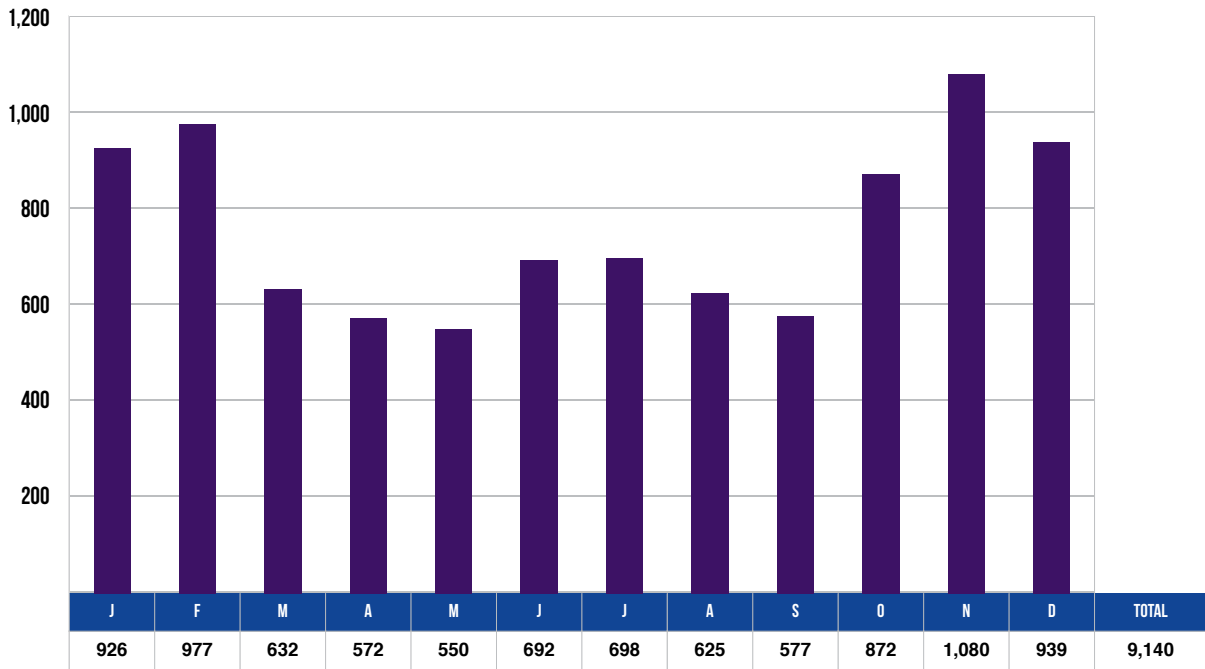
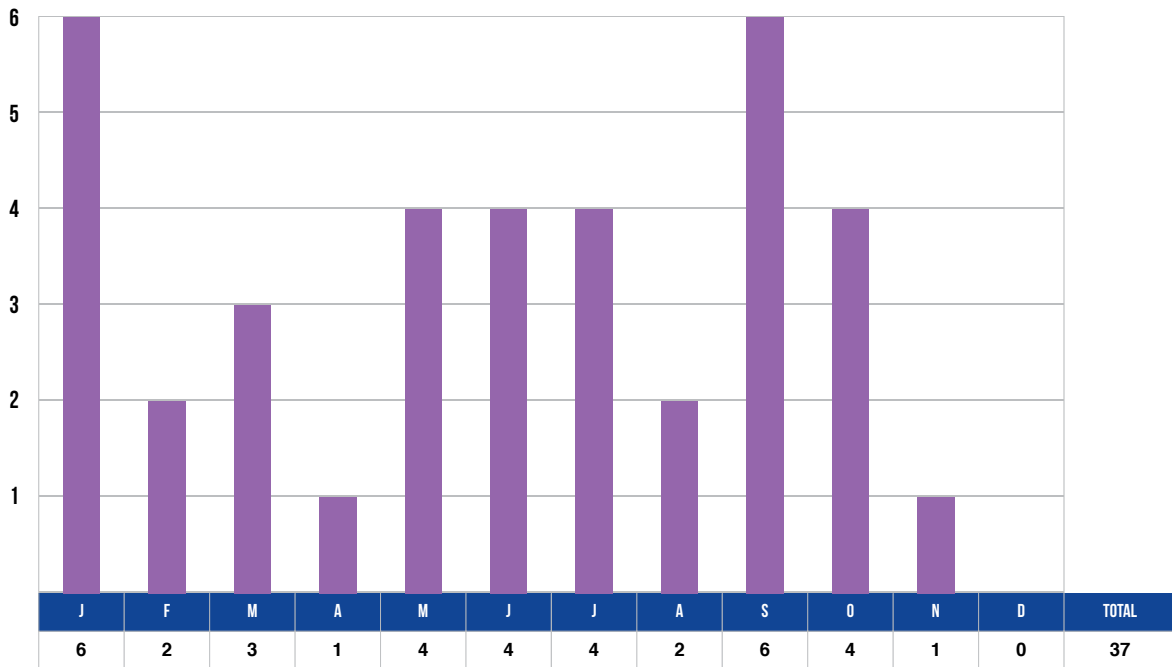


