



VISION ZERO
zero deaths • zero serious injuries

MONTANA DEPARTMENT
OF TRANSPORTATION

2021 Annual Transportation Safety Virtual Meeting

Comprehensive Highway Safety Plan (CHSP) Overview & 2020 Crash Data

Rail, Transit & Planning Division
Montana Department of
Transportation

Montana Comprehensive Highway Safety Plan



2020



VISION ZERO
zero deaths • zero serious injuries
MONTANA DEPARTMENT
OF TRANSPORTATION

- **What is the CHSP?**
- **Vision & Goal**
- **2020 Crash Data**

Montana

Comprehensive Highway Safety Plan



- Initially Developed in 2006
- Amended in 2010
- Updated in 2015
- Updated in 2020

MONTANA
MDTA
DEPARTMENT OF TRANSPORTATION
May 2015

#VisionZeroMT
zero deaths | zero serious injuries

Federal Motor Carrier Administration
Montana Metropolitan Planning Organizations
Montana Department of Public Health and Human Services

prepared by:
Cambridge Systematics, Inc.

Montana Metropolitan Planning Organizations
Montana Department of Public Health and Human Services

prepared by:
Cambridge Systematics, Inc.

August 2006

CHSP is ...



- Data Driven



- Multiagency Coordination



- Safety Performance Measures



- Documents Target Methodology



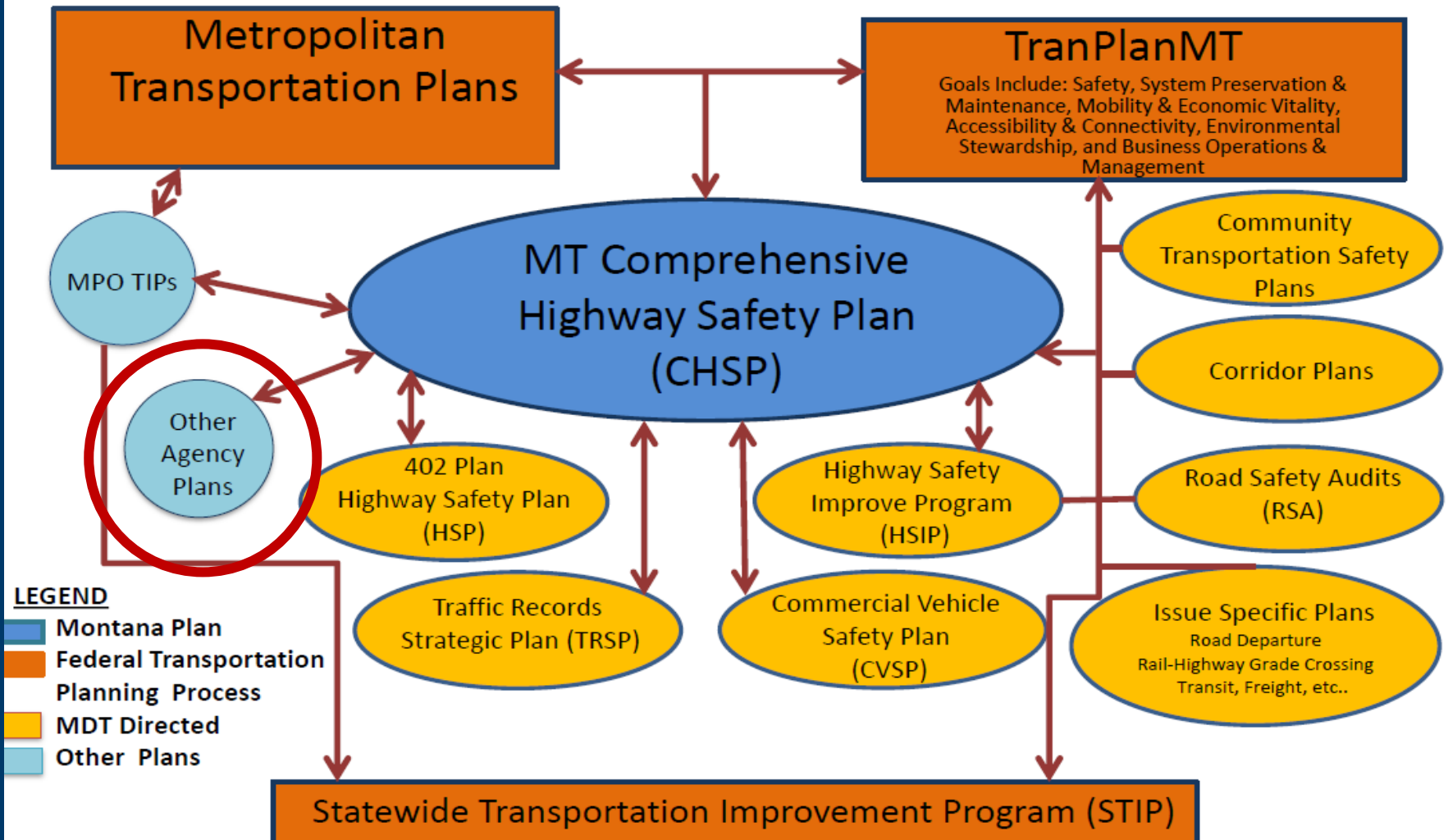
- Reports, tracks, and evaluates process



- Updated every 5 years

Coordination

Relationship of Montana's Safety Plan (CHSP) with Agency Safety Plans & Programs



Vision Zero

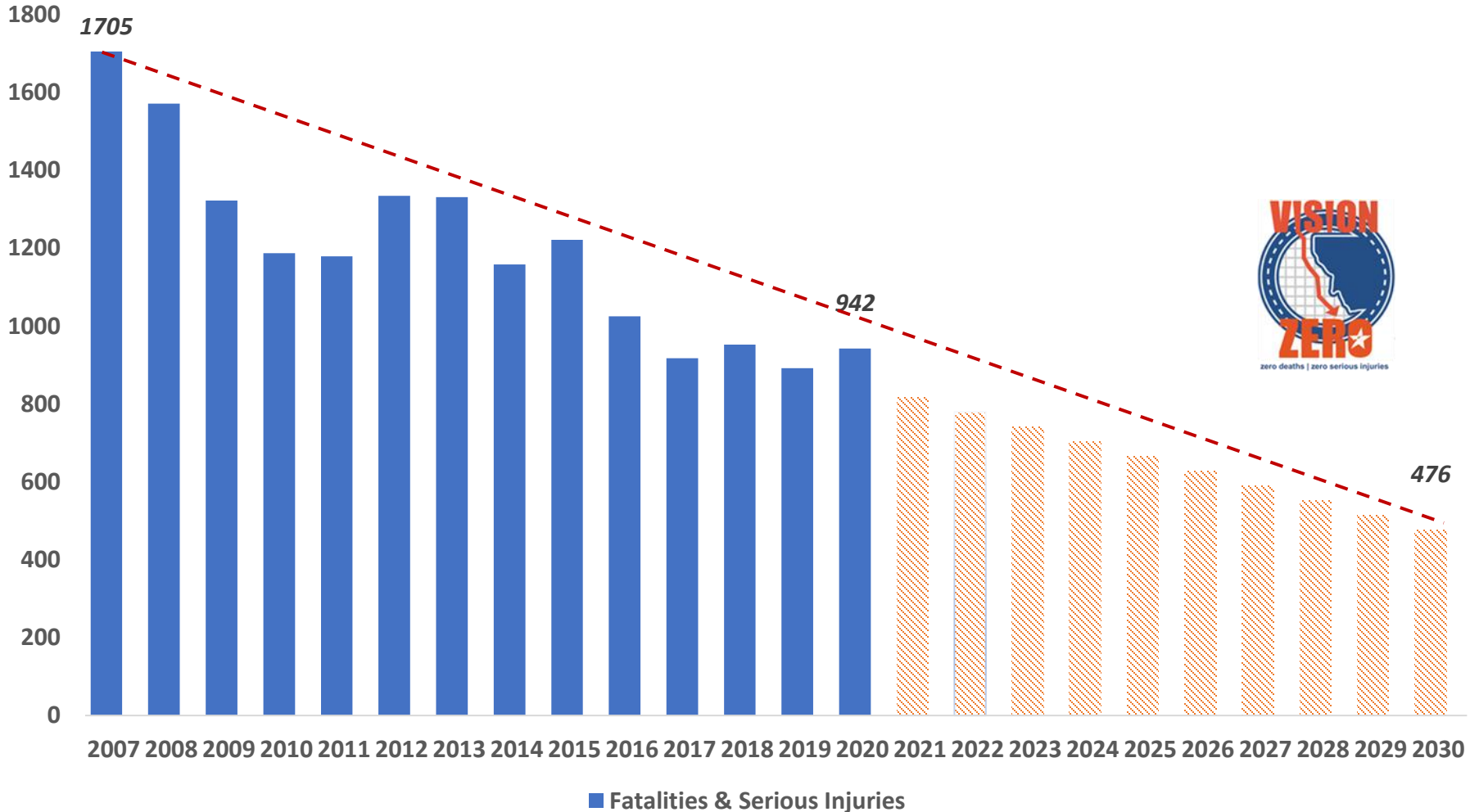
***The Vision for Montana is
Zero-***

***Zero Fatalities and
Zero Serious Injuries –
on Montana's roadways.***

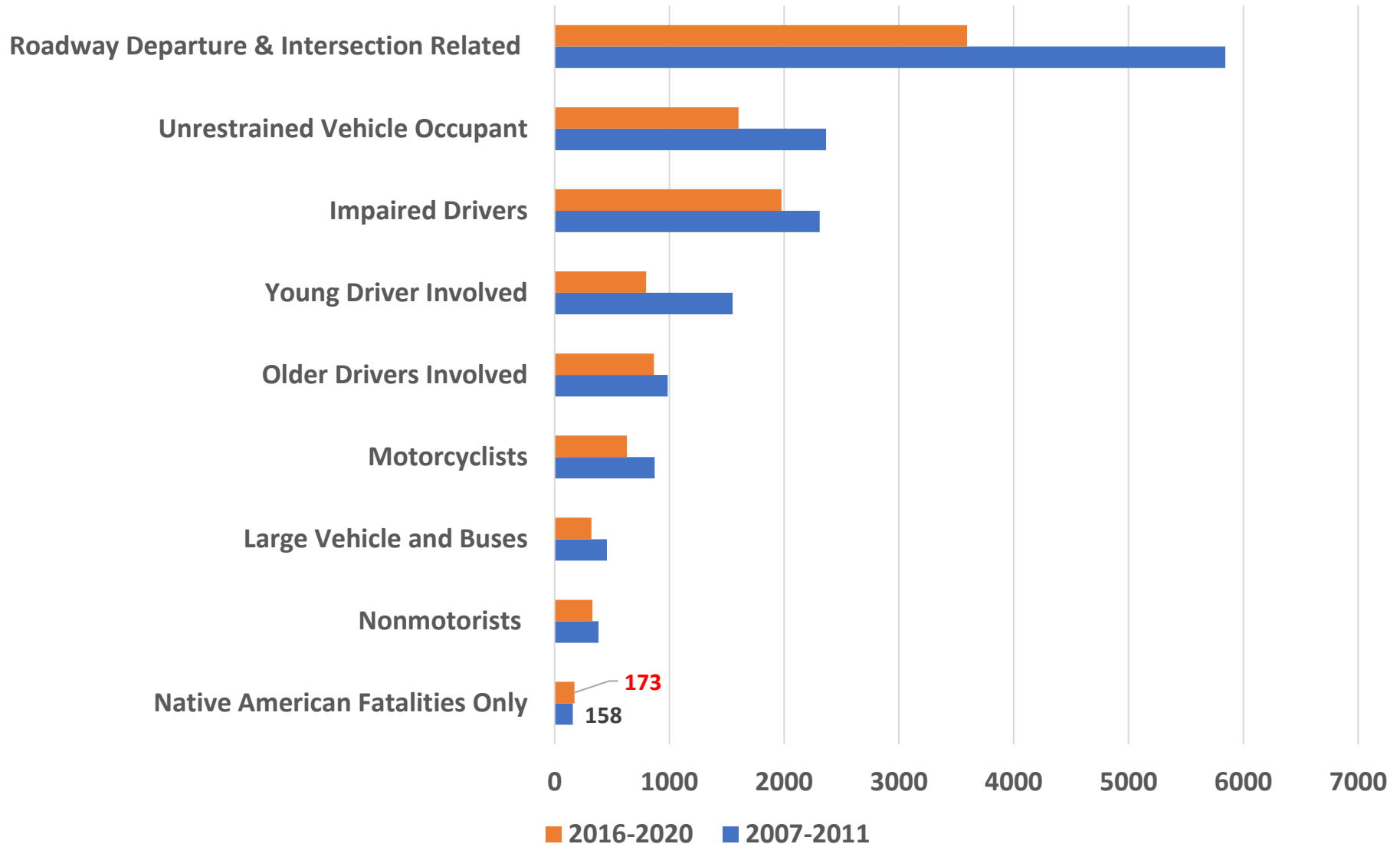


CHSP Interim Goal

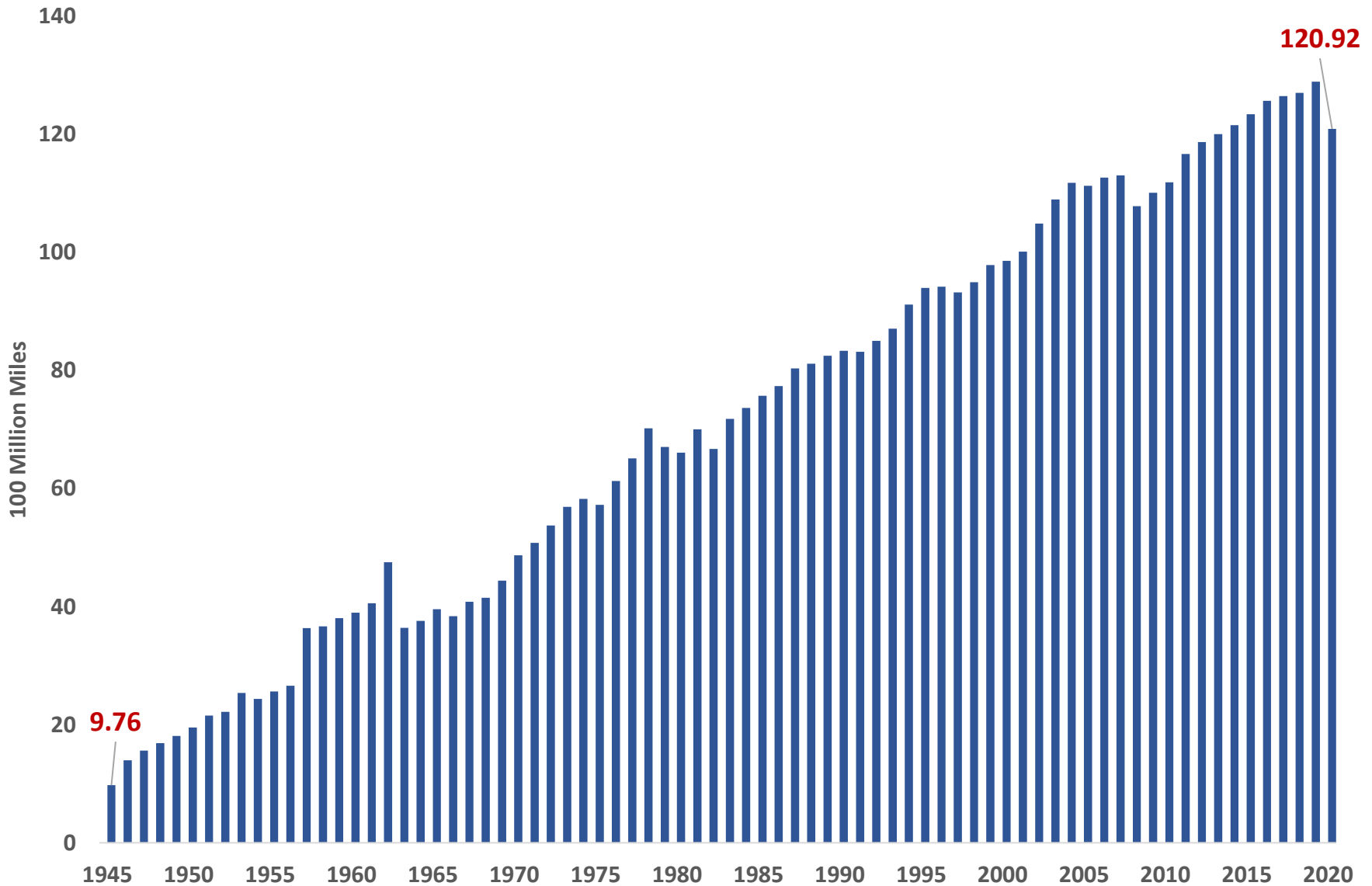
Reduce fatalities and serious injuries on Montana's roads by half, from 952 in 2018 to 476 in 2030.



