

COMMERCIAL VEHICLE SAFETY IN LOUISIANA

An Analysis of Truck Crashes for 2008

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TABLE OF CONTENTS

Summary	4
Overview.....	6
Analysis of Crashes by Month.....	8
Violations.....	9
Manner of Collision	10
Interstate Corridors	11
Work-Zone Crashes	14
Seat Belt Usage.....	15
Hazardous Material.....	16
Distractions	19
Changes of Number of Crashes by Parish	20
Rural CMV Crashes.....	20
Bus Crashes.....	22

LIST OF TABLES

Table 1: CMV Crashes 2005-2008	6
Figure 1: CMV Crashes 2005-2008.....	6
Figure 2: CMV Crashes by Severity: 2005-2008	7
Figure 3: CMV and Non-CMV Fatal Crashes: 2002-2007.....	7
Figure 4: Fatal CMV Crashes by Year: 2002-2007	7
Table 2: CMV and all Crashes 2005-2008 per 100 Million Miles Traveled	8
Table 3: CMV Crashes by Month in 2008.....	8
Table 4: Violations as Percentage of Drivers and Percent of all Violations.....	9
Figure 5: CMV and Non-CMV Driver Violations: 2003-2008	9
Table 5: Type of Violation of CMV Driver.....	10
Table 6: Manner of Collision.....	11
Figure 6: Interstate 10 Corridor	11
Figure 7: Cumulative Percentage of Interstate 10 Crashes.....	12
Figure 8: Interstate 10 at Milepost 160.....	12
Figure 9: Cumulative Percent of Interstate 12 Crashes	13
Figure 9: Cumulative Percent of Interstate 12 Crashes	13
Figure 10: Interstate 12 at Milepost 38.....	13
Figure 11: Interstate 20 Corridor	14
Figure 12: Cumulative Frequency of CMV Crashes on Interstate 20	14
Table 7: Work -Zone CMV Crashes on Interstates (2007-2008)	15
Table 8: Seat Belt Usage.....	16
Table 9: Hazardous Material Crashes.....	17
Table 10: Type of Hazardous Material in CMV Crashes	18
Table 11: Distractions	19
Figure 13: Cell Phone Use as a Distraction	19
Table 12: CMV Crashes by Parishes	20
Table 13: Percentage of CMV Crashes by Highways Rural Type 2008	21
Table 14: CMV Crashes by Highways Rural Type 2008	21
Table 15: CMV Bus Crashes in 2008	22
Figure 14: Bus Crashes by Year	23
Figure 15: Bus-Crash Injuries by Year	23

Summary

In an effort to reduce the number and severity of crashes involving Commercial Motor Vehicles (CMV), the Louisiana State Police (LSP) studies factors such as location, severity, time of day, day of week, violations, primary contributing factors, driver characteristics, carrier and type of truck, road conditions, highway type, and hazardous material involvement. This information allows LSP to continuously develop strategies and methods designed to reduce the overall number and severity of CMV crashes in the state. These strategies and methods include enforcement activities, prompt reporting of road problems, and educating the general public on the importance of safe driving. The following crash data and statistical information was calculated by the Department of Information Systems and Decision Sciences at Louisiana State University.

In 2008, the total number of reported CMV crashes decreased by 4.2% compared to 2007. The number of fatal CMV crashes decreased from 118 in 2007 to 102 in 2008. The number of injury CMV crashes decreased from 2,120 to 1,950 during the same period, an 8% decline. From 2005 to 2008, crashes involving injuries and fatalities have declined substantially; fatal crashes declining 23.9% and injury crashes declining 11.2%.

During 2008, 27% of all CMV crashes in Louisiana occurred on interstates, 37% occurred on state highways, and 21% occurred on U.S. highways. In 2007, the respective percentages were 26%, 39%, and 21%. Although, there was a one percentage point increase in the percent of CMV crashes on interstates in 2008, the percentage distribution of fatal CMV crashes dropped dramatically from 32% in 2007 to 26%. Over this two year period, we can observe a slight increase for the percentage of injury CMV crashes on interstates from 24% to 25%, with the percentage of fatal and injury crashes on US highways remaining constant at 24% and 22%, respectively.

For 2008, 23% of all CMV crashes on interstates occurred in a work-zone (23% of fatal crashes, 25% of injury crashes and 21% of PDO crashes). When 5 miles are added before and after the work zone these percentages increase to 50% for all crashes, 54% for fatal crashes, 54% for injury crashes, and 47% for PDO crashes. This is a considerable increase from 2007 when 17% and 48% were within a work zone and within 5 miles of a work zone, respectively.

In 2008, of all CMV drivers in fatal crashes, 32% were cited for violations, a decline of two percentage points from 2007. In injury and property damage crashes, the driver of the CMV was cited for violations 49% and 48% 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 37% of all violations given to either the driver of the CMV or the driver of the other vehicle. Other violations with relatively high occurrence rates were following too closely at 11.2% and failure to yield at 8.5%.

Commercial Vehicle Safety – 2008

The manner of collision most common in CMV crashes are rear-end types at 31% and non-collision types (single vehicle crashes) at 19%. For fatal crashes, the types were right angle collisions at 25%, rear-end at 25%, non-collision at 21%, and head-on collisions at 13%.

The above data indicates a need for continued special attention given to traffic enforcement in specific areas for both CMV operators and drivers of passenger vehicles. As well, a continued public education posture is appropriate to help decrease the number and severity of crashes involving commercial motor vehicles.

Overview

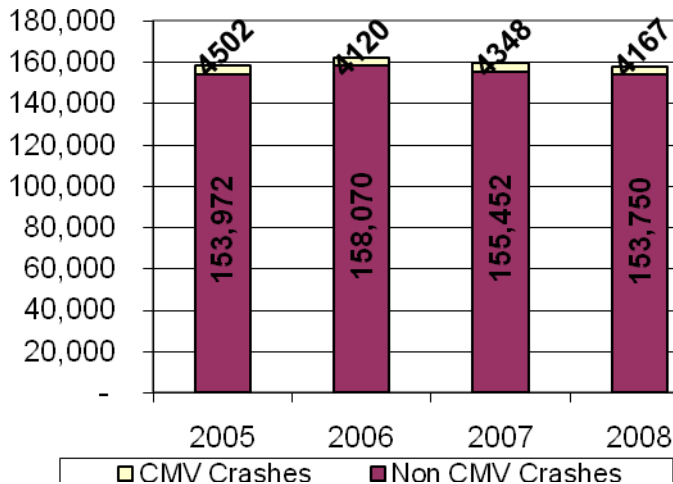
Based on the UMTRI study, the crash reporting was updated to include intra-state crashes and public motor vehicles in order to meet new reporting requirements. In order to eliminate inconsistencies in reporting issues and observe the true change in the number of CMV crashes from 2005 to 2006, the 2005 data were updated using the new reporting criteria as well. Table 1, depicts CMV crashes from 2005 to 2008. The data shows that the percentage of fatal CMV crashes as part of all fatal crashes has decreased in 2008 by 1 percentage point from 2007, and the percentage of injury crashes decreased by 0.2 percentage points compared to 2007.