UPPER PENINSULA ALL CRASHES INJURY SEVERITY BY MONTH

TOTAL CRASHES

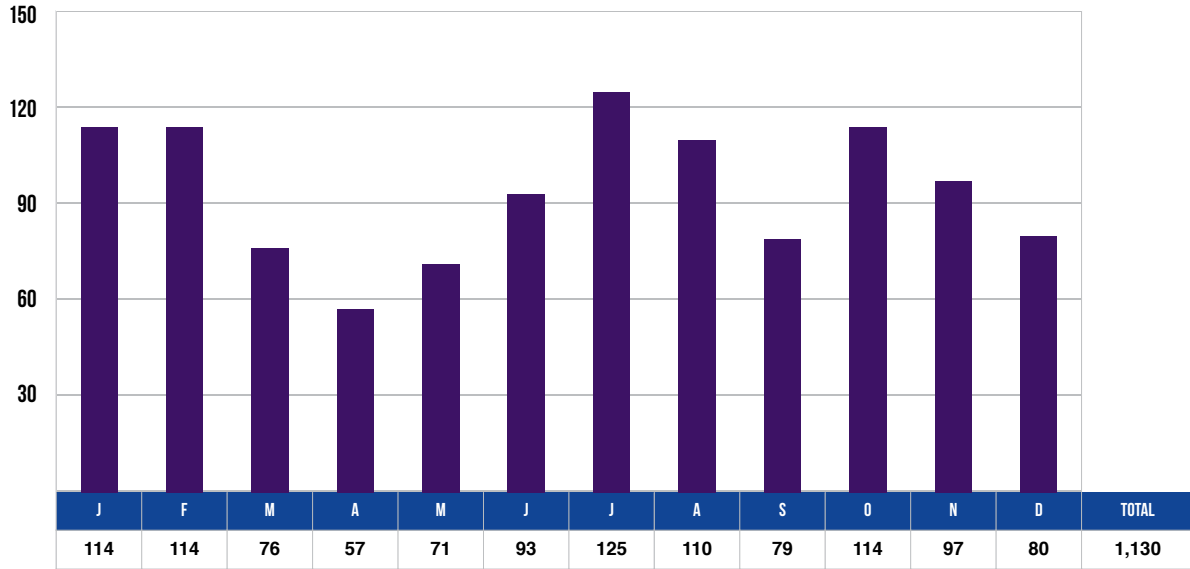


FATAL CRASHES

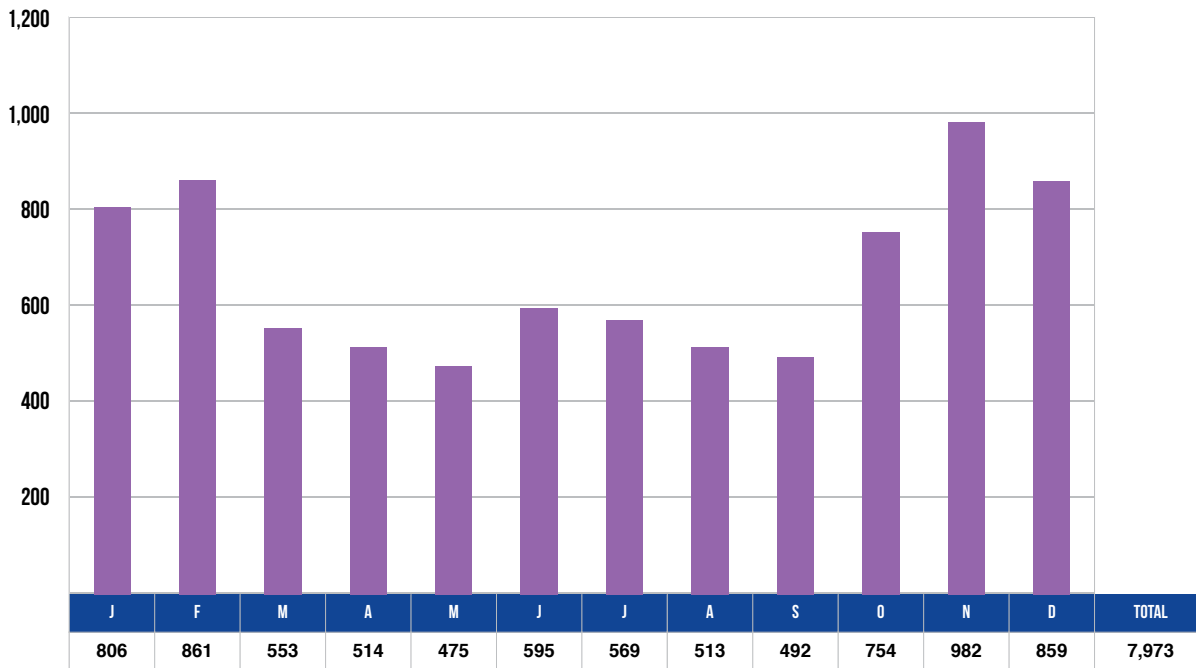


UPPER PENINSULA ALL CRASHES INJURY SEVERITY BY MONTH (CONTINUED)

