

2016

Tippecanoe County Vehicle Crash Report

10/23/2017

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## Glossary

**Analysis Period-** The calendar years for which data was queried, studied, and analyzed while this report was being produced. For this report, the analysis period is 2013 through and including 2015.

**ARIES** – Automated Reporting Information Exchange System developed and maintained by the Indiana State Police. ARIES provides officer’s an electronic way to complete and submit the Indiana Officer’s Standard Crash Report form. The system also allows authorized individuals access to the Indiana State Police crash records database. ARIES was formerly known as the Vehicle Crash Record System (VCRS).

**Bicycle** – Indiana Code IC 9-13-2-14, “Bicycle” means any foot-propelled vehicle, irrespective of the number of wheels in contact with the ground.

**Curve Crash-** A crash that occurs on a segment of road with a horizontal curve.

**Fatal Injury Crash-** A crash that results in death for one or more of the vehicle(s) occupants or non-motorists. Other occupants or non-motorists may be injured in additional to the fatality.

**Motorcycle-** Indiana Code IC 9-13-2-108, “Motorcycle” means a motor vehicle with motive power that has a seat or saddle for the use of the rider, is designed to travel on not more than three wheels in contact with the ground, and satisfies the operational and equipment specifications described in 49 CFR 571 and IC 9-19.

**Pedestrian-** Any person afoot. This includes persons walking bicycles, riding skateboards, rollerblading and using other forms of non-motorized/non-pedaled forms of transportation.

**Personal Injury Crash-** A crash where at least one of the vehicle occupants or non-motorists were injured, but not fatally. Non-Fatal Injuries are classified as Incapacitating, Non-Incapacitating, or Probable.

**Property Damage Only Crash (PDO)**- A crash in which a vehicle or property is damaged and the occupant or non-motorist is not injured. A crash is required by law to be reported if the amount of the damage is \$750 or more.

**Roadway** – That portion of a highway improved, designed, or ordinarily used for vehicular travel. The roadway does not include unpaved areas, paved sidewalks, or shared use paths.

**Street, Road or Highway** – The entire width between the right-of-way lines of every way or place open to the use of the public for purposes of vehicular traffic. This includes the sidewalk.

**Vehicle** – Is any vehicle, whether it be an automobile, truck, motorcycle, moped, scooter, or bicycle.

## Contents

|  |    |
|--|----|
| Glossary.....  | 3  |
| Contents.....  | 5  |
| List of Figures .....                                    | 6  |
| List of Tables .....                                     | 7  |
| Chapter 1: Introduction .....                            | 8  |
| Chapter 2: Age and Gender .....                          | 21 |
| Chapter 3: Time of Crashes.....                          | 27 |
| Chapter 4: Weather and Road Conditions.....              | 31 |
| Chapter 5: Injuries and Fatalities .....                 | 37 |
| Chapter 6: Drug and Alcohol Involvement in Crashes ..... | 52 |
| Chapter 7: Curve Crashes.....                            | 58 |
| Chapter 8: Motorcycle Crashes.....                       | 66 |
| Chapter 9: Bicycle Crashes.....                          | 72 |
| Chapter 10: Pedestrian Crashes.....                      | 78 |
| Chapter 11: Other Crash Types and Factors .....          | 84 |

## List of Figures

|   |    |
|---|----|
| Figure 1: Percentage of Crashes by Crash Severity.....                | 9  |
| Figure 2: Tippecanoe County Crashes .....                             | 10 |
| Figure 3: Lafayette and West Lafayette Crashes .....                  | 11 |
| Figure 4: Percentage of Crashes by Primary Factor Category.....       | 19 |
| Figure 5: Drivers in Crashes by Gender.....                           | 26 |
| Figure 6: Injured Passengers by Gender .....                          | 26 |
| Figure 7: Crashes by Month.....                                       | 27 |
| Figure 8: 3 Most Common Crash Types by Month.....                     | 28 |
| Figure 9: Crashes by Day of the Week .....                            | 29 |
| Figure 10: 3 Most Common Crash Types by Day of the Week.....          | 29 |
| Figure 11: Crashes by Time of Day .....                               | 30 |
| Figure 12: 3 Most Common Crash Types by Time of Day .....             | 30 |
| Figure 13: Tippecanoe County Crashes in Clear Weather Conditions..... | 32 |
| Figure 14: Lafayette and West Lafayette Crashes in Clear Weather..... | 33 |
| Figure 15: Tippecanoe County Winter Weather Crashes.....              | 34 |
| Figure 16: Lafayette and West Lafayette Winter Weather Crashes.....   | 35 |
| Figure 17: Injuries by Time of Day .....                              | 40 |
| Figure 18: Injuries by Day of the Week.....                           | 41 |
| Figure 19: Tippecanoe County Incapacitating Injuries .....            | 42 |
| Figure 20: Incapacitating Injuries by Gender .....                    | 45 |
| Figure 21: Incapacitating Injuries by Day of the Week .....           | 46 |
| Figure 22: Tippecanoe County Fatality Crashes.....                    | 47 |
| Figure 23: Lafayette and West Lafayette Fatality Crashes.....         | 48 |
| Figure 24: Fatalities by Day of the Week .....                        | 50 |
| Figure 25: Fatalities by Time of Day.....                             | 51 |
| Figure 26: Tippecanoe County Alcohol Crashes.....                     | 53 |
| Figure 27: Tippecanoe County Drug Crashes.....                        | 54 |
| Figure 28: Drug and Alcohol Crashes by Month .....                    | 55 |
| Figure 29: Drug and Alcohol Crashes by Day of the Week.....           | 56 |
| Figure 30: Drug and Alcohol Crashes by Time of Day .....              | 56 |
| Figure 31: Tippecanoe County Curve Crashes .....                      | 59 |
| Figure 32: Lafayette and West Lafayette Curve Crashes .....           | 60 |
| Figure 33: Curve Crashes by Month .....                               | 63 |
| Figure 34: Curve Crashes by Day of the Week.....                      | 63 |
| Figure 35: Curve Crashes by Time of Day .....                         | 64 |
| Figure 36: Curve Crashes by Road Surface Condition .....              | 65 |
| Figure 37: Tippecanoe County Motorcycle Crashes .....                 | 67 |
| Figure 38: Lafayette and West Lafayette Motorcycle Crashes .....      | 68 |
| Figure 39: Motorcycle Crashes by Month.....                           | 70 |
| Figure 40: Motorcycle Crashes by Time of Day .....                    | 71 |
| Figure 41: Tippecanoe County Bicycle Crashes.....                     | 73 |
| Figure 42: Lafayette and West Lafayette Bicycle Crashes.....          | 74 |
| Figure 43: Bicycle Crashes by Time of Day.....                        | 77 |
| Figure 44: Tippecanoe County Pedestrian Crashes.....                  | 79 |
| Figure 45: Lafayette and West Lafayette Pedestrian Crashes .....      | 80 |
| Figure 46: Pedestrian Crashes by Time of Day.....                     | 83 |
| Figure 47: Tippecanoe County Deer Crashes.....                        | 85 |
| Figure 48: Tippecanoe County Hit and Run Crashes.....                 | 86 |
| Figure 49: Lafayette and West Lafayette Hit and Run Crashes .....     | 87 |
| Figure 50: Tippecanoe County Single Vehicle Crashes.....              | 89 |
| Figure 51: Lafayette and West Lafayette Single Vehicle Crashes.....   | 90 |