Table 1: CMV Crashes 2005-2008

Year	CMV Crashes				CMV Crash Percentages				All Crashes				% CMV Relative to All Crashes			
	Fatal	Injury	PDO	Total CMV	Fatal	Injury	PDO	Total CMV	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total
2005	134	2197	2171	4502	2.98%	49%	48%	2.84%	874	49,500	108,100	158,474	12%	4.40%	2.00%	2.80%
2006	105	1922	2093	4120	2.55%	47%	51%	2.57%	886	48,100	111,100	160,086	12%	4.00%	1.90%	2.60%
2007	118	2120	2110	4348	2.71%	49%	49%	2.74%	887	47,961	110,100	158,948	13%	4.40%	1.90%	2.70%
2008	102	1950	2115	4167	2.45%	47%	51%	2.64%	817	46,500	110,600	157,917	12%	4.20%	1.90%	2.60%

Figure 1 highlights the number of all crashes and CMV crashes from 2005 to 2008.

Figure 1: CMV Crashes 2005-2008



This figure demonstrates that the number of CMV crashes in 2008 has dropped back to the level of 2006. While the non-CMV crashes declined by 1.1% from 2007 to 2008, the number of CMV crashes declined by 4.2% during the same time frame. CMV crashes accounted for 2.6% of all crashes in 2008.

Figure 2: CMV Crashes by Severity: 2005-2008

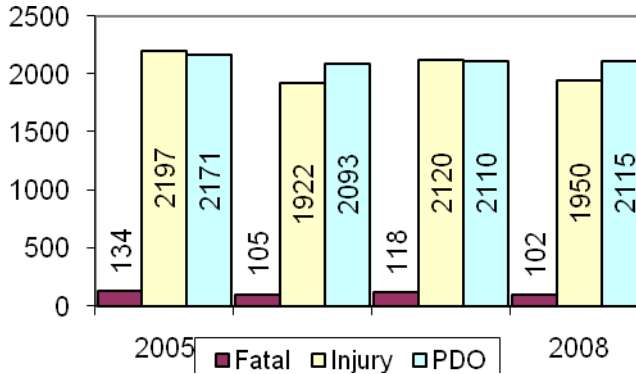


Figure 2 shows CMV crashes by severity. While all injury crashes declined by 3.5% from 2007 to 2008, CMV injury crashes fell by 8% in the same time frame.

CMV property-damage-only crashes increased by 0.2% from 2007 to 2008, while all CMV crashes declined by 4.2%. This indicates that there was a significant decline in CMV crashes with injuries and fatalities.

Figure 3: CMV and Non-CMV Fatal Crashes: 2002-2007

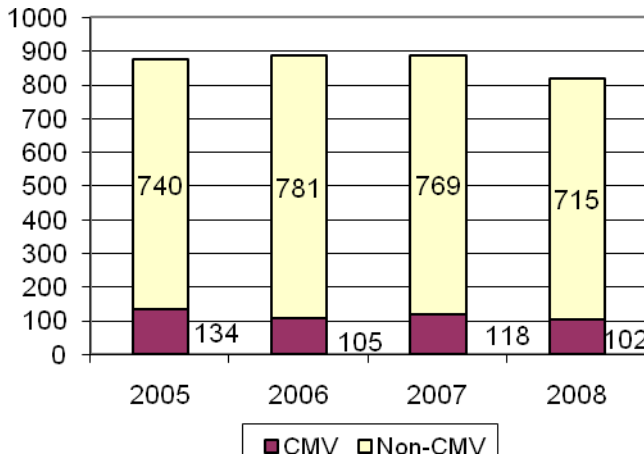


Figure 3 illustrates fatal CMV crashes and all fatal crashes during 2005 - 2008. The decline in the number of CMV fatal crashes was significantly larger than the decline in overall fatal crashes, namely 13.6% for CMV crashes compared to 8.6% for all crashes. The graphs show that the number of fatal CMV crashes has been significantly declining from the 2005 peak of 134 fatalities.

Figure 4: Fatal CMV Crashes by Year: 2002-2007

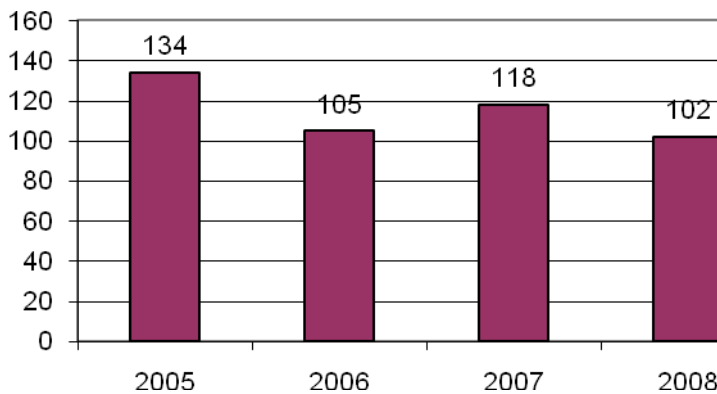


Figure 4 shows the trend of fatal CMV crashes. The number of fatal CMV crashes in 2008 was at the lowest since 2005.

Commercial Vehicle Safety – 2008

Due to a steady increase in Louisiana traffic over the years, the number of crashes should be adjusted by the vehicle miles traveled (VMT). The vehicle miles traveled were obtained from the FMCSA website. While 2008 VMT data are not available yet, there is indication that the VMT remained steady from 2007 to 2008. Thus, 2007 VMT data was used to compute the following rates. Table 2 depicts the estimated crashes per 100 million miles traveled. Based on this data, the fatal CMV crash rate has declined from 2.2 in 2007 to 1.9 in 2008. It is also noteworthy to point out that the CMV fatal crash rate is only 0.1 percentage point higher than the overall crash rate for all automobiles.