INJURY CRASHES

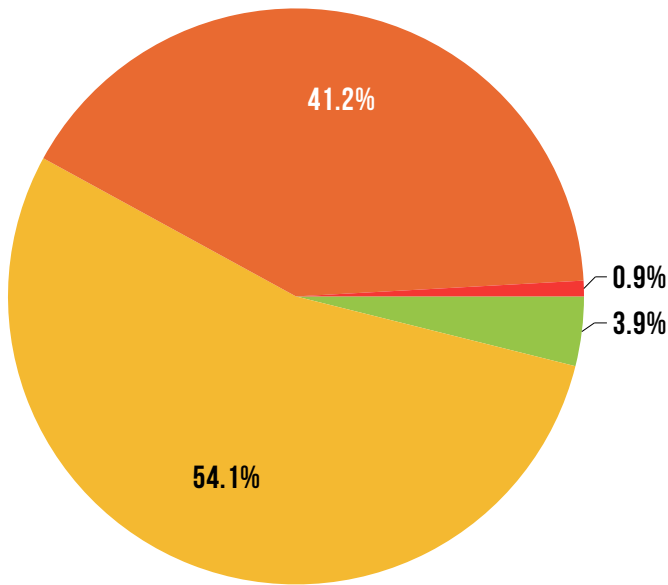


PROPERTY DAMAGE ONLY CRASHES

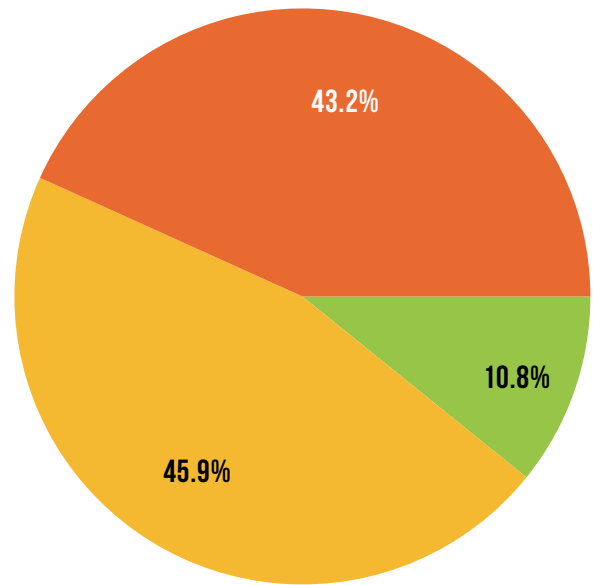


UPPER PENINSULA CRASH EXPERIENCE BY HIGHWAY CLASS

| HIGHWAY CLASS | ALL CRASHES | FATAL CRASHES | INJURY CRASHES | PROPERTY DAMAGE ONLY |
|-----------------------|-------------|---------------|----------------|----------------------|
| Interstate Routes | 356 | 4 | 37 | 315 |
| U.S. & Michigan Roads | 4,942 | 17 | 592 | 4,333 |
| County & City Roads | 3,762 | 16 | 492 | 3,254 |
| Uncoded & Errors | 80 | 0 | 9 | 71 |



ALL CRASHES



FATAL CRASHES

The highest percentage of all crashes (54.1%), fatal crashes (45.9%), injury crashes (52.4%), and property damage only crashes (54.3%) occurred on U.S. and Michigan roads.

UPPER PENINSULA CRASH EXPERIENCE BY CRASH TYPE

| CRASH TYPE | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------------------|--------------|--------------|---------------|--------------|----------------|------------|------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Single Vehicle | 5,406 | 59.1 | 23 | 62.2 | 106 | 162 | 218 | 4,897 |
| Head On | 90 | 1.0 | 3 | 8.1 | 11 | 11 | 15 | 50 |
| Head On – Left Turn | 118 | 1.3 | 1 | 2.7 | 8 | 15 | 23 | 71 |
| Angle | 1,212 | 13.3 | 8 | 21.6 | 36 | 59 | 172 | 937 |
| Rear End | 838 | 9.2 | 0 | 0.0 | 13 | 28 | 113 | 684 |
| Rear End – Left Turn | 94 | 1.0 | 0 | 0.0 | 2 | 6 | 10 | 76 |
| Rear End – Right Turn | 46 | 0.5 | 0 | 0.0 | 1 | 4 | 2 | 39 |
| Sideswipe – Same Direction | 478 | 5.2 | 0 | 0.0 | 8 | 8 | 17 | 445 |
| Sideswipe – Opposite Direction | 222 | 2.4 | 2 | 5.4 | 6 | 8 | 16 | 190 |
| Backing | 256 | 2.8 | 0 | 0.0 | 0 | 0 | 4 | 252 |
| Other/Unknown | 380 | 4.2 | 0 | 0.0 | 9 | 17 | 22 | 332 |
| TOTAL | 9,140 | 100.0 | 37 | 100.0 | 200 | 318 | 612 | 7,973 |

RELATIONSHIP TO ROADWAY

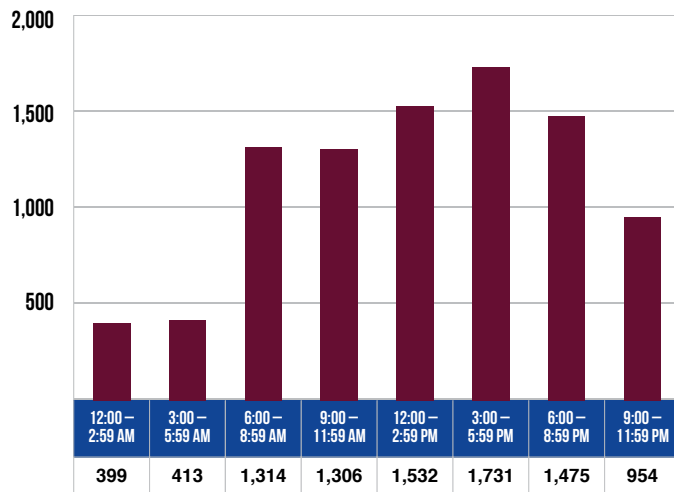
| LOCATION OF FIRST IMPACT | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------------|--------------|--------------|---------------|--------------|----------------|------------|------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| On Road | 7,684 | 84.1 | 23 | 62.2 | 137 | 225 | 482 | 6,817 |
| Median | 45 | 0.5 | 1 | 2.7 | 1 | 2 | 5 | 36 |
| Shoulder | 479 | 5.2 | 5 | 13.5 | 17 | 25 | 40 | 392 |
| Outside of Shoulder/Curb | 692 | 7.6 | 7 | 18.9 | 37 | 62 | 73 | 513 |
| Gore | 33 | 0.4 | 1 | 2.7 | 2 | 2 | 5 | 23 |
| On-Street Parking | 157 | 1.7 | 0 | 0.0 | 0 | 2 | 4 | 151 |
| Off the Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| On the Sidewalk | 10 | 0.1 | 0 | 0.0 | 1 | 0 | 2 | 7 |
| In the Bicycle Lane | 2 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 2 |
| Other/Unknown | 38 | 0.4 | 0 | 0.0 | 5 | 0 | 1 | 32 |
| TOTAL | 9,140 | 100.0 | 37 | 100.0 | 200 | 318 | 612 | 7,973 |

In the Upper Peninsula, only 7.6 percent of crashes occur outside of the shoulder/curb of the road, but these crashes account for 18.9 percent of the fatal crashes.

