area consisting of a larger population nucleus and adjacent communities with high economic and social involvement (U.S. Census Bureau). The designated MSA counties in the North Dakota observational seat belt survey are Burleigh, Morton, Cass, and Grand Forks.

The data shown in Figure 20 are unweighted and do not account for the allocation of sites by road type in the two categories. Analysis shows restraint use in MSA counties on primary roads (92.9%) was higher than on the same road type in non-MSA counties (88.2%). Restraint use on secondary roads in MSA counties (85.9%) was also higher than on the same road type in non-MSA counties (82.4%). Occupants on local roads in MSA counties were restrained at 79.5%; local road sites were outside the sampling frame in non-MSA counties, so a comparison of that road type is not available.

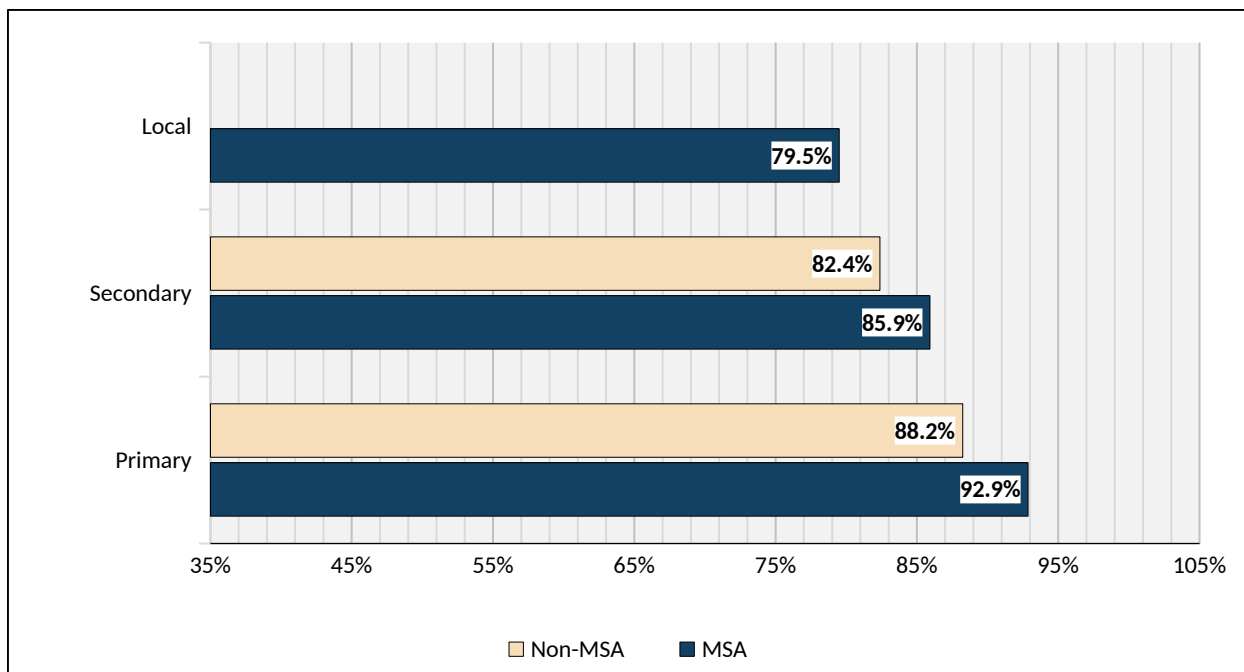


Figure 20: Percent Belted by Road Type & Metropolitan Statistical Areas, 2026, Unweighted

Sample size and restraint use by MSA designation, road type, and region are shown in Table 14. Vehicle observations from primary roads were predominantly collected in non-MSA counties in the west (28.7% of the full sample) compared with non-MSA counties in the east (20.8%). Survey data indicated the rate of belted occupants on primary road segments in non-MSA counties was 85.5% in the east and 90.3% in the west. Primary roads in MSA counties were observed to have rates of 92.2% in the east and 93.2% in the west.

Secondary roads in non-MSA western counties represented 18.3% of the sample, compared with 7.3% in the east. The corresponding rates were 74.6% in the east and 85.5% in the west. Vehicle occupants on secondary roads in MSA counties were observed to have rates of 84.2% in the east and 88.1% in the west. As mentioned previously, observations were collected on local roads in MSA counties only per NHTSA protocol guidance. Regional sample sizes and use rates from local roads were 1.0% of the sample in each region, with use rates of 85.1% in the east and 73.9% in the west.