Table 2: CMV and all Crashes 2005-2008 per 100 Million Miles Traveled

Year	CMV Crashes				All crashes			
	Fatal	Injury	PDO	Total CMV	Fatal	Injury	PDO	Total
2005	2.8	46	45	94	1.9	110	240	352
2006	2.0	36	39	77	2.0	106	245	353
2007	2.2	40	39	81	2.0	106	243	350
2008	1.9	36	39	78	1.8	102	244	348

Analysis of Crashes by Month

Table 3 displays CMV crash information for 2008 by month. As the data in Table 3 indicates, December and July had the highest number of fatal crashes. However, taking into account the number of days in each month, an analysis of the past four years of crash data demonstrates that October has the highest number of CMV crashes per day. Also, the time period from October to December had the highest number of fatal CMV crashes per day.

Table 3: CMV Crashes by Month in 2008

MONTH	FATAL CRASHES	TOTAL KILLED	INJURY CRASHES	PDO	TOTAL CRASHES	TOTAL TRUCKS AND BUSES	% CRASHES
JANUARY	7	7	152	163	322	340	8%
FEBRUARY	8	10	158	159	325	349	8%
MARCH	10	11	161	176	347	367	8%
APRIL	5	5	183	190	378	402	9%
MAY	10	13	156	161	327	350	8%
JUNE	9	10	149	174	332	354	8%
JULY	11	14	146	162	319	354	8%
AUGUST	10	10	139	163	312	334	7%
SEPTEMBER	8	9	159	190	357	392	9%
OCTOBER	7	8	216	213	436	468	10%
NOVEMBER	6	7	157	169	332	353	8%
DECEMBER	11	13	174	195	380	407	9%
TOTAL	102	117	1950	2115	4167	4470	100%

Commercial Vehicle Safety – 2008

Although November was the deadliest month with respect to CMV crashes over the past four years, it had a relatively low number of fatal crashes in 2008.

Violations

In 2008, of all CMV drivers in fatal crashes, 32% were cited for a violation. For injury and property damage crashes, the driver of the CMV was cited for a violation 49% and 48% of the time, respectively.

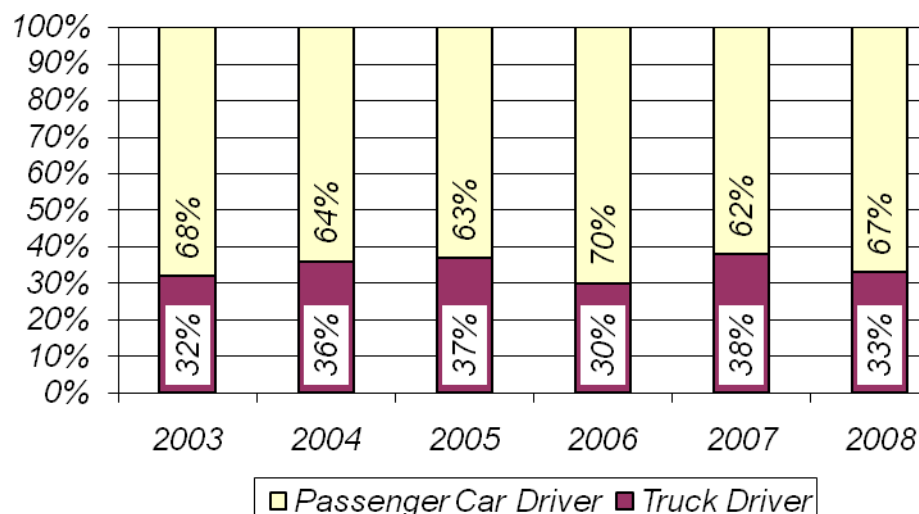
Table 4: Violations as Percentage of Drivers and Percent of all Violations

As Percentage of Drivers	VIOLATIONS	FATAL CRASHES		INJURY CRASHES		PDO		TOTAL CRASHES	
		Truck Driver	Passenger Car Driver	Truck Driver	Passenger Car Driver	Truck Driver	Passenger Car Driver	Truck Driver	Passenger Car Driver
2003	32%	68%	55%	45%	57%	43%	55%	45%	
2004	34%	54%	54%	50%	52%	55%	52%	52%	
2005	31%	47%	52%	44%	47%	50%	49%	47%	
2006	32%	66%	50%	50%	50%	54%	49%	52%	
2007	35%	68%	47%	53%	48%	53%	47%	54%	
2008	32%	78%	49%	49%	48%	55%	48%	53%	

As Percentage of Violations	VIOLATIONS	FATAL CRASHES		INJURY CRASHES		PDO		TOTAL CRASHES	
		Truck Driver	Passenger Car Driver	Truck Driver	Passenger Car Driver	Truck Driver	Passenger Car Driver	Truck Driver	Passenger Car Driver
2003	32%	68%	55%	45%	57%	43%	55%	45%	
2004	36%	64%	54%	46%	55%	45%	54%	46%	
2005	37%	63%	39%	61%	40%	60%	39%	61%	
2006	30%	70%	50%	50%	53%	47%	51%	49%	
2007	38%	62%	48%	52%	53%	47%	50%	50%	
2008	33%	67%	50%	50%	51%	49%	50%	50%	

In order to assess who is at fault in a CMV crash, the 2008 data shows that in fatal crashes the citation went to the CMV driver in 33% of the cases (see Figure 5).

Figure 5: CMV and Non-CMV Driver Violations: 2003-2008



There is a 5 percentage point shift from the CMV driver receiving a violation compared to the driver of the other vehicle from 2007 to 2008. In non-fatal crashes the violations remain evenly distributed among the CMV driver

and the driver of the other vehicle.

Table 5 illustrates the types of violations drivers receive. In 2008, careless operation accounts for the majority of violations (12 in all) committed in association with commercial vehicle crashes at 37%. Other violations with relatively high occurrence rates were failure to yield at 12.6% and following too closely at 9.3%.