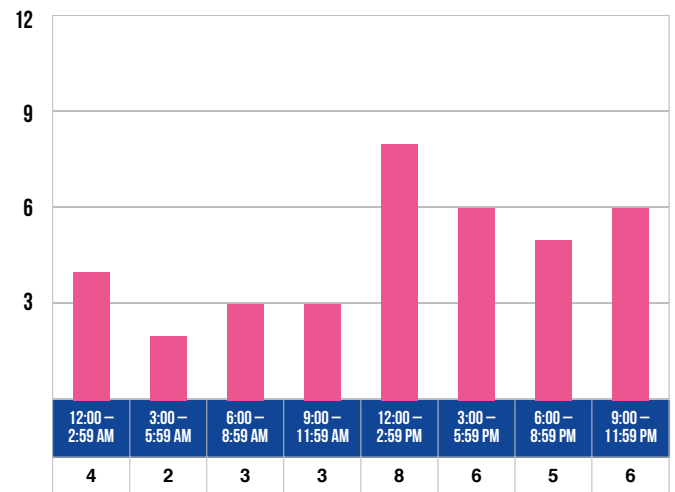
UPPER PENINSULA TIME AND SEVERITY

| TIME OF DAY | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------|--------------|--------------|---------------|--------------|----------------|------------|------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| 12:00 AM – 2:59 AM | 399 | 4.4 | 4 | 10.8 | 12 | 18 | 24 | 341 |
| 3:00 AM – 5:59 AM | 413 | 4.5 | 2 | 5.4 | 12 | 10 | 20 | 369 |
| 6:00 AM – 8:59 AM | 1,314 | 14.4 | 3 | 8.1 | 12 | 30 | 82 | 1,187 |
| 9:00 AM – 11:59 AM | 1,306 | 14.3 | 3 | 8.1 | 29 | 50 | 88 | 1,136 |
| 12:00 PM – 2:59 PM | 1,532 | 16.8 | 8 | 21.6 | 41 | 69 | 128 | 1,286 |
| 3:00 PM – 5:59 PM | 1,731 | 18.9 | 6 | 16.2 | 51 | 79 | 145 | 1,450 |
| 6:00 PM – 8:59 PM | 1,475 | 16.1 | 5 | 13.5 | 28 | 41 | 86 | 1,315 |
| 9:00 PM – 11:59 PM | 954 | 10.4 | 6 | 16.2 | 15 | 21 | 39 | 873 |
| Unknown | 16 | 0.2 | 0 | 0.0 | 0 | 0 | 0 | 16 |
| TOTAL | 9,140 | 100.0 | 37 | 100.0 | 200 | 318 | 612 | 7,973 |

ALL CRASHES BY TIME OF DAY



FATAL CRASHES BY TIME OF DAY

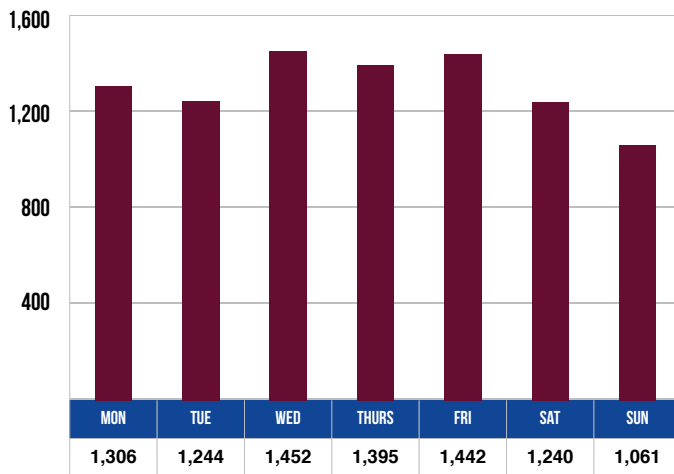


In the Upper Peninsula, crash frequencies peak in the late afternoon, then drop off until 6:00 AM (the morning rush hour). In 2019, fatal crashes were more prevalent in the PM hours than the AM hours, with the highest concentration (8) occurring during the 12:00 PM to 2:59 PM time period.