# List of Tables

|  |    |
|--|----|
| Table 1: Crash Severity.....   | 9  |
| Table 2: Crashes by Township.....  | 12 |
| Table 3: Crashes by City/Town.....   | 12 |
| Table 4: Crashes 0-100 Feet from Intersection.....                           | 14 |
| Table 5: Crashes 0-250 Feet from Intersection.....                           | 15 |
| Table 6: Intersections with Multiple Fatalities/Incapacitating Injuries..... | 16 |
| Table 7: Primary Factors in Crashes.....                                     | 17 |
| Table 8: Primary Factor Categories.....                                      | 18 |
| Table 9: Summary of Crashes by Primary Factor Categories.....                | 19 |
| Table 10: Crashes by Crash Type.....   | 20 |
| Table 11: Crashes by Age and Gender of Driver.....                           | 21 |
| Table 12: Crash Participants by Age.....                                     | 21 |
| Table 13: Primary Factors by Age of Driver.....                              | 22 |
| Table 14: Primary Factors by Gender of Driver.....                           | 23 |
| Table 15: Crash Type by Age of Driver.....                                   | 24 |
| Table 16: Crash Type by Gender of Driver.....                                | 25 |
| Table 17: Crash Percentages by Day of the Week.....                          | 29 |
| Table 18: Crashes by Weather Conditions.....                                 | 31 |
| Table 19: Crashes by Road Surface Condition.....                             | 36 |
| Table 20: Crashes by Amount of Sunlight.....                                 | 36 |
| Table 21: Injury and Fatality Crashes.....                                   | 37 |
| Table 22: Injuries by Primary Factor.....                                    | 38 |
| Table 23: Injuries by Crash Type.....  | 39 |
| Table 24: Injuries by Month.....   | 40 |
| Table 25: Injuries by Age and Gender.....                                    | 41 |
| Table 26: Severity of Injuries in Crashes.....                               | 41 |
| Table 27: Incapacitating Injuries by Primary Factor.....                     | 43 |
| Table 28: Incapacitating Injuries by Crash Type.....                         | 44 |
| Table 29: Incapacitating Injuries by Age and Gender.....                     | 44 |
| Table 30: Incapacitating Injuries by Month.....                              | 45 |
| Table 31: Incapacitating Injuries by Time of Day.....                        | 46 |
| Table 32: Fatalities by Primary Factor.....                                  | 49 |
| Table 33: Fatalities by Crash Type.....                                      | 49 |
| Table 34: Fatalities by Age and Gender.....                                  | 49 |
| Table 35: Fatalities by Month.....   | 50 |
| Table 36: Drug and Alcohol Crash Statistics.....                             | 52 |
| Table 37: Drug and Alcohol Crash Data.....                                   | 52 |
| Table 38: Crash Types for Drug and Alcohol Crashes.....                      | 55 |
| Table 39: Drug and Alcohol Crashes by Age and Gender.....                    | 57 |
| Table 40: Crashes by Road Curvature.....                                     | 58 |
| Table 41: Primary Factors for Curve Crashes.....                             | 61 |
| Table 42: Crash Type for Curve Crashes.....                                  | 62 |
| Table 43: Curve Crashes by Weather Conditions.....                           | 64 |
| Table 44: Motorcycle Crash Injuries and Fatalities.....                      | 66 |
| Table 45: Crash Types for Motorcycle Crashes.....                            | 69 |
| Table 46: Motorcycle Crashes by Day of Week.....                             | 70 |
| Table 47: Bicycle Crash Injuries and Fatalities.....                         | 72 |
| Table 48: Crash Types for Bicycle Crashes.....                               | 75 |
| Table 49: Bicycle Crashes by Month.....                                      | 76 |
| Table 50: Bicycle Crashes by Day of the Week.....                            | 76 |
| Table 51: Pedestrian Injuries and Fatalities.....                            | 78 |
| Table 52: Crash Types for Pedestrian Crashes.....                            | 81 |
| Table 53: Pedestrian Crashes by Month.....                                   | 82 |
| Table 54: Pedestrian Crashes by Day of the Week.....                         | 82 |
| Table 55: Summary of Number of Vehicles Involved in Crashes.....             | 88 |
| Table 56: Crashes by Road Surface.....                                       | 91 |
| Table 57: Crashes by Driver's State of Residence.....                        | 92 |

## Chapter 1: Introduction

Every year, thousands of vehicle crashes occur in Tippecanoe County. Given the number of crashes and their seemingly random nature, the task of identifying specific factors that contribute to the cause of a crash can be very complex. A single crash can have several variables that cause it to occur. Extracting those variables from a crash report is not an exact science, but some trends can be extracted and analyzed.

The objective of this report is to analyze crashes in Tippecanoe County in 2016 and identify any area-wide trends and hazardous intersections. Problem areas can then receive follow-up analysis to identify specific problems and potential solutions. The analysis in this report includes all *Personal Injury*, *Fatal*, and *Property Damage* crashes that occurred in 2016 on public streets, local as well as state maintained. Crashes that occurred in alleys, parking lots, parking garages, loading docks, and other private property were not analyzed.

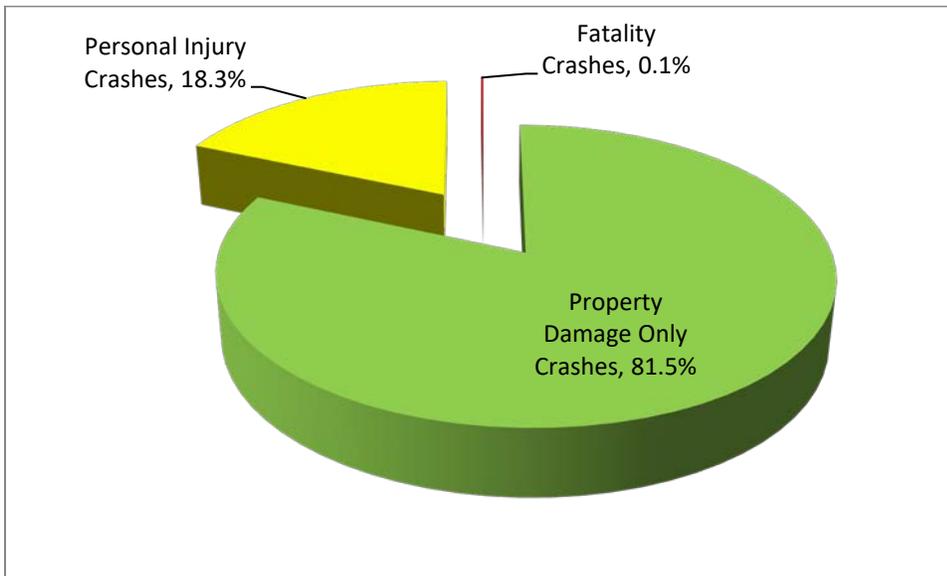
The data for this report came from the Indiana State Police (ISP) Automated Reporting Information Exchange System (ARIES) database of crash reports submitted by the police departments of Lafayette, West Lafayette, Purdue, Dayton, Battleground, the Tippecanoe County Sheriff, the Department of Natural Resources, and the Indiana State Police. The ARIES database contains general information about crashes, but in many cases, individual crash reports were reviewed in detail to get more information. This data required some quality control, because it did not always match up with the officer's crash report.

This chapter gives a general overview of crashes in 2016. Crashes are classified according to severity as *Property Damage Only* (damage only to vehicles and objects), *Personal Injury* (one or more persons injured), and *Fatality* (one or more fatalities). Table 1 and Figure 1 show that most crashes can be categorized as "property damage only." More details on injury and fatal crashes are given in Chapter 5.