Table 5: Type of Violation of CMV Driver

VIOLATIONS	FATAL CRASHES	INJURY CRASHES	PDO	TOTAL CRASHES
OVER STATED SPEED LMT	0	1	6	7
OVER SAFE SPEED LIMIT	1	8	16	25
FAILURE TO YIELD	3	145	121	269
FOLLOWING TOO CLOSELY	0	106	92	198
DRIVING LEFT OF CENTER	0	20	14	34
CUT IN/IMPROPER PASS	0	16	21	37
DISREGARDED TRAF CNTL	3	49	40	92
FAILED TO DIM HEADLTS	0	0	0	0
VEHICLE CONDITION	0	21	44	65
DRIVER CONDITION	2	22	13	37
CARELESS OPERATION	13	375	401	789
UNKNOWN VIOLATION	8	64	56	128
NO VIOLATION	75	1066	1180	2321
OTHER	3	97	135	235
TOTAL VIOLATION	35	1011	1085	2131
COLUMN % OF VIOLATIONS IN CRASH	32%	49%	48%	48%
ROW % OF VIOLATIONS IN CRASH	33%	50%	51%	50%

Manner of Collision

Table 6 shows the manner of collision. “Head-on”, “right angle”, and “rear-end” collisions make up more than 78% $[(13+25+25) / (102-21)]$ of all fatal multi-vehicle CMV crashes.

Table 6: Manner of Collision

MANNER OF COLLISION	FATAL CRASHES		INJURY CRASHES		PDO		TOTAL CRASHES	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
HEAD-ON	13	13%	47	2%	27	1%	87	2%
LEFT TURN - ANGLE	1	1%	66	3%	70	3%	137	3%
LEFT TURN - OPPOSITE DIRECTION	2	2%	54	3%	38	2%	94	2%
LEFT TURN - SAME DIRECTION	0	0%	29	2%	25	1%	54	1%
NON-COLLISION WITH MOTOR VEHICLE	21	21%	269	14%	453	22%	743	18%
OTHER	2	2%	181	9%	195	9%	378	9%
REAR END	25	25%	624	33%	616	29%	1265	31%
RIGHT ANGLE	25	25%	289	15%	252	12%	566	14%
RIGHT TURN - OPPOSITE DIRECTION	0	0%	13	1%	11	1%	24	1%
RIGHT TURN - SAME DIRECTION	0	0%	26	1%	30	1%	56	1%
SIDESWIPE - OPPOSITE DIRECTION	7	7%	90	5%	51	2%	148	4%
SIDESWIPE - SAME DIRECTION	6	6%	234	12%	325	16%	565	14%
TOTAL	102	100%	1922	100%	2093	100%	4117	100%

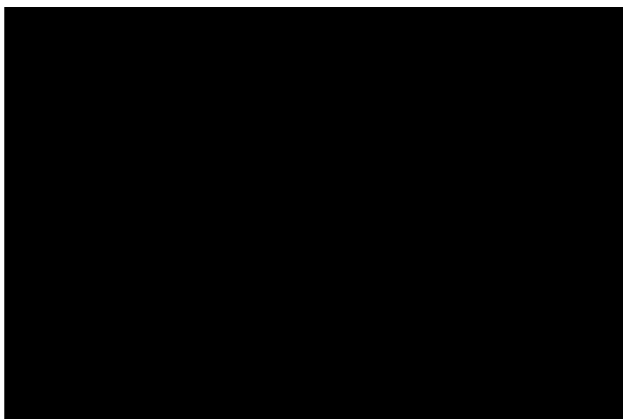
Interstate Corridors

There are two main corridors in Louisiana, (1) Interstate 10/12 corridor in south Louisiana from the Texas state line to the Mississippi state line and (2) Interstate 20 corridor in north Louisiana from the Texas state line to the Mississippi state line. Both corridors have significant interstate traffic.

Interstate 10/12 Corridor

Interstate 10/12 corridor includes 16 parishes, and these parishes accounted for over half of all truck crashes in the past three years.

Figure 6: Interstate 10 Corridor



The corridor includes Louisiana Interstates 10, 110, 210, 310, 610, 12, 55, 59 and parts of Interstate 49 as shown in Figure 6. The major US Highways along the corridor are US 90, 190 and 61.

Figure 7: Cumulative Percentage of Interstate 10 Crashes

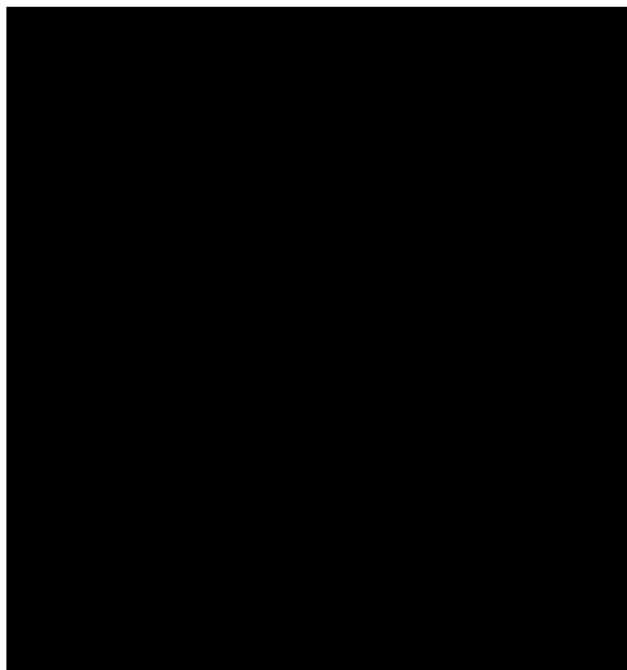
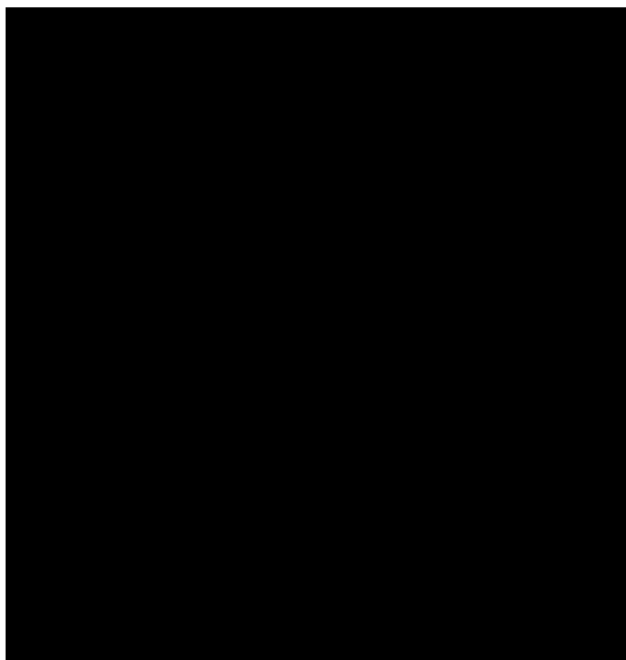


Figure 7 shows the cumulative frequency of commercial vehicle crashes for 2008 and 2007 by milepost on Interstate 10 along with all fatal crashes. The comparison between 2007 and 2008 proves that the percentage of crashes within the first 50 miles of interstate 10 has increased from 20% to 30% of all CMV crashes from 142 in 2007 to 199 in 2008.