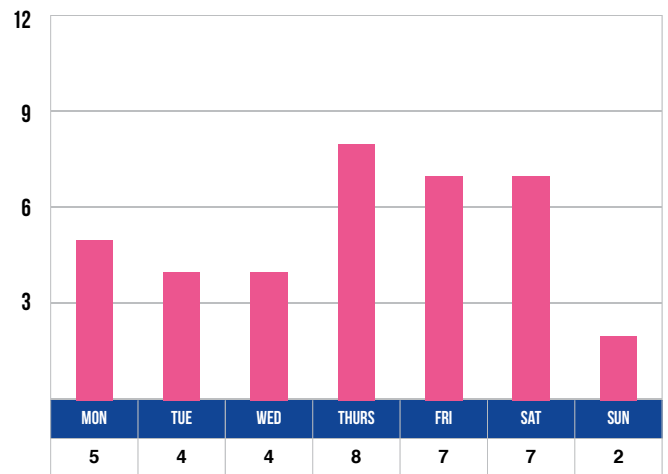
UPPER PENINSULA DAY OF WEEK

| DAY OF WEEK | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|-------------|-------------|------------|---------------|------------|----------------|-----|-----|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Monday | 1,306 | 14.3 | 5 | 13.5 | 37 | 41 | 87 | 1,136 |
| Tuesday | 1,244 | 13.6 | 4 | 10.8 | 23 | 45 | 81 | 1,091 |
| Wednesday | 1,452 | 15.9 | 4 | 10.8 | 25 | 48 | 95 | 1,280 |
| Thursday | 1,395 | 15.3 | 8 | 21.6 | 29 | 45 | 101 | 1,212 |
| Friday | 1,442 | 15.8 | 7 | 18.9 | 20 | 46 | 107 | 1,262 |
| Saturday | 1,240 | 13.6 | 7 | 18.9 | 40 | 47 | 83 | 1,063 |
| Sunday | 1,061 | 11.6 | 2 | 5.4 | 26 | 46 | 58 | 929 |
| TOTAL | 9,140 | 100.0 | 37 | 100.0 | 200 | 318 | 612 | 7,973 |

ALL CRASHES BY DAY OF WEEK



FATAL CRASHES BY DAY OF WEEK

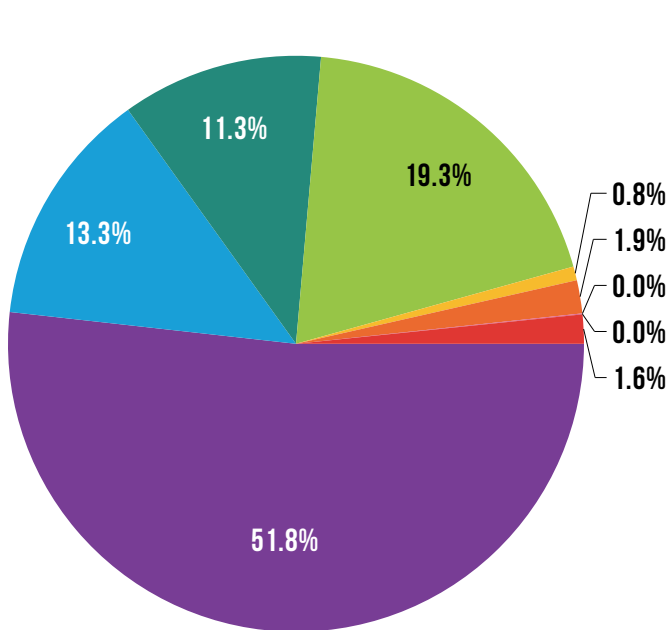


In the Upper Peninsula, overall crash frequencies are the highest on Wednesday (1,452), but Thursday has the highest number of fatal crashes (eight).

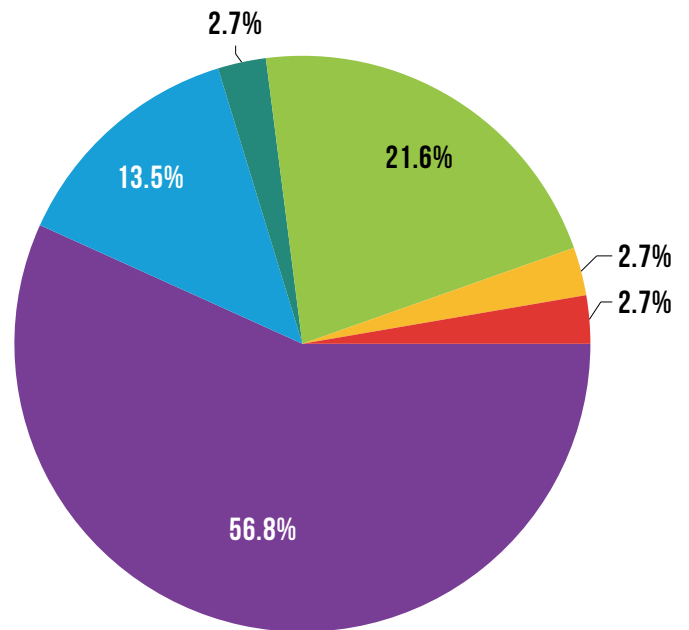
UPPER PENINSULA ROAD CONDITION

| ROAD SURFACE CONDITION | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------------|--------------|--------------|---------------|--------------|----------------|------------|------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Dry | 4,731 | 51.8 | 21 | 56.8 | 106 | 179 | 327 | 4,098 |
| Wet | 1,213 | 13.3 | 5 | 13.5 | 24 | 41 | 85 | 1,058 |
| Ice | 1,033 | 11.3 | 1 | 2.7 | 12 | 28 | 75 | 917 |
| Snow | 1,763 | 19.3 | 8 | 21.6 | 39 | 55 | 106 | 1,555 |
| Mud, Dirt, Gravel | 68 | 0.7 | 1 | 2.7 | 9 | 9 | 4 | 45 |
| Slush | 170 | 1.9 | 0 | 0.0 | 5 | 4 | 10 | 151 |
| Debris | 3 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 3 |
| Water (Standing/Flowing) | 5 | 0.1 | 0 | 0.0 | 1 | 0 | 1 | 3 |
| Sand | 3 | 0.0 | 0 | 0.0 | 2 | 0 | 0 | 1 |
| Oily | 2 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 2 |
| Other/Unknown | 149 | 1.6 | 1 | 2.7 | 2 | 2 | 4 | 140 |
| TOTAL | 9,140 | 100.0 | 37 | 100.0 | 200 | 318 | 612 | 7,973 |