**Table 1: Crash Severity**

| Severity of Crash    | Crashes     | Percentage of Total Crashes | Total Injured Persons | Total Fatalities |
|----------------------|-------------|-----------------------------|-----------------------|------------------|
| Property Damage Only | 4755        | 81.5%                       | 0                     | 0                |
| Personal Injury      | 1070        | 18.3%                       | 1425                  | 0                |
| Fatality             | 8           | 0.1%                        | 5                     | 8                |
| <b>Total</b>         | <b>5833</b> | <b>100.0%</b>               | <b>1430</b>           | <b>8</b>         |

**Figure 1: Percentage of Crashes by Crash Severity**



Figures 2 and 3 show the locations of crashes in 2016 in Tippecanoe County.

Figure 2: Tippecanoe County Crashes

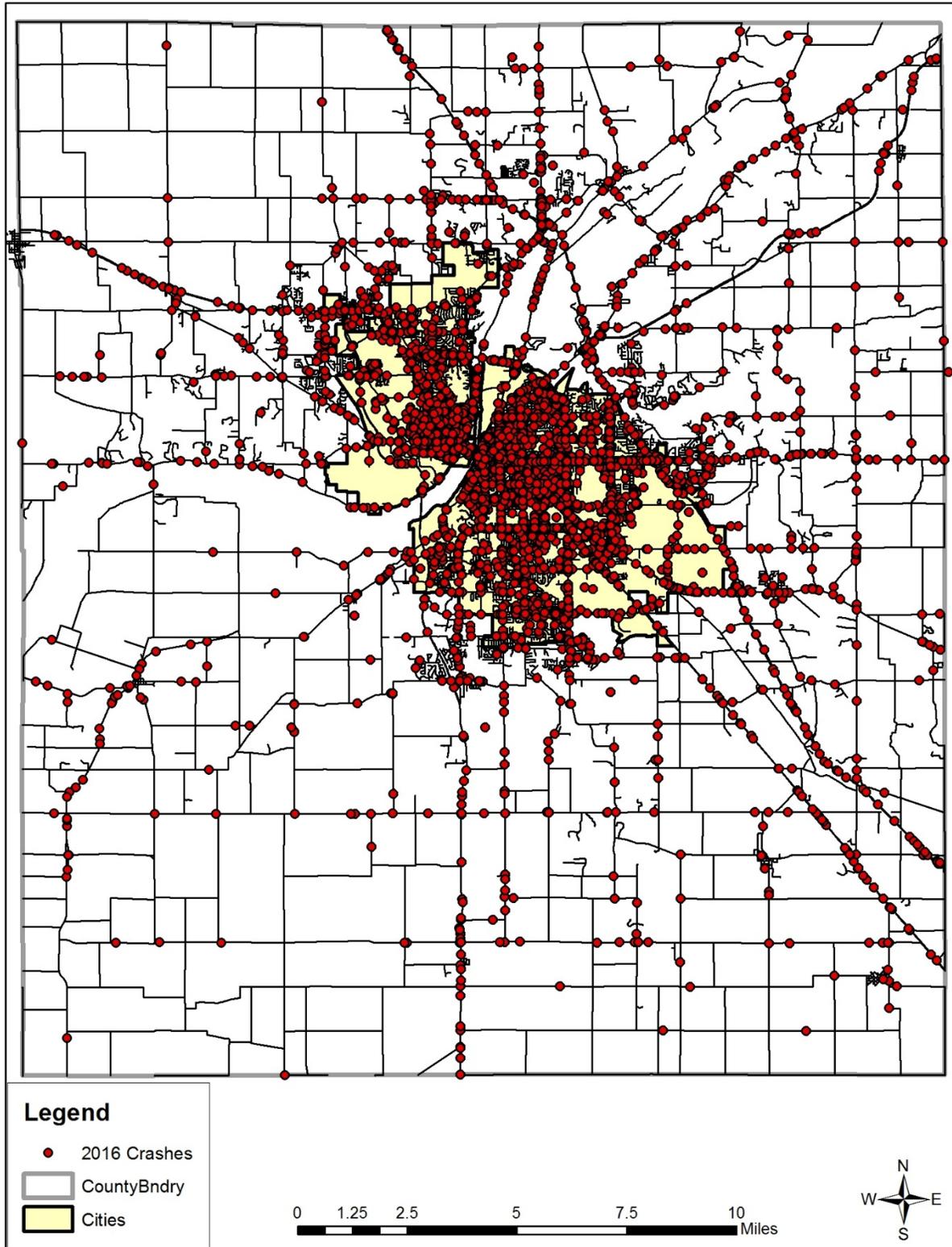


Figure 3: Lafayette and West Lafayette Crashes

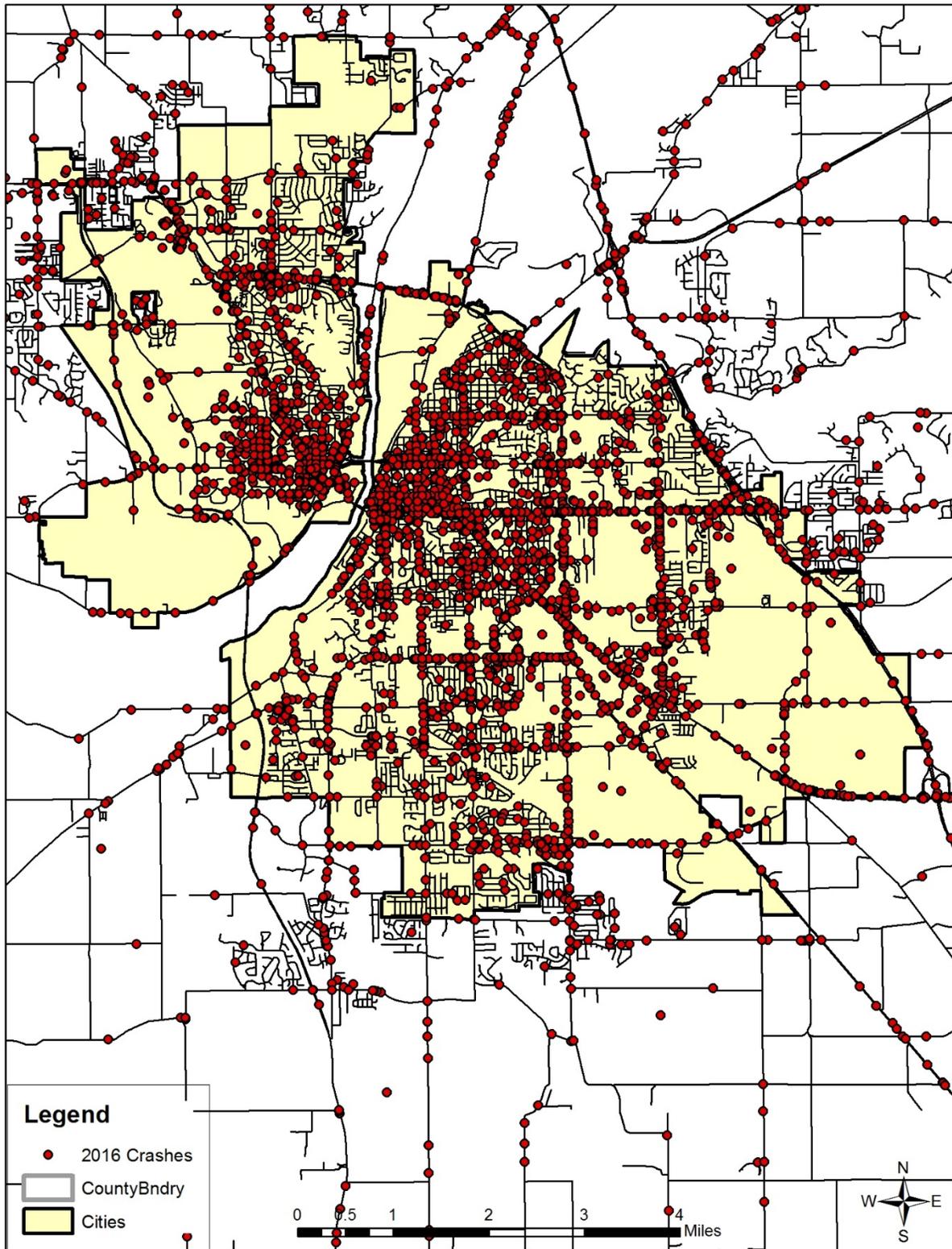


Table 2 shows that Fairfield and Wabash townships had the most crashes in 2016.

