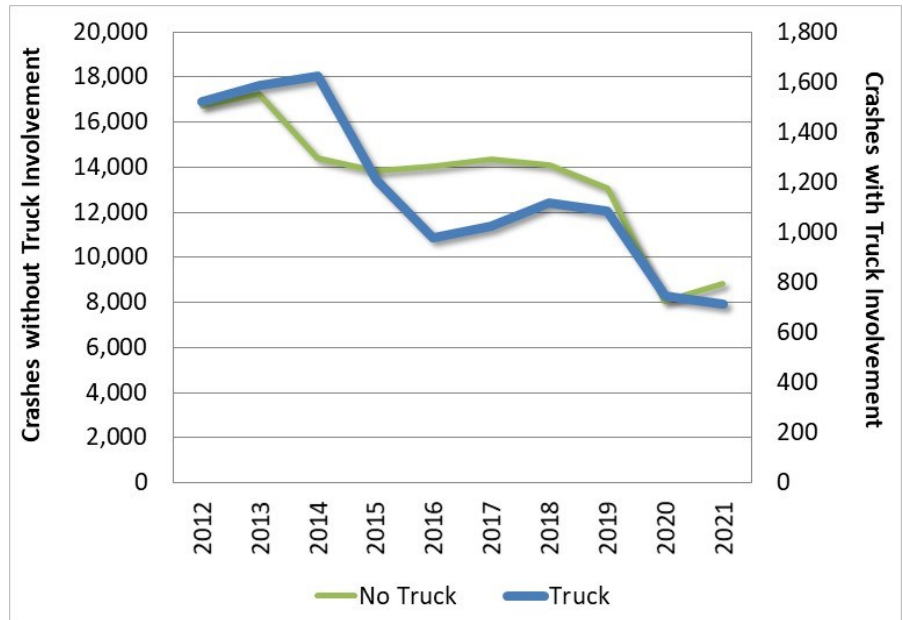


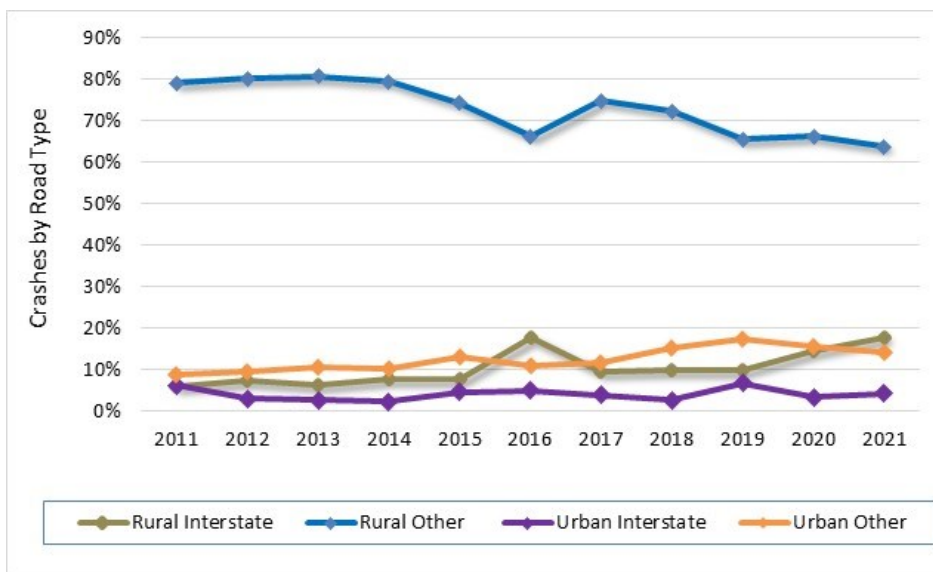
Truck Crash Facts ND Crash Summary

Trucks are an important mode of economic connectivity in rural states like North Dakota. The size/mass difference between 80,000-pound trucks and 4,000-pound passenger vehicles, along with operational differences such as acceleration/deceleration times and turning radiuses, heighten risk for crash events. Therefore, as changes in traffic volumes and patterns are recognized, it is important to monitor levels and effects of increased safety-related interactions between trucks and passenger vehicles.

Truck Crash Involvement



Injury Truck Crash Involvement By Road System



The number of truck-involved injury crashes has steadily decreased since 2014. The 2021 data reflect a 56% overall reduction from the high shown in 2014.