Table 13: Sample and Seat Belt Use by Region & MSA Designations

Occupants Observed						
	East			West		
	<i>n</i>	<i>% sample</i>	<i>% belted</i>	<i>n</i>	<i>% sample</i>	<i>% belted</i>
Primary						
Primary	803	4.8%	92.2%	1,581	9.4%	93.2%
Non-MSA	3,519	20.8%	85.5%	4,848	28.7%	90.3%
MSA	848	5.0%	84.2%	658	3.9%	88.1%
Non-MSA	1,235	7.3%	74.6%	3,084	18.3%	85.5%
Local						

MSA	161	1.0%	85.1%	161	1.0%	73.9%
Non-MSA	-	-	-	-	-	-

Field Survey Protocol

Table 14: Summary of the Seat Belt Use Survey

Methodology	Multistage stratified cluster design with probability proportional to size sampling
Source of Samples	NHTSA supplied FARS, VMT, and road segment data
Geographic Coverage	State of North Dakota
Identified Regions	East West
Selected Counties	<u>East Region:</u> Barnes, Benson, Cass, Grand Forks, Richland, Rolette, Stutsman, Walsh <u>West Region:</u> Burleigh, McKenzie, McLean, Morton, Mountrail, Stark, Ward, Williams
Number of Sites	320
Survey Period	June 7–13, 2026
Observation Duration Per Site	60 minutes
Sample Size	16,898 vehicle occupants (includes all vehicles where either the driver or passenger or both had a known protection status)

Standard Error and Confidence Intervals

The standard error of the state seat belt use rate measures the amount of random sampling error in the survey results. The smaller the standard error, the more accurate the seat belt use rate when compared with the true, but unknown, seat belt use rate for North Dakota. Assuming the design of the survey accurately measures the variable of interest, the larger the survey sample the more accurate the results.

The standard error for the state seat belt use rate was calculated to be 0.000342 using SAS statistical software. From this, a 95% confidence interval for state seat belt use can be determined. The 95% confidence interval means that, statistically, there is only a 5% chance the actual statewide seat belt percentage falls outside the 85.75% to 85.90% range.

Table 15: Confidence Interval

95% Confidence Interval and Estimated Standard Error for 2026 State Seat Belt Use				
Occupants	State Rate	Standard Error	95% CI Lower Limit	95% CI Upper Limit
16,898	85.8%	0.000342	85.75%	85.90%

Nonresponse Rate

A factor that could potentially bias the results and invalidate the survey is exceedingly high nonresponse rates. A nonresponse occurs when the observer tries but cannot determine an occupant's seat belt use. In the 2026 survey, 14,822 drivers and 2,076 passengers were observed for a total of 16,898 vehicle occupants with known protection status. Seat belt use could not be determined for 717 additional occupants, resulting in a nonresponse rate of 4.07%. As stipulated in NHTSA's guidelines, the nonresponse rate did not exceed the allowable maximum of 10%, so no resampling was necessary.

Protocols

Observers

Observers contracted to conduct the 2026 statewide seat belt survey were required to complete online training. The training module covered survey methods, observer responsibilities, and instructions for tablet operation for electronic data collection. Knowledge points required the trainee's correct responses in order to move forward in the module. Completion of training was verified by the survey administrator, and follow-up phone calls or emails were made to first-time observers to ensure full understanding of observer duties and survey protocols. All observers were required to have a current driver's license with proof of adequate vehicle insurance. They were required to use seat belts and wear safety vests while conducting field observations.

Observational Protocols

The observational protocols used in the 2026 study adhere to the uniform criteria as outlined in the Federal Register.

Observations were conducted Sunday through Saturday. The initial observation site day of the week and time of day were randomly chosen within each county. The remaining sites within each county were arranged sequentially through the survey week based on the first site. Observation route sequencing was aimed at minimizing travel time and costs among the sample site locations. This predetermined order of daily observation sites was provided to each observer before the survey. A complete list of county observation sites is available in the survey certification documentation submitted to NHTSA. The traffic direction of vehicles to be observed was randomly chosen in advance and was limited to one direction.