**Table 2: Crashes by Township**

| <b>Township</b>   | <b>Number of Crashes</b> |
|-------------------|--------------------------|
| <b>Fairfield</b>  | 2902                     |
| <b>Wabash</b>     | 1239                     |
| <b>Wea</b>        | 573                      |
| <b>Tippecanoe</b> | 383                      |
| <b>Sheffield</b>  | 221                      |
| <b>Perry</b>      | 131                      |
| <b>Lauramie</b>   | 90                       |
| <b>Washington</b> | 75                       |
| <b>Shelby</b>     | 65                       |
| <b>Randolph</b>   | 49                       |
| <b>Union</b>      | 47                       |
| <b>Wayne</b>      | 43                       |
| <b>Jackson</b>    | 15                       |
| <b>Total</b>      | 5833                     |

In ARIES, each crash was assigned to the closest city or town to where it occurred. Table 3 shows that Lafayette had the most crashes.

**Table 3: Crashes by City/Town**

| <b>City/Town</b>      | <b>Crashes</b> |
|-----------------------|----------------|
| <b>Battle Ground</b>  | 65             |
| <b>Clarks Hill</b>    | 24             |
| <b>Dayton</b>         | 84             |
| <b>Lafayette</b>      | 4199           |
| <b>Shadeland</b>      | 4              |
| <b>West Lafayette</b> | 1452           |
| <b>Unlisted</b>       | 4              |
| <b>West Point</b>     | 1              |
| <b>Total</b>          | 5833           |

Crashes occurred at various locations throughout Tippecanoe County. Mapping crash data shows that some crashes occurred in the middle of an intersection, some in the approach to an intersection, and others far away from the influence of an intersection. Crashes can be put into three categories based on their distance from an intersection: 0-100 feet from the intersection, 0-250 feet from an intersection, and mid-block.

Both the 0-100 feet from intersection and 0-250 feet from intersection categories include crashes that took place inside of the intersection.

Table 4 shows the intersections where at least 20 crashes occurred within 100 feet of the intersection. Table 5 shows all the intersections where at least 20 crashes occurred within 250 feet of the intersection.

**Table 4: Crashes 0-100 Feet from Intersection**

| <b>Rank</b> | <b>Intersection</b>                     | <b>Crashes 0-100 Feet from Intersection</b> |
|-------------|---|---|
| <b>1</b>    | Interstate 65 and South St              | 59  |
| <b>2</b>    | Creasy Ln and South St                  | 54  |
| <b>T3</b>   | Creasy Ln and State Road 38             | 43  |
| <b>T3</b>   | Sagamore Pky and South St               | 43  |
| <b>T5</b>   | Eastland Dr and South St                | 40  |
| <b>T5</b>   | Farabee Dr and South St                 | 40  |
| <b>7</b>    | Fairington Ave and South St             | 35  |
| <b>T8</b>   | Creasy Ln and McCarty Ln                | 32  |
| <b>T8</b>   | Sagamore Pky and Salisbury St           | 32  |
| <b>T10</b>  | Interstate 65 and State Road 43         | 30  |
| <b>T10</b>  | Cumberland Ave and Sagamore Pky         | 30  |
| <b>12</b>   | Interstate 65 and State Road 25         | 27  |
| <b>T13</b>  | Interstate 65 and State Road 38         | 26  |
| <b>T13</b>  | Old State Road 25 and State Road 25     | 26  |
| <b>T15</b>  | Earl Ave and Main St                    | 25  |
| <b>T15</b>  | Shenandoah Dr and South St              | 25  |
| <b>T17</b>  | Brady Ln and Concord Rd                 | 24  |
| <b>T17</b>  | Century Pl and South St                 | 24  |
| <b>T17</b>  | Concord Rd and Veterans Memorial Pky    | 24  |
| <b>T17</b>  | Park East Blvd and South St             | 24  |
| <b>T17</b>  | Sagamore Pky and Soldiers Home Rd       | 24  |
| <b>T22</b>  | US 52 and Veterans Memorial Pky         | 23  |
| <b>T22</b>  | Grant St and State St                   | 23  |
| <b>T24</b>  | 18 <sup>th</sup> St and South St        | 21  |
| <b>T24</b>  | 18 <sup>th</sup> St and Teal Rd         | 21  |
| <b>T24</b>  | Sagamore Pky and State Road 38          | 21  |
| <b>T27</b>  | State Road 38 and Veterans Memorial Pky | 20  |
| <b>T27</b>  | River Rd and State St                   | 20  |

**Table 5: Crashes 0-250 Feet from Intersection**

| <b>Rank</b> | <b>Intersection</b>                           | <b>Crashes 0-250 Feet from Intersection</b> |
|-------------|---|---|
| <b>1</b>    | Creasy Ln and South St                        | 63  |
| <b>2</b>    | Interstate 65 and South St                    | 60  |
| <b>3</b>    | Sagamore Pky and South St                     | 49  |
| <b>4</b>    | Eastland Dr and South St                      | 45  |
| <b>5</b>    | Creasy Ln and State Road 38                   | 44  |
| <b>6</b>    | Farabee Dr and South St                       | 42  |
| <b>7</b>    | Fairington Ave and South St                   | 40  |
| <b>8</b>    | Creasy Ln and McCarty Ln                      | 39  |
| <b>T9</b>   | Sagamore Pky and Salisbury St                 | 35  |
| <b>T9</b>   | Cumberland Ave and Sagamore Pky               | 35  |
| <b>11</b>   | Interstate 65 and State Road 43               | 33  |
| <b>12</b>   | Earl Ave and Main St                          | 31  |
| <b>13</b>   | Shenandoah Dr and South St                    | 29  |
| <b>14</b>   | Interstate 65 and State Road 25               | 28  |
| <b>T15</b>  | Old State Road 25 and State Road 25           | 27  |
| <b>T15</b>  | Sagamore Pky and State Road 38                | 27  |
| <b>T17</b>  | Interstate 65 and State Road 38               | 26  |
| <b>T17</b>  | Park East Blvd and South St                   | 26  |
| <b>T19</b>  | Brady Ln and Concord Rd                       | 25  |
| <b>T19</b>  | Century Pl and South St                       | 25  |
| <b>T19</b>  | Concord Rd and Veterans Memorial Pky          | 25  |
| <b>T19</b>  | Sagamore Pky and Soldiers Home Rd             | 25  |
| <b>T23</b>  | US 52 and Veterans Memorial Pky               | 24  |
| <b>T23</b>  | Grant St and State St                         | 24  |
| <b>T23</b>  | Sagamore Pky and Union St                     | 24  |
| <b>26</b>   | 18 <sup>th</sup> St and Teal Rd               | 23  |
| <b>27</b>   | State Road 38 and Veterans Memorial Pky       | 22  |
| <b>T28</b>  | 18 <sup>th</sup> St and South St              | 21  |
| <b>T28</b>  | Harrison Bridge and River Rd                  | 21  |
| <b>T30</b>  | River Rd and State St                         | 20  |
| <b>T30</b>  | 18 <sup>th</sup> St and Veterans Memorial Pky | 20  |
| <b>T30</b>  | Sagamore Pky and Schuyler Ave                 | 20  |
| <b>T30</b>  | Kossuth St and Sagamore Pky                   | 20  |

Twelve intersections had a combination of more than one fatality and incapacitating injury. Table 6 gives a summary of fatalities and incapacitating injuries at those locations. More details on fatalities and incapacitating injuries are included in Chapter 5.