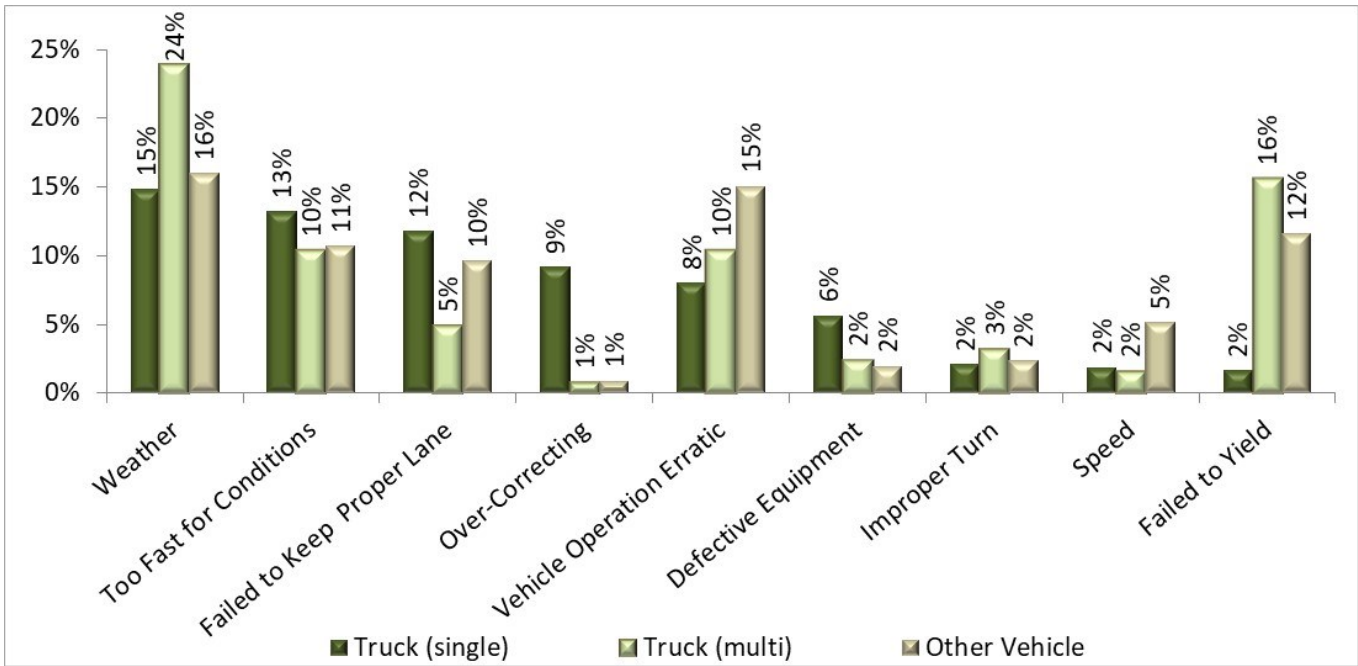
Another measure of fatal and injury truck crashes shows a higher frequency on other rural roads ranging between 64% and 81%. Comparatively, rural interstate and urban road systems represent less than 20% of crashes.

Citations Issued in Injury Crashes, 2017-2021

	Single Vehicle	Multi - Vehicle	
	Trucks	Trucks	Other Vehicles
Care Required	70%	24%	29%
DUI (Alcohol)	4%	1%	10%
Failed to Yield	3%	25%	15%
Careless Driving	2%	2%	2%
Drivers License	2%	1%	2%
Failed to Stop	1%	7%	7%
Improper Turning	0%	5%	3%
Following too Close	0%	17%	7%
Overtaking	0%	1%	4%

Care required was the most commonly issued citation in all crash categories, but was considerably higher in single versus multi-vehicle truck crashes, 70% and 24%, respectively. DUI was cited more often in other vehicle crashes (10%) than in crashes with truck involvement. Failure to yield held a 25% share in multi-vehicle truck crashes compared to 15% of crashes involving other vehicles. Following too close was a factor in 17% of multi-vehicle truck crashes. There were no citations issued in 56% of single truck crashes, 74% of multi-vehicle truck crashes, and 61% of other vehicle crashes.