There are two other areas where the frequencies of commercial vehicle crashes are higher than expected.

Figure 8: Interstate 10 at Milepost 160



These areas on Interstate 10 are between milepost 150 to 160 (depicted in Figure 8) and New Orleans. Figure 7 shows that a significant number of crashes occur near this milepost, i.e. the I10-I12 split. Figure 8 shows the Interstate 10 - 12 split around milepost 160.

Figure 9: Cumulative Percent of Interstate 12 Crashes

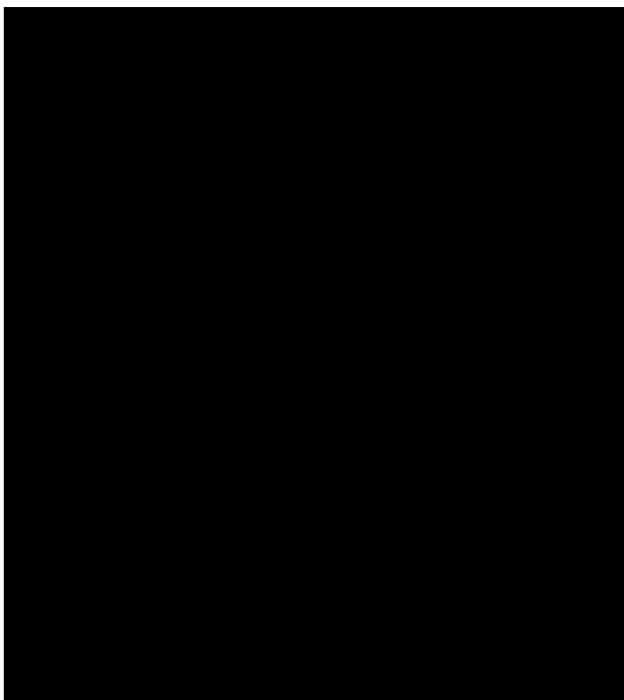
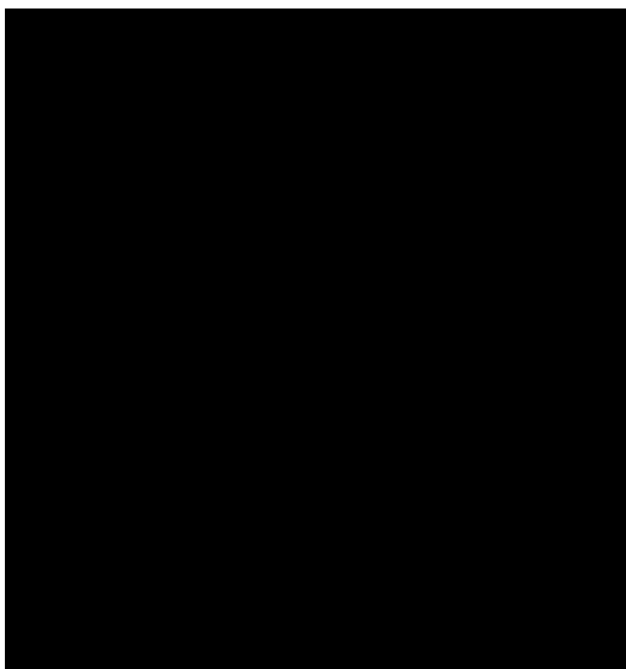


Figure 9 shows the cumulative frequency of CMV crashes along with all crashes for Interstate 12 for 2008 and 2007. The comparison between 2007 and 2008 explains that the percentage of crashes in the first 20 miles of interstate 12 has increased from 30% to 35%. The actual number increased from 50 to 66 CMV crashes.

Areas of high crashes on Interstate 12 include mileposts 0 to 10 and 35 to 45, depicted in Figure 10. The latter includes the intersection of I12 and I55. However, the number of CMV crashes actually has declined from 32 in 2007 to 22 in 2008 in these areas.

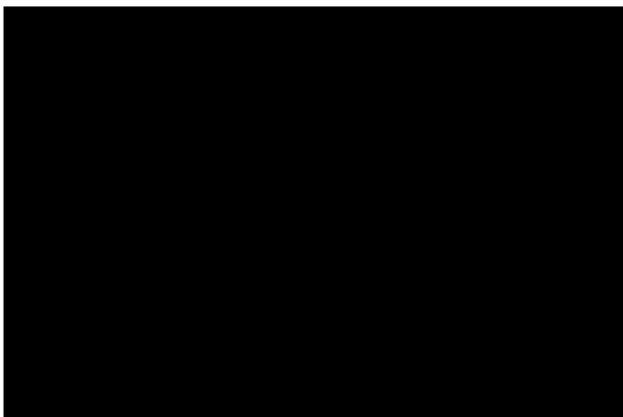
Figure 10: Interstate 12 at Milepost 38



The number of crashes within a mile of the intersection at milepost 38 has remained constant at 11 in 2007 and 2008.

Interstate 20 Corridor

Figure 11: Interstate 20 Corridor



The Interstate 20 corridor includes 10 parishes. These parishes account for 15% of all commercial vehicle crashes in the last three years. As illustrated in Figure 11, the corridor includes Interstates 20, 220 and parts of Interstate 49. The major US Highways along the corridor are US 61, 65, 71, 80, 165 and 167.

