

Commercial Vehicle Safety - 2022

**COMMERCIAL VEHICLE SAFETY
IN LOUISIANA
An Analysis of Truck Crashes for 2022**

Prepared by
Cory Hutchinson, Ph.D.
Center for Analytics & Research
in Transportation Safety
Louisiana State University
May 27, 2023

Commercial Vehicle Safety - 2022

TABLE OF CONTENTS

Summary 4

Overview 5

Analysis of Crashes by Month..... 9

Violations (Driver Action)..... 10

Manner of Collision..... 14

Work-Zone Crashes 16

Seat Belt Usage 16

Hazardous Material 17

Distractions..... 19

Changes in Number of Crashes by Parish..... 20

Rural CMV Crashes 20

Bus Crashes..... 22

2023 YTD Crash Results 25

Table 15: CMV Crashes YTD 2023 25

Commercial Vehicle Safety - 2022

List of Figures and Tables

Table 1: CMV Crashes: 2017-2022.....	5
Figure 1: CMV and Non-CMV Crashes 2017-2022	6
Figure 2: CMV Crashes by Severity: 2017-2022.....	7
Figure 3: CMV and Non-CMV Fatal Crashes 2017-2022.....	8
Figure 4: Fatal CMV Crashes by Year: 2017-2022.....	8
Table 2: CMV and All Crashes 2017-2022 per 100 Million Miles Traveled.....	9
Table 3: CMV Crashes by Month in 2022	10
Table 4a: Violations as a Percentage of Drivers.....	11
Table 4b: Violations as a Percent of All Violations	12
Figure 5: CMV and Non-CMV Driver Violations in Fatal Crashes: 2017-2022	13
Table 5: Type of Violation of CMV Driver.	14
Table 6: Manner of Collision.....	15
Table 7: Work-Zone CMV Crashes on Interstates (2021-2022).....	16
Table 8: Seat Belt Usage.	17
Table 9: Hazardous Material Crashes.....	18
Table 10: Type of Hazardous Material in CMV Crashes.	18
Table 11: Distractions.....	19
Figure 13: Cell Phone Use as a Distraction in CMV Crashes.	19
Table 12: CMV Crashes by Parishes.....	20
Table 13a: CMV Crashes by Highway Type 2022.....	21
Table 13b: Percentage of CMV Crashes Outside City Limits 2022.....	22
Table 14: CMV Bus Crashes in 2021-2022.....	22
Figure 14: CMV Bus Crashes 2017 to 2022	23
Figure 15: Bus-Crash Injuries 2017 to 200	24
Table 15: CMV Crashes YTD 2023	25

Summary

In 2022, the total number of reported CMV crashes decreased by -7.55% compared to 2021. The number of fatal CMV crashes decreased from 116 in 2021 to 99 in 2022, a decrease of 14.66%. The number of suspected injury CMV crashes also decreased from 2,156 to 2,112 during the same period, an decrease of 2.04%.

The percentage of CMV drivers in fatal crashes cited for a violation (driver action) increased slightly from 28.57% to 29.41% from 2021 to 2022. Careless Operation and Failed to Yield Right of Way were the most frequent violations. CMV drivers in injury and property damage crashes were cited for violations were 43.38% and 46.38% of the time, respectively. Within this same year, careless operation accounted for the majority of violations committed in association with commercial vehicle crashes. Careless operation made up 56.67% of all CMV driver violations in fatal crashes and 62.60% in all crashes. Other violations with relatively high occurrence rates were failure to yield, with 13.33% in fatal and 14.82% in all crashes. Since careless operation is often a proxy for speed violations, we can look at the combined percentage of speed and careless operation violations. For fatal CMV crashes, the combined CMV driver speeding relation and careless operations make up 73.33%. In all CMV crashes, this percentage is 64.01%. When failure to yield is included, these percentages are 73.33% for fatal crashes and 70.97% for all crashes.

The manner of collision most common in all CMV crashes are rear-end types at 28.79% and non-collision with motor vehicles in transport (single vehicle crashes) at 20.93%. For fatal crashes, the types were rear-end collisions at 29.29%, head-on collisions at 15.15%, non-collision with motor vehicles in transport, and angle-perpendicular crashes at 11.11%.

During 2022, 34.44% of all CMV crashes in Louisiana occurred on interstates, 30.69% occurred on state highways, and 16.19% occurred on U.S. highways. In 2021, the respective percentages were 36.39%, 30.65%, and 78.48%. From 2021 to 2022, the number of fatal interstate crashes decreased significantly from 49 to 36. U.S. highways also experienced a significant decrease from 26 to 16, and state highways saw a minor increase from 36 to 39. Thus, the overall decrease in CMV related fatalities of 22.49% was largely due to the decrease of fatalities on interstates and U.S. highways.

Commercial Vehicle Safety - 2022

The number of fatal CMV crashes in work zones decreased from 10 to 4 from 2021 to 2022. These numbers are based as work zone crashes by the officer on the crash report. For 2022, DOTD does not have work zone areas identifiable on the new base map. Therefore we are unable to calculate DOTD identified work zone crashes and crashes within a 5 mile approach.

Overview

This section provides an overview of the most important issues relating to CMV crashes in 2021 and trend data for the past five years. Table 1 depicts CMV crashes from 2017 to 2022 and shows that the fatal CMV crashes have decreased by 14.66% from 2021 to 2022 while the 5-year change in fatal CMV crashes was 3.13%. The CMV involved injury crashes decreased by 2.04% while the CMV involved PDO crashes decreased by 13.17% from 2021 to 2022. The total number of CMV crashes decreased by 7.55% from 2021 to 2022, a larger decrease than for all vehicle crashes, which was only 0.10%.

Table 1: CMV Crashes 2017-2022

Year	CMV Crashes				CMV Crashes Percentages				All Crashes				%CMV			
	Fatal	Injury	PDO	Total CMV	Fatal	Injury	PDO	Total CMV	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total
2022	99	2,112	1,707	3,918	2.53	53.91	43.57	100.00	835	42,304	105,459	148,598	12.03	4.99	1.62	2.64
2021	116	2,156	1,966	4,238	2.74	50.87	46.39	100.00	886	46,678	114,512	162,076	13.09	4.62	1.72	2.61
2020	89	1,848	1,725	3,662	2.43	50.46	47.11	100.00	762	40,100	98,036	138,898	11.68	4.61	1.76	2.64
2019	90	2,090	1,651	3,831	2.35	54.55	43.10	100.00	681	44,587	114,965	160,233	13.22	4.69	1.44	2.39
2018	95	2,189	1,792	4,076	2.33	53.70	43.96	100.00	719	45,988	117,125	163,832	13.21	4.76	1.53	2.49
2017	96	2,213	1,800	4,109	2.34	53.86	43.81	100.00	706	47,454	11,774	59,934	13.60	4.66	15.29	6.86
1 Yr % Change	-14.66%	-2.04%	-13.17%	-7.55%	-0.21	3.03	-2.82	0.00	-5.76%	-9.37%	-7.91%	-8.32%	-1.06	0.37	-0.10	0.02
5 Yr % Change	3.13%	-4.56%	-5.17%	-4.65%	0.19	0.05	-0.24	0.00	16.57%	-10.85%	795.69%	147.92%	-1.57	0.33	-13.67	-4.22
Average	98	2,102	1,774	3,972	2.45	52.89	44.66	100.00	763	44,519	93,645	138,927	12.80	4.72	3.89	3.27

Commercial Vehicle Safety - 2022

While injury crashes involving all motor vehicles decreased by 9.37% from 2021 to 2022, CMV injury crashes only slightly decreased, 2.04%, in the same period. CMV property damage crashes decreased by 13.17% from 2021 to 2022, while all CMV crashes combined decreased by 7.55%.