Fatal & Serious Injuries Associated Key Emphasis Areas, First 5-Years vs Recent 5-Years of Implementation



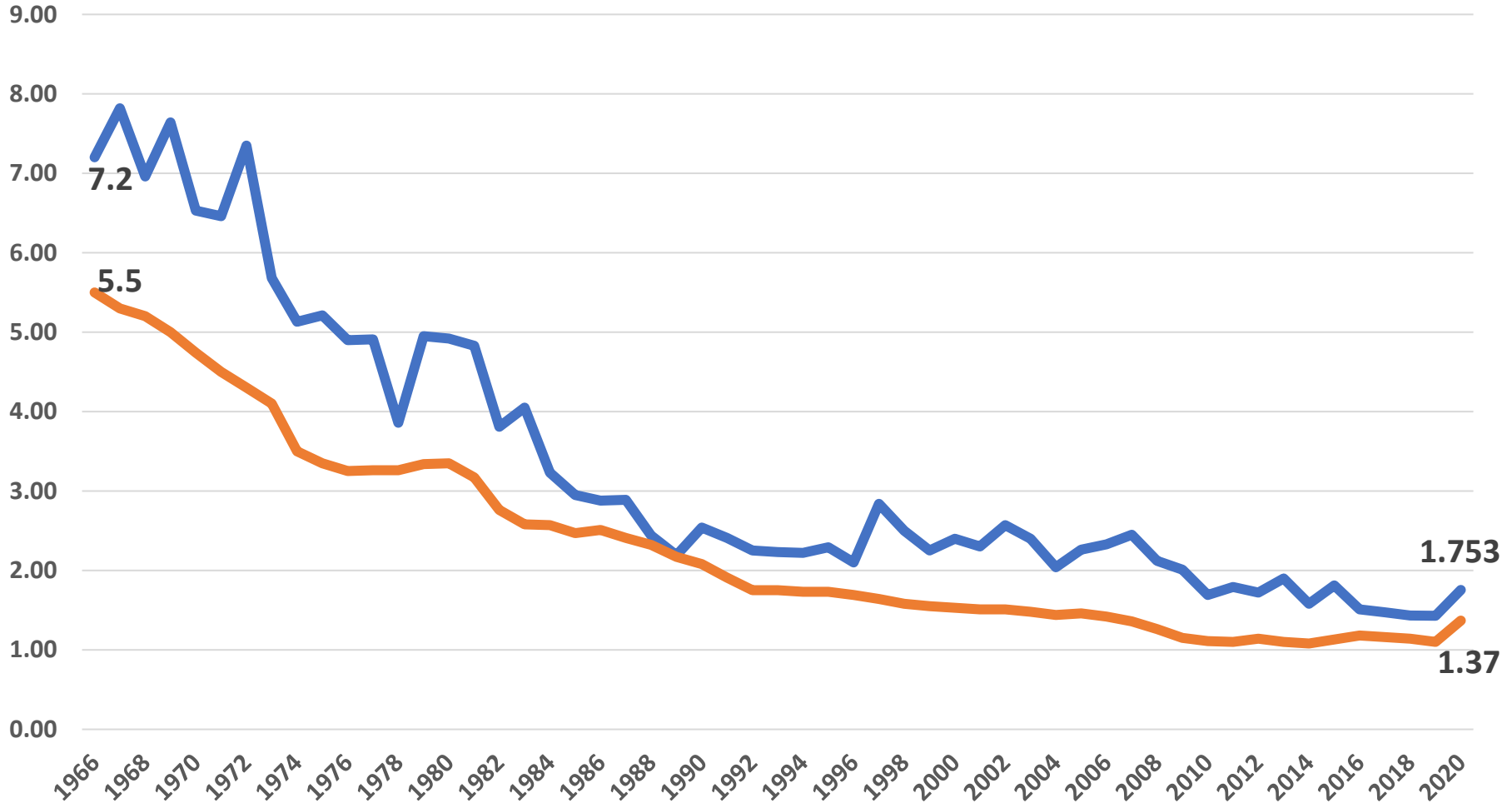
Montana's Vehicle Miles Traveled (VMT), 1945-2020



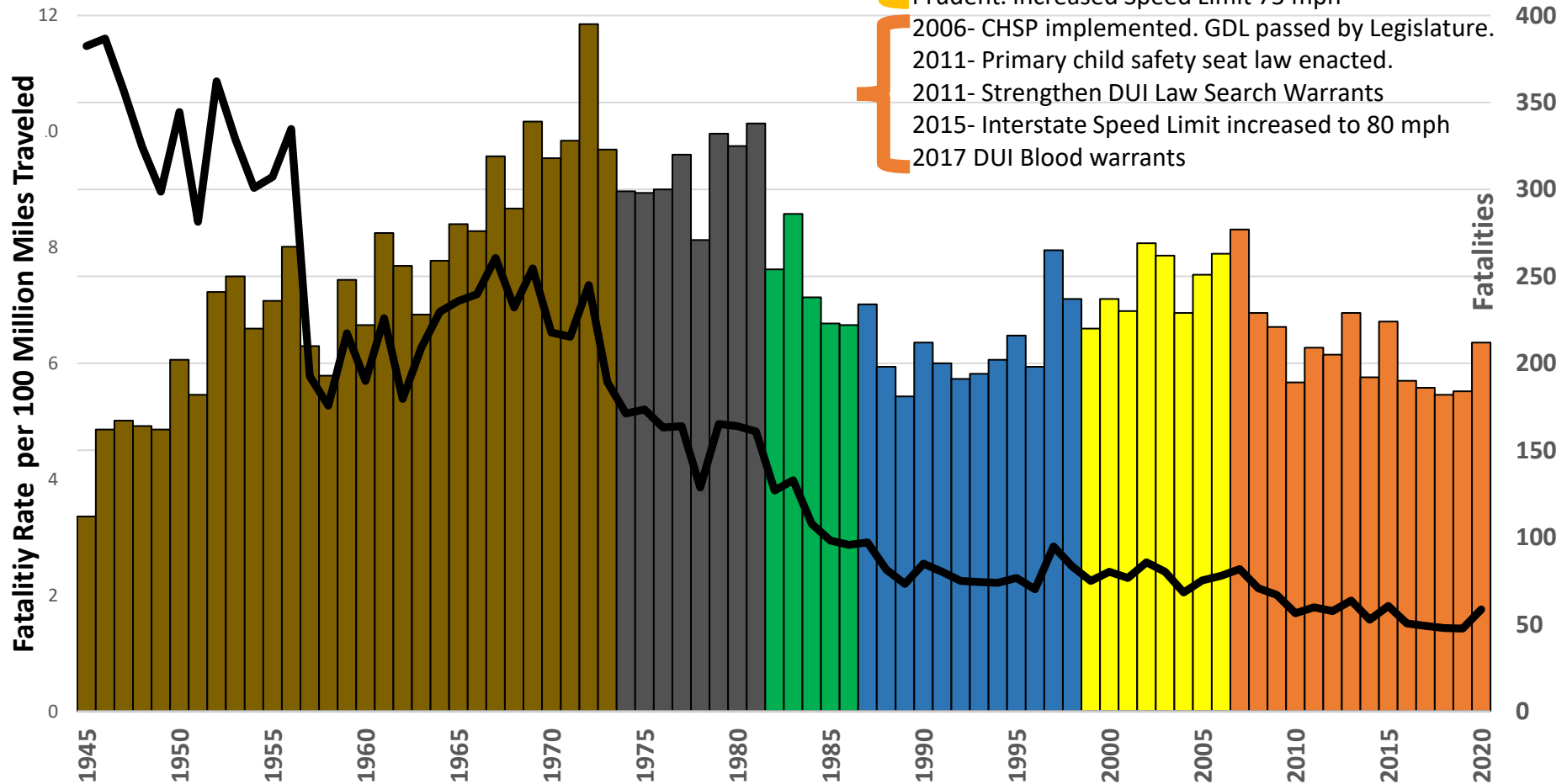
Fatality Rate, 1966-2020

MT vs US

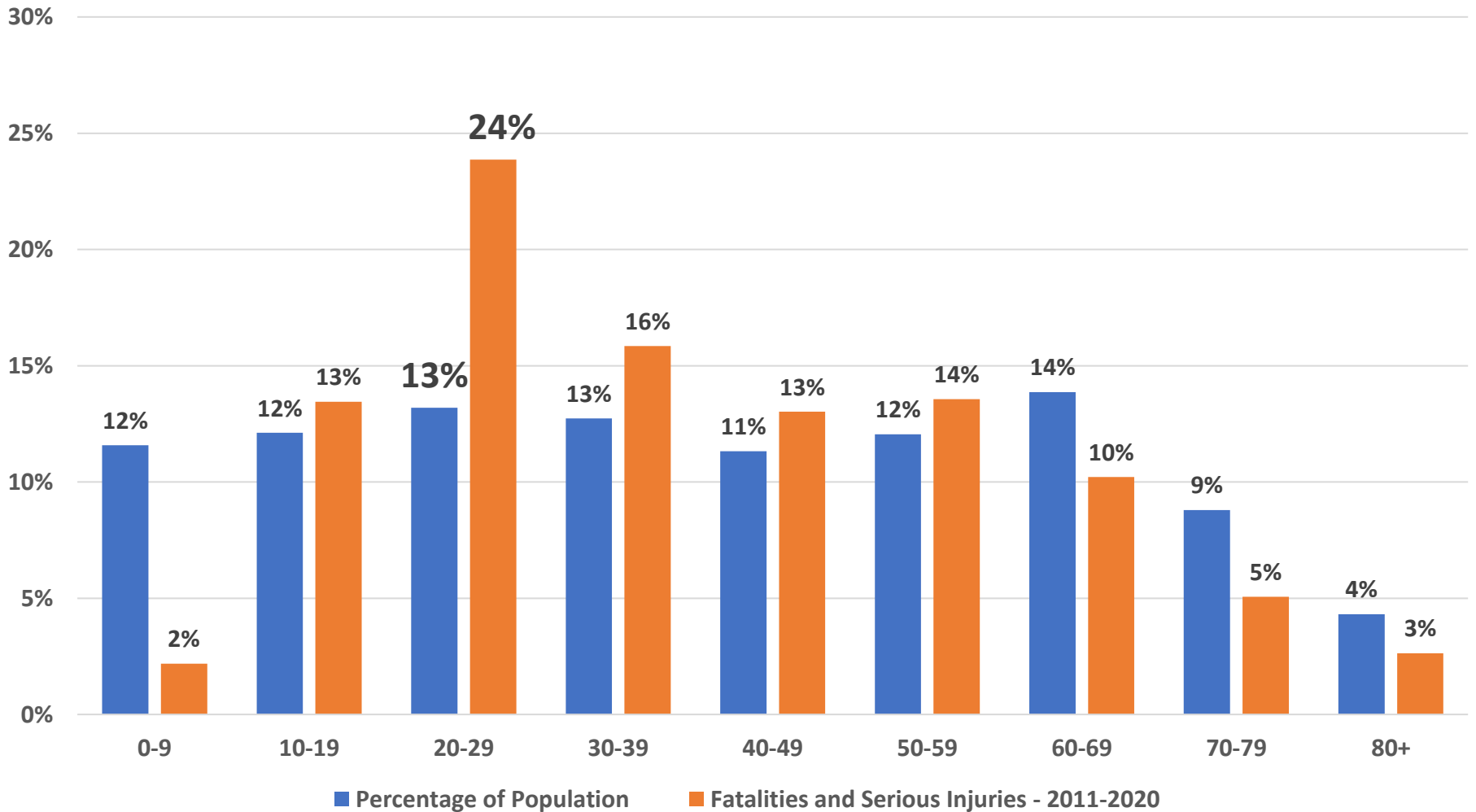
— Montana — USA



Fatality Rate & Fatalities 1945-2020

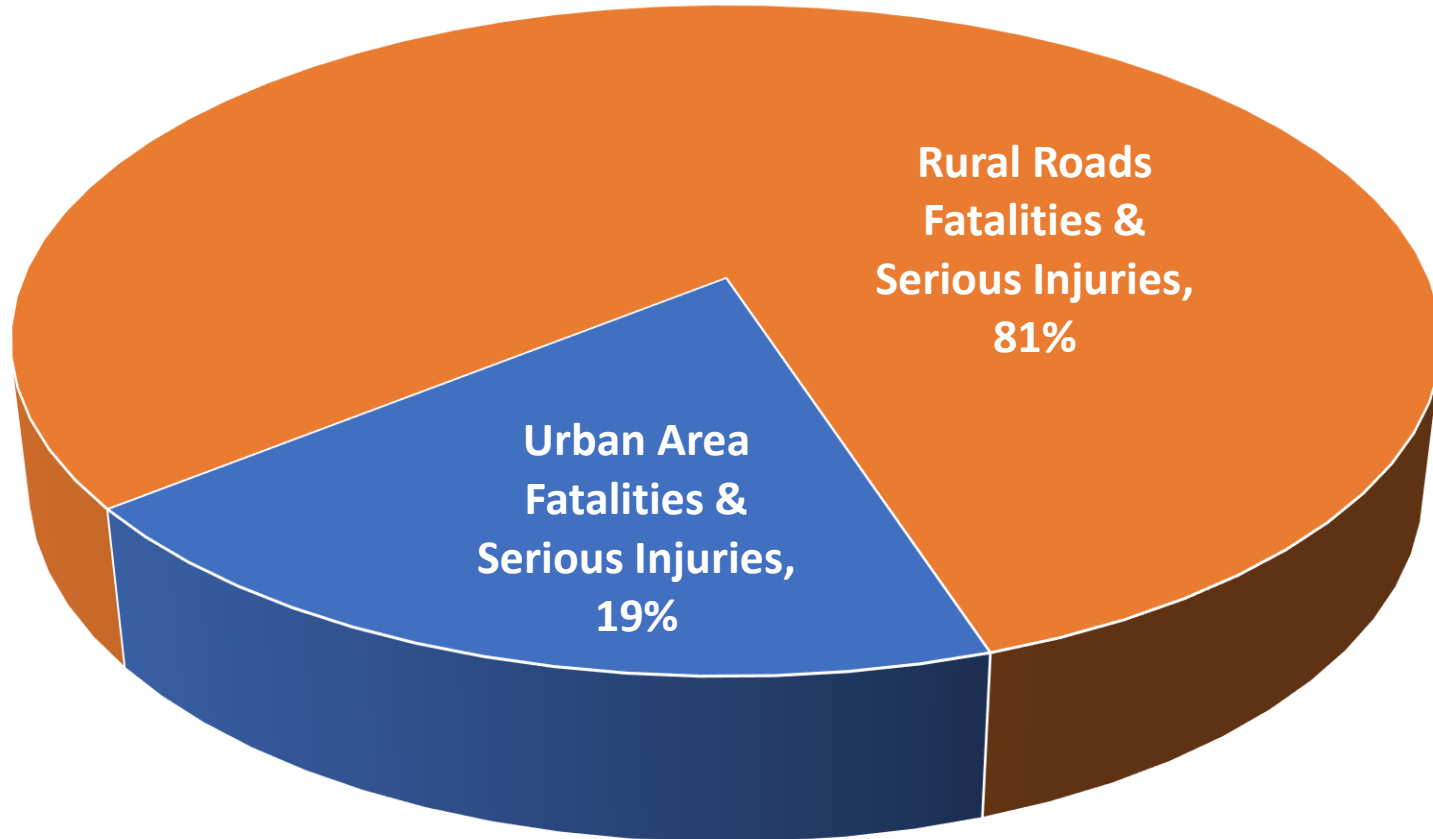


Fatalities & Serious Injuries by Age, 2011-2020



Young population 20-29 years of age are at the greatest risk.