**Table 6: Intersections with Multiple Fatalities/Incapacitating Injuries**

| <b>Intersection</b>                    | <b>Fatalities</b> | <b>Incapacitating Injuries</b> |
|--|-------------------|--------------------------------|
| <b>Interstate 65 and State Road 43</b> | 0                 | 4                              |
| <b>Brady Ln and Portsmouth Dr</b>      | 1                 | 1                              |
| <b>S 975 E and US 52</b>               | 1                 | 1                              |
| <b>State Road 25 and W 300 S</b>       | 1                 | 1                              |
| <b>Shenandoah Dr and South St</b>      | 0                 | 2                              |
| <b>Creasy Ln and Greenbush St</b>      | 0                 | 2                              |
| <b>Earl Ave and South St</b>           | 0                 | 2                              |
| <b>Sagamore Pky and Yeager Rd</b>      | 0                 | 2                              |
| <b>State Road 28 and US 52</b>         | 0                 | 2                              |
| <b>US 231 and US 52</b>                | 0                 | 2                              |
| <b>E 450 S and US 52</b>               | 0                 | 2                              |
| <b>E 1200 S and US 231</b>             | 0                 | 2                              |

In each crash report, officers can specify up to two “Driver(s)”, one “Vehicle”, and one “Environmental” contributing circumstance for each vehicle. One of the contributing circumstances must be listed as the primary contributing circumstance (also called the “primary factor”) for the crash. Table 7 shows that “Following too closely” and “Failure to Yield Right of Way” were the most common primary factors in crashes.

**Table 7: Primary Factors in Crashes**

| <b>Primary Factor</b>                    | <b>Number Of Crashes</b> |
|--|--------------------------|
| Following Too Closely                    | 1160                     |
| Failure To Yield Right Of Way            | 1017                     |
| Unsafe Speed                             | 600                      |
| Ran Off Road Right                       | 422                      |
| Improper Lane Usage                      | 331                      |
| Animal/Object In Roadway                 | 313                      |
| Other (Driver) - Explain In Narrative    | 298                      |
| Speed Too Fast For Weather Conditions    | 290                      |
| Unsafe Backing                           | 279                      |
| Disregard Signal/Reg Sign                | 256                      |
| Improper Turning                         | 226                      |
| Left Of Center                           | 102                      |
| Improper Passing                         | 90                       |
| Driver Distracted - Explain In Narrative | 69                       |
| Roadway Surface Condition                | 66                       |
| Unsafe Lane Movement                     | 66                       |
| Overcorrecting/Oversteering              | 45                       |
| Driver Asleep Or Fatigued                | 43                       |
| Pedestrian Action                        | 20                       |
| Brake Failure Or Defective               | 18                       |
| Cell Phone Usage                         | 18                       |
| Other (Environmental) - Explain In Narr  | 18                       |
| Tire Failure Or Defective                | 15                       |
| Driver Illness                           | 14                       |
| Wrong Way On One Way                     | 14                       |
| Obstruction Not Marked                   | 10                       |
| Other (Vehicle) - Explain In Narrative   | 9                        |
| Steering Failure                         | 7                        |
| Insecure/Leaky Load                      | 6                        |
| View Obstructed                          | 4                        |
| Engine Failure Or Defective              | 2                        |
| Tow Hitch Failure                        | 2                        |
| Headlight Defective Or Not On            | 1                        |
| Lane Marking Obscured                    | 1                        |
| Traffic Control Inoperative/Missing      | 1                        |
| <b>Total</b>                             | <b>5833</b>              |

In this report, the term “fault” refers to the party who was responsible for causing a crash. Determining fault can be difficult because there are often complex circumstances that affect pedestrian, bicyclist, and vehicle behavior. This data is also not usually available from a vehicle owner’s private insurance provider, so it was approximated for this report using the primary factor information from ARIES, then sorted into one of four categories: Driver Error, Environmental Factors, Vehicular Factors, and Miscellaneous Factors. Table 8 shows which primary factors were grouped into these categories.

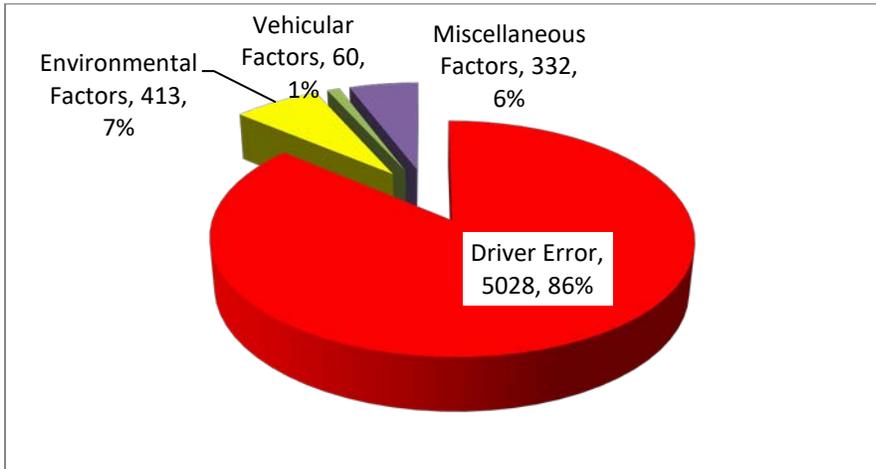
| Table 8: Primary Factor Categories |  |
|------------------------------------|--|
| Primary Factor Category            | Primary Factor                               |
| Driver Error                       | Following Too Closely                        |
| Driver Error                       | Failure To Yield Right Of Way                |
| Driver Error                       | Ran Off Road Right                           |
| Driver Error                       | Improper Lane Usage                          |
| Driver Error                       | Speed Too Fast For Weather Conditions        |
| Driver Error                       | Unsafe Backing                               |
| Driver Error                       | Disregard Signal/Regulatory Sign             |
| Driver Error                       | Unsafe Speed                                 |
| Driver Error                       | Improper Turning                             |
| Driver Error                       | Left Of Center                               |
| Driver Error                       | Driver Distracted - Explain In Narrative     |
| Driver Error                       | Improper Passing                             |
| Driver Error                       | Unsafe Lane Movement                         |
| Driver Error                       | Overcorrecting/Oversteering                  |
| Driver Error                       | Driver Asleep Or Fatigued                    |
| Driver Error                       | Cell Phone Usage                             |
| Driver Error                       | Wrong Way On One Way                         |
| Environmental Factors              | Animal/Object In Roadway                     |
| Environmental Factors              | Roadway Surface Condition                    |
| Environmental Factors              | Other (Environmental) - Explain In Narrative |
| Environmental Factors              | Lane Marking Obscured                        |
| Environmental Factors              | Obstruction Not Marked                       |
| Environmental Factors              | Traffic Control Inoperative/Missing          |
| Environmental Factors              | View Obstructed                              |
| Miscellaneous Factors              | Other (Driver) - Explain In Narrative        |
| Miscellaneous Factors              | Pedestrian Action                            |
| Miscellaneous Factors              | Driver Illness                               |
| Vehicular Factors                  | Brake Failure Or Defective                   |
| Vehicular Factors                  | Tire Failure Or Defective                    |
| Vehicular Factors                  | Insecure/Leaky Load                          |
| Vehicular Factors                  | Other (Vehicle) - Explain In Narrative       |
| Vehicular Factors                  | Steering Failure                             |
| Vehicular Factors                  | Engine Failure Or Defective                  |
| Vehicular Factors                  | Tow Hitch Failure                            |
| Vehicular Factors                  | Headlight Defective Or Not On                |

Table 9 and Figure 4 show that driver error was the most common primary factor category in 2016 crashes.