Common Contributing Factors In Injury Crashes, 2017-2021

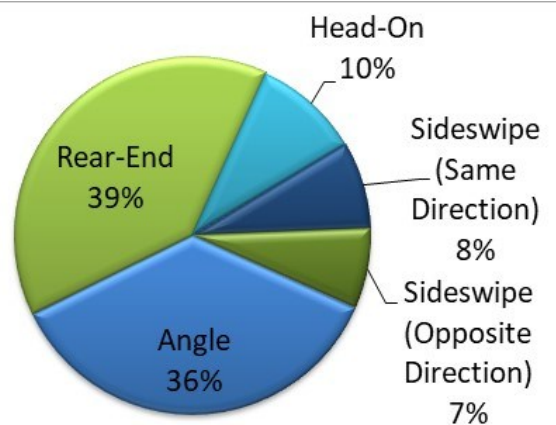


Weather was the largest contributing factor in all crash categories whether single, multi-vehicle, or other vehicles. Failure to yield held a 16% share in multi-vehicle crashes. Speed, along with too fast for conditions combined for 15% and 12% of contributing factors in both single and multi-vehicle truck crashes, respectively.

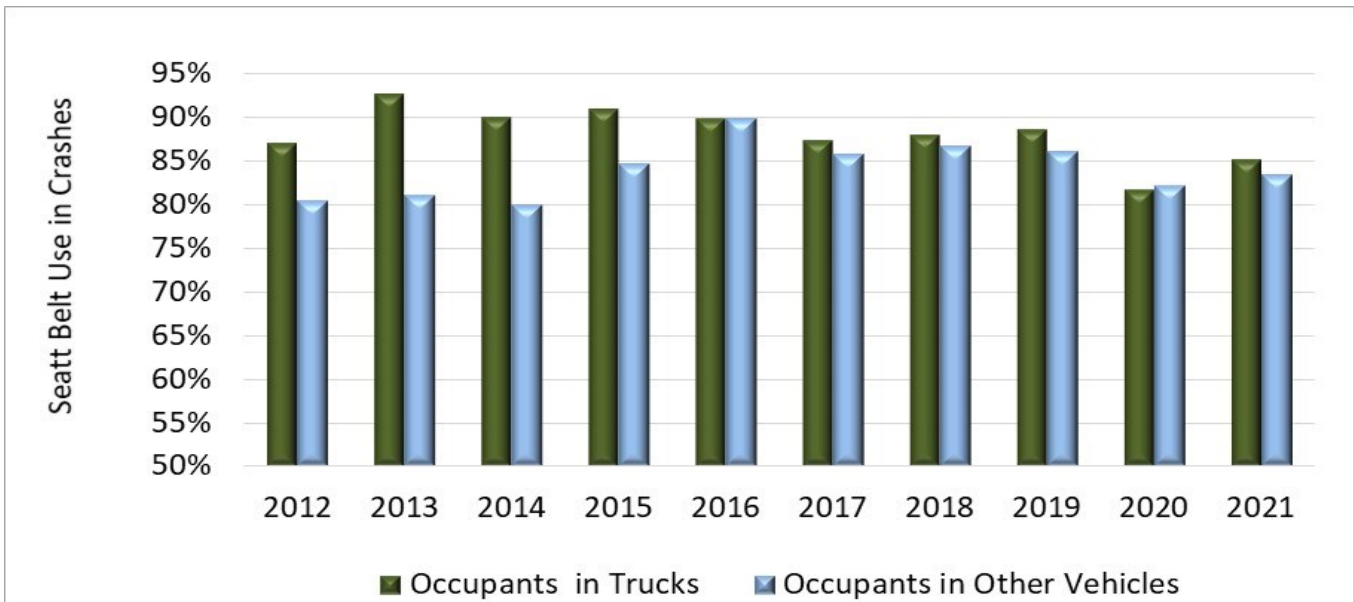
Truck injury crashes were multi-vehicle crashes in 66% of occurrences. Angle and rear-end crashes made up 75% of this group of injury crashes.

Restraint use by truck occupants in crashes generally exceeded use by other vehicle occupants although the disparity is less noticeable in recent years. Use by truck occupants has decreased from a high of 93% in 2013 to 85% in 2021.