The number of CMV crashes is expected to follow the trend of all crashes. Thus, the CMV crashes as a percent of all crashes may provide some insight in how programs specifically designed for the reduction of CMV crashes have worked. Fatal CMV crashes as a percent of all fatal crashes decreased in 2021 by 1.06 percentage points compared to 2021 while the CMV injury crashes as percent of all injury crashes increased slightly by 0.37 percentage points compared to 2021.

Figure 1: CMV and Non-CMV Crashes 2017-2022

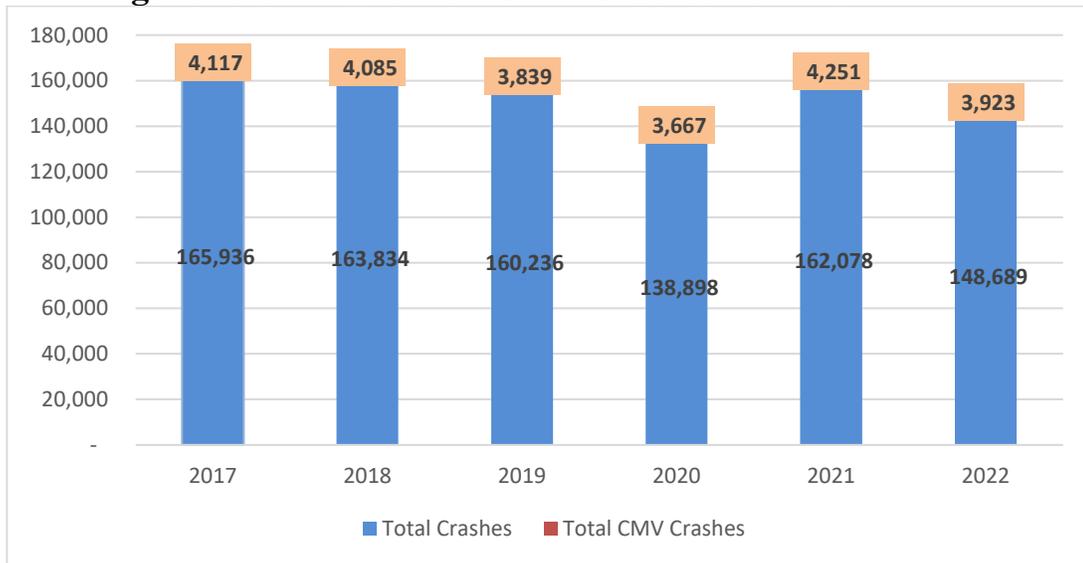
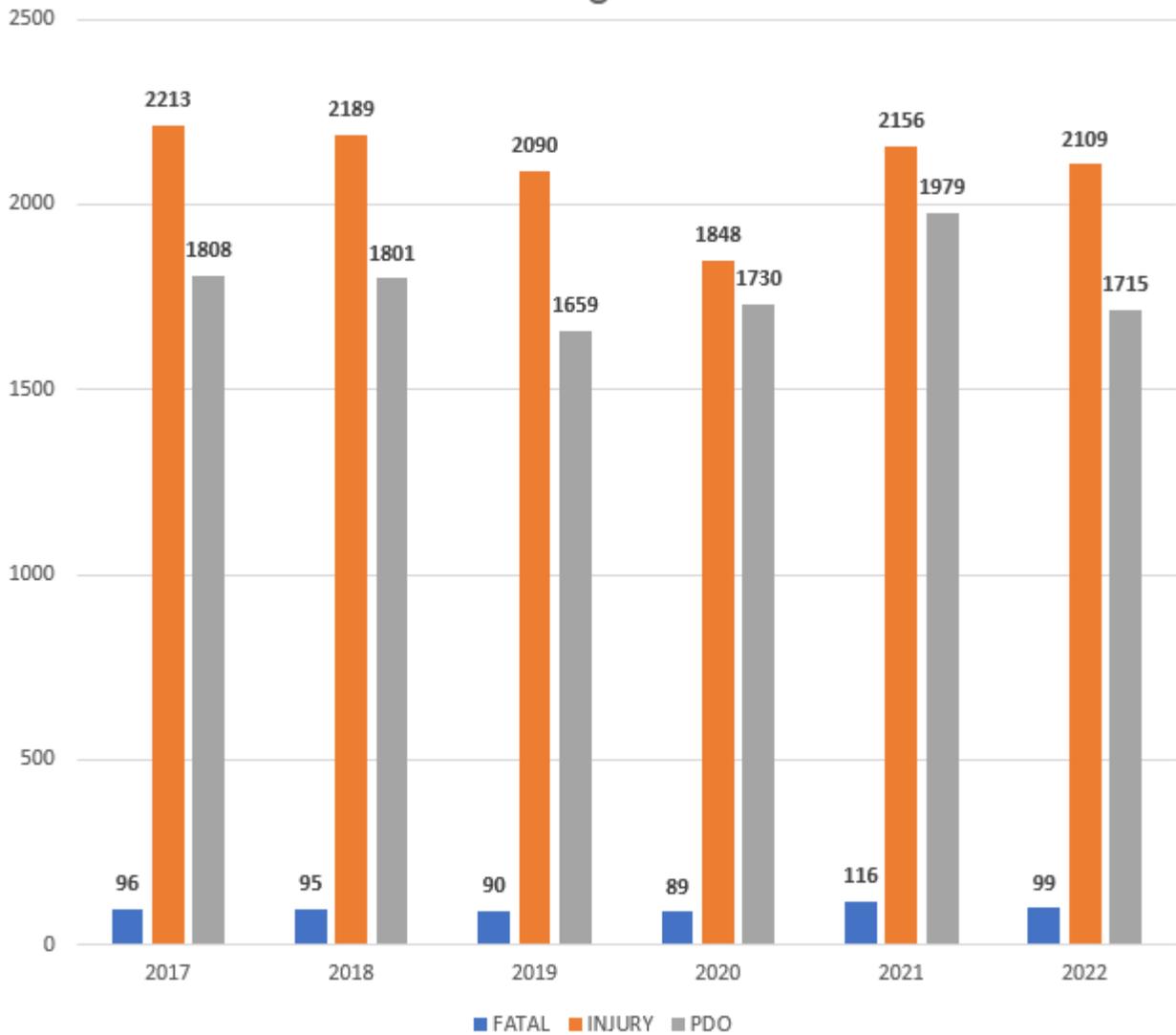


Figure 1 highlights the number of all crashes and CMV crashes from 2017 to 2022. There were 328 less CMV crashes and 13,389 less non-CMV crashes in 2022 compared to 2021. In addition, as Table 1 shows, CMV crashes accounted for 2.6% of all crashes in 2022, which is same percentage as in 2021.

Commercial Vehicle Safety - 2022

Figure 2 shows that the number of fatal, injury, and PDO CMV crashes all decreased from 2021 to 2022.