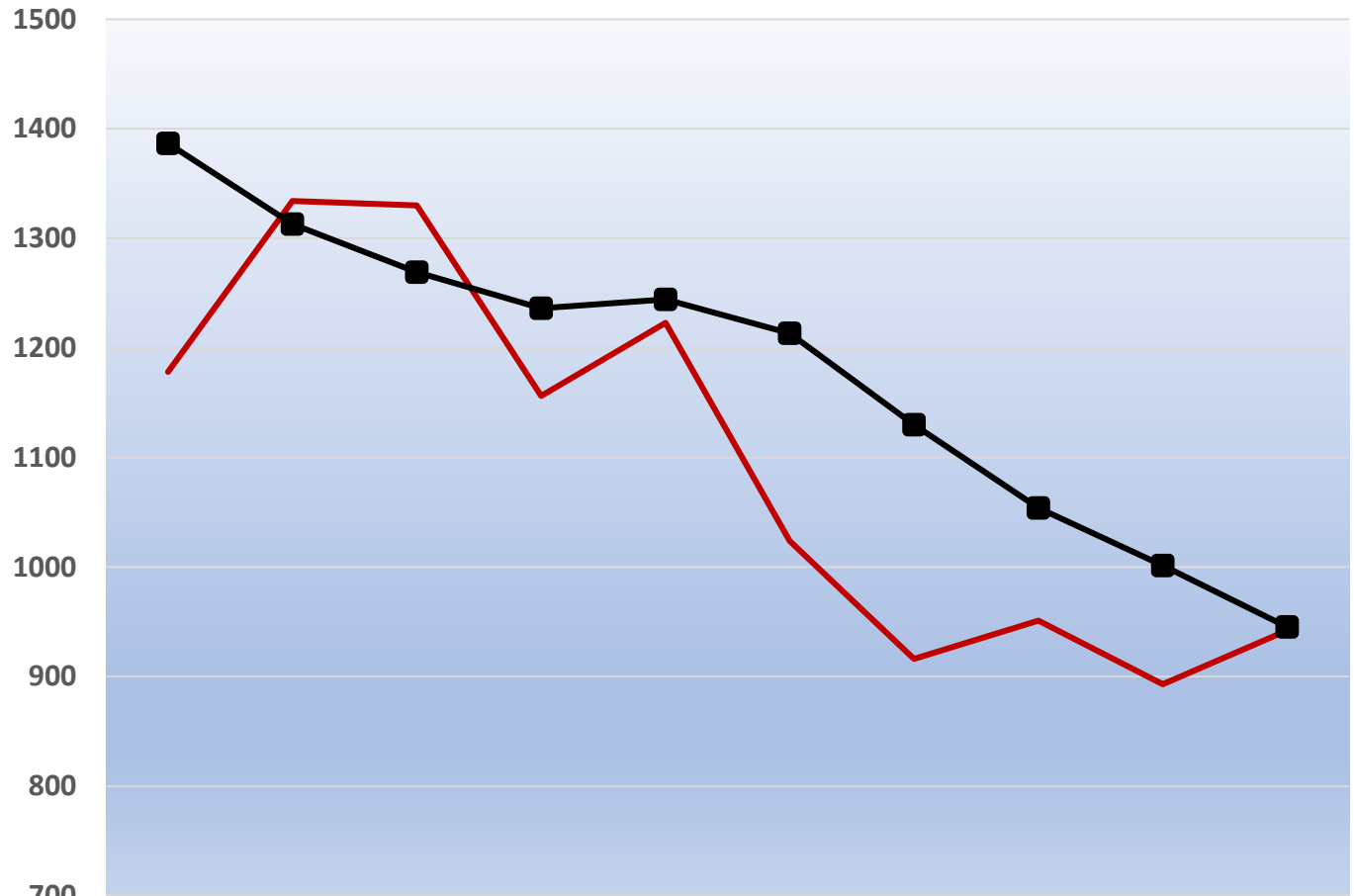
Rural Roads vs Urban Area Fatalities & Serious Injuries, 2011-2020



- Urban Area Fatalities & Serious Injuries
- Rural Roads Fatalities & Serious Injuries

Total Fatalities & Serious Injuries, 2011-2020

In 2020 there was an increase in fatalities & serious injuries from 2019. Beginning in 2017 annual numbers began to fluctuate.



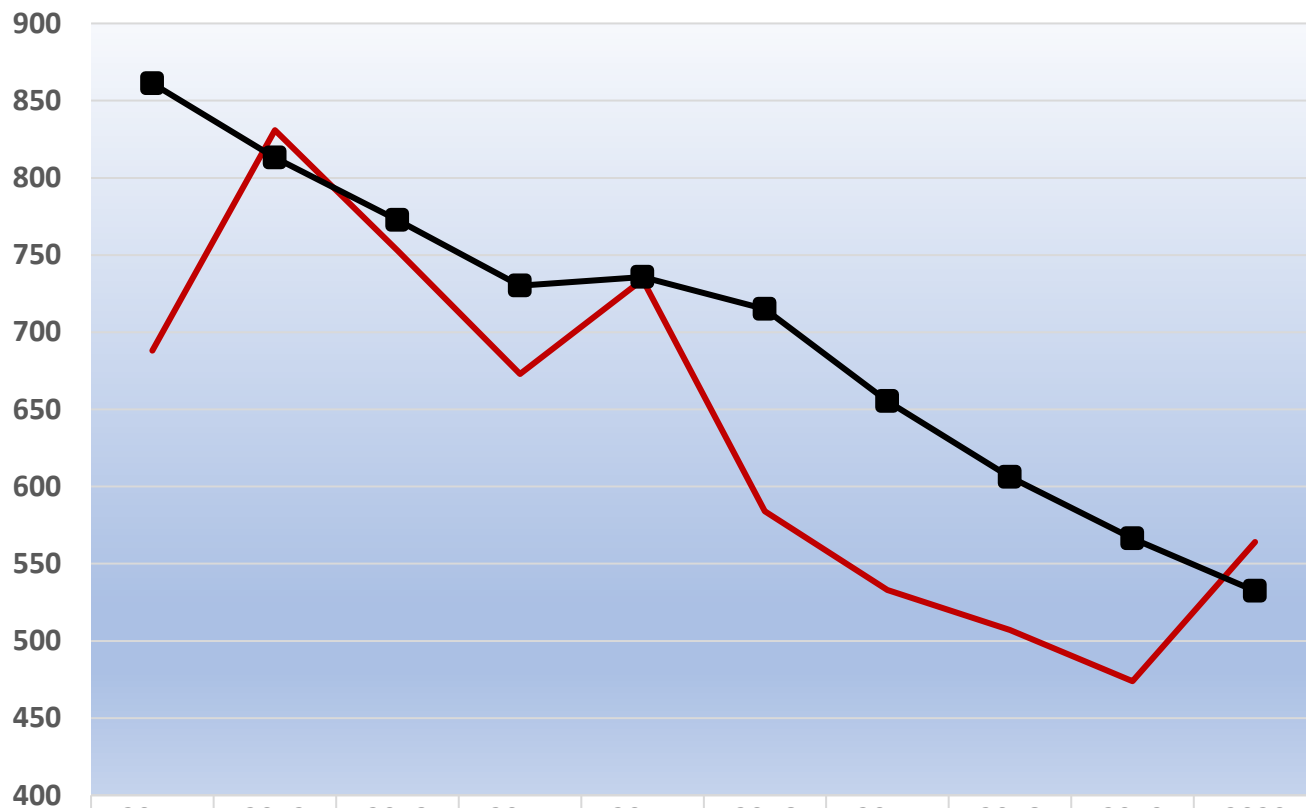
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Fatalities & Serious Injuries	1178	1334	1330	1156	1223	1024	916	951	893	942
5-Year Average	1387	1313	1269	1236	1244	1213	1130	1054	1001	945
Fatalities	211	205	229	192	224	190	186	182	184	212
Serious Injuries	967	1129	1101	964	999	834	730	769	709	730



Roadway Departure Fatalities & Serious Injuries, 2011-2020

A roadway departure is defined as any instance in which a vehicle leaves the travel lane and includes; a non-junction Head On collision (HO), Side-Swipe Opposite Direction (SSOD), Fixed Object (FO) or Roll Over (RO).

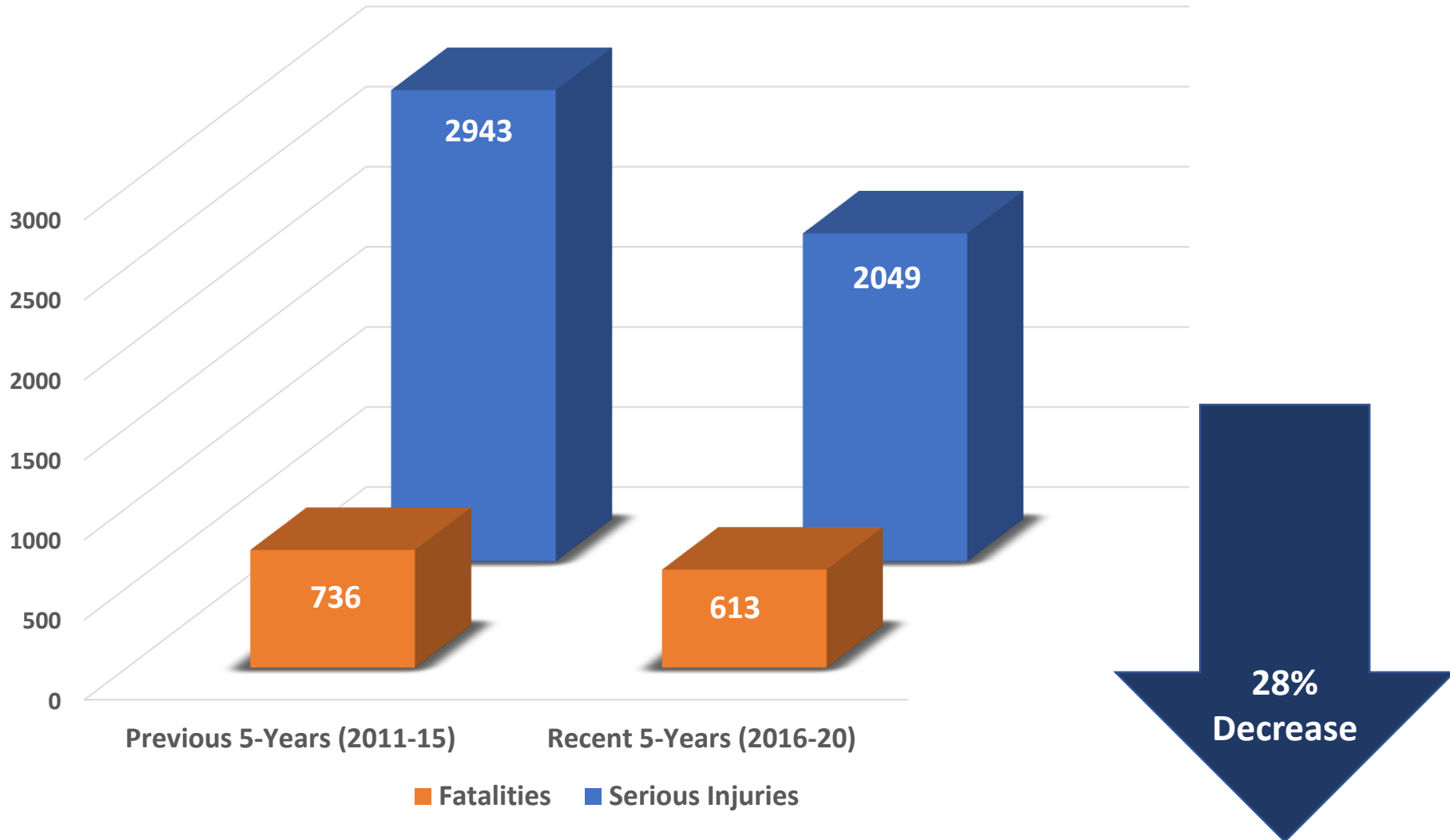
Roadway Departure Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All Fatalities & Serious Injuries	688	831	753	673	734	584	533	507	474	564
5-Year Average	861	813	773	730	736	715	655	606	566	532
Fatalities	143	159	150	129	155	131	127	127	94	134
Serious Injuries	545	672	603	544	579	453	406	380	380	430