Figure 12: Cumulative Frequency of CMV Crashes on Interstate 20

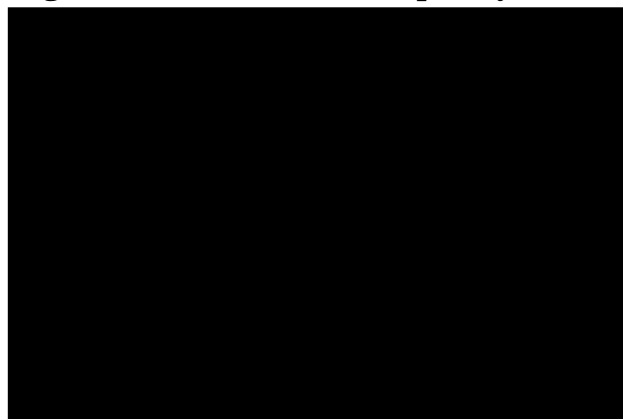


Figure 12 shows the cumulative frequency of commercial motor vehicle crashes by milepost on Interstate 20 along with all crashes. The number of CMV crashes within the first 50 miles of interstate 20 increased from 80 in 2007 to 100 in 2008. This demonstrates a

25% increase in crashes.

Work-Zone Crashes

Table 7 shows the number of CMV crashes in work zones for 2008 and the number of CMV crashes within 5 miles of a construction zone. Table 7 shows that the number of fatal CMV crashes on all interstates decreased from 38 in 2007 to 26 in 2008 and the number of fatal crashes in construction zones was unchanged at 6. When miles and days under construction are taken into account, fatal crashes decreased from 14.7 fatalities per day-mile in 2007 to 11.2 fatal crashes per day-mile in 2008.

Table 7: Work -Zone CMV Crashes on Interstates (2007-2008)

		2008				2007			
WHERE		FATAL	INJURY	PDO	ALL	FATAL	INJURY	PDO	ALL
ALL CMV CRASHES ON INTERSTATES	Count	26	476	630	1132	38	498	596	1132
	PER 100,000 Day-MILES	8.0	146	193	346	11.6	152	182	346
CONSTRUCTION ZONES	Count	6	121	132	259	6	92	99	197
	PER 100,000 Day-MILES	11.2	226	246	483	14.7	226	243	484
WITHIN 5 MILES OF CONSTRUCTION ZONES	Count	14	255	297	566	20	246	279	545
	PER 100,000 Day-MILES	8.5	155	180	343	15.2	187	212	414
IN 5 MILES OF CONSTRUCTION ZONE	Count	8	134	165	307	14	154	180	348
	PER 100,000 Day-MILES	7.2	120	148	276	15.4	169	198	382

There was a considerable drop in the number of fatal crashes in the 5 miles before and after construction zones. In 2007, there were 14 fatal crashes in the 5 miles before or 5 miles after a construction zone compared to 8 fatal crashes in 2008. This is a 43% decline in fatal crashes in the 5-mile approach toward construction zones and departure from construction zones. The number of fatal crashes per day mile decreased from 15.4 in 2007 to 7.2 in 2008. There is evidence that construction zones had more CMV fatal crashes in 2008 than interstate miles not under construction, but the number of fatal crashes in the 5 miles before and after a construction zone fell to a level comparable to fatal crashes on interstate miles not under construction. Also, it can be seen from Table 7 that there was a decline in all crashes within the 5 miles before and after construction zones, i.e., from 348 in 2007 to 307 in 2008, while the number of crashes within construction zones was about the same in 2007 and 2008, namely 484 and 483, respectively.

Seat Belt Usage

Table 8 shows that in 2008, 56% of CMV drivers killed in a crash did not wear a seat belt while 64% of all drivers killed in all crashes were not wearing a seat belt. However, since the number of CMV drivers killed is relatively small, this percentage varies greatly from year to year. As seen in Table 8, the percentage of CMV drivers killed in crashes while not wearing a seatbelt was 29 % in 2006. On average, CMV drivers killed used seat belts at a higher rate than all other killed drivers.

Table 8: Seat Belt Usage

Year	CMV Drivers						All Drivers					
	# of Drivers Killed w/o Seatbelt	Total # of Drivers Killed*	% of Drivers Killed w/o Seatbelt	# of Drivers Seriously Injured w/o Seatbelt	Total # of Drivers Injured*	% of Drivers Seriously Injured	# of Drivers Killed w/o Seatbelt	Total # of Drivers Killed*	% of Drivers Killed w/o Seatbelt	# of Drivers Seriously Injured w/o Seatbelt	Total # of Drivers Seriously Injured*	% of Drivers Seriously Injured w/o Seatbelt
2001	8	12	67%	4	12	33%	294	461	64%	249	794	31%
2002	2	6	33%	3	10	30%	270	422	64%	279	876	32%
2003	5	8	63%	3	16	19%	290	452	64%	239	739	32%
2004	6	9	67%	3	8	38%	290	495	59%	213	717	30%
2005	8	11	73%	5	19	26%	237	391	61%	187	703	27%
2006	2	7	29%	2	13	15%	284	457	62%	177	690	26%
2007	14	20	70%	2	8	25%	247	399	62%	183	727	25%
2008	9	16	56%	2	11	18%	222	345	64%	179	656	27%
Average	5	9	57%	3	12	26%	267	428	62%	213	738	29%

*Total includes drivers where seatbelt use is known.

Hazardous Material

CMV crashes involving trucks 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 eight years, on average, about one out of five crashes involving hazardous material results in a release of the hazardous material. The actual percentage of release may be higher since many of the trucks 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 17% shown in Table 9 for 2008.

Table 9: Hazardous Material Crashes

Year	Transport	Released	% Released
2001	111	17	15%
2002	96	19	20%
2003	82	13	16%
2004	58	15	26%
2005	86	15	17%
2006	102	19	19%
2007	127	20	16%
2008	94	16	17%

The interstates accounted for 39% of all crashes involving hazardous materials in 2008. Specifically, Interstate 10 accounts for 50% of all hazardous material crashes on interstates in 2008. US highways account for 25% of all hazardous material crashes in 2008, with US 90 accounting for 28% of hazardous material crashes on US highways. State highways accounted for 36% of all hazardous crashes in 2008.

The types of hazardous material reported in CMV crashes are displayed in Table 10. On average, 50% of the hazardous material crashes involve flammable liquids and 12% involve flammable gases.