Figure 2: CMV Crashes by Severity: 2017-2022



Commercial Vehicle Safety - 2022

Figure 3: CMV and All Fatal Crashes 2017-2022

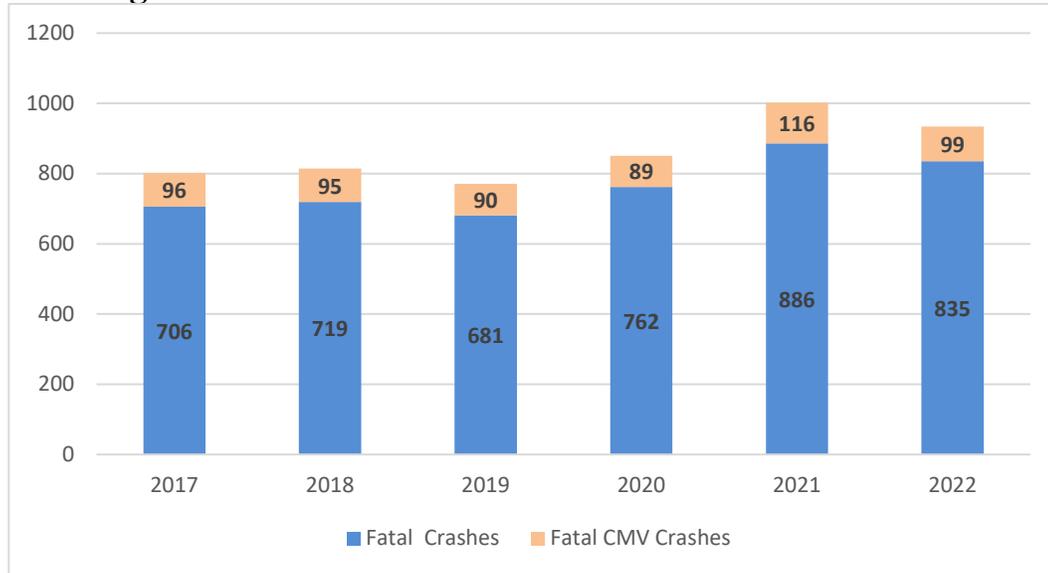
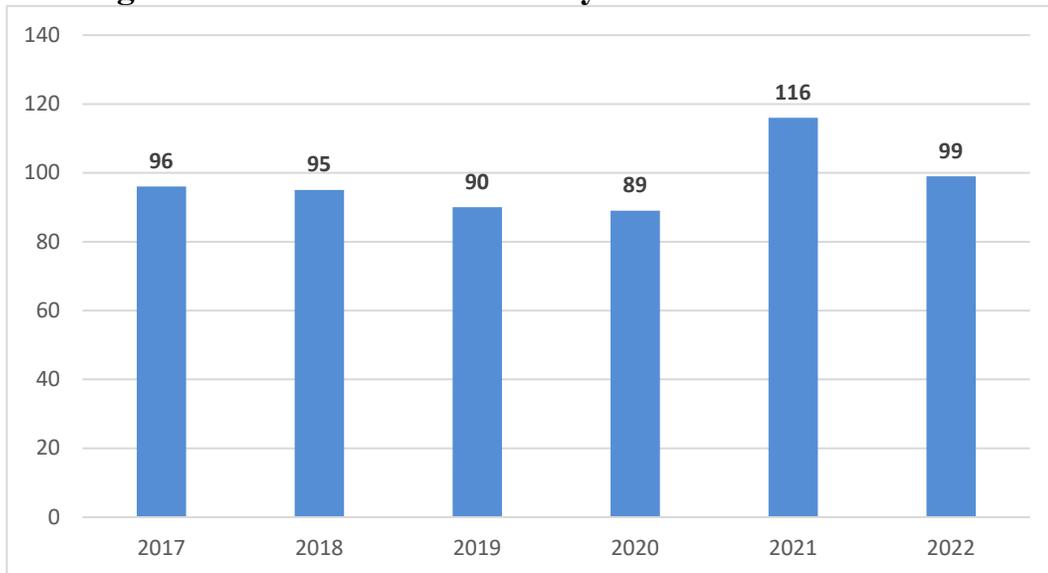


Figure 4: Fatal CMV Crashes by Year: 2017-2022



Figures 3 and 4 illustrate all fatal and CMV crashes from 2017 to 2022. While the decrease in the number of all fatal crashes was 5.76% from 2021 to 2022, the CMV fatal crashes experienced a larger decrease of 14.66%, which amounts to 17 less fatal CMV crashes and 30 less fatalities. Figure 4 shows the trend of fatal CMV crashes which indicates that 2019 and 2020 had the lowest numbers of fatal CMV crashes in the past five years. In fact, 2019 and 2020 had the lowest number of CMV fatal crashes since at least 1999 when the yearly report was first compiled.

Commercial Vehicle Safety - 2022

To obtain a better understanding of the CMV crashes over past years, the number of crashes should be adjusted by the vehicle miles traveled (VMT) by commercial vehicles. In past reports, vehicle miles traveled for CMVs were obtained from the FMCSA website which was discontinued in 2007. The new FMCSA guidelines now proposes to use total VMT rather than commercial vehicle VMT. Table 2 depicts the fatal crashes, injury crashes, PDO crashes, and all crashes per 100 million miles traveled by all vehicles. The fatality rate for CMV crashes was 0.18 in 2022, a decrease from 0.21 in 2021. While these crash rates can be used to look at trends, it is important to note that with the new measure used by FMCSA the CMV rates cannot be compared with the rates for all vehicles because of the use of total VMT to normalize CMV crashes.

The 2022 VMT was not available at the time of this report, so the 2021 VMT was used for 2022.

Table 2: CMV and All Crashes 2017-2022 per 100 Million Miles Traveled

Year	CMV Crash Rates				All Crash Rates			
	Fatal Crash Rate	Injury Crash Rate	PDO Crash Rate	Total CMV Crash Rate	Fatal Crash Rate	Injury Crash Rate	PDO Crash Rate	Total Crash Rate
2022	0.18	3.82	3.09	7.09	1.51	76.57	190.96	269.04
2021	0.21	3.90	3.56	7.67	1.60	84.46	207.21	293.27
2020	0.17	3.60	3.36	7.13	1.48	78.08	190.89	270.46
2019	0.18	4.07	3.21	7.46	1.33	86.82	223.85	312.00
2018	0.19	4.37	3.58	8.14	1.44	91.87	233.97	327.27
2017	0.20	4.50	3.66	8.35	1.43	96.40	239.24	337.08

Analysis of Crashes by Month

Since monthly crash data fluctuates considerably from year to year, it is difficult to conclude that the month of the year has any effect on the number of crashes. Specifically, the fatal crash count exhibits large variations since small crash numbers vary more, percentage wise, than large crash numbers.

Commercial Vehicle Safety - 2022
Table 3: CMV Crashes by Month in 2022

MONTH	FATAL CRASHES	TOTAL KILLED	INJURY CRASHES	PDO	TOTAL CRASHES
January	4	4	166	146	316
February	9	10	158	146	313
March	8	9	215	175	398
April	15	16	163	145	323
May	7	7	174	160	341
June	15	15	183	139	337
July	7	7	182	111	300
August	6	6	173	140	319
September	6	6	191	135	332
October	10	10	184	142	336
November	5	5	160	128	293
December	7	8	163	140	310
TOTAL	99	103	2,112	1,707	3,918

Nevertheless, as the data in Table 3 indicates, April and June had the highest number of fatal crashes with 15 fatal crashes and 16, 15 deaths respectively. The analysis of the CMV crash data for 2022 indicates yearly fatal crash counts in any given month may vary from 4 to 15 with the three highest months being April, June, and October, and with 16, 15, and 10 people killed.

Violations (Driver Action)

There are two ways one can evaluate the citations in CMV crashes, depending on whether we use the number of drivers or the number of citations as the denominator. In a crash, either the CMV driver or the non-CMV driver or both may receive a citation. Thus, when the number of CMV drivers and the number of car drivers are used as the denominator, respectively, the two percentages do not add up to 100%. They may be lower or higher than 100% if there are many crashes where no driver received a citation, and this percentage will be higher than 100% if there are many crashes where both drivers received a citation. For instance, in 2014 the two percentages added up to more than 100% for fatal crashes. The average of both percentages approximates the percentage of all drivers involved in CMV crashes that received citations.

Commercial Vehicle Safety - 2022

The percentage of CMV drivers in fatal crashes who received a citation slightly increased from 2021 to 2022, i.e. 32.54% in 2021 to 33.93% in 2022. For injury and property damage crashes, 45.51% and 48.45% of the CMV drivers were cited for violations, respectively. Also 75.53% of non- CMV drivers received violations in fatal CMV crashes in 2022. These figures show that in fatal crashes non-CMV drivers continued to have a higher percentage of citations than CMV drivers. In PDO crashes 48.45% of CMV drivers and 56.07% of non-CMV drivers received citations. The percentages of CMV drivers receiving citations in injury crashes was 45.51% which is slightly lower than the 51.29% received by non-CMV drivers.