■ DRY
 ■ WET/WATER
 ■ ICE
 ■ SNOW
 ■ MUD/SAND
 ■ SLUSH
 ■ DEBRIS
 ■ OILY
 ■ OTHER/UNKNOWN



ALL CRASHES



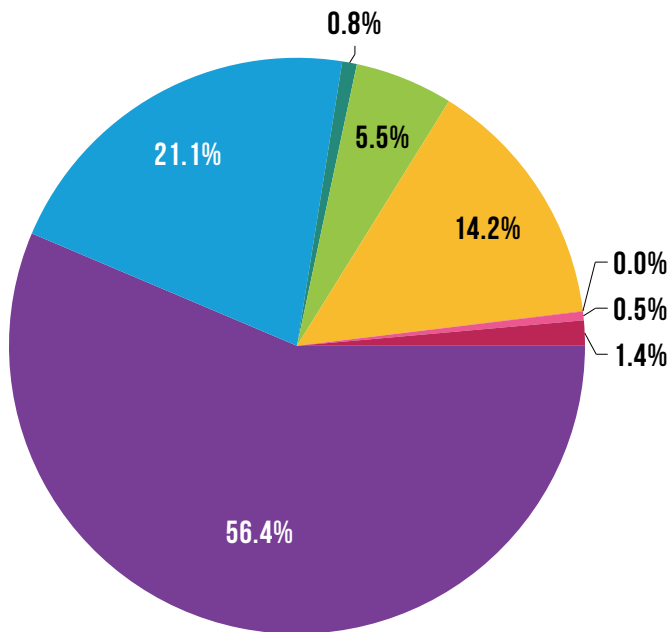
FATAL CRASHES

In the Upper Peninsula, the highest percentage of all crashes (51.8%), fatal crashes (56.8%), injury crashes (54.2%), and property damage only crashes (51.4%) occur on dry roads.

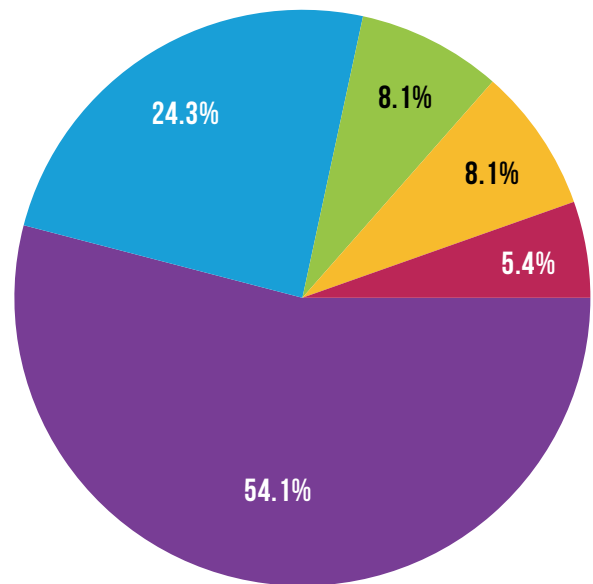
UPPER PENINSULA WEATHER CONDITION

| WEATHER CONDITION | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------------|--------------|--------------|---------------|--------------|----------------|------------|------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Clear | 5,153 | 56.4 | 20 | 54.1 | 134 | 186 | 352 | 4,461 |
| Cloudy | 1,932 | 21.1 | 9 | 24.3 | 32 | 68 | 131 | 1,692 |
| Fog | 75 | 0.8 | 0 | 0.0 | 1 | 1 | 7 | 66 |
| Rain | 504 | 5.5 | 3 | 8.1 | 11 | 19 | 34 | 437 |
| Snow | 1,114 | 12.2 | 3 | 8.1 | 14 | 34 | 71 | 992 |
| Severe Crosswinds | 3 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 3 |
| Sleet/Hail | 45 | 0.5 | 0 | 0.0 | 2 | 0 | 3 | 40 |
| Blowing Snow | 185 | 2.0 | 0 | 0.0 | 5 | 7 | 12 | 161 |
| Blowing Sand, Soil, Dirt | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Smoke | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Other/Unknown | 129 | 1.4 | 2 | 5.4 | 1 | 3 | 2 | 121 |
| TOTAL | 9,140 | 100.0 | 37 | 100.0 | 200 | 318 | 612 | 7,973 |

■ CLEAR
 ■ CLOUDY
 ■ FOG/SMOKE
 ■ RAIN
 ■ SNOW/BLOWING SNOW
 ■ SEVERE WIND/BLOWING SAND
 ■ SLEET/HAIL
 ■ OTHER/UNKNOWN



ALL CRASHES



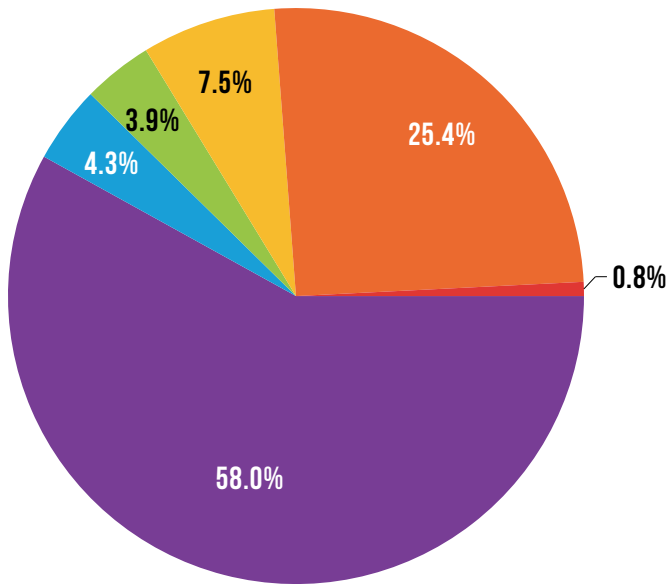
FATAL CRASHES

In the Upper Peninsula, the highest percentage of all crashes (56.4%), fatal crashes (54.1%), injury crashes (59.5%), and property damage only crashes (56.0%) occur during clear weather conditions.