**In 2020 there was a spike in roadway fatalities & serious injuries.
Overall, the trend continues to decrease.**

Roadway Departure Fatalities & Serious Injuries, 5-Year Comparison



Roadway Departure Fatalities & Serious Injuries, 2011-2020

58% of All Fatalities & Serious Injuries involved a Roadway
Departure

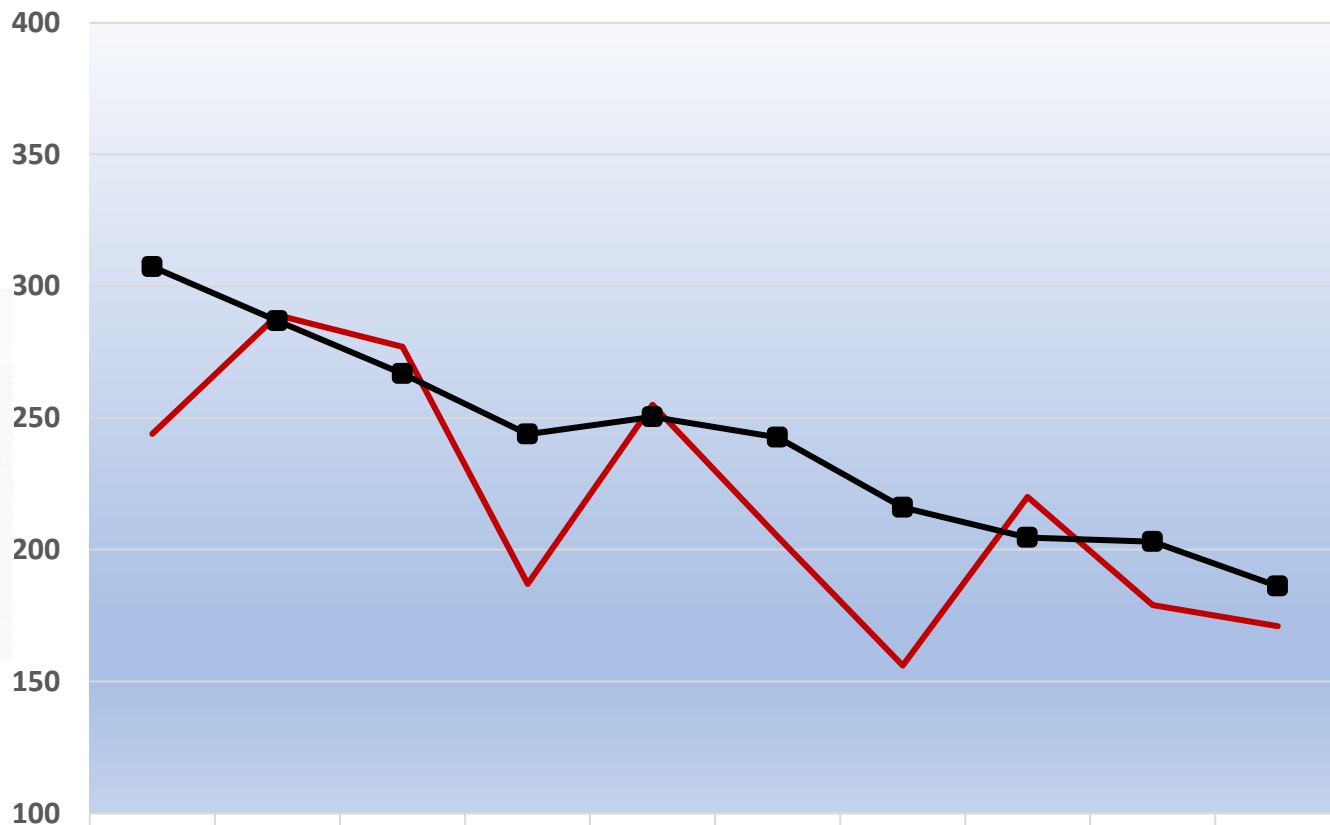
- 93% of All Roadway Fatalities & Serious Injuries occurred in a Rural Area.
- 84% of All Roadway Fatalities & Serious Injuries involved a Single Vehicle Crash.
- 76% of All Roadway Departure Fatalities & Serious Injuries occurred on Dry Roads.
- 48% of All Roadway Departure Fatalities & Serious Injuries involved an Impaired Driver.
- 46% of All Roadway Departure Fatalities & Serious Injuries occurred during the Summer months (Jun, Jul, Aug, Sep).



Intersection Related Fatalities & Serious Injuries, 2011-2020

An Intersection-related crash is defined as a crash occurring in or related to or near an intersection.

Intersection-related Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
— All Fatalities & Serious Injuries	244	289	277	187	255	205	156	220	179	171
■ 5-Year Average	307	287	267	244	250	243	216	205	203	186
Fatalities	29	17	27	19	30	14	15	21	21	16
Serious Injuries	215	272	250	168	225	191	141	199	158	155

The Intersection-related fatalities & serious injuries were lower in 2020 than the previous two years and below the 5-year average.

Intersection-related Fatalities & Serious Injuries, 2011-2020

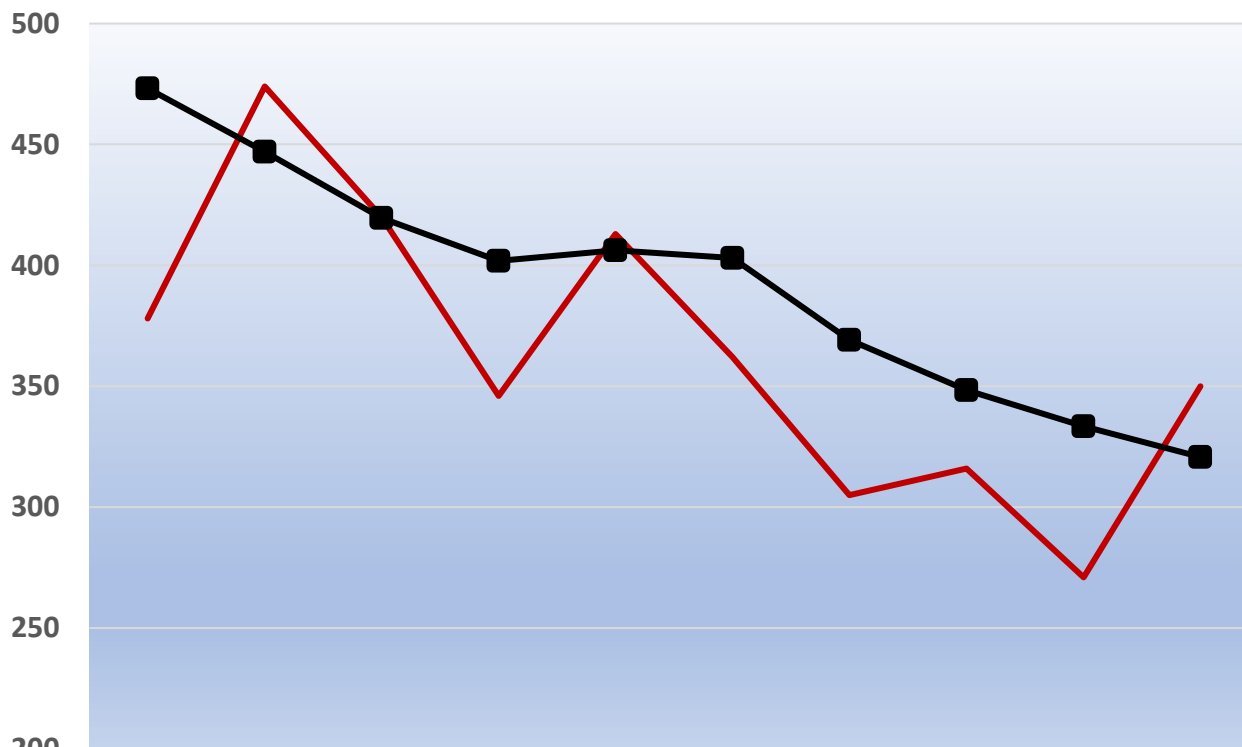
20% of All Fatalities & Serious Injuries were Intersection-related.

- 81% of All Intersection-related Fatalities & Serious Injuries occurred on Dry Roads.
- 50% of All Intersection-related Fatalities & Serious Injuries occurred in Rural Areas.
- 42% of All Intersection-related Fatalities & Serious Injuries occurred during the Summer months(Jun/Jul/Aug/Sep).
- 40% of All Intersection-related Fatalities & Serious Injuries involved a Young Drivers (14-25 YOA).
- 38% of All Intersection-related Fatalities & Serious Injuries involved a right-angle crash.



**Unrestrained
Vehicle
Occupant
Fatalities &
Serious
Injuries,
2011-2020**

Unrestrained Vehicle Occupant Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
— All Fatalities & Serious Injuries	378	474	420	346	413	362	305	316	271	350
—■ 5-Year Average	473	447	420	402	406	403	369	348	333	321
Fatalities	110	114	105	100	118	95	84	91	74	108
Serious Injuries	268	360	315	246	295	267	221	225	197	242

The 5-year average shows a continuous decrease. 2017, 2018, & 2019 were the lowest years for unrestrained vehicle occupant fatalities & serious injuries.

Unrestrained Vehicle Occupant Fatalities & Serious Injuries, 2011-2020

33% of All Fatalities & Serious Injuries involved Unrestrained Vehicle Occupants

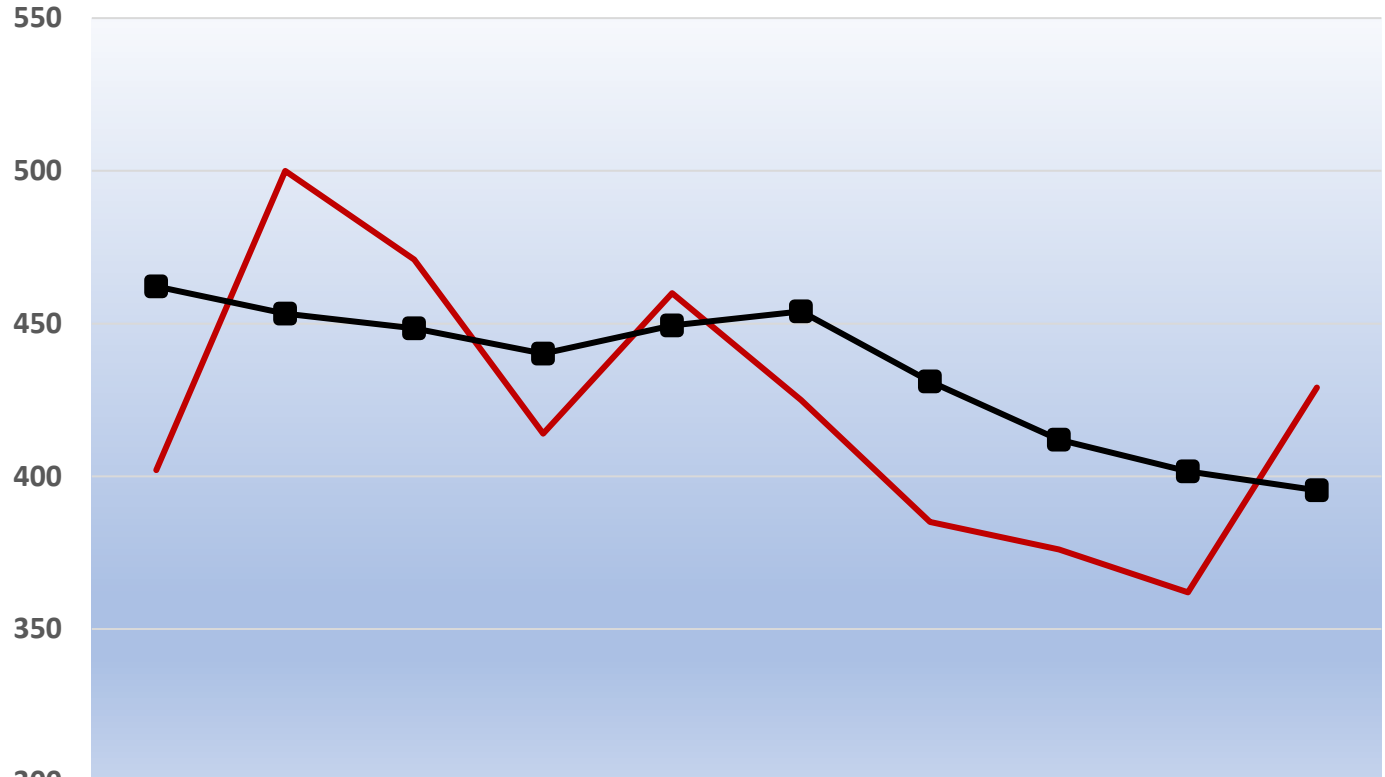
- **78% of All Unrestrained Vehicle Occupant Fatalities & Serious Injuries occurred on Dry Roads.**
- **75% of All Unrestrained Vehicle Occupant Fatalities & Serious Injuries Involved a Single Vehicle Crash.**
- **43% of All Unrestrained Vehicle Occupant Fatalities & Serious Injuries were ejected (full/partial)**
- **41% of All Unrestrained Vehicle Occupant Fatalities & Serious Injuries occurred during the Summer months (Jun/Jul/Aug/Sep).**
- **20% of All Unrestrained Vehicle Occupant Fatalities & Serious Injuries were Young Drivers (14-25 YOA).**



Impaired Driving Fatalities & Serious Injuries, 2011- 2020

An impaired driving crash indicates whether the driver(s) was impaired by alcohol & / or drugs.

Impaired Driver Involved Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All Fatalities & Serious Injuries	402	500	471	414	460	425	385	376	362	429
5-Year Average	462	453	448	440	449	454	431	412	402	395
Fatalities	112	127	137	117	129	128	114	117	106	140
Serious Injuries	290	373	334	297	331	297	271	259	256	289

The 2020 fatalities & serious injuries increased and are similar to 2016. Overall, the trend continues to decrease.