**Table 9: Summary of Crashes by Primary Factor Categories**

| Primary Factor Category | Crashes |
|-------------------------|---------|
| Driver Error            | 5028    |
| Environmental Factors   | 413     |
| Vehicular Factors       | 60      |
| Miscellaneous Factors   | 332     |
| Total                   | 5833    |

**Figure 4: Percentage of Crashes by Primary Factor Category**



The manner of collision (also referred to as crash type in this report), is a description of the way a collision between vehicles or objects occurs. Table 10 shows that rear end crashes were the most common crash type.

**Table 10: Crashes by Crash Type**

| <b>Crash Type</b>                         | <b>Crashes</b> |
|---|----------------|
| <b>Rear End</b>                           | 2037           |
| <b>Right Angle</b>                        | 842            |
| <b>Ran Off Road</b>                       | 735            |
| <b>Same Direction Sideswipe</b>           | 725            |
| <b>Left Turn</b>                          | 244            |
| <b>Collision With Deer</b>                | 242            |
| <b>Other - Explain In Narrative</b>       | 237            |
| <b>Backing Crash</b>                      | 231            |
| <b>Head On Between Two Motor Vehicles</b> | 166            |
| <b>Opposite Direction Sideswipe</b>       | 116            |
| <b>Right Turn</b>                         | 85             |
| <b>Non-Collision</b>                      | 39             |
| <b>Collision With Object In Road</b>      | 36             |
| <b>Collision With Animal Other</b>        | 19             |
| <b>Left/Right Turn</b>                    | 18             |
| <b>Rear To Rear</b>                       | 5              |
| <b>Total</b>                              | 5777           |

## Chapter 2: Age and Gender

Different age groups and genders may behave differently when using the road. These behavioral differences may affect how, when, and where crashes occur. This chapter analyzes trends in the age and gender of crash participants.

Table 11 shows that 16-24 year-old drivers were the most likely age group to be involved in crashes.

**Table 11: Crashes by Age and Gender of Driver**

|               | <16 | 16-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|---------------|-----|-------|-------|-------|-------|-------|-----|-------|
| <b>Male</b>   | 9   | 1512  | 1122  | 782   | 780   | 587   | 511 | 5303  |
| <b>Female</b> | 4   | 1334  | 926   | 661   | 524   | 497   | 398 | 4344  |
| <b>Total</b>  | 13  | 2846  | 2048  | 1443  | 1304  | 1084  | 909 | 9647  |

In a crash, there are several different types of participants that can be categorized as follows: drivers, injured persons, pedalcyclists, or pedestrians. Table 12 gives a summary (by age) of participants in crashes. In this table, “Injured Person” refers to a passenger in one of the vehicles that sustained an injury. It does not apply to a driver, pedestrian, or pedalcyclist that was injured.

**Table 12: Crash Participants by Age**

|                       | <16 | 16-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|-----------------------|-----|-------|-------|-------|-------|-------|-----|-------|
| <b>Driver</b>         | 13  | 2868  | 2050  | 1443  | 1304  | 1084  | 909 | 9671  |
| <b>Injured Person</b> | 78  | 97    | 51    | 32    | 27    | 19    | 30  | 334   |
| <b>Pedalcyclist</b>   | 6   | 24    | 3     | 3     | 2     | 3     | 0   | 41    |
| <b>Pedestrian</b>     | 8   | 18    | 11    | 2     | 6     | 3     | 3   | 51    |
| <b>Total</b>          | 105 | 3007  | 2115  | 1480  | 1339  | 1109  | 942 | 10097 |

Table 13 shows that following too closely was the primary cause of crashes for almost every age group.

**Table 13: Primary Factors by Age of Driver**

|   | <16 | 16-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|---|-----|-------|-------|-------|-------|-------|-----|-------|
| <b>Following Too Closely</b>                        | 1   | 748   | 518   | 372   | 354   | 261   | 192 | 2446  |
| <b>Failure To Yield Right Of Way</b>                | 2   | 630   | 391   | 258   | 225   | 226   | 244 | 1976  |
| <b>Unsafe Speed</b>                                 | 2   | 308   | 256   | 195   | 152   | 113   | 94  | 1120  |
| <b>Ran Off Road Right</b>                           | 0   | 144   | 110   | 35    | 43    | 30    | 32  | 394   |
| <b>Improper Lane Usage</b>                          | 0   | 111   | 98    | 68    | 74    | 61    | 57  | 469   |
| <b>Animal/Object In Roadway</b>                     | 0   | 80    | 53    | 64    | 57    | 53    | 13  | 320   |
| <b>Other (Driver) - Explain In Narrative</b>        | 1   | 104   | 75    | 60    | 41    | 41    | 36  | 358   |
| <b>Speed Too Fast For Weather Conditions</b>        | 0   | 168   | 87    | 77    | 55    | 40    | 19  | 446   |
| <b>Unsafe Backing</b>                               | 1   | 96    | 69    | 46    | 44    | 38    | 38  | 332   |
| <b>Disregard Signal/Reg Sign</b>                    | 1   | 115   | 112   | 64    | 71    | 54    | 76  | 493   |
| <b>Improper Turning</b>                             | 2   | 90    | 78    | 50    | 50    | 50    | 31  | 351   |
| <b>Left Of Center</b>                               | 0   | 39    | 36    | 28    | 26    | 17    | 13  | 159   |
| <b>Improper Passing</b>                             | 0   | 29    | 24    | 23    | 32    | 18    | 13  | 139   |
| <b>Driver Distracted - Explain In Narrative</b>     | 1   | 35    | 28    | 22    | 18    | 16    | 3   | 123   |
| <b>Roadway Surface Condition</b>                    | 1   | 32    | 22    | 17    | 6     | 8     | 4   | 90    |
| <b>Unsafe Lane Movement</b>                         | 1   | 29    | 27    | 16    | 16    | 22    | 11  | 122   |
| <b>Overcorrecting/Oversteering</b>                  | 0   | 21    | 8     | 4     | 5     | 6     | 5   | 49    |
| <b>Driver Asleep Or Fatigued</b>                    | 0   | 15    | 16    | 5     | 8     | 6     | 9   | 59    |
| <b>Pedestrian Action</b>                            | 0   | 6     | 3     | 1     | 3     | 3     | 2   | 18    |
| <b>Brake Failure Or Defective</b>                   | 0   | 10    | 7     | 5     | 3     | 6     | 2   | 33    |
| <b>Cell Phone Usage</b>                             | 0   | 13    | 5     | 9     | 0     | 2     | 1   | 30    |
| <b>Other (Environmental) - Explain In Narrative</b> | 0   | 5     | 3     | 4     | 2     | 4     | 1   | 19    |
| <b>Tire Failure Or Defective</b>                    | 0   | 7     | 3     | 6     | 3     | 1     | 1   | 21    |
| <b>Driver Illness</b>                               | 0   | 4     | 5     | 3     | 0     | 4     | 4   | 20    |
| <b>Wrong Way On One Way</b>                         | 0   | 11    | 3     | 2     | 4     | 1     | 4   | 25    |
| <b>Obstruction Not Marked</b>                       | 0   | 2     | 0     | 2     | 6     | 0     | 0   | 10    |
| <b>Other (Vehicle) - Explain In Narrative</b>       | 0   | 3     | 4     | 2     | 4     | 0     | 1   | 14    |
| <b>Steering Failure</b>                             | 0   | 3     | 4     | 0     | 0     | 0     | 1   | 8     |
| <b>Insecure/Leaky Load</b>                          | 0   | 5     | 1     | 1     | 1     | 1     | 2   | 11    |
| <b>View Obstructed</b>                              | 0   | 2     | 0     | 0     | 0     | 2     | 0   | 4     |
| <b>Engine Failure Or Defective</b>                  | 0   | 0     | 2     | 2     | 0     | 0     | 0   | 4     |
| <b>Tow Hitch Failure</b>                            | 0   | 0     | 0     | 1     | 1     | 0     | 0   | 2     |
| <b>Headlight Defective Or Not On</b>                | 0   | 2     | 0     | 0     | 0     | 0     | 0   | 2     |
| <b>Lane Marking Obscured</b>                        | 0   | 0     | 1     | 1     | 0     | 0     | 0   | 2     |
| <b>Traffic Control Inoperative/Missing</b>          | 0   | 1     | 1     | 0     | 0     | 0     | 0   | 2     |
| <b>Total</b>  | 13  | 2868  | 2050  | 1443  | 1304  | 1084  | 909 | 9671  |