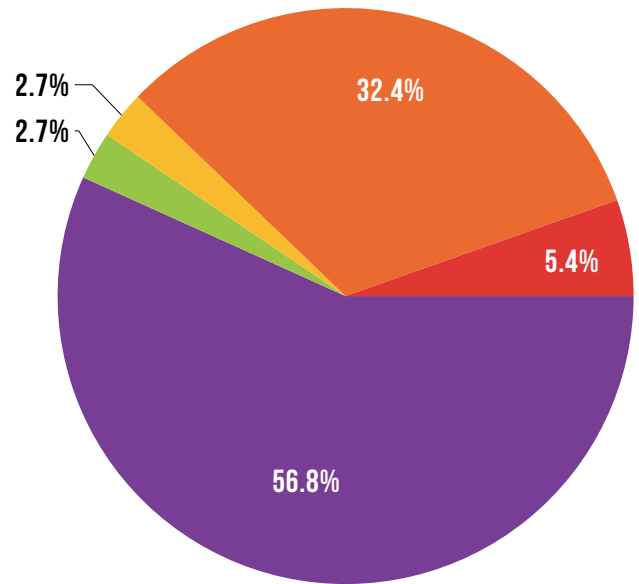
UPPER PENINSULA LIGHT CONDITION

| LIGHT CONDITION | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|------------------|--------------|--------------|---------------|--------------|----------------|------------|------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Daylight | 5,305 | 58.0 | 21 | 56.8 | 140 | 224 | 422 | 4,498 |
| Dawn | 395 | 4.3 | 0 | 0.0 | 6 | 11 | 19 | 359 |
| Dusk | 358 | 3.9 | 1 | 2.7 | 5 | 12 | 22 | 318 |
| Dark – Lighted | 687 | 7.5 | 1 | 2.7 | 11 | 21 | 55 | 599 |
| Dark – Unlighted | 2,323 | 25.4 | 12 | 32.4 | 38 | 50 | 94 | 2,129 |
| Other/Unknown | 72 | 0.8 | 2 | 5.4 | 0 | 0 | 0 | 70 |
| TOTAL | 9,140 | 100.0 | 37 | 100.0 | 200 | 318 | 612 | 7,973 |

■ DAYLIGHT
 ■ DAWN
 ■ DUSK
 ■ DARK – LIGHTED
 ■ DARK – UNLIGHTED
 ■ OTHER/UNKNOWN



ALL CRASHES



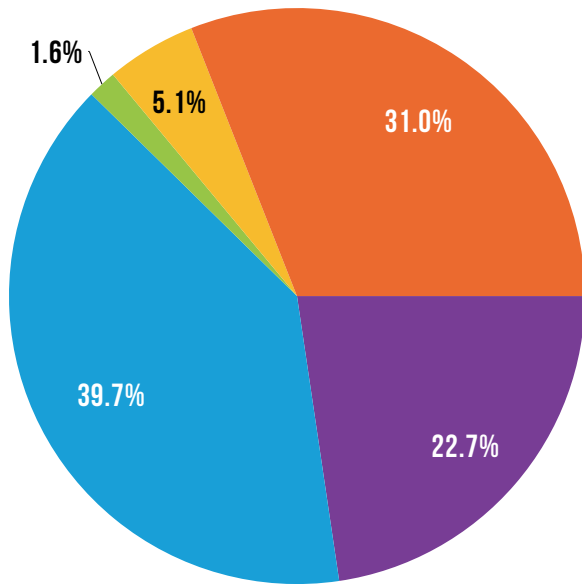
FATAL CRASHES

In the Upper Peninsula, the highest percentage of all crashes (58.0%), fatal crashes (56.8%), injury crashes (69.6%), and property damage only crashes (56.4%) occur during daylight hours.

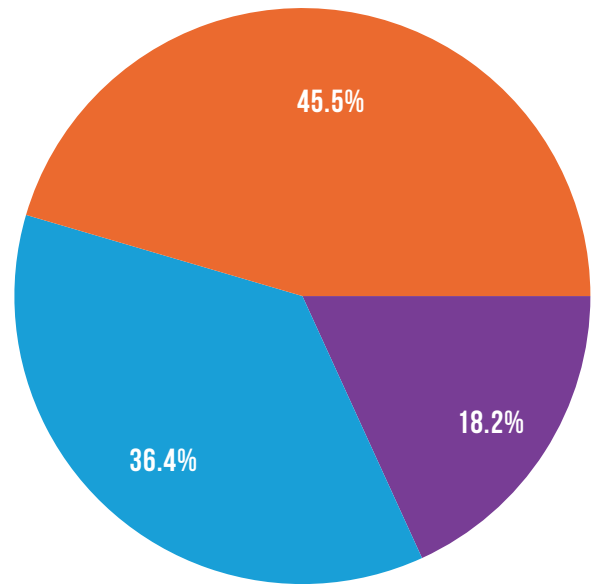
UPPER PENINSULA INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

| TRAFFIC CONTROL TYPE | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|---------------------------|--------------|--------------|---------------|--------------|----------------|------------|------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Signal | 520 | 22.7 | 2 | 18.2 | 9 | 27 | 80 | 402 |
| Stop Sign | 911 | 39.7 | 4 | 36.4 | 25 | 37 | 108 | 737 |
| Stop with Flashing Beacon | 37 | 1.6 | 0 | 0.0 | 2 | 5 | 4 | 26 |
| Yield Sign | 116 | 5.1 | 0 | 0.0 | 2 | 5 | 13 | 96 |
| None | 711 | 31.0 | 5 | 45.5 | 21 | 35 | 63 | 587 |
| Unknown | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| TOTAL | 2,295 | 100.0 | 11 | 100.0 | 59 | 109 | 268 | 1,848 |