Secondly, we can look at the percentage of citations going to CMV versus the non-CMV driver. These two percentages add up to 100% all of the time. Even if the percentage of all citations in crashes would decline to say 10%, still half, for example, could go to the CMV driver and half could go to the non-CMV driver. The percentage of citations in fatal crashes going to the CMV driver has very slightly increased from 2021 to 2021, i.e. from 32.80% in 2021 to 34.86% in 2022 (see Table 4b). For injury and property damage only crashes (PDO) the CMV driver received 47.08% and 52.88% of violations, respectively.

Table 4a: Violations as a Percentage of Drivers

As Percentage of Drivers								
Year	FATAL CRASHES		INJURY CRASHES		PDO		TOTAL CRASHES	
	CMV Driver	Passenger Car Driver	CMV Driver	Passenger Car Driver	CMV Driver	Passenger Car Driver	CMV Driver	Passenger Car Driver
2022	33.93%	75.53%	45.51%	51.29%	48.45%	56.07%	46.49%	53.70%
2021	32.54%	53.16%	47.91%	48.24%	49.31%	56.28%	48.12%	51.65%
2020	32.29%	64.52%	45.47%	50.69%	49.84%	55.59%	47.21%	53.08%
2019	45.55%	61.54%	47.61%	50.02%	50.40%	55.42%	48.76%	52.26%
2018	35.19%	45.34%	48.29%	48.11%	48.26%	56.48%	47.95%	51.24%
2017	39.25%	56.73%	49.98%	48.88%	46.37%	57.97%	48.13%	52.61%

*These are the percentage of drivers receiving citations.

Commercial Vehicle Safety - 2021

Table 4b: Violations as a Percentage of all Violations

As Percentage of Violations								
YEAR	FATAL CRASHES		INJURY CRASHES		PDO		TOTAL CRASHES	
	CMV Driver	Passenger Car Driver	CMV Driver	Passenger Car Driver	CMV Driver	Passenger Car Driver	CMV Driver	Passenger Car Driver
2022	34.86%	66.14%	47.08%	52.92%	52.88%	47.12%	49.21%	50.79%
2021	32.80%	67.20%	49.77%	50.23%	52.72%	47.28%	50.62%	49.38%
2020	34.07%	65.93%	47.12%	52.88%	53.24%	46.76%	49.65%	50.35%
2019	51.52%	48.48%	48.36%	51.64%	53.98%	46.02%	50.80%	49.20%
2018	43.68%	56.32%	50.52%	49.48%	51.93%	48.07%	50.98%	49.021%
2017	41.58%	58.42%	50.82%	49.18%	49.89%	50.11%	50.20%	49.80%

These are all the citations in a crash and the percentages going to either CMV driver or other car driver.

The different views become apparent when the total number of citations given to the drivers change over time. The relative distribution of the citations changed in fatal crashes in the past year with 34.86% going to the CMV driver in fatal crashes and 66.14% going to the non-CMV driver. In 2022, , citations were given more frequently (50.79%) to the non-CMV drivers in 2022 compared to 2021 where 49.38% went to the non-CMV driver (Table 4b).

Figure 5 visualizes the findings expressed above, namely the relative percentage citations going to CMV drivers versus non-CMV drivers in fatal CMV crashes. Overall, the percentages have been relatively stable over the past years for fatal crashes with roughly one third of citations going to the CMV driver and the remaining going to the non-CMV driver.

Commercial Vehicle Safety - 2021

Figure 5: CMV and Non-CMV Driver Violations in Fatal Crashes: 2016-2021

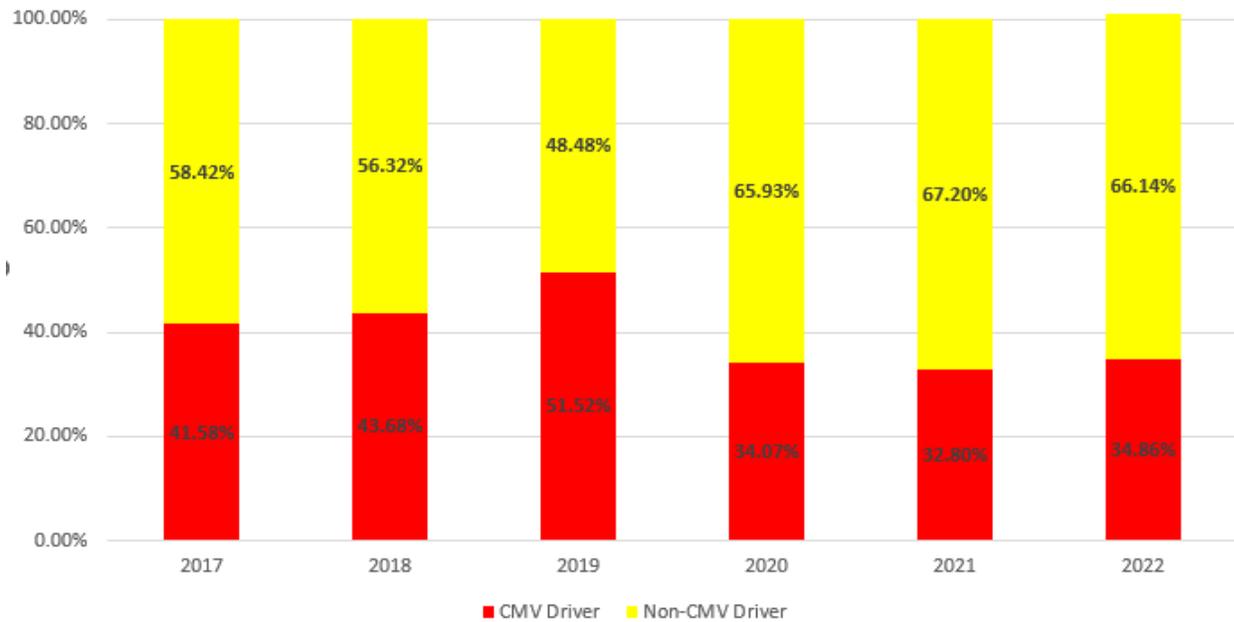


Table 5 shows the types of violations drivers receive. Including unknown violations, CARELESS OPERATION and FAILED TO YIELD violations accounted for most violations of the CMV driver in fatal crashes for 2022, namely 17 and 4, respectively, which combined accounted for 46.67% of violations. The percentage of CARELESS OPERATION and FAILED TO YIELD violations for CMV drivers was 51.96% for injury CMV crashes and 51.94% for PDO crashes.

NOTE: THE NEW MMUCC 5 CRASH REPORT, WHICH WAS USED IN AHLOF OF 2022, ALLOWS FOR THE OFFICER TO NOTE UP TO 4 VIOLATIONS (DRIVER ACTIONS). THE PREVIOUS CRASH REPORT ONLY ALLOWED THE OFFICER TO SELECT ONE VIOLATION. THIS CAN ACCOUNT FOR THE INCREASE IN THE NUMBER OF VIOLATIONS FROM 2021 TO 2022.