Impaired Driving Fatalities & Serious Injuries, 2011-2020

39% of All Fatalities & Serious Injuries involved an Impaired Driver

- **88% of All Impaired Driving Fatalities & Serious Injuries occurred in Rural Areas.**
- **72% of All Impaired Driving Fatalities & Serious Injuries involved a Roadway Departure.**
- **50% of All Impaired Driving Fatalities & Serious Injuries occurred at Night.**
- **46% of All Impaired Driving Fatalities & Serious Injuries occurred during the Sumer months (Jun/Jul/Aug/Sep).**
- **37% of All Impaired Driving Fatalities & Serious Injuries involved a Single Vehicle Crash.**



Vulnerable Users 2011-2020

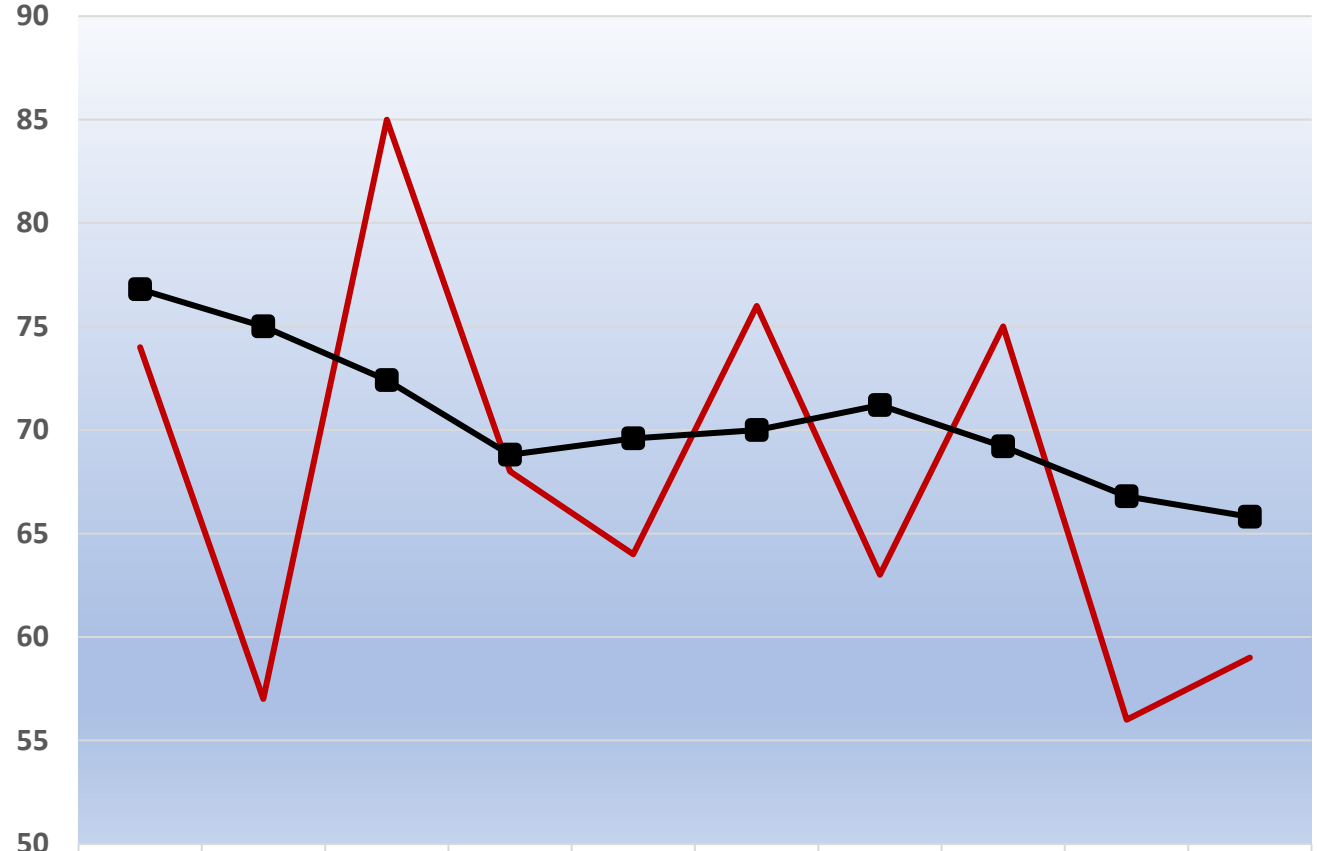




Nonmotorized Fatalities & Serious Injuries, 2011- 2020

Nonmotorized includes pedestrians and bicyclists.

Non-Motorized Fatalities & Serious Injuries, 2011-2020

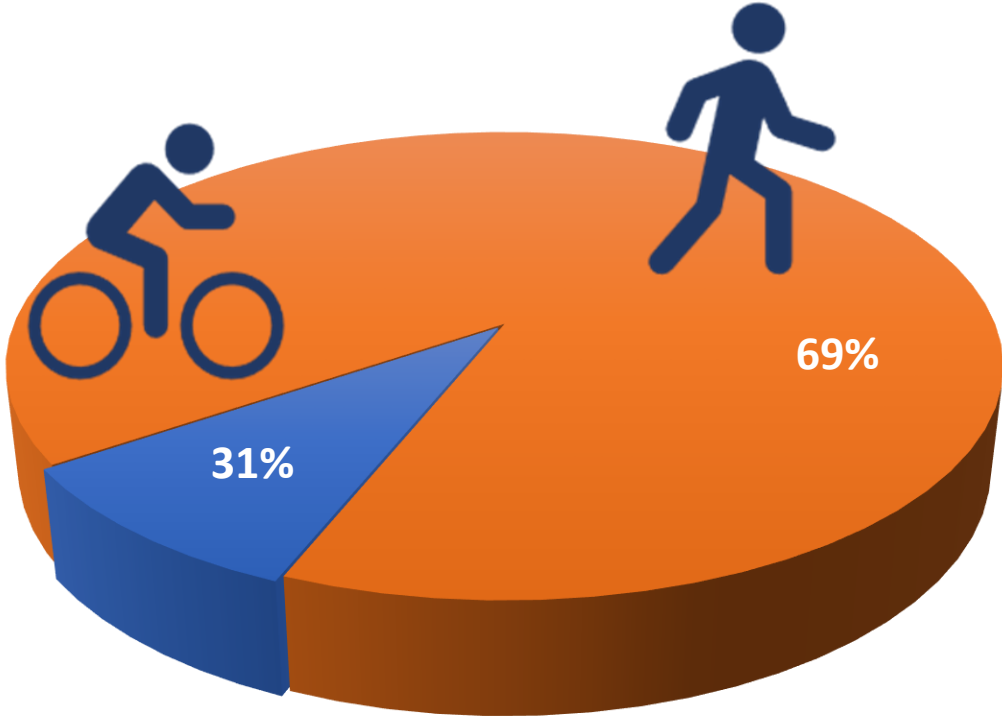


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All Fatalities & Serious Injuries	74	57	85	68	64	76	63	75	56	59
5-Year Average	77	75	72	69	70	70	71	69	67	66
Fatalities	16	9	24	12	15	14	15	17	20	17
Serious Injuries	58	48	61	56	49	62	48	58	36	42

The annual numbers change from year-to-year; looking at the 5-year average confirms that a downward trends continues.

Non-Motorized Fatalities, 2011-2020

6% of All Fatalities & Serious Injuries were Non-Motorized Fatalities & Serious Injuries



- Bicyclist Fatalities & Serious Injuries of All Nonmotorized Fatalites & Serious Injuries
- Pedestrain Fatalities & Serious Injuries of All Nonmotorized Fatalites & Serious Injuries

Nonmotorized Fatalities & Serious Injuries, 2011-2020

6% of All Fatalities & Serious Injuries involved Non-Motorized Users

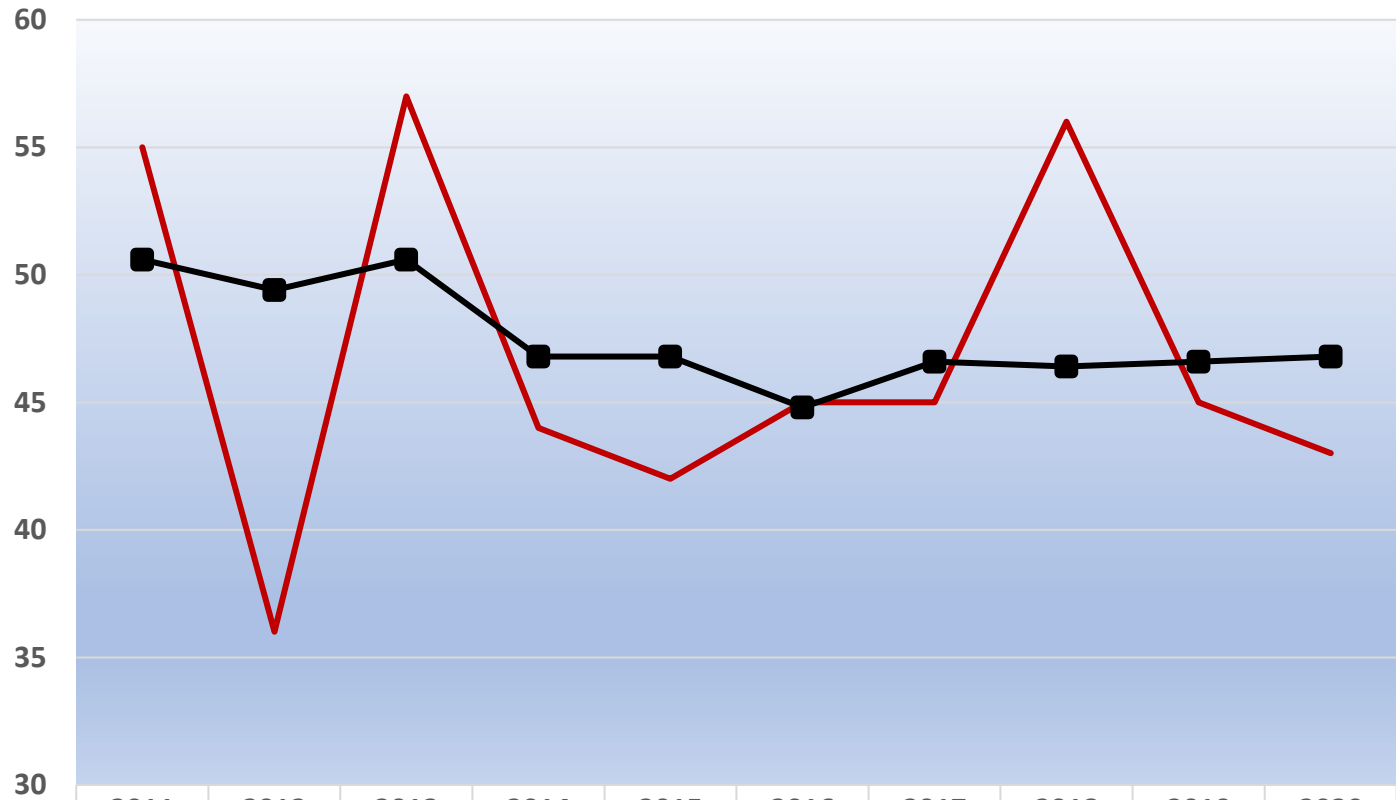
- **69% of All Non-Motorized Fatalities & Serious Injuries were Pedestrians.**
- **63% of All Non-Motorized Fatalities & Serious Injuries occurred in Urban Areas**
- **46% of All Non-Motorized Fatalities & Serious Injuries occurred at night.**
- **23% of All Non-Motorized Fatalities & Serious Injuries were 14-25 YOA.**
- **18% of All Non-Motorized Fatalities & Serious Injuries involved an Impaired Driver.**



Pedestrian Fatalities & Serious Injuries, 2011- 2020

Pedestrian includes wheelchair users.

Pedestrian Fatalities & Serious Injuries, 2011-2020



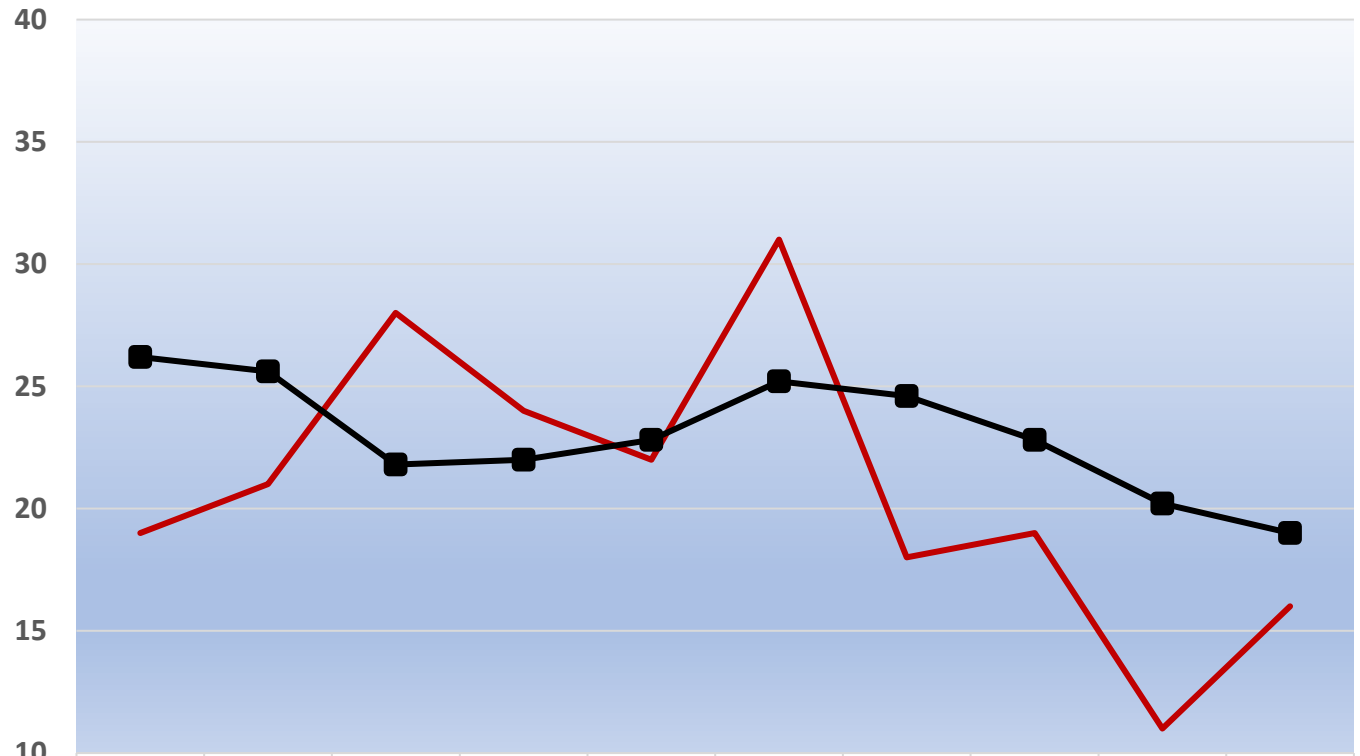
— Total Fatalities & Serious Injuries	55	36	57	44	42	45	45	56	45	43
■ 5-Year Average	51	49	51	47	47	45	47	46	47	47
Fatalities	15	8	23	10	14	11	14	15	17	17
Serious Injuries	40	28	34	34	28	34	31	41	28	26

The 2020 pedestrian fatalities & serious injuries are below the 5-year average.