■ SIGNAL
 ■ STOP SIGN
 ■ STOP WITH FLASHING BEACON
 ■ YIELD SIGN
 ■ NONE
 ■ UNKNOWN



ALL CRASHES

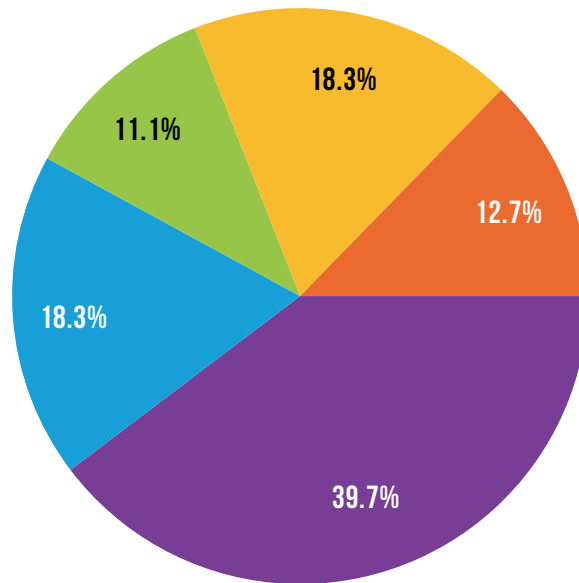


FATAL CRASHES

Compared to other intersection crashes, Upper Peninsula intersections with stop signs have the highest percentage of all crashes (39.7%) and injury crashes (39.0%).

UPPER PENINSULA CONSTRUCTION ZONE CRASHES

| CONSTRUCTION ZONE TYPE | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|---------------------------------|--|--------------|---------------|------------|----------------|----------|-----------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| CONSTRUCTION/MAINTENANCE | <i>Indicates roadway construction, maintenance, or repair. The building, maintenance, or repair of the road itself and roadway-related features (e.g., overhead signs, signals).</i> | | | | | | | |
| Lane Closure | 50 | 39.7 | 0 | 0.0 | 1 | 4 | 8 | 37 |
| Lane Shift/Crossover | 23 | 18.3 | 0 | 0.0 | 0 | 2 | 1 | 20 |
| Work on Shoulder/Median | 14 | 11.1 | 0 | 0.0 | 0 | 0 | 3 | 11 |
| Intermittent/Moving Work | 23 | 18.3 | 0 | 0.0 | 1 | 0 | 1 | 21 |
| Other | 16 | 12.7 | 0 | 0.0 | 1 | 0 | 0 | 15 |
| Unknown | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| TOTAL | 126 | 100.0 | 0 | 0.0 | 3 | 6 | 13 | 104 |



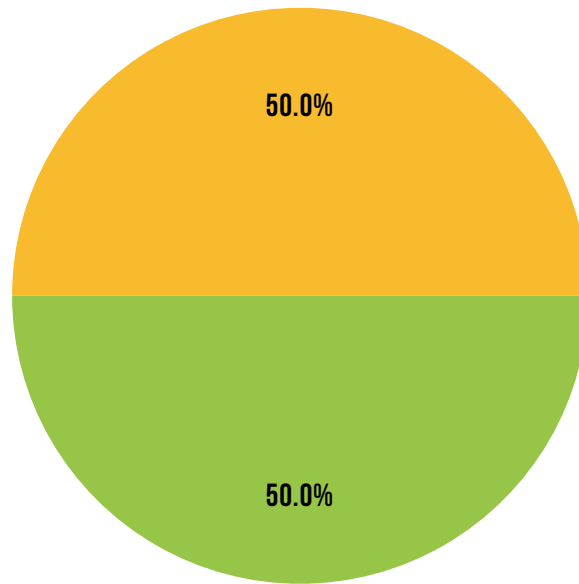
ALL CRASHES

For crashes taking place in construction/maintenance zones, the highest percentage of all crashes (39.7%), injury crashes (59.1%), and property damage only crashes (35.6%) occur in lane closure situations.

UPPER PENINSULA CONSTRUCTION ZONE CRASHES

| CONSTRUCTION ZONE TYPE | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------------|--|--------------|---------------|------------|----------------|----------|----------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| UTILITY | <i>Indicates work on facilities other than the roadway such as telephone, electrical, cable television, water, or sewer.</i> | | | | | | | |
| Lane Closure | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Lane Shift/Crossover | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Work on Shoulder/Median | 1 | 50.0 | 0 | 0.0 | 0 | 0 | 0 | 1 |
| Intermittent/Moving Work | 1 | 50.0 | 0 | 0.0 | 0 | 0 | 0 | 1 |
| Other | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| TOTAL | 2 | 100.0 | 0 | 0.0 | 0 | 0 | 0 | 2 |

LANE CLOSURE
 LANE SHIFT/CROSSOVER
 WORK ON SHOULDER/MEDIAN
 INTERMITTENT/MOVING WORK
 OTHER
 UNKNOWN



ALL CRASHES

Two crashes occurred in a utility construction zone in the Upper Peninsula in 2019, both property damage only. One involved work on the shoulder/median, and the other involved intermittent/moving work.