Table 14 shows that following too closely was the most common primary cause of crashes for both genders.

**Table 14: Primary Factors by Gender of Driver**

|  | Male        | Female      | Total        |
|--|-------------|-------------|--------------|
| Following Too Closely                    | 1348        | 1171        | 2519         |
| Failure To Yield Right Of Way            | 1112        | 996         | 2108         |
| Unsafe Speed                             | 605         | 552         | 1157         |
| Disregard Signal/Reg Sign                | 281         | 260         | 541          |
| Improper Lane Usage                      | 263         | 216         | 479          |
| Speed Too Fast For Weather Conditions    | 249         | 209         | 458          |
| Ran Off Road Right                       | 259         | 161         | 420          |
| Other (Driver) - Explain In Narrative    | 215         | 158         | 373          |
| Improper Turning                         | 193         | 164         | 357          |
| Unsafe Backing                           | 180         | 153         | 333          |
| Animal/Object In Roadway                 | 197         | 126         | 323          |
| Left Of Center                           | 95          | 74          | 169          |
| Improper Passing                         | 80          | 62          | 142          |
| Driver Distracted - Explain In Narrative | 65          | 64          | 129          |
| Unsafe Lane Movement                     | 80          | 33          | 113          |
| Roadway Surface Condition                | 55          | 36          | 91           |
| Driver Asleep Or Fatigued                | 34          | 28          | 62           |
| Overcorrecting/Oversteering              | 30          | 22          | 52           |
| Pedestrian Action                        | 27          | 11          | 38           |
| Brake Failure Or Defective               | 23          | 10          | 33           |
| Cell Phone Usage                         | 15          | 15          | 30           |
| Wrong Way On One Way                     | 18          | 8           | 26           |
| Driver Illness                           | 12          | 9           | 21           |
| Tire Failure Or Defective                | 13          | 7           | 20           |
| Other (Environmental) - Explain In Narr  | 10          | 9           | 19           |
| Other (Vehicle) - Explain In Narrative   | 6           | 7           | 13           |
| Insecure/Leaky Load                      | 7           | 4           | 11           |
| Obstruction Not Marked                   | 7           | 3           | 10           |
| Steering Failure                         | 4           | 4           | 8            |
| View Obstructed                          | 2           | 3           | 5            |
| Engine Failure Or Defective              | 1           | 3           | 4            |
| Tow Hitch Failure                        | 2           | 0           | 2            |
| Headlight Defective Or Not On            | 0           | 2           | 2            |
| Lane Marking Obscured                    | 1           | 1           | 2            |
| Traffic Control Inoperative/Missing/Obsc | 0           | 2           | 2            |
| <b>Total</b>                             | <b>5489</b> | <b>4583</b> | <b>10072</b> |

Table 15 shows that rear end crashes were the most common crash type for every age group.

**Table 15: Crash Type by Age of Driver**

| <b>Crash Type</b>                         | <b>&lt;16</b> | <b>16-24</b> | <b>25-34</b> | <b>35-44</b> | <b>45-54</b> | <b>55-64</b> | <b>65+</b> | <b>Total</b> |
|---|---------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| <b>Rear End</b>                           | 3             | 1247         | 905          | 668          | 577          | 461          | 331        | 4192         |
| <b>Right Angle</b>                        | 3             | 483          | 320          | 213          | 215          | 197          | 205        | 1636         |
| <b>Same Direction Sideswipe</b>           | 2             | 312          | 230          | 176          | 166          | 151          | 139        | 1176         |
| <b>Ran Off Road</b>                       | 2             | 269          | 173          | 94           | 71           | 56           | 51         | 716          |
| <b>Left Turn</b>                          | 0             | 134          | 104          | 64           | 51           | 50           | 58         | 461          |
| <b>Backing Crash</b>                      | 0             | 79           | 57           | 37           | 34           | 29           | 37         | 273          |
| <b>Collision With Deer</b>                | 0             | 60           | 36           | 49           | 44           | 42           | 12         | 243          |
| <b>Head On Between Two Motor Vehicles</b> | 0             | 73           | 69           | 31           | 28           | 19           | 22         | 242          |
| <b>Other - Explain In Narrative</b>       | 0             | 79           | 60           | 32           | 33           | 22           | 12         | 238          |
| <b>Opposite Direction Sideswipe</b>       | 0             | 54           | 34           | 24           | 27           | 21           | 13         | 173          |
| <b>Right Turn</b>                         | 2             | 38           | 27           | 25           | 28           | 16           | 18         | 154          |
| <b>Collision With Object In Road</b>      | 0             | 5            | 10           | 11           | 11           | 3            | 3          | 43           |
| <b>Non-Collision</b>                      | 1             | 10           | 7            | 4            | 12           | 2            | 3          | 39           |
| <b>Left/Right Turn</b>                    | 0             | 8            | 8            | 4            | 2            | 7            | 5          | 34           |
| <b>Collision With Animal Other</b>        | 0             | 5            | 1            | 5            | 1            | 7            | 0          | 19           |
| <b>Rear To Rear</b>                       | 0             | 4            | 1            | 1            | 2            | 1            | 0          | 9            |
| <b>Total</b>                              | 13            | 2860         | 2042         | 1438         | 1302         | 1084         | 909        | 9648         |

Table 16 shows that rear end crashes were the most common crash type for both genders.