Table 5: Type of Violation of CMV Driver

VIOLATIONS	FATAL CRASHES		INJURY CRASHES		PDO		TOTAL CRASHES	
NO VIOLATION	72		1,215		948		2,235	
DISREGARDED OTHER ROAD MARKINGS	1	2.22%	5	0.36%	3	0.24%	9	0.34%
DISREGARDED OTHER TRAFFIC SIGN	1	2.22%	35	2.54%	21	1.70%	57	2.14%
FAILED TO KEEP IN PROPER LANE	1	2.22%	69	5.01%	73	5.91%	143	5.38%
FAILED TO YIELD RIGHT-OF-WAY	4	8.89%	152	11.03%	108	8.74%	264	9.93%
FOLLOWED TOO CLOSELY	0	0.00%	124	9.00%	63	5.10%	187	7.03%
IMPROPER BACKING	1	2.22%	19	1.38%	21	1.70%	41	1.54%
IMPROPER PASSING	1	2.22%	32	2.32%	31	2.51%	64	2.41%
IMPROPER TURN	1	2.22%	54	3.92%	54	4.37%	109	4.10%
CARELESS, NEGLIGENT, OR ERRATIC MANNER	17	37.78%	564	40.93%	534	43.20%	1,115	41.93%
RECKLESS OR AGGRESSIVE MANNER	0	0.00%	3	0.22%	5	0.40%	8	0.30%
OVER-CORRECTING OR OVER-STEERING	0	0.00%	27	1.96%	20	1.62%	47	1.77%
RAN OFF ROADWAY	2	4.44%	64	4.64%	66	5.34%	132	4.96%
RAN RED LIGHT	0	0.00%	12	0.87%	1	0.08%	13	0.49%
RAN STOP SIGN	0	0.00%	8	0.58%	2	0.16%	10	0.38%
SWERVED OR AVOIDED	2	4.44%	15	1.09%	27	2.18%	44	1.65%
WRONG SIDE OR WRONG WAY	0	0.00%	1	0.07%	1	0.08%	2	0.08%
OTHER CONTRIBUTING ACTION	9	20.00%	107	7.76%	131	10.60%	247	9.29%
UNKNOWN	5	11.11%	87	6.31%	75	6.07%	167	6.28%
TOTAL VIOLATIONS	45	100.00%	1,378	100.00%	1,236	100.00%	2,659	100.00%
% Violations from Table 4a	33.93%		45.51%		48.45%		46.49%	
% from Table 4b	34.86%		47.08%		52.88%		4.21%	

**Includes multiple violations for the driver*

Manner of Collision

Table 6 shows the manner of collision. "REAR END," "HEAD-ON", and "Perpendicular" collisions make up more than 72.37%, $[(29 + 15 + 11) / (99 - 23)]$ of all fatal CMV crashes. This is a 13.05 percentage point decrease from 85.42% in 2021 for these three types of collisions. Also, the number of non-collision fatal CMV crashes increased from 18 to 23 from 2021 to 2022.

Commercial Vehicle Safety - 2022

Table 6: Manner of Collision

MANNER OF COLLISION	FATAL CRASHES		INJURY CRASHES		PDO		TOTAL CRASHES	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
ANGLE - LEFT ACROSS FLOW	1	1.01%	5	0.24%	9	0.53%	15	0.38%
ANGLE - LEFT INTO FLOW	4	4.04%	45	2.13%	33	1.93%	82	2.09%
ANGLE - LEFT OPPOSITE DIRECTION	4	4.04%	85	4.02%	37	2.17%	126	3.22%
ANGLE - LEFT OVERTAKE	2	2.02%	57	2.70%	34	1.99%	93	2.37%
ANGLE - PERPENDICULAR/OTHER ANGLE	11	11.11%	293	13.87%	153	8.96%	457	11.66%
ANGLE - RIGHT ACROSS FLOW		0.00%	10	0.47%	12	0.70%	22	0.56%
ANGLE - RIGHT INTO FLOW		0.00%	36	1.70%	38	2.23%	74	1.89%
ANGLE - RIGHT OVERTAKE		0.00%	7	0.33%	7	0.41%	14	0.36%
BACKING - REAR TO FRONT		0.00%	5	0.24%	8	0.47%	13	0.33%
BACKING - REAR TO SIDE		0.00%	2	0.09%	3	0.18%	5	0.13%
FRONT TO FRONT - HEAD ON	15	15.15%	69	3.27%	20	1.17%	104	2.65%
FRONT TO FRONT - LEFT AGAINST FLOW		0.00%	11	0.52%	7	0.41%	18	0.46%
FRONT TO FRONT - RIGHT AGAINST FLOW		0.00%	3	0.14%	7	0.41%	10	0.26%
FRONT TO REAR - REAR END	29	29.29%	678	32.10%	421	24.66%	1128	28.79%
NOT A COLLISION BETWEEN TWO MOTOR VEHICLES IN TRANSPORT	23	23.23%	353	16.71%	444	26.01%	820	20.93%
OTHER	3	3.03%	81	3.84%	103	6.03%	187	4.77%
SIDESWIPE - LEFT OVERTAKE	1	1.01%	14	0.66%	6	0.35%	21	0.54%
SIDESWIPE - OPPOSITE DIRECTION	4	4.04%	56	2.65%	43	2.52%	103	2.63%
SIDESWIPE - RIGHT OVERTAKE		0.00%	10	0.47%	5	0.29%	15	0.38%
SIDESWIPE - SAME DIRECTION	2	2.02%	287	13.59%	314	18.39%	603	15.39%
UNKNOWN		0.00%	5	0.24%	3	0.18%	8	0.20%
TOTAL	99	100.00%	2,112	100.00%	1,707	100.00%	3,918	100.00%

Work-Zone Crashes

Work zones are of specific interest for enforcement activities because they are potential hotspots for crashes. The work zones were derived using crashes that are marked as Work Zone Relation Indicator "Yes". Table 7 therefore does not report crashes before or after construction zones. The number of fatal CMV crashes based on the crash report was 7 in 2021 and 7 in 2022.

**Table 7: Work-Zone CMV Crashes on Interstates (2021-2022)
(Based on Crash Report Form)**

	WHERE	2022				2021				Percent Change			
		FATAL	INJ.	PDO	ALL	FATAL	INJ.	PDO	ALL	FATAL	INJ.	PDO	ALL
ALL CMV CRASHES ON INTER-STATES	Count	36	640	675	1351	49	680	813	1,542	-26.5%	-5.9%	-17%	-12.4%
CONSTRUCTION ZONES	Count	4	50	45	99	7	47	64	118	-42.8%	6.38%	-29%	-16.1%

Seat Belt Usage

Seat belt usage is one of the most important factors preventing death in a crash. Table 8 shows that in 2022, 54.5% of CMV drivers killed in a crash did not wear a seat belt while 50.3% of all drivers killed in all motor vehicle crashes were not wearing a seat belt. However, since the number of CMV drivers killed is relatively small, these percentages vary more than the percentages for all drivers. The five-year average shows that CMV drivers killed had a higher rate of seat belt usage than all drivers. The 5-year average of CMV drivers killed not wearing a seat belt was 44.2% compared to 52.0% for all drivers.

Commercial Vehicle Safety - 2022

Table 8: Seat Belt Usage

This includes only drivers with known seat belt use.

Year	CMV Drivers						All Drivers					
	Drivers Killed w/o Seatbelt	Drivers Killed	% of Drivers Killed w/o seatbelt	Drivers Seriously Injured w/o Seatbelt	Drivers Seriously Injured	% of Drivers Seriously Injured w/o seatbelt	Drivers Killed w/o Seatbelt	Drivers Killed	% of Drivers Killed w/o seatbelt	Drivers Seriously Injured w/o Seatbelt	Drivers Seriously Injured	% of Drivers Seriously Injured w/o seatbelt
2022	6	11	54.5%	5	22	22.7%	224	445	50.3%	350	1,333	26.2%
2021	4	10	40.0%	2	5	40.0%	257	468	54.9%	203	724	28.0%
2020	3	6	50.0%	3	11	27.2%	221	409	54.0%	193	657	29.3%
2019	6	15	40.0%	0	9	0.0%	168	340	49.4%	174	593	29.3%
2018	4	10	40.0%	4	9	44.4%	178	350	50.8%	126	504	25.0%
Total	23	52	44.2%	14	56	25.0%	1,048	2,012	52.0%	1,046	3,811	27.4%

Hazardous Material

CMV crashes involving CMVs carrying hazardous material are of particular interest due to their potential danger to the environment and community when hazardous materials are released. Over the past 6 years, from 2017 to 2022, on average, about 12.4% of crashes involving hazardous material resulted in a release of the hazardous material. This percentage was 14.3% in 2021. The actual percentage of release may be higher since many of the CMVs identified as transporting hazardous material may actually be returning with an empty load, thus the percentage of releases based on crashes with full loads of hazardous material may be much higher than the percentages shown in Table 9.