**Bicyclist
Fatalities &
Serious
Injuries,
2011- 2020**

Bicyclist Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
— All Fatalities & Serious Injuries	19	21	28	24	22	31	18	19	11	16
■ 5-Year Average	26	26	22	22	23	25	25	23	20	19
Fatalities	1	1	1	2	1	3	1	2	3	0
Serious Injuries	18	20	27	22	21	28	17	17	8	16

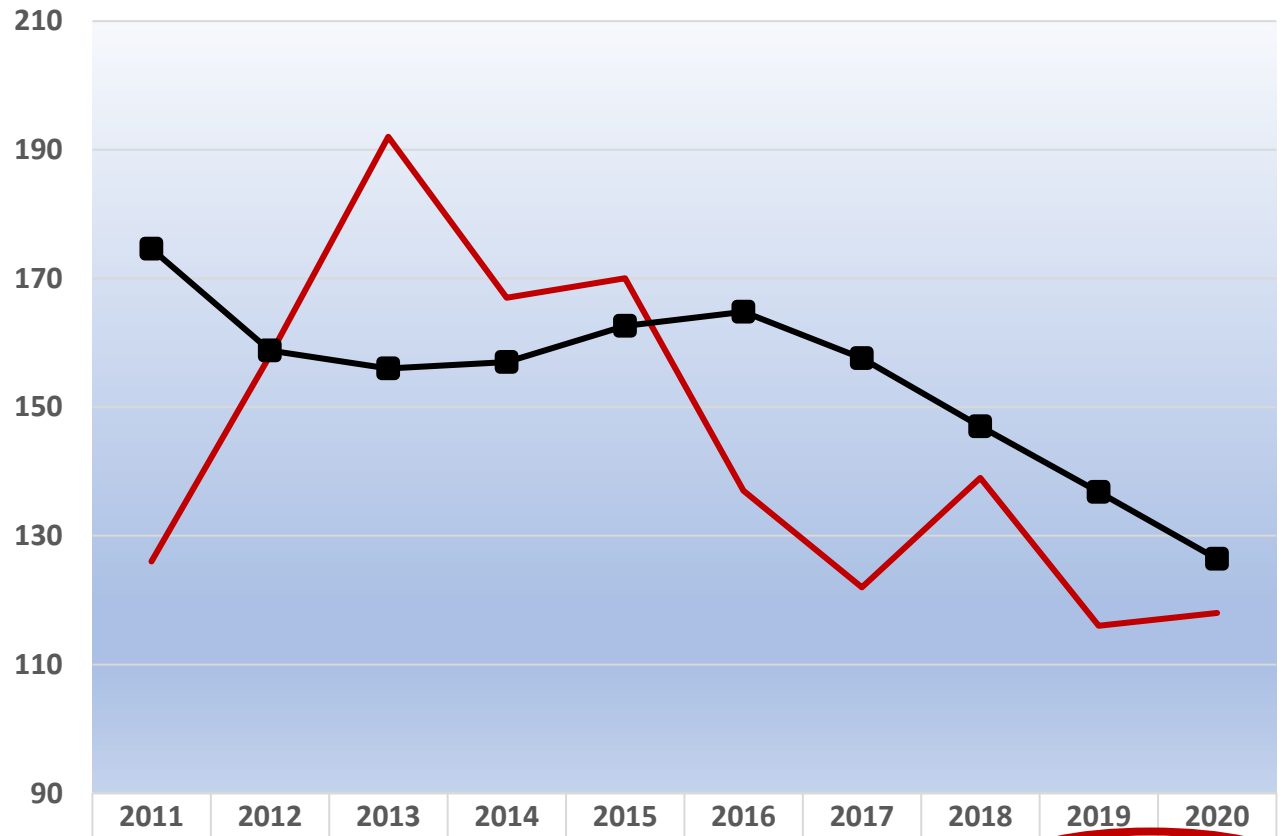
While the 2020 bicyclist serious injuries reflect a spike from 2019, there were no fatalities. Here again illustrates why we look at trends. Serious injuries are similar to those of 2017 & 2018. Overall, the trend continues to decrease.



Motorcyclist Fatalities & Serious Injuries, 2011-2020

A Motorcyclist is defined as and includes motorcycle operator and passenger.

Motorcyclist* Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Fatalities & Serious Injuries	126	158	192	167	170	137	122	139	116	118
5-Year Average	175	159	156	157	163	165	158	147	137	126
Fatalities	20	30	34	23	25	17	22	21	22	29
Serious Injuries	106	128	158	144	145	120	100	118	94	89

Motorcyclist fatalities & serious injuries for 2019 & 2020 were the lowest in ten years. Overall, the trend continues to decrease.

Motorcyclist Fatalities & Serious Injuries, 2011- 2020

13% of All Fatalities & Serious Injuries were Motorcyclist Fatalities & Serious Injuries

- 95% of All Motorcyclist Fatalities & Serious Injuries occurred during good weather & Dry Roads.
- 88% of All Motorcyclist Fatalities & Serious Injuries were the operator.
- 69% of All Motorcyclist Fatalities & Serious Injuries were Single Vehicle Crashes.
- 47% of All Motorcyclist Fatalities & Serious Injuries involved a Road Departure.
- 41% of All Motorcyclist Fatalities & Serious Injuries were not using a helmet.
- 15% of All Motorcyclist Fatalities & Serious Injuries involved collision with a wild animal.



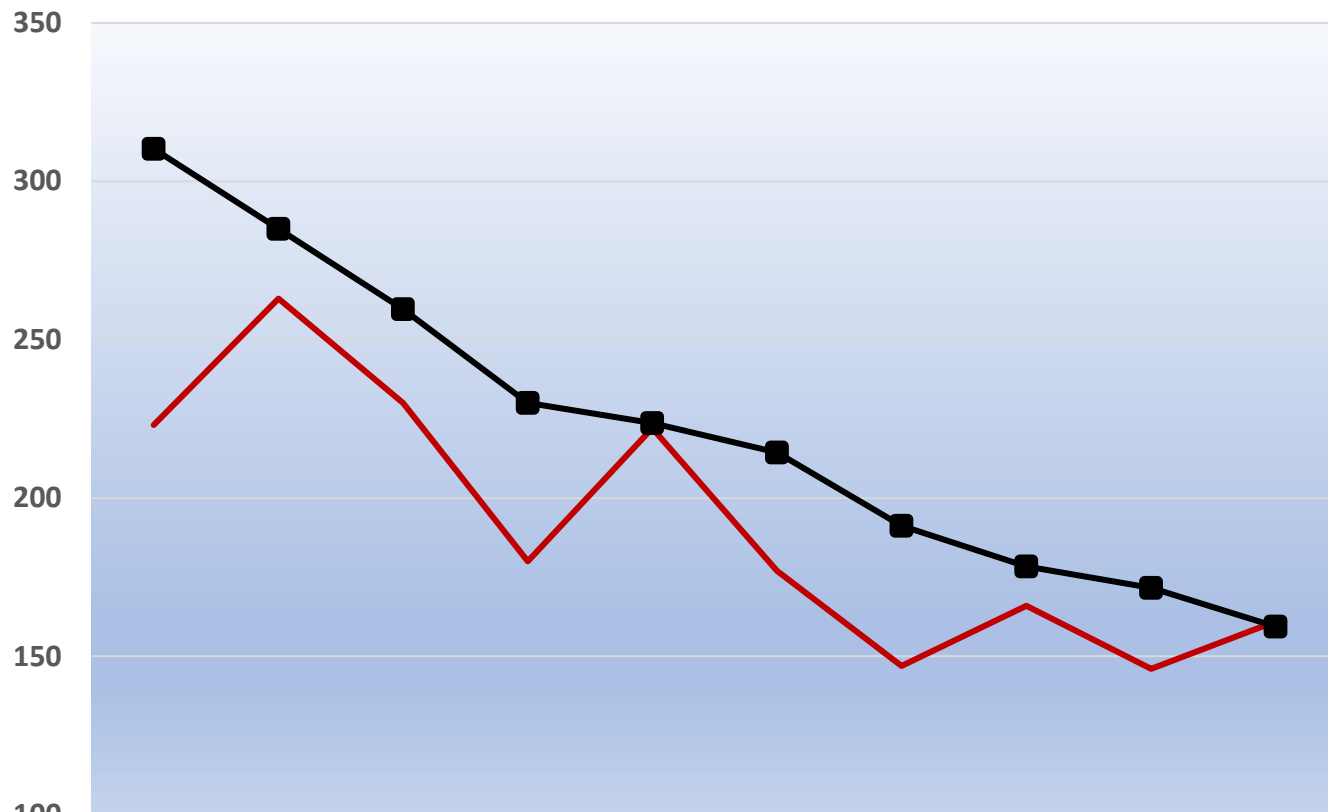
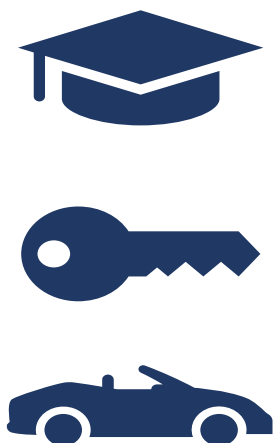


Crash Factors of Interest Fatalities & Serious Injuries, 2011-2020



**Young Driver
Involved (14-20 YOA)
Fatalities & Serious
Injuries, 2011-2020**

Young Driver*(14-20 YOA)** Involved Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All Fatalities & Serious Injuries	223	263	230	180	222	177	147	166	146	161
5-Year Average	310	285	260	230	224	214	191	178	172	159
Fatalities	27	26	26	24	36	18	25	29	35	31
Serious Injuries	196	237	204	156	186	159	122	137	111	130

The overall trend has been decreasing over the last 10 years.

Young Driver (14-20 YOA) Involved Fatalities & Serious Injuries, 2011-2020

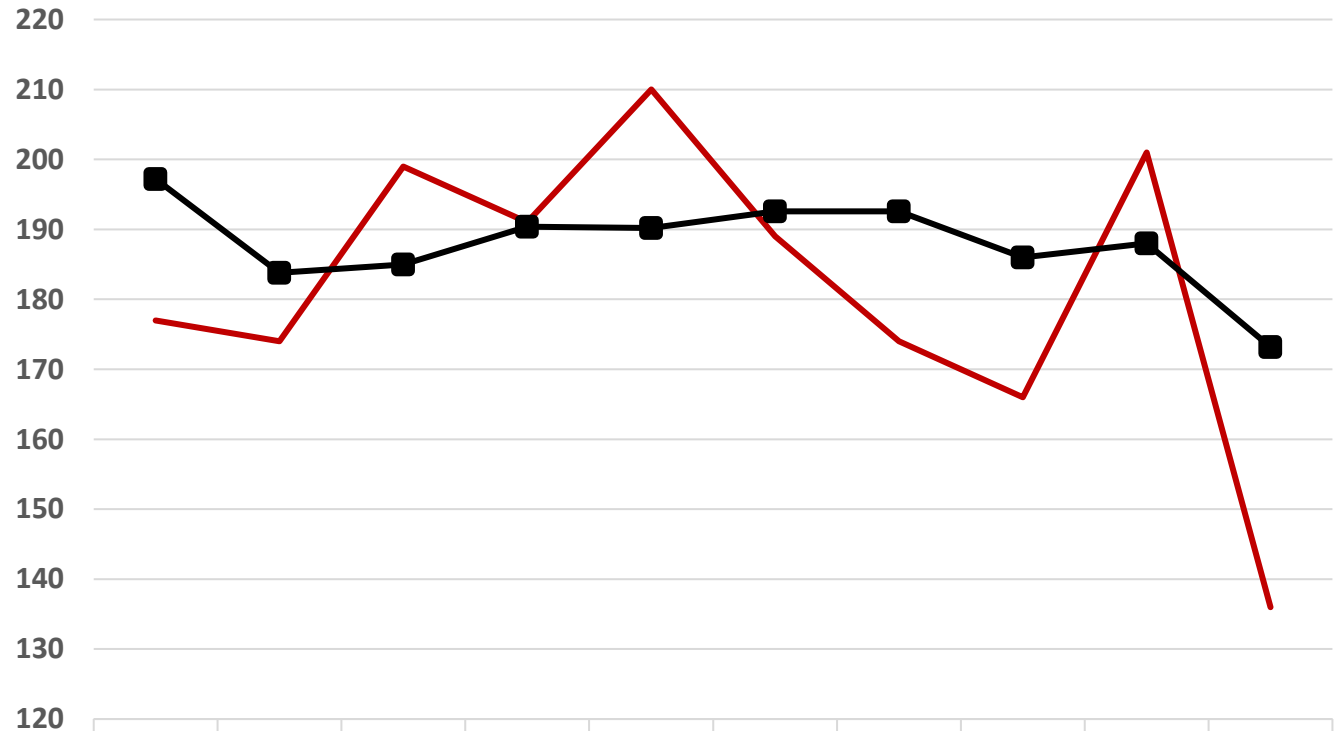
17% of All Fatalities & Serious Injuries involved a Young Driver (14-20 YOA)

- **78% of All Young Driver Fatalities & Serious Injuries occurred in Rural Areas.**
- **52% of All Young Driver Fatalities & Serious Injuries involved a Single Vehicle Crash.**
- **46% of All Young Driver Fatalities & Serious Injuries occurred during the Summer months (Jun/Jul/Aug/Sep).**
- **39% of All Young Driver Fatalities & Serious Injuries were an Unrestrained Vehicle Occupant.**
- **33% of All Young Driver Fatalities & Serious Injuries occurred during Nighttime hours.**



**Older Driver
(65+ YOA)
Fatalities &
Serious
Injuries,
2011- 2020**

Older Driver (65+YOA) Involved* Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Fatalities & Serious Injuries	177	174	199	191	210	189	174	166	201	136
5-Year Average	197	184	185	190	190	193	193	186	188	173
Fatalities	39	26	51	32	46	34	37	29	54	33
Serious Injuries	138	148	148	159	164	155	137	137	147	103

In 2020, Older Driver involved Fatalities & Serious injuries were the lowest in 10 years. This may be due to designated shopping hours & encouragement to stay at home during COVID.

Older Driver (65+ YOA) Involved Fatalities & Serious Injuries, 2011-2021

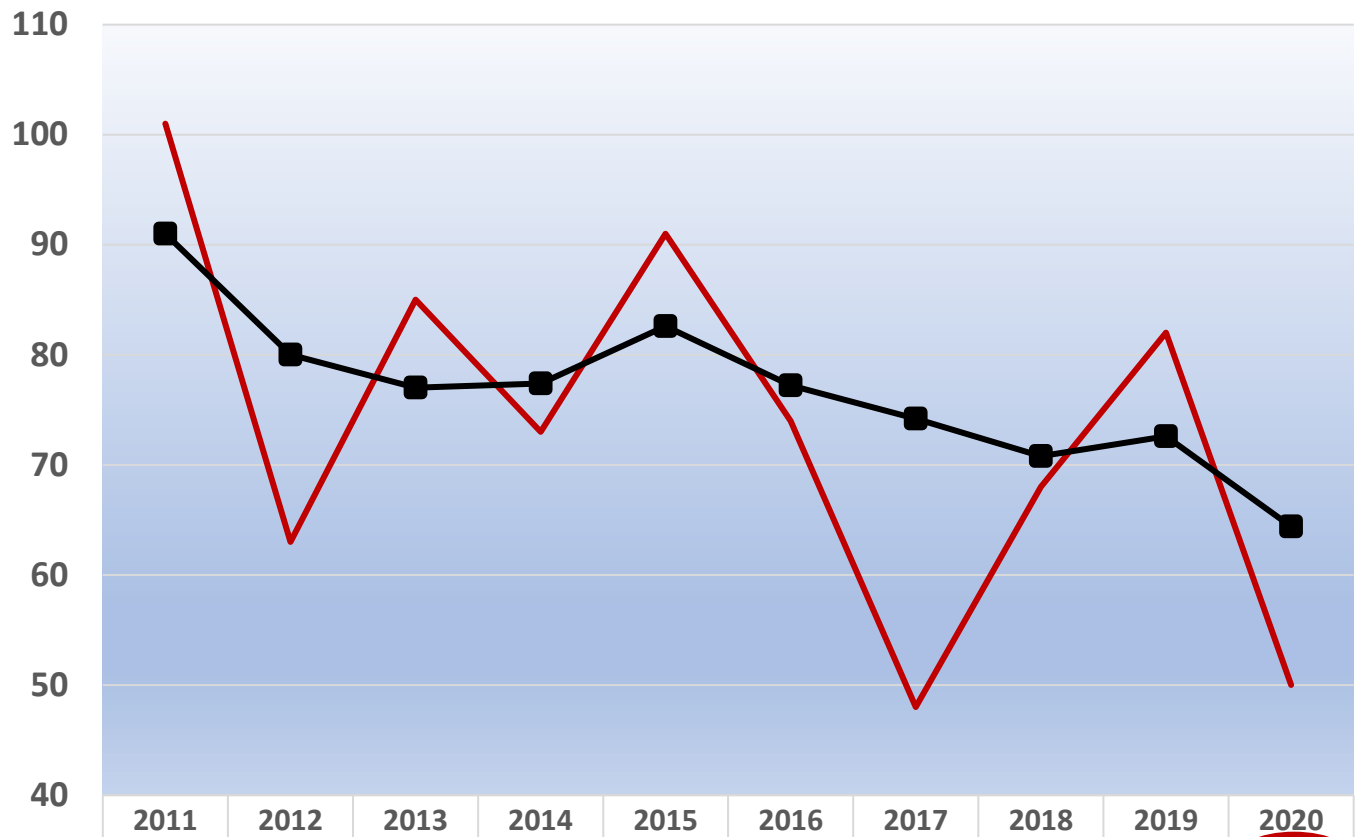
9% of All Fatalities & Serious Injuries involved an Older Driver (65 + YOA)

- **91% of All Older Driver Involved Fatalities & Serious Injuries occurred during Summer months (Jun/Jul/Aug/Sep).**
- **81% of All Older Driver Involved Fatalities & Serious Injuries involved a Roadway Departure.**
- **72% of All Older Driver Involved Fatalities & Serious Injuries involved a Single Vehicle Crash.**
- **68% of All Older Driver Involved Fatalities & Serious Injuries occurred on Roadways with < 4 feet shoulders.**
- **54% of All Older Driver Involved Fatalities & Serious Injuries occurred at Intersections.**



**Large
Vehicle
Fatalities &
Serious
Injuries,
2011- 2020**

Large Vehicle Involved Fatalities & Serious Injuries, 2011-2020



— All Fatalities & Serious Injuries	101	63	85	73	91	74	48	68	82	50
■ 5-Year Average	91	80	77	77	83	77	74	71	73	64
Fatalities	32	11	21	14	22	22	20	16	25	19
Serious Injuries	69	52	64	59	69	52	28	52	57	31

In Montana, large vehicle* fatalities & serious injury trend continues to decrease.