Table 10: Type of Hazardous Material in CMV Crashes

Material	2003		2004		2005		2006		2007		2008	
	Transp.	Rel.	Transp.	Rel.	Transp.	Rel.	Transp.	Rel.	Transp.	Rel.	Transp.	Rel.
CORROSIVE GASES (CANADA)	0	0	0	0	0	0	1	1	0	0	0	0
CORROSIVE MATERIALS	19	2	9	3	19	2	17	3	29	3	12	3
DANGEROUS WASTES (CANADA)	1	0	0	0	0	0	0	0	0	0	1	0
DANGEROUS WHEN WET MATERIALS	0	0	0	0	0	0	0	0	0	0	0	0
ENVIRON HAZARDOUS SUBSTANCES(CANADA)	0	0	0	0	1	0	0	0	4	1	0	0
EXPLOSIVES-MASS EXPLOXION HAZARD	1	0	0	0	0	0	1	0	1	0	0	0
EXPLOSIVES WITH A NO SIGNIFICANT BLAST HAZARD	0	0	1	0	0	0	1	0	0	0	2	0
EXPLOSIVES WITH A PREDOMINANTLY A FIRE HAZARD	0	0	2	0	0	0	2	0	1	1	1	0
EXPLOSIVES-PROJECTION HAZARD	0	0	0	0	0	0	0	0	0	0	2	0
EXTREMELY INSENSITIVE DETONATING ARTICLES	0	0	0	0	0	0	0	0	0	0	0	0
FLAMMABLE GASES	15	2	8	2	1	0	13	1	21	3	16	3
FLAMMABLE LIQUIDS	36	7	26	7	56	10	59	13	53	8	49	9
FLAMMABLE SOLIDS	1	0	0	0	0	0	1	0	0	0	1	0
GASES TOXIC BY INHALATION	1	0	0	0	0	0	1	0	2	0	0	0
INFECTIOUS SUBSTANCES	0	0	0	0	0	0	0	0	1	0	0	0
MISC DANGEROUS GOODS(CANADA)	4	0	4	1	1	0	1	0	4	1	2	0
NON-FLAM, NON-TOXIC COMPRESSED GASES	1	1	3	1	7	2	5	1	8	2	4	1
ORGANIC PEROXIDES	0	0	0	0	0	0	0	0	0	0	0	0
OXIDIZERS	0	0	0	0	0	0	0	0	0	0	0	0
RADIOACTIVE MATERIALS	1	0	0	0	0	0	0	0	0	0	1	0
SPONTANEOUSLY COMBUSTIBLE MATERIALS	0	0	0	0	1	1	0	0	0	0	1	0
TOXIC MATIERALS	2	1	4	0	0	0	0	0	3	1	2	0
Total	82	13	57	14	86	15	102	19	127	20	94	16

Distractions

Distractions play an important role in all crashes, including CMV crashes. In 2008, no fatal CMV crashes were reported where cell phone usage was the cause of distraction. Table 11 shows the breakdown of crashes by type of distraction.

Table 11: Distractions

	FATAL	INJURY	PDO	TOTAL
CELL PHONE	0	6	7	13
OTHER ELECTRONIC DEVICE	0	1	1	2
OTHER INSIDE THE VEHICLE	1	26	25	52
OTHER OUTSIDE THE VEHICLE	2	53	52	107
NOT DISTRACTED	82	1680	1859	3621
UNKNOWN	25	323	327	675

Figure 13: Cell Phone Use as a Distraction

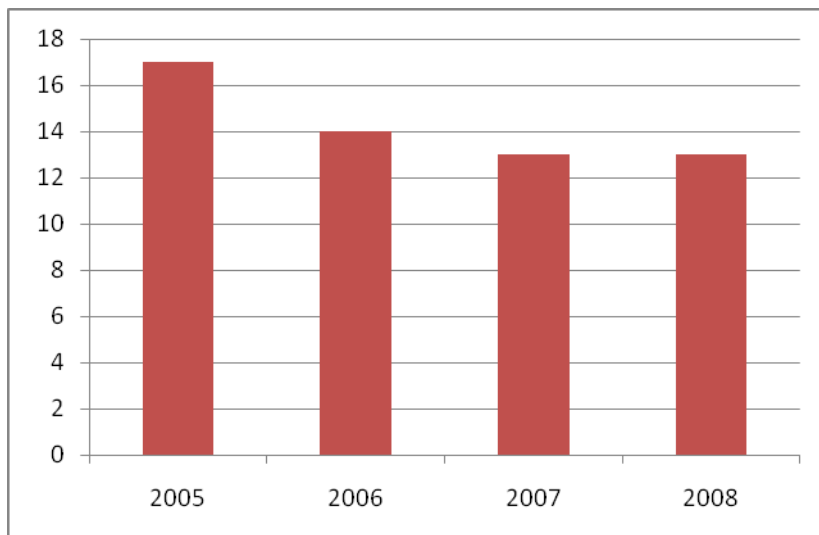


Figure 13 shows that distractions caused by cell phone usage have not increased over the past four years.

Changes of Number of Crashes by Parish

The 15 parishes with highest number of CMV crashes are listed in Table 12. In 2008, Louisiana experienced a significant decrease in CMV crashes along the I10/I12 corridor. St. Tammany, Tangipahoa, Livingston and West and East Baton Rouge Parishes have all shown decreases in CMV crashes ranging from 7% to 26%. The exception was Orleans Parish, which had a 37% increase in CMV crashes. Bossier Parish also had a large increase in CMV crashes, with a 21% increase from 2007 to 2008.

Table 12: CMV Crashes by Parishes

PARISH	FATAL CRASHES		TOTAL CRASHES		2008-2007	2008-2007
	2008	2007	2008	2007	Diff	% Change
EAST BATON ROUGE	6	8	368	395	-27	-7%
JEFFERSON	2	3	297	318	-21	-7%
CALCASIEU	6	7	265	261	4	2%
LAFAYETTE	4	2	244	240	4	2%
ST. TAMMANY	2	2	175	222	-47	-21%
TANGIPAHOA	4	6	153	176	-23	-13%
CADDO	8	9	176	152	24	16%
ORLEANS	3	5	213	155	58	37%
LAFOURCHE	8	2	158	140	18	13%
LIVINGSTON	1	1	101	136	-35	-26%
RAPIDES	1	4	105	121	-16	-13%
TERREBONNE	2	1	91	108	-17	-16%
BOSSIER	4	1	102	104	-2	-2%
OUACHITA	6	7	126	104	22	21%
WEST BATON ROUGE	0	4	89	103	-14	-14%

Rural CMV Crashes

Table 13 depicts the percentage of rural road crashes by highway type and Table 14 displays the count of crashes on rural roads by highway type. Table 13 shows that in 2008, about 77% of all fatal CMV crashes and 69% of all injury CMV crashes occurred on rural roads, while only 56% of all PDO crashes occurred on rural roads.