The interstates accounted for 38.68% of all crashes involving hazardous materials in 2022. Specifically, Interstate 10 accounts for 46.34% of all hazardous material crashes on interstates in 2022. US highways account for 27.36% of all hazardous material crashes in 2022, with US 90 and US 190 accounting for 50.00% of hazardous material crashes on US highways. State highways accounted for 27.36% of all hazardous crashes in 2022.

Commercial Vehicle Safety - 2022

Table 9: Hazardous Material Crashes

Year	Transport Crashes	Released Crashes	% Released	Transport Fatal Crashes	Released Fatal Crashes
2022	106	12	11.32%	1	0
2021	102	11	10.78%	4	1
2020	83	13	15.66%	3	1
2019	117	18	15.38%	4	2
2018	96	14	14.58%	4	1
2017	121	15	12.40%	5	2

The types of hazardous material reported in CMV crashes are displayed in Table 10. On average, 17.60% involve corrosive material, 16.96% involve gasses (gas and flammable gasses), and 42.88% involve flammable liquids. The remaining percentages are various chemicals.

Table 10: Type of Hazardous Material in CMV Crashes

	2022		2021		2020		2019		2018		2017	
	Haz Mat Crash	Haz Mat Released Crash	Haz Mat Crash	Haz Mat Released Crash	Haz Mat Crash	Haz Mat Released Crash	Haz Mat Crash	Haz Mat Released Crash	Haz Mat Crash	Haz Mat Released Crash	Haz Mat Crash	Haz Mat Released Crash
	2	0										
CORROSIVES	18	1	14	2	15	2	21	3	16	1	26	3
DANGEROUS WHEN WET MATERIALS					1	0						
EXPLOSIVES	11	1	11	0	1	0	2	0			1	0
EXPLOSIVES WITH NO SIGNIFICANT BLAST HAZARD											2	0
EXPLOSIVES WITH PREDOMINANTLY A FIRE HA..							1	0			1	0
FLAMMABLE GASES	1	0	2	1	11	1	18	3	16	2	10	2
FLAMMABLE LIQUIDS	41	7	38	5	33	7	53	10	48	9	55	6
FLAMMABLE SOLIDS					3	0	1	0	1	0	2	1
GAS	23	2	16	1	1	0	1	0	3	0	4	0
MISCELLANEOUS DANGEROUS GOODS	5	1	9	1	7	0	6	2	8	0	12	2
NON-FLAMMABLE, NON-TOXIC COMPRESSED G..					7	1	6	0			6	1
ORGANIC PEROXIDES	1	0										
OTHER FLAMMABLE SUBSTANCES	1	0	3	0	1	0						
OXIDIZERS							3	0			1	0
OXIDIZING SUBSTANCES AND ORGANIC PEROXIDES	1	0	2	0					1	1		
RADIOACTIVE MATERIAL	2	0	5	0								
SPONTANEOUSLY COMBUSTIBLE MATERIALS							1	0				
TOXIC (POISONOUS) AND INFECTIOUS SUBSTANCES	2	0	2	1	4	2	4	0	3	1	2	0
UNKNOWN	0	0	0	0	1	0	0	0	0	0	1	0
Grand Total	106	12	102	11	83	13	117	18	96	14	121	15

Distractions

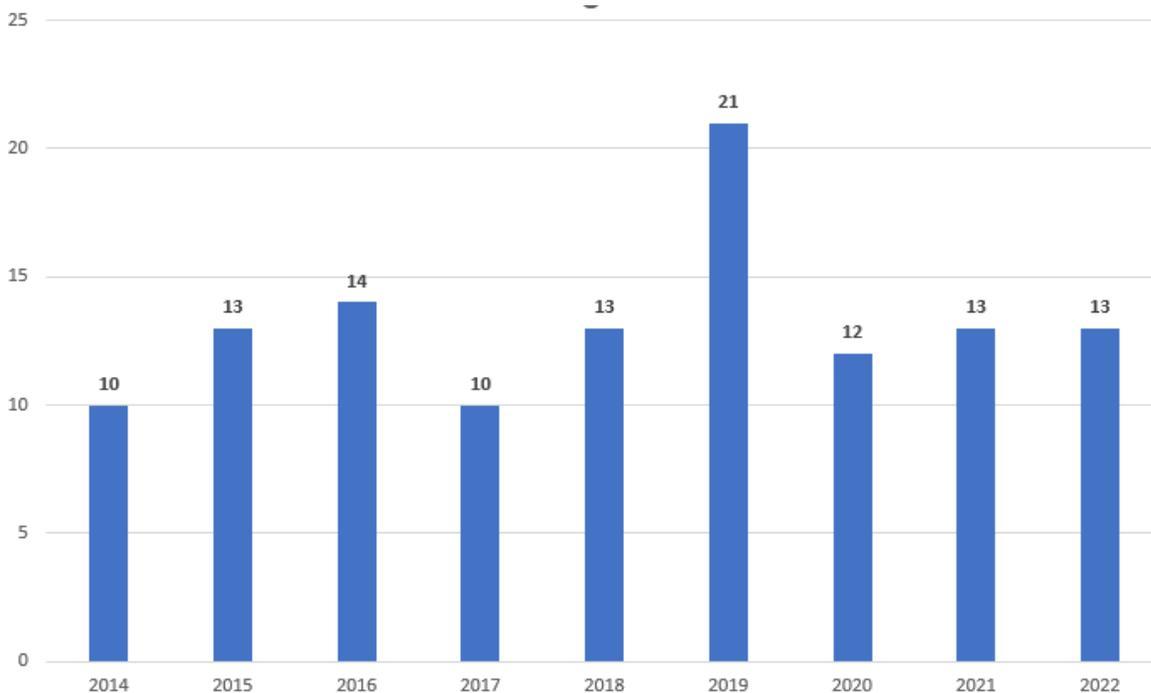
Although distractions play an important role in all crashes, including CMV crashes, 1 CMV fatal crash was reported in 2022 in which cell phone usage was the cause of distraction. Table 11 shows the breakdown of crashes by type of distractions for CMV crashes.

Table 11: CMV Driver Distractions

Driver Distraction Description	Fatal	Injury	PDO	Total
CELL PHONE	1	16	3	20
NOT DISTRACTED	84	1,859	1,511	3,454
OTHER ELECTRONIC DEVICE	0	2	5	7
OTHER INSIDE THE VEHICLE	0	15	17	32
OTHER OUTSIDE THE VEHICLE	0	14	23	37
UNKNOWN	21	321	264	606

The number of CMV drivers with cell phone usage has varied between a low of 10 in 2014 to a spike of 21 in 2019, having an average of 13.6 between all years.

Figure 13: Cell Phone Use as a Distraction of CMV Drivers



Changes in Number of Crashes by Parish

The 16 parishes with the highest number of fatal and non-fatal CMV crashes are listed in Table 12. From 2021 to 2022, Louisiana experienced a significant decrease in total number of CMV crashes for 7 of the 16 parishes. Eleven (11) of the top 16 parishes (bolded) incorporate either I10 or I12. Three (3) of the top 16 parishes (underlined) incorporate I12. Thus, the I10/I12 corridor and I20 are candidates for increased enforcement to counteract the increasing trend in crashes.