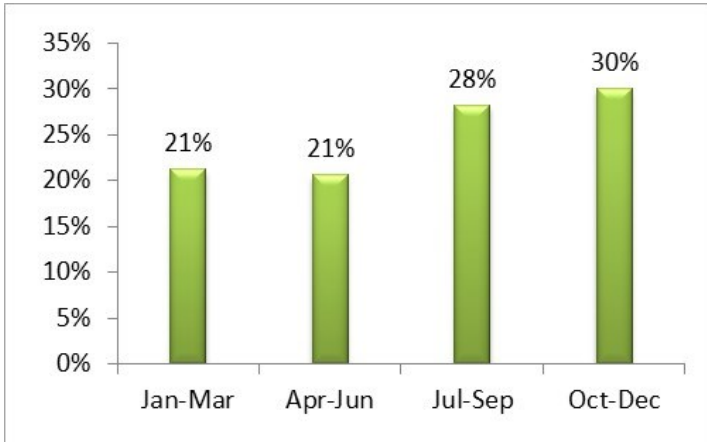
Manner of Collision, Multi-Vehicle 2017-2021



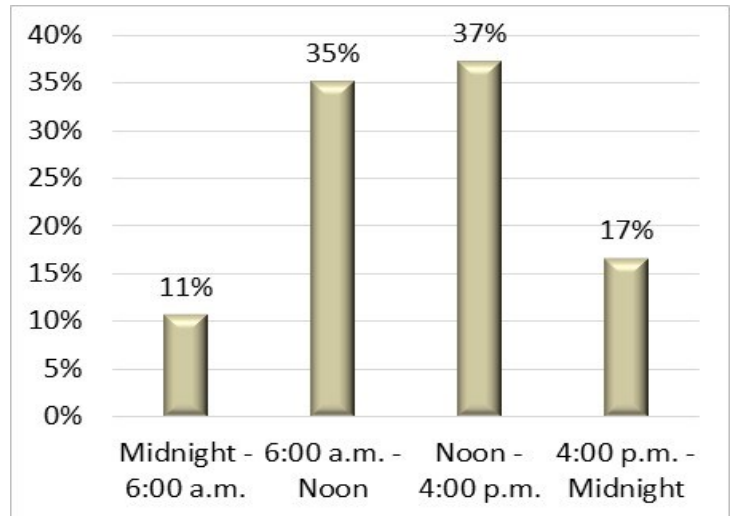
Restraint Use in Serious Injury Truck Crashes