Table 13: Percentage of CMV Crashes by Highways Rural Type 2008

HIGHWAY TYPE	FATAL CRASHES	INJURY CRASHES	PDO	Total
INTERSTATE	73%	69%	52%	60%
US HIGHWAY	67%	63%	56%	60%
STATE HIGHWAY	86%	83%	69%	76%
PARISH ROAD	86%	121%	71%	92%
TOTAL	77%	69%	56%	63%

Table 14: CMV Crashes by Highways Rural Type 2008

HIGHWAY TYPE	FATAL CRASHES	INJURY CRASHES	PDO	Total
INTERSTATE	19	329	330	678
US HIGHWAY	16	272	231	519
STATE HIGHWAY	38	614	502	1154
PARISH ROAD	6	131	106	243
TOTAL	79	1346	1169	2594
% Interstates	24%	24%	28%	26%
% US	20%	20%	20%	20%
% State	48%	46%	43%	44%

Although interstates are the safest roads, they are of particular interest because they have fewer miles to patrol, account for a large portion of VMT, and have higher speeds. In 2008, 73% of fatal CMV crashes occurred on rural sections of the interstates. Figures 7, 9 and 12 show the cumulative graphs for interstates 10, 12 and 20 respectively.

Of all US highways, US 61 had the highest number of fatal crashes in 2008 and all were in rural areas. Although the data shows that rural roads account for most fatal and injury crashes, rural roads make up the majority of the roadway sections. Thus, it is challenging to provide effective countermeasures. Patrolling rural interstates are likely to provide the most cost effective safety measure.

Bus Crashes

The number of CMV bus crashes, injuries, and fatalities is depicted in Table 15. In 2008, there were 2 people killed and 160 injured in large buses. There were 22 people injured in small buses and 286 injured in school buses. Overall, there were 5 people killed and 759 people injured in bus crashes, three of the fatalities and 291 injuries occurred outside the bus.

Table 15: CMV Bus Crashes in 2008

Year		Vehicle Type	School Bus	Small Bus	Large Bus	Total
2005	Inside Bus	Number of Crashes	176	47	104	327
		Number Killed	0	0	1	1
		Number Injured	404	45	289	738
	In Bus Crash	Number Killed	3	0	5	8
		Number Injured	637	87	478	1202
2006	Inside Bus	Number of Crashes	156	37	53	246
		Number Killed	0	0	0	0
		Number Injured	262	34	91	387
	In Bus Crash	Number Killed	2	1	0	3
		Number Injured	403	57	129	589
2007	Inside Bus	Number of Crashes	185	31	71	287
		Number Killed	0	1	0	1
		Number Injured	381	50	86	517
	In Bus Crash	Number Killed	3	2	0	5
		Number Injured	533	71	128	732
2008	Inside Bus	Number of Crashes	170	28	76	274
		Number Killed	0	0	2	2
		Number Injured	286	22	160	468
	In Bus Crash	Number Killed	1	1	3	5
		Number Injured	463	45	251	759

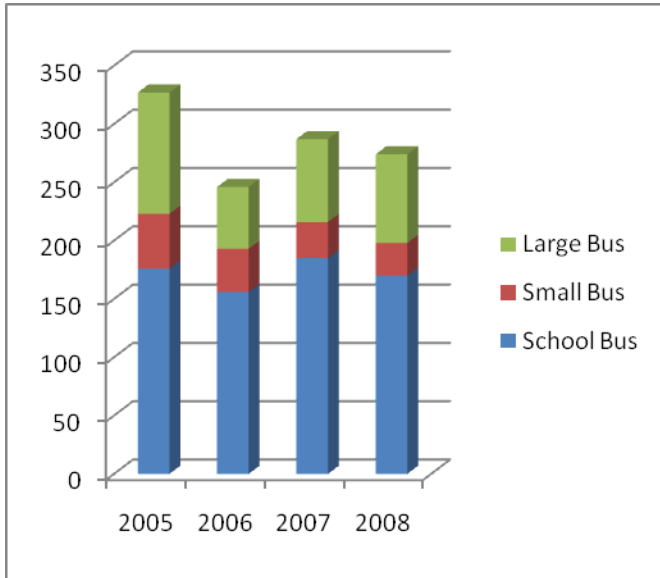
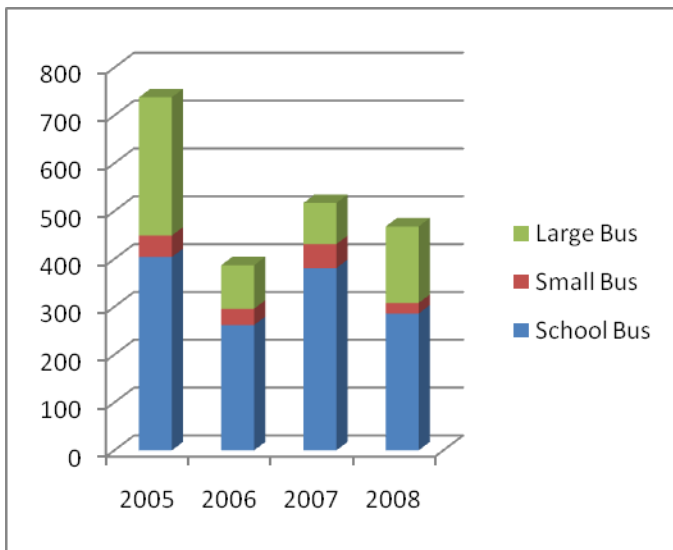


Figure 14: Bus Crashes by Year

Figure 14 shows the trend in bus crashes. Generally, bus crashes have been declining. The 2006 year was marked by the post Katrina clean-up and thus the number of crashes was relative low because of less bus traffic.

Figure 15: Bus-Crash Injuries by Year



Although the injuries in large buses have increased from 2007 to 2008, overall, the bus injuries have declined in the same time period. The years 2005 and 2006 were affected by hurricane Katrina and thus may not be used for comparisons.

Note: Definition of Reportable Truck Crashes: To qualify for reporting to the SafetyNET, the crash has to involve a private or public motor carrier, a truck weight of at least 10,001 pounds or above, a tow of one of the vehicles, or the transportation of a person to medical treatment away from the crash scene, or a fatality.