Table 12: CMV Crashes by Parishes

PARISH	FATAL CRASHES		TOTAL CRASHES		TOTAL CRASHES	
	2022	2021	2022	2021	Diff	% Change
East Baton Rouge	8	11	353	406	-53	-13.05%
Calcasieu	2	8	239	305	-66	-21.64%
St. Tammany	10	3	217	227	-10	-4.41%
<u>Caddo</u>	5	3	210	223	-13	-5.83%
Jefferson	0	2	208	208	0	0.00%
Orleans	5	5	194	209	-15	-7.18%
Lafayette	1	4	182	177	5	2.82%
Tangipahoa	5	5	157	178	-21	-11.80%
<u>Ouachita</u>	6	3	130	162	-32	-19.75%
Livingston	2	2	122	132	-10	-7.58%
St. Martin	2	2	71	121	-50	-41.32%
<u>Bossier</u>	1	1	117	116	1	0.86%
Rapides	4	2	102	114	-12	-10.53%
Lafourche	5	4	76	111	-35	-31.53%
Ascension	1	2	120	100	20	20.00%
West Baton Rouge	4	4	90	94	-4	-4.26%
TOTAL	61	61	2,588	2,883	-295	-10.23%

Rural CMV Crashes

Table 13a displays the count of crashes on rural roads by highway type. Although the data shows that rural roads account for most of the fatal and injury crashes, rural roads make up the majority of the roadway sections. While the fatal CMV crashes on state roads stayed the same at 32 or 0.0% from 2021 to 2022, fatal CMV crashes on interstates decreased by 5 or 16.1%, and fatal CMV crashes on US Highways decreased by 10 or 33.3%.

Commercial Vehicle Safety - 2022

Injury crashes during the same period decreased by 5.7% on interstates, 10.9% on US Highways, and 14.4% on state roads.

Table 13a: CMV Rural Crashes by Highway Type 2022

HIGHWAY TYPE	FATAL CRASHES			INJURY CRASHES			PDO			TOTAL		
	2022 CRASH	2021 CRASH	DIFFERENCE	2022 CRASH	2021 CRASH	DIFFERENCE	2022 CRASH	2021 CRASH	DIFFERENCE	2022 CRASH	2021 CRASH	DIFFERENCE
INTERSTATE	26	31	-16.1%	333	353	-5.7%	435	512	-15.0%	794	896	-11.4%
US HIGHWAY	11	17	-35.3%	172	193	-10.9%	144	174	-17.2%	327	384	-14.8%
STATE ROAD	32	32	0.0%	422	493	-14.4%	372	389	-4.4%	828	915	-9.5%
PARISH ROAD	2	3	-33.3%	126	127	-0.8%	107	130	-17.7%	235	262	-10.3%
CITY/LOCAL ROADS	0	0	0.0%	2	0	0.0%	4	0	0.0%	6	0	1.0%
OTHER	0	0	0.0%	0	0	0.0%	0	1	0.0%	0	1	0.0%
ALL ROADWAYS	71	83	-14.5%	1,058	1,166	-9.2%	1,065	1,206	-11.7%	2,196	2,458	-10.7%
% Interstates	36.6%	37.3%	-0.7%	31.5%	30.3%	1.2%	40.8%	42.5%	-1.6%	36.2%	36.5%	-0.3%
% US	15.5%	20.5%	-5.0%	16.3%	16.6%	-0.3%	13.5%	14.4%	-0.9%	14.9%	15.6%	-0.7%
% State	45.1%	38.6%	6.5%	39.9%	42.3%	-2.4%	34.9%	32.3%	2.7%	37.7%	37.2%	0.5%
% State, US, & Interstate	97.2%	96.4%	0.8%	87.6%	89.1%	-1.6%	89.3%	89.1%	0.2%	88.8%	89.3%	-0.5%

The crash report does not indicate if a crash was urban or rural besides the city code which is not a reliable indicator. Because of urban sprawl over the years there are many urbanized areas outside the city limits.

Table 13b shows the percentage of crashes by severity and highway type coded with city code 00. This code is most often used by the state police to identify crashes that occurred outside of city limits. However, some crashes worked by state police could have been inside city limits. About 63.2% of the fatal interstate CMV crashes occurred in rural areas and 51.9% of the injury interstate CMV crashes occurred in rural areas. Overall, 71.5% of fatal CMV crashes and 57.9% of all CMV crashes occur in rural areas. Thus, rural interstates, US highways, and state highways should continue to be the focus of enforcement.

Commercial Vehicle Safety - 2022

Table 13b: Percentage of CMV Crashes Outside City Limits 2022

HWY Type	Fatal	Injury	PDO	Total
INTERSTATE	63.2%	51.9%	63.0%	58.1%
US HIGHWAY	65.3%	46.3%	58.0%	51.7%
STATE ROAD	88.8%	69.9%	69.5%	70.2%
PARISH ROAD	100.0%	100.0%	100.0%	100.0%
CITY/LOCAL ROADS AND STREETS	0.0%	0.0%	0.0%	0.0%
ALL ROADWAYS	71.5%	54.1%	61.3%	57.9%

Bus Crashes

Small and large busses are of particular interest to law enforcement because of the potential risk of high number of fatalities in a single crash. The number of CMV bus crashes, injuries, and fatalities is depicted in Table 14. In 2022, there were 48 large bus crashes where 54 passengers were injured inside the bus. There were 22 small bus crashes with 1 person killed and 26 passengers injured. There were 170 school bus crashes with 241 passengers injured. Overall, in 2022, there were 6 people killed in 240 bus crashes and 321 people injured. The number of bus crashes has decreased from 258 in 2021 to 240 in 2022, and the number of injuries has decreased from 343 in 2021 to 321 in 2022. The number of school bus crashes has significantly increased by 23.18%. Small and large bus crashes have significantly decreased by 51.11% and 36.0% respectively.