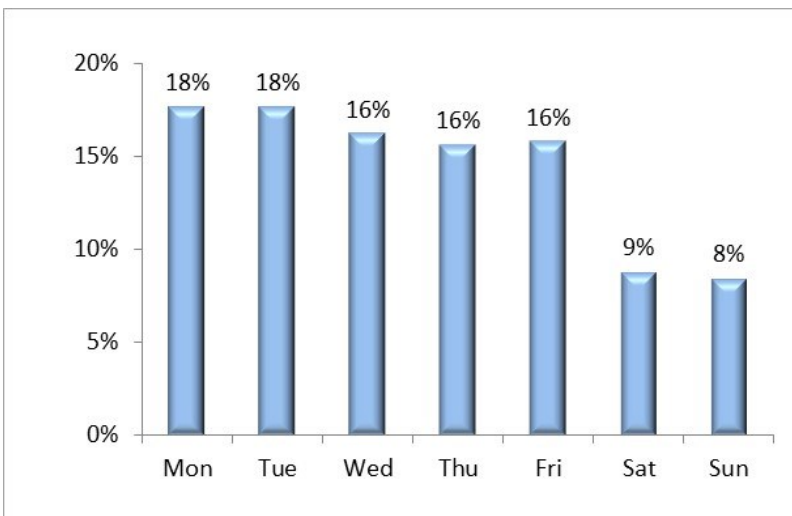
Serious Injury Truck Crashes by Month



Serious Injury Truck Crashes by Hour



Serious Injury Truck Crashes by Weekday

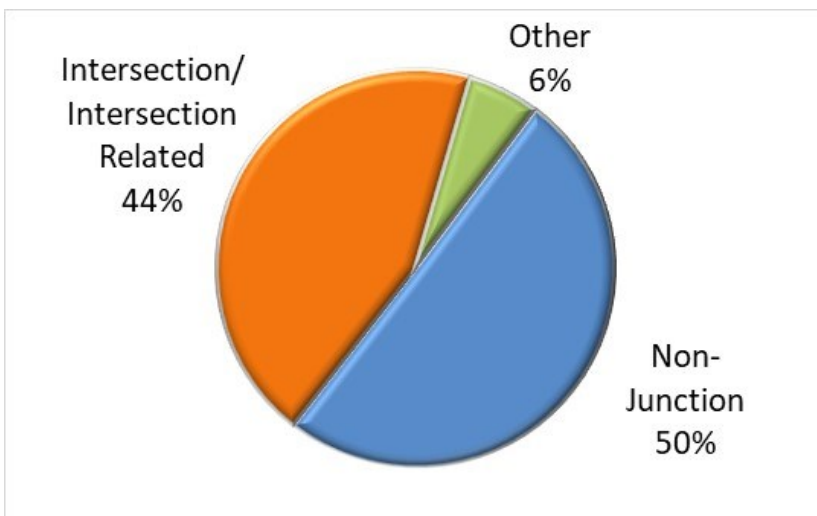


Crash data based on the most recent five years shows more serious injury crashes (58%) occur during the second half of the calendar year; are more prevalent during workday hours between 6:00 a.m. and 4:00 p.m.; and decline on weekends.

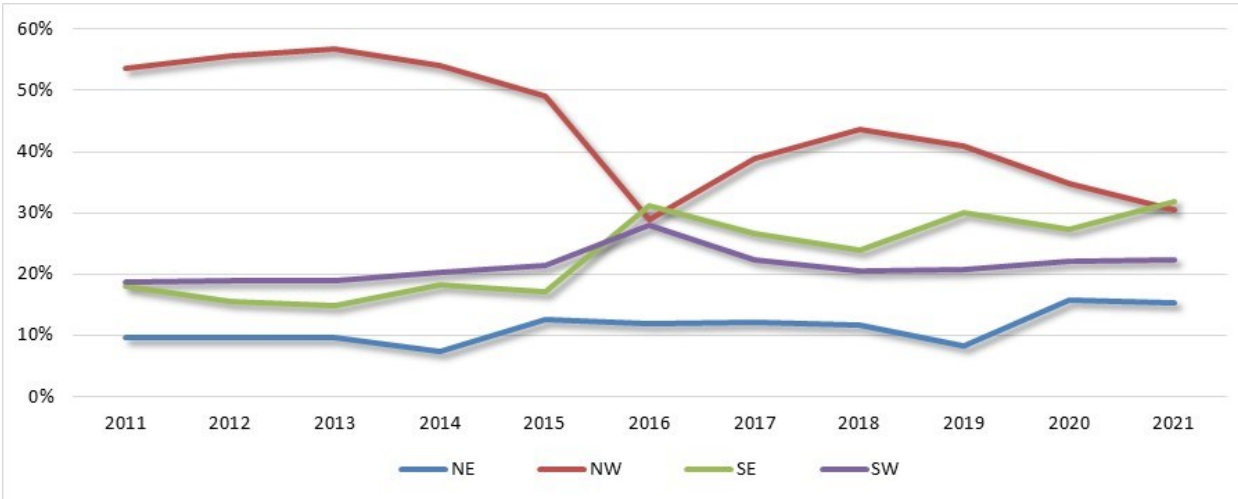
Other crash characteristics indicate:

- 44% of truck crashes occur at intersections or are intersection-related. Half of crashes are non-junction - 50%.
- Crashes occurring on hills measures 16%.
- The incidence of truck crashes on curves for single trucks is 65% compared to 35% of multi-vehicle.
- Rollovers were the most harmful event in 28% of crashes.
- On gravel roads the number of truck-involved injury crashes is significantly higher than injury crashes not involving trucks. The current rate of 14% is down from a high of 19% in 2012. The incidence of crashes on other road surfaces includes rates between 11% - 33% on concrete surfaces, and 51% - 75% on asphalt surfaces.
- Truck crashes in the oil region of the state are reduced to 28% in 2021 from a high of 63% in 2013 and 2014. A crash map of North Dakota identifying injury crashes by severity is found on the following page.