An 11-hour block of daylight, from 7 a.m. to 6 p.m., was identified as the observational period. Observations at each site occurred in the predetermined time slot and required a 60-minute observation

period, which began at the start of the predetermined time slot—or the first five-minute interval after arrival at the site if the observer was delayed—and ended 60 minutes later.

Traffic Conditions and Data Collection Problems

Observers were trained to cope with traffic problems in the following manner:

- When traffic was heavy and there were too many vehicles to observe, recording took place for as long as possible and then stopped until the observer could catch up with observations. Some vehicles were, therefore, outside the sample. When this occurred, counting resumed after no more than a one-minute pause. Once an observer's eyes were locked on a vehicle, a record of that vehicle was required on the observation form.
- At sites with more than one lane of traffic in the predetermined direction, observations were made from the lane closest to the observer.

Site Accessibility Problems

Field observers could terminate observations at a preselected site if any of the following circumstances arose: (1) weather conditions that would hinder the accuracy of the observations, (2) heavy traffic flow that might endanger the safety of the observer, or (3) road conditions that rendered observations unfeasible, such as road construction, detoured traffic, or a crash site. In these circumstances, observers were directed to contact the project coordinator immediately for assignment of an alternate site if a suitable vantage point could not be established approximate to the detour.

Observed Vehicles

All vehicles with a gross vehicle weight up to 10,000 lbs. were observed and classified on the observation form as cars, vans, sport utility vehicles, and trucks. Large trucks (semi or large box), large emergency vehicles (ambulance/fire), and RVs/motor homes were not included in the survey.

Observations

Type of vehicle, gender, and seat belt use for both drivers and right front-seat passengers were recorded. Observations occurred from within the observer's vehicle whenever possible. The observer was parked as close as possible to the road for accurate observation without compromising observer safety. If observations could not be conducted from within the vehicle, the observer was allowed to stand off the roadway. Observers were required to wear an ANSI-approved Type-2 safety vest at all times to enhance the visibility of the observer.

Problems Encountered by Observers

If traffic, observer safety, or construction issues were problematic, alternate sites were available through the project coordinator. Observer placement was managed according to site protocols. Intermittent problems relating to road construction and inclement weather did not seriously impede

schedules, and hour-long observations were fulfilled as described in the protocol with on-time arrival at subsequent sites not seriously impacted. In accordance with the Federal Register, if scheduled observations were not carried out for any of the above reasons, a return visit would have been arranged the following week while adhering to the original prescribed schedule for data collection.

Quality Assurance

During observation week, quality control personnel carried out unannounced site visits (minimum one per county) to verify observers were located within valid road segments, conforming to the prearranged day of week/time of day schedules, and properly recording seat belt data. It was required that quality control personnel visit any new observers during their initial observation day to assure protocol compliance and verify safe observation practices.

CONCLUSION

Uniform criteria published in 2011 guided the development of methodology used for seat belt surveys in North Dakota from 2012 through 2016. This methodology changed the focus from population-based criterion to traffic-crash-related fatality data for county sampling. The federal criteria mandated the reselection of observation sites at five-year intervals. This reselection requirement was carried out in 2017 and again in 2022 without further modifications to the survey design.

For the 2026 statewide survey, observers recorded seat belt use for 14,822 drivers and 2,076 passengers for a total of 16,898 vehicle occupants. The unweighted estimates of seat belt use were 86.0% for drivers, 94.1% for passengers, and 87.0% overall. Adjusting the raw state rate for the survey design and weights resulted in an overall weighted state rate of 85.8%, which is the generalizable seat belt use rate for the state. Rates by strata such as gender, vehicle type, region, roadway, and population density are unweighted due to the sample design.

North Dakota's 2026 weighted seat belt rate of 85.8% remains below the national rate as reported by NHTSA in 2025 (91.3%). The 2026 findings also demonstrate substantial variation by county, occupant position, gender, vehicle type, region, and roadway type. Burleigh County recorded the highest weighted county rate at 94.8%, while Stutsman County recorded the lowest at 66.0%. Passengers continued to demonstrate higher restraint use than drivers, and female occupants continued to demonstrate higher use than males. Truck and local-road occupants remained among the groups with the lowest restraint use, while SUV occupants had the highest vehicle-type rate. These findings identify specific populations and roadway environments where continued education and enforcement efforts may be useful.