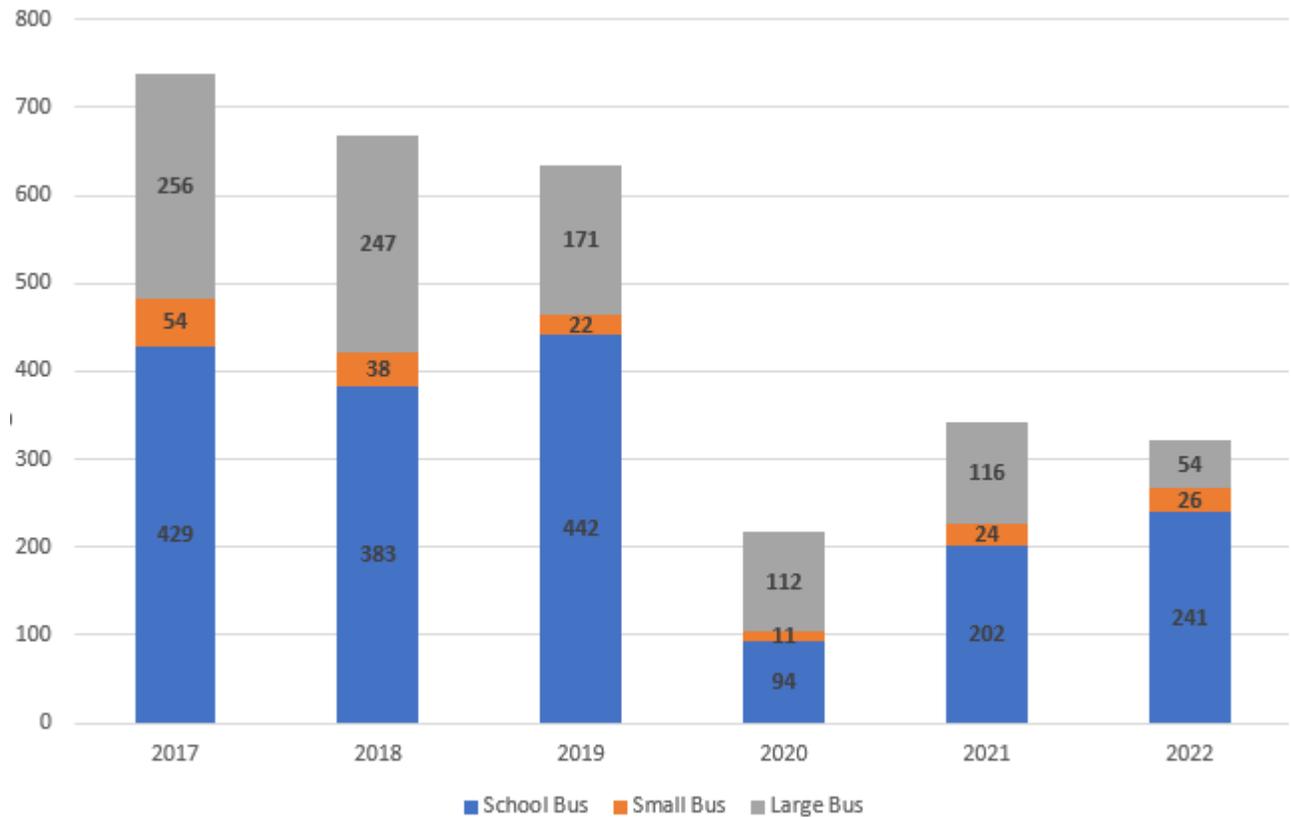
Table 14: CMV Bus Crashes in 2021-2022

Year		Count	SCHOOL BUS	SMALL BUS	LARGE BUS	TOTAL
2021	Bus Crash	Number of Crashes	138	45	75	258
		Number of Fatal Crashes	2	0	1	3
		Number Total Killed	2	0	1	3
		Number Killed Inside Bus	0	0	0	0
		Number Injured Inside Bus	202	25	116	343
2022	Bus Crash	Number of Crashes	170	22	48	240
		Number of Fatal Crashes	4	1	1	6
		Number Total Killed	4	1	1	6
		Number Killed Inside Bus	0	0	0	0
		Number Injured Inside Bus	241	26	54	321

Commercial Vehicle Safety - 2022

Figure 14 shows the trend in bus crashes. The graph shows that the total number of bus crashes have decreased from 258 in 2021 to 240 in 2022.

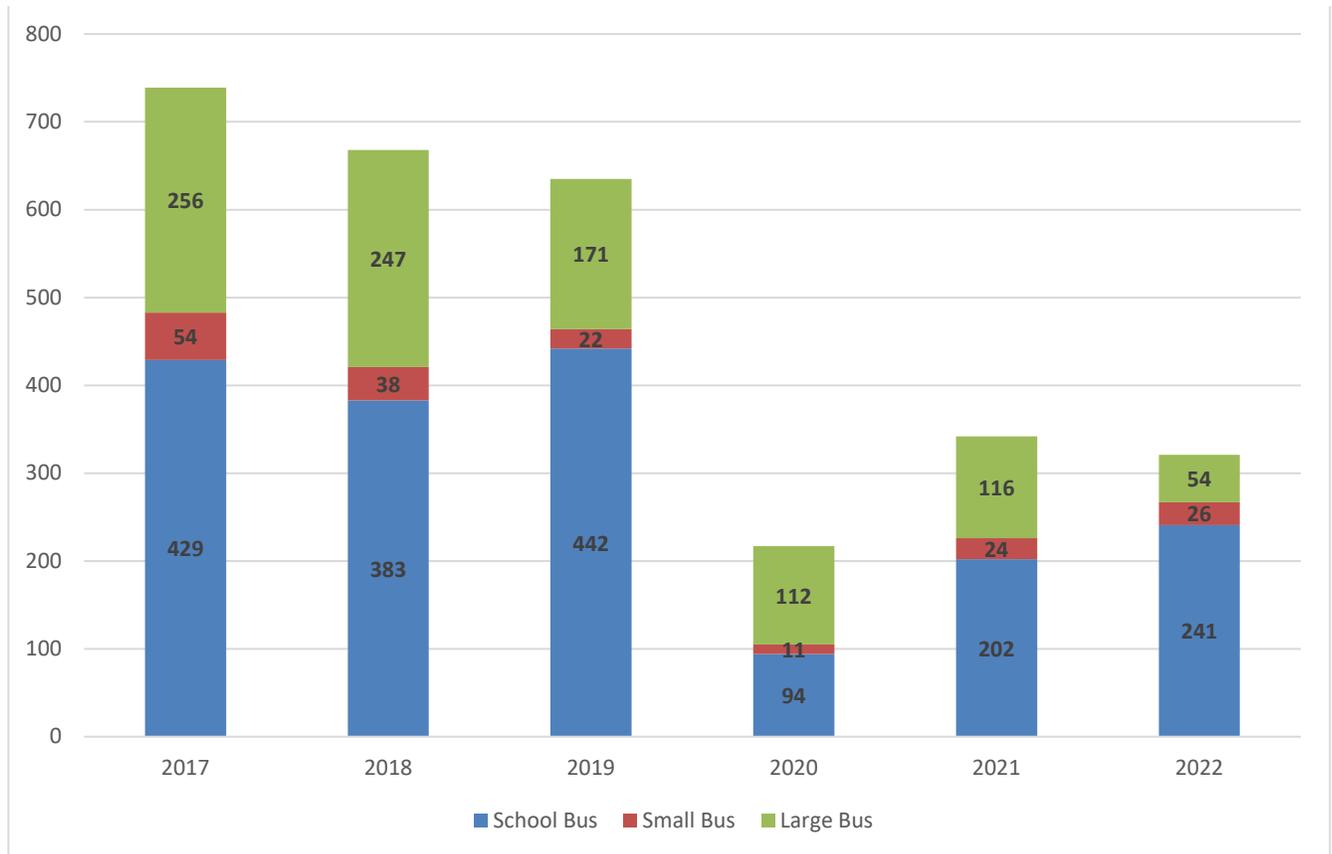
Figure 14: CMV Bus Crashes 2017 to 2022



Commercial Vehicle Safety - 2022

Figure 15 shows that injuries inside buses peaked in 2017 with 739 injuries and decreased to 305 in 2022.

Figure 15: Bus-Crash Injuries 2017 to 2022



Commercial Vehicle Safety - 2022

While the number of bus crashes increased by 28.3% from 2020 to 2021, namely from 185 to 258, the number of injuries has significantly increased by 55.20%, namely from 221 to 343.

2023 YTD Crash Results

The 2023 data is still being collected at this time, but the following Table 15 provides a snapshot of CMV crashes YTD.

Table 15: CMV Crashes YTD 2023

CMV Crashes and Type	2023 YTD*
Total CMV Crashes	267
Total CMV Fatal Crashes	5
Total CMV Fatalities	5
Total Crashes	49,234
Total Fatal Crashes	198
Total Fatalities	209
Total HazMat Crashes	9
Total HazMat Fatal Crashes	0
Total HazMat Fatalities	0
Total Construction Zone CMV Fatal Crashes	0
Total Construction Zone Fatal Crashes	5

***As of Thursday, May 14, 2023, NA: Not available at this time.**

Note: Definition of Reportable CMV Crashes: To qualify for reporting to the SafetyNET, the crash has to involve a private or public motor carrier, a GCWR weight of at least 10,001 pounds or above, a motor vehicle that can transport 9 or more people including the driver seat or a vehicle displaying a hazmat placard and one of the three conditions apply: (1) a tow of one of the vehicles, (2) the transportation of an injured person to medical treatment away from the crash scene, or (3) a fatality.