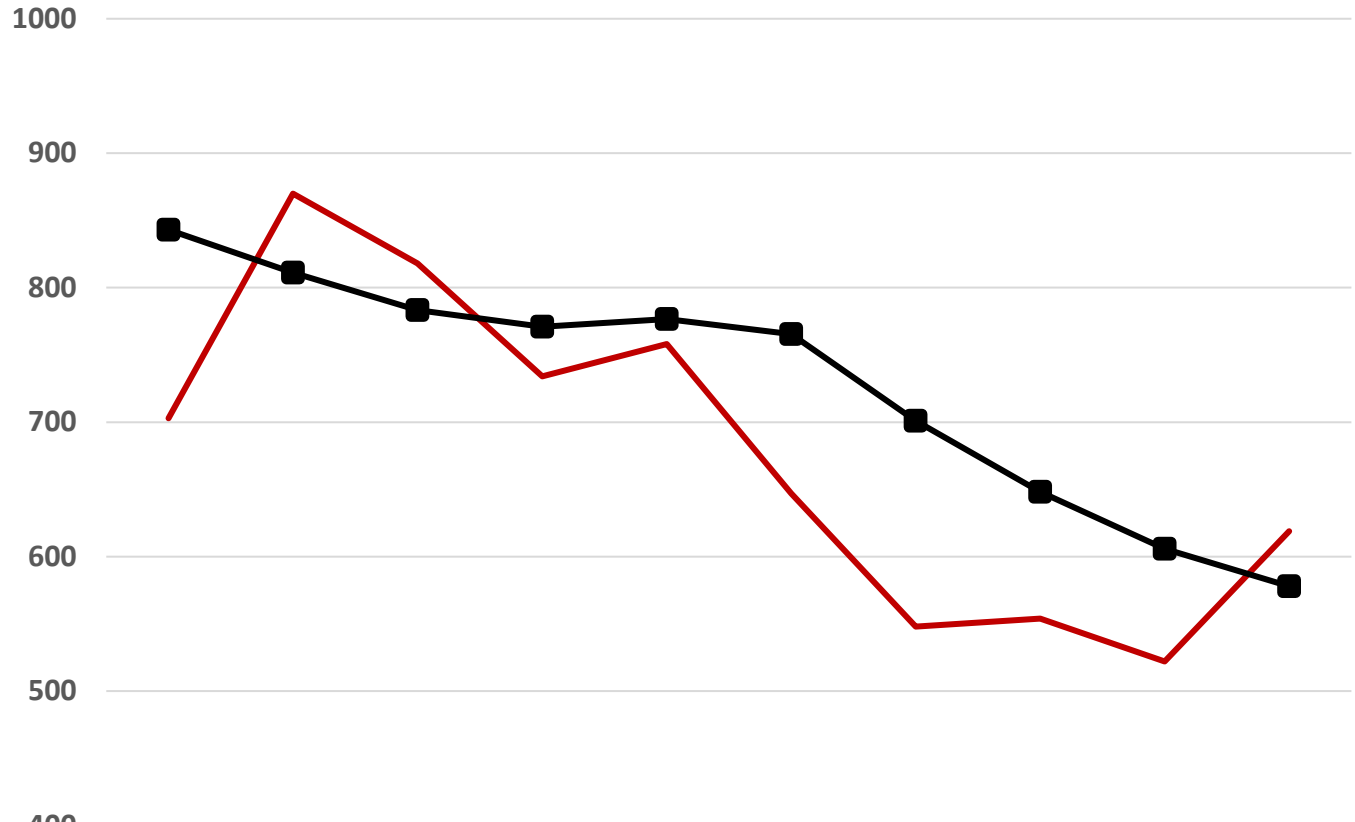
***Large Vehicles are those over 9,999 pounds**



Single Vehicle Fatalities & Serious Injuries, 2011-2020



Single Vehicle Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Fatalities & Serious Injuries	703	870	818	734	758	647	548	554	522	619
5-Year Average	843	811	783	771	777	765	701	648	606	578
Fatality	128	147	156	130	151	134	112	125	116	147
Serious Injury	575	723	662	604	607	513	436	429	406	472

The 2020 single-vehicle fatalities & serious injuries increased and are higher than the previous 3 years of 2017, 2018 & 2019

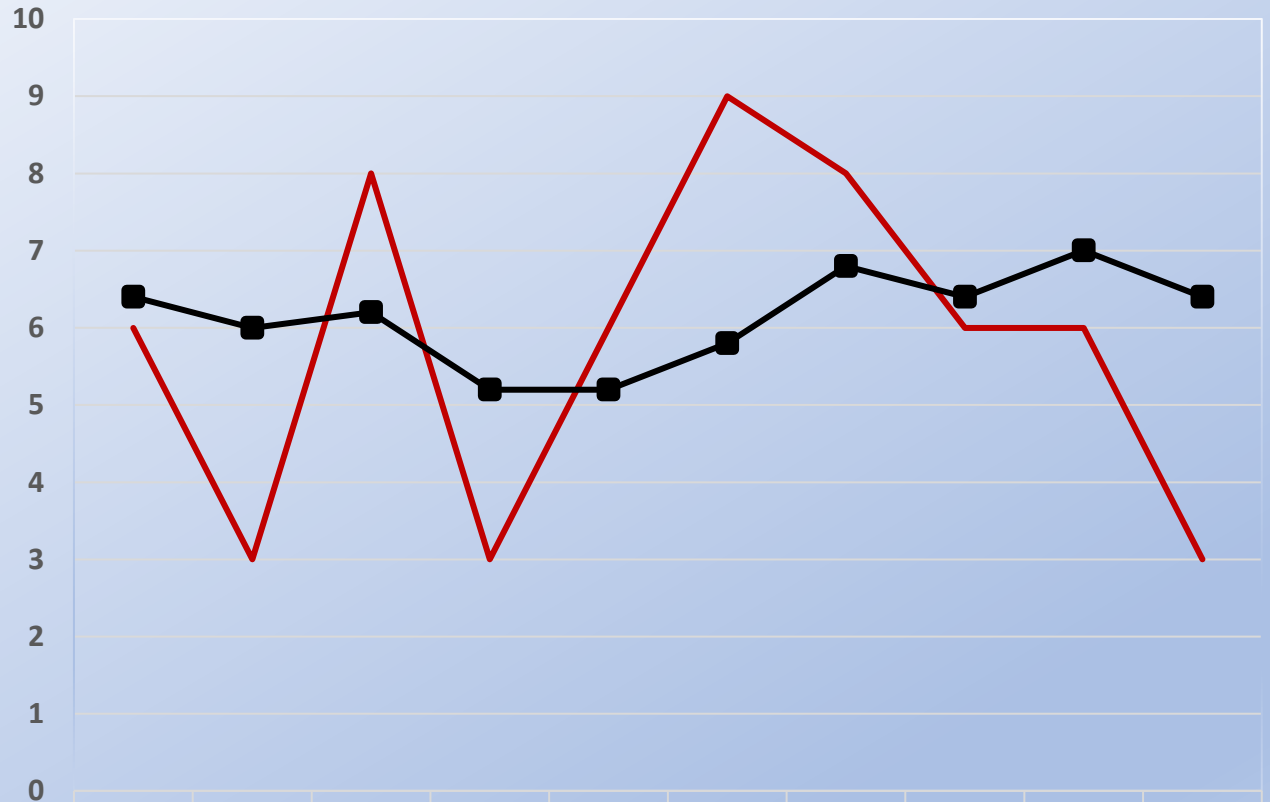
Older Driver (66 + YOA) Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
— Total Fatalities & Serious Injuries	84	77	98	106	103	93	92	76	104	70
—■ 5-Year Average	88	84	87	92	94	95	98	94	94	87
Fatalities	20	15	27	21	26	19	17	21	34	25
Serious Injuries	64	62	71	85	77	74	75	55	70	45

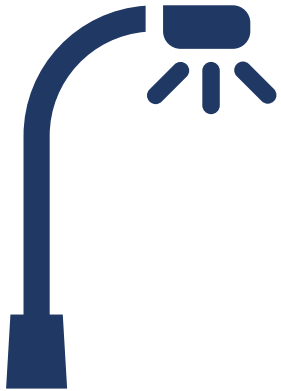
The trend continues to decrease. Fatalities and serious injuries declined in 2020 from 2019.

Older Pedestrian (66 + YOA) Fatalities & Serious Injuries, 2011-2020



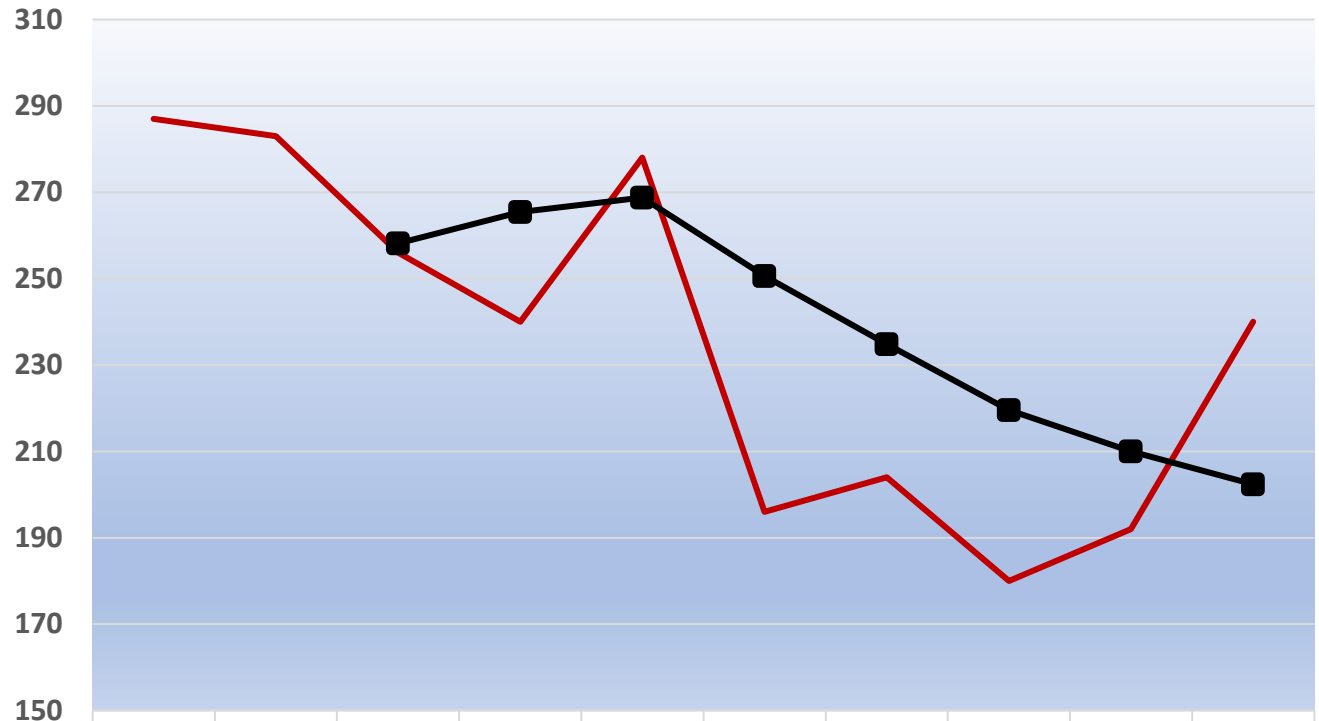
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
— Total Fatalities & Serious Injuries	6	3	8	3	6	9	8	6	6	3
— 5-Year Average	6	6	6	5	5	6	7	6	7	6
Fatalities (66+)	3	1	4	1	2	4	2	2	5	0
Serious Injuries (66+)	3	2	4	2	4	5	6	4	1	3

Older Pedestrians 66+ YOA fatalities and serious injuries were fewer in 2020 and comparable to 2014.