Crashes by Junction



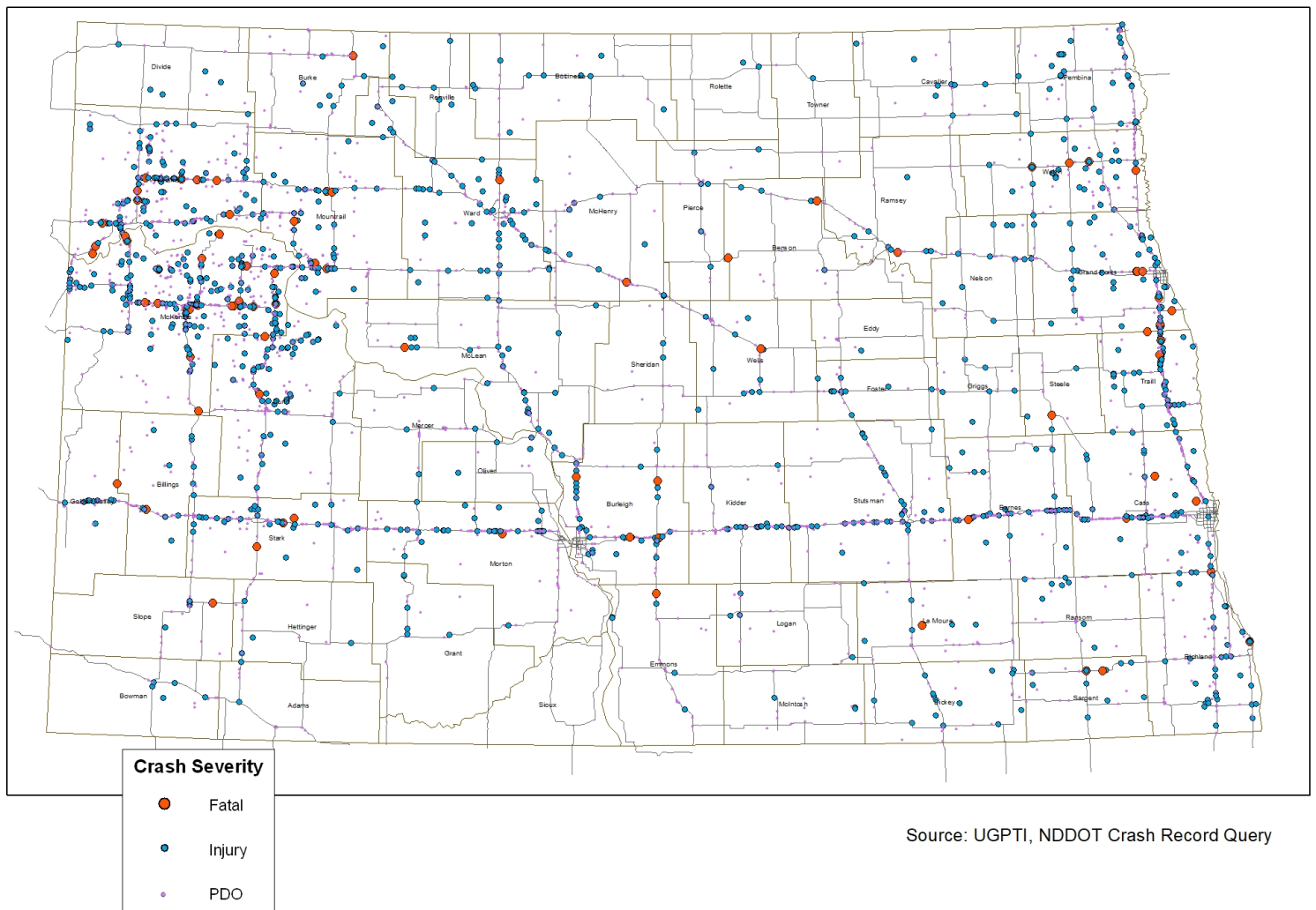
Truck Crashes by Regional Quadrants



The crash map below shows a continued prevalence of truck-involved injury crashes in the oil-producing region. McKenzie, Williams, and Mountrail counties represented 36% of truck-involved fatal and injury crashes in the state. The ND County Crash Dashboard at the following website allows users to toggle for specific crash features.

<https://ndsu.maps.arcgis.com/apps/dashboards/93a0ca93e706476f89e927a84e247155>

Truck-Involved Crashes by Injury Type, 2016 to 2021



Source: UGPTI, NDDOT Crash Record Query