Other Factors

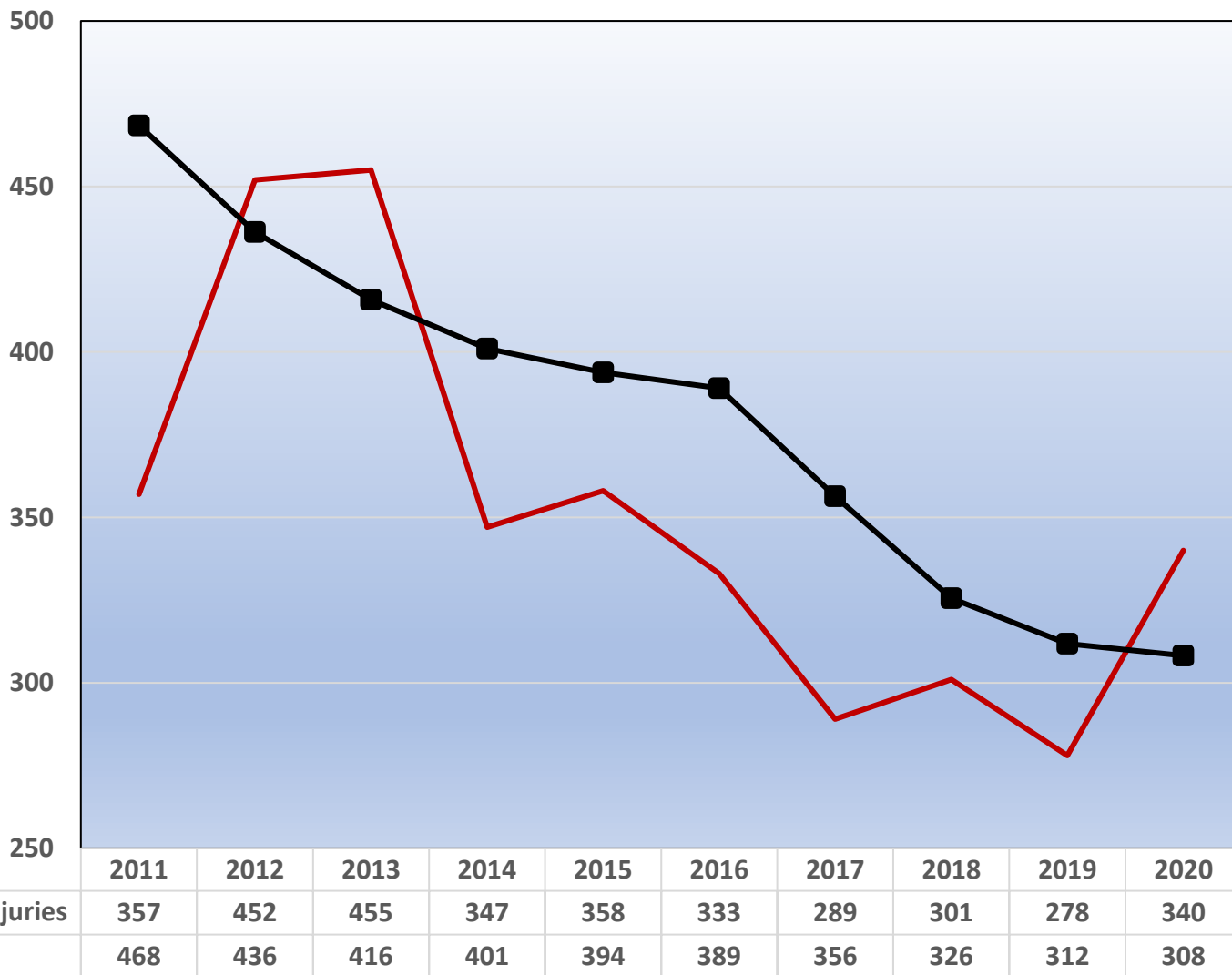
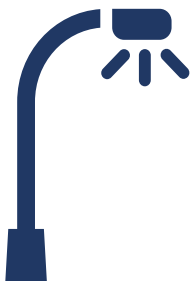
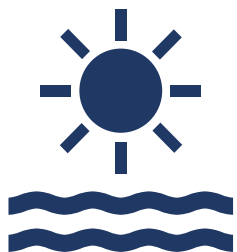
Speed Related Fatalities & Serious Injuries, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
— Total Fatalities & Serious Injuries	287	283	256	240	278	196	204	180	192	240
■ 5-Year Average			258	265	269	251	235	220	210	202
Fatalities	58	56	52	38	68	47	54	54	44	65
Serious Injuries	229	227	204	202	210	149	150	126	148	175

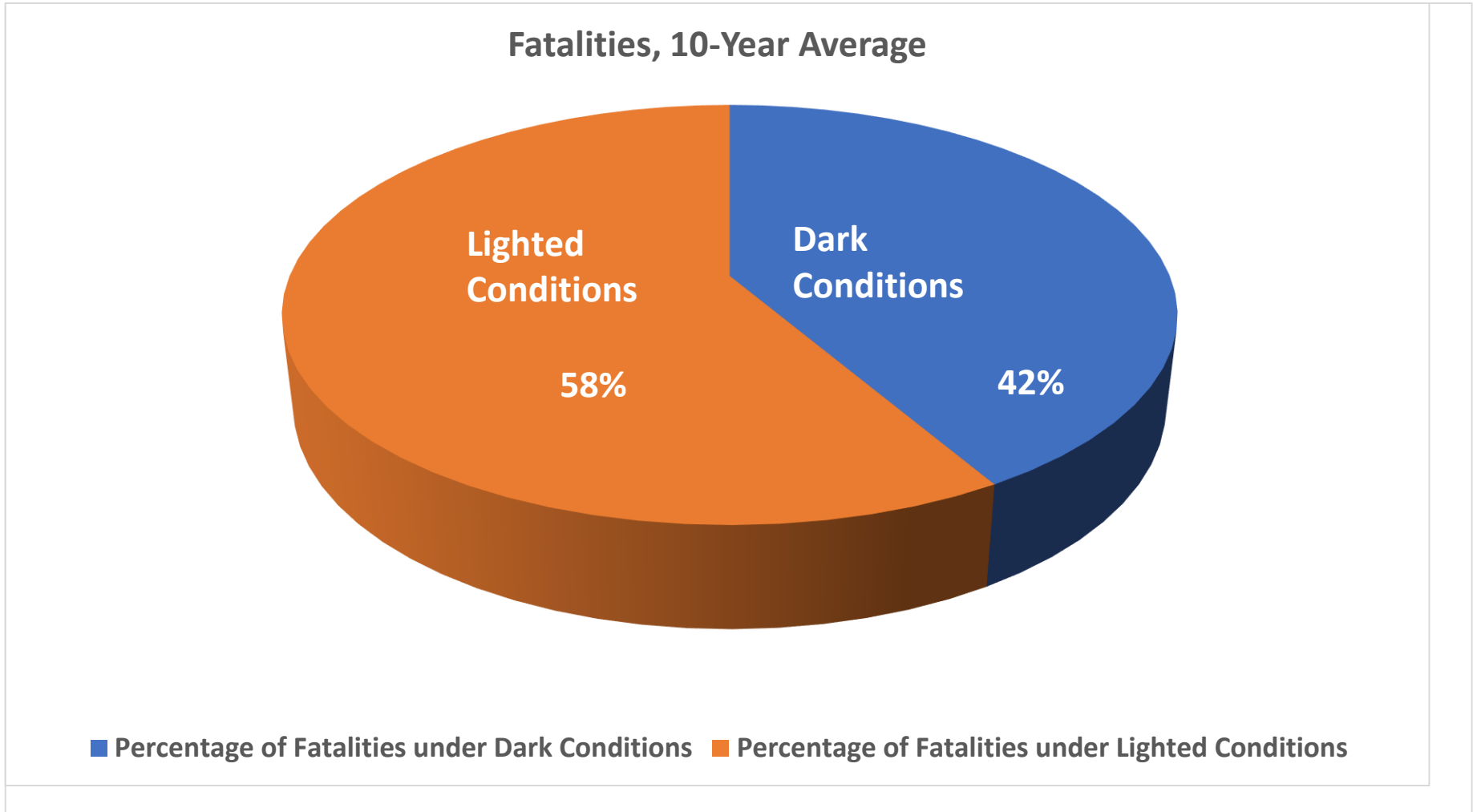
Speed related fatalities & serious injuries have decreased over the past 10 years, but notable increased in 2020.

Under Dark Conditions- Occurrence of Fatalities & Serious Injuries, 2011-2020



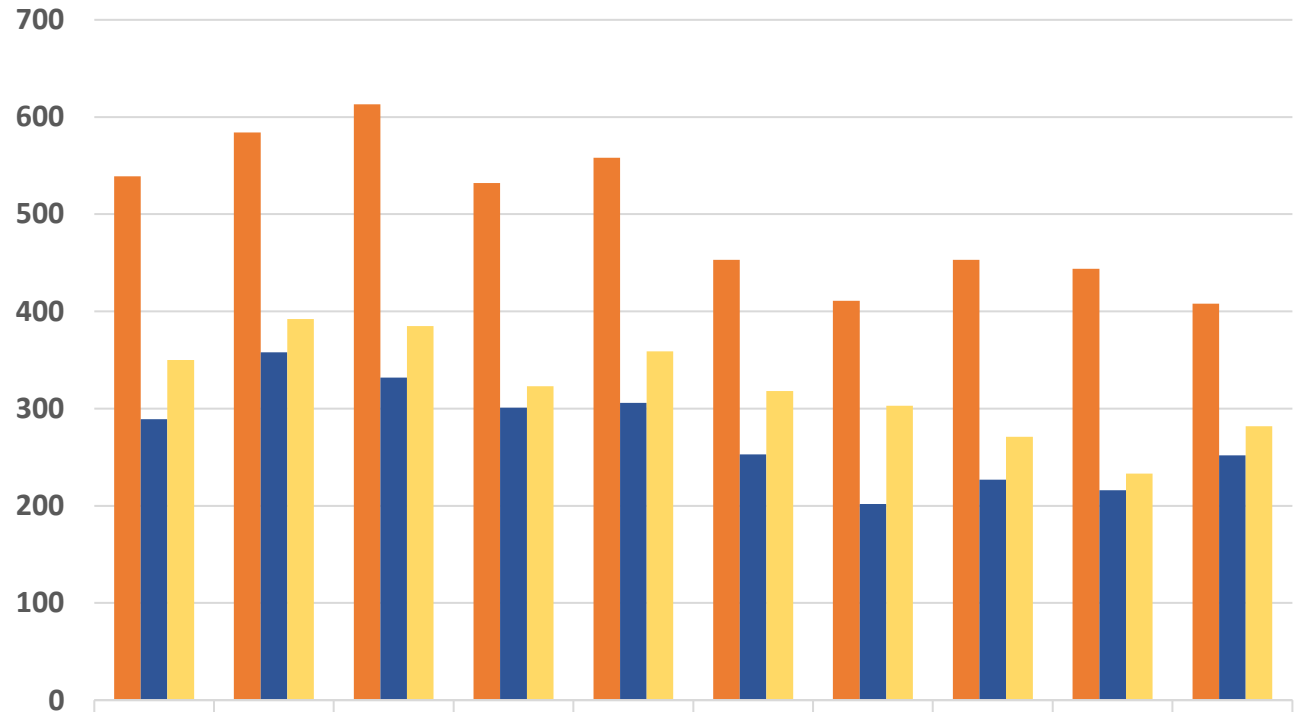
Fatalities & serious injuries occurring at night & under dark conditions increased in 2020.

Lighting Conditions – Occurrence of Fatalities, 10-Year Average



No significant change in time-of-day when fatalities occurred.

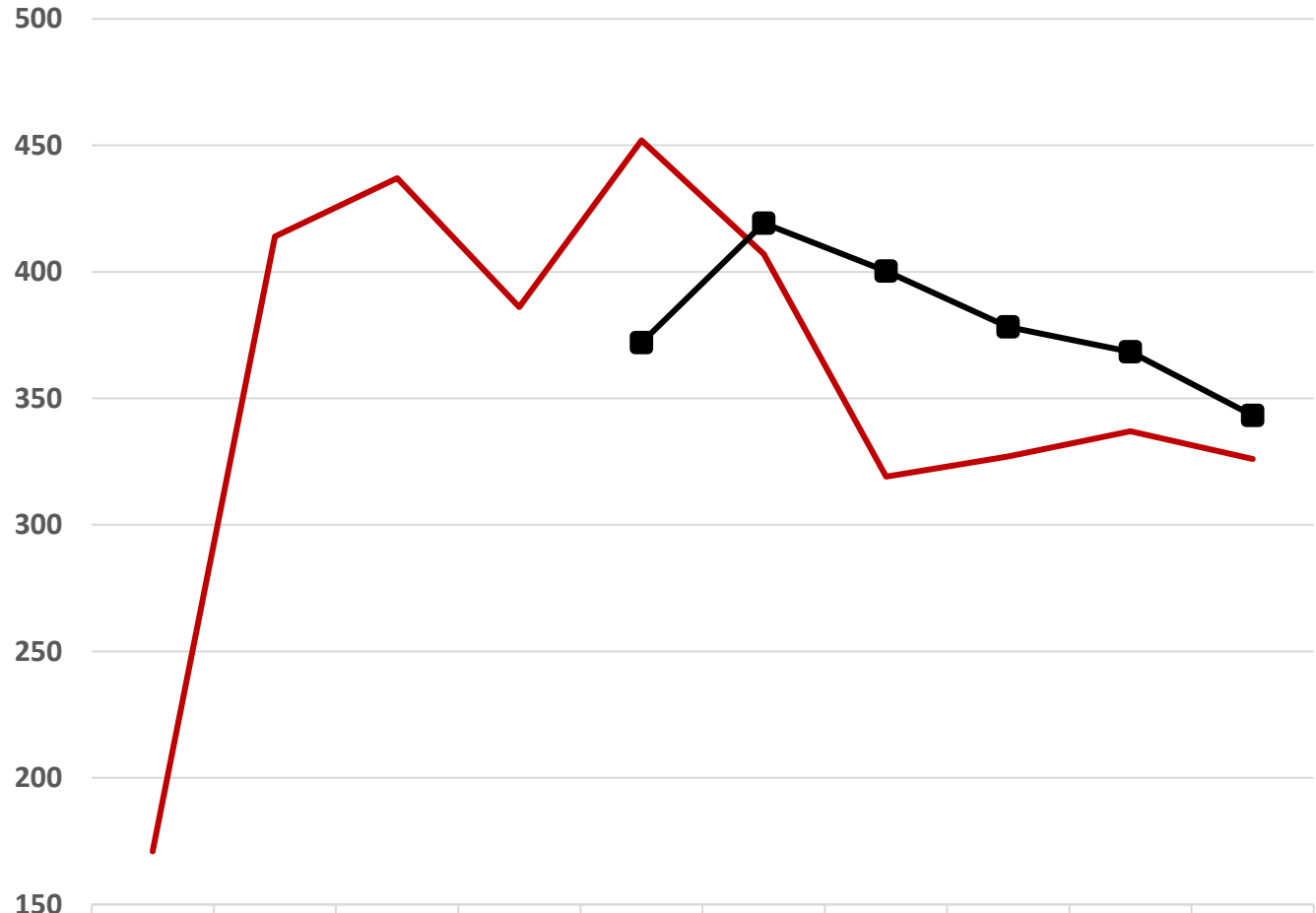
When Fatalities & Serious Injuries Occur, 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Summer Fatalities & Serious Injuries	539	584	613	532	558	453	411	453	444	408
Winter Fatalities & Serious Injuries	289	358	332	301	306	253	202	227	216	252
Shoulder Season Fatalities & Serious Injuries (Mar/Apr/May/Oct)	350	392	385	323	359	318	303	271	233	282

Fatalities & Serious Injuries occur most often during the Summer months of Jun, Jul, Aug & Sept when weather is good. Opposite of the adverse winter weather months of Jan, Feb, Nov & Dec when people tend to be more cautious and drive less.

Careless/Inattentive/Distracted Driving Fatalities & Serious Injuries, 2011-2020



— Total Careless/ Inattentive /Distracted Fatality & Serious Injuries

— 5- Year Average

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Careless/ Inattentive /Distracted Fatality & Serious Injuries	171	414	437	386	452	407	319	327	337	326
5- Year Average					372	419	400	378	368	343

Comprehensive Highway Safety Plan information

<http://www.mdt.mt.gov/visionzero/plans/chsp.shtml>

For questions or more information
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