**Table 16: Crash Type by Gender of Driver**

| <b>Crash Type</b>                         | <b>Male</b> | <b>Female</b> | <b>Total</b> |
|---|-------------|---------------|--------------|
| <b>Rear End</b>                           | 2232        | 1955          | 4187         |
| <b>Right Angle</b>                        | 862         | 774           | 1636         |
| <b>Same Direction Sideswipe</b>           | 633         | 528           | 1161         |
| <b>Ran Off Road</b>                       | 447         | 268           | 715          |
| <b>Left Turn</b>                          | 237         | 224           | 461          |
| <b>Backing Crash</b>                      | 149         | 124           | 273          |
| <b>Collision With Deer</b>                | 152         | 91            | 243          |
| <b>Head On Between Two Motor Vehicles</b> | 141         | 101           | 242          |
| <b>Other - Explain In Narrative</b>       | 156         | 79            | 235          |
| <b>Opposite Direction Sideswipe</b>       | 101         | 72            | 173          |
| <b>Right Turn</b>                         | 89          | 65            | 154          |
| <b>Collision With Object In Road</b>      | 27          | 16            | 43           |
| <b>Non-Collision</b>                      | 27          | 12            | 39           |
| <b>Left/Right Turn</b>                    | 18          | 16            | 34           |
| <b>Collision With Animal Other</b>        | 10          | 9             | 19           |
| <b>Rear To Rear</b>                       | 2           | 7             | 9            |
| <b>Total</b>                              | 5283        | 4341          | 9624         |

Figure 5 shows that males were the drivers in 55% of crashes.

**Figure 5: Drivers in Crashes by Gender**

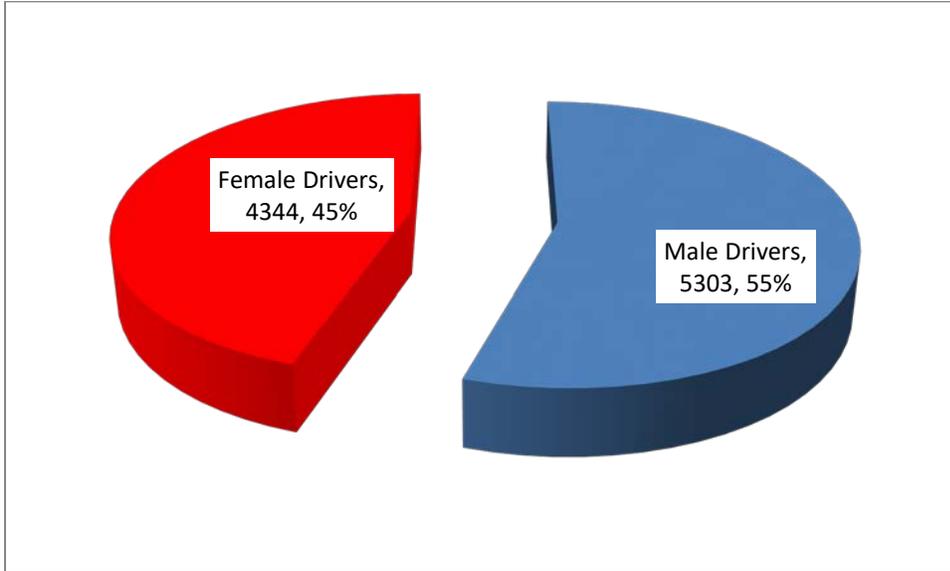
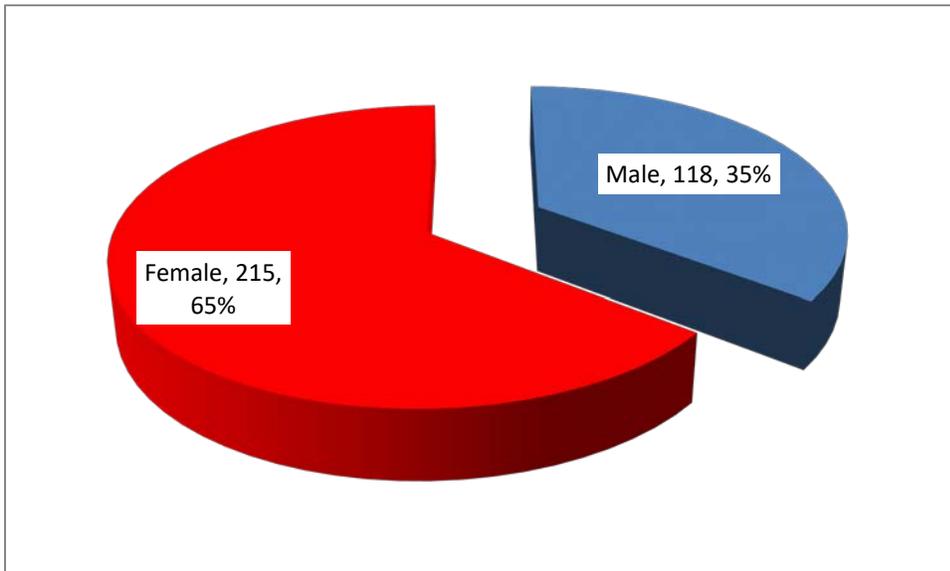


Figure 6 shows the number of passengers injured in crashes, broken down by gender.

**Figure 6: Injured Passengers by Gender**



## Chapter 3: Time of Crashes

Drivers often behave differently at different times of the year, week, or day. These behavioral changes can be due to weather, increased/decreased level of distraction, fatigue, or several other factors. This chapter analyzes trends in the times when crashes occurred.

Figure 7 shows that the highest number of crashes occurred in November.

Figure 7: Crashes by Month

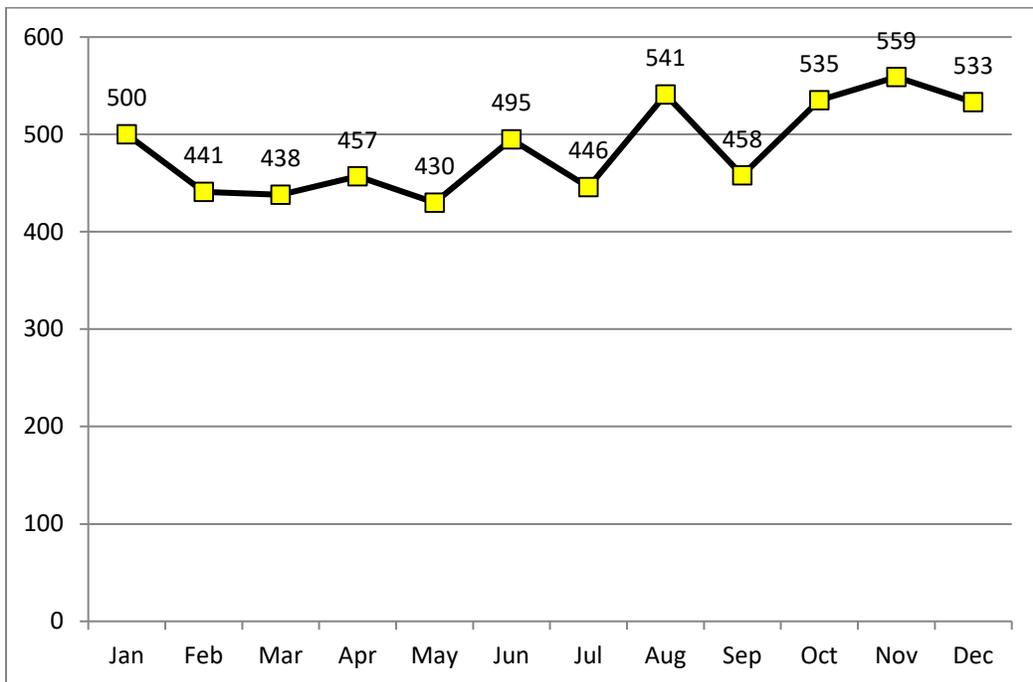


Figure 8 shows crashes by month for the three most common crash types (rear end, right angle, and ran off road).

Figure 8: 3 Most Common Crash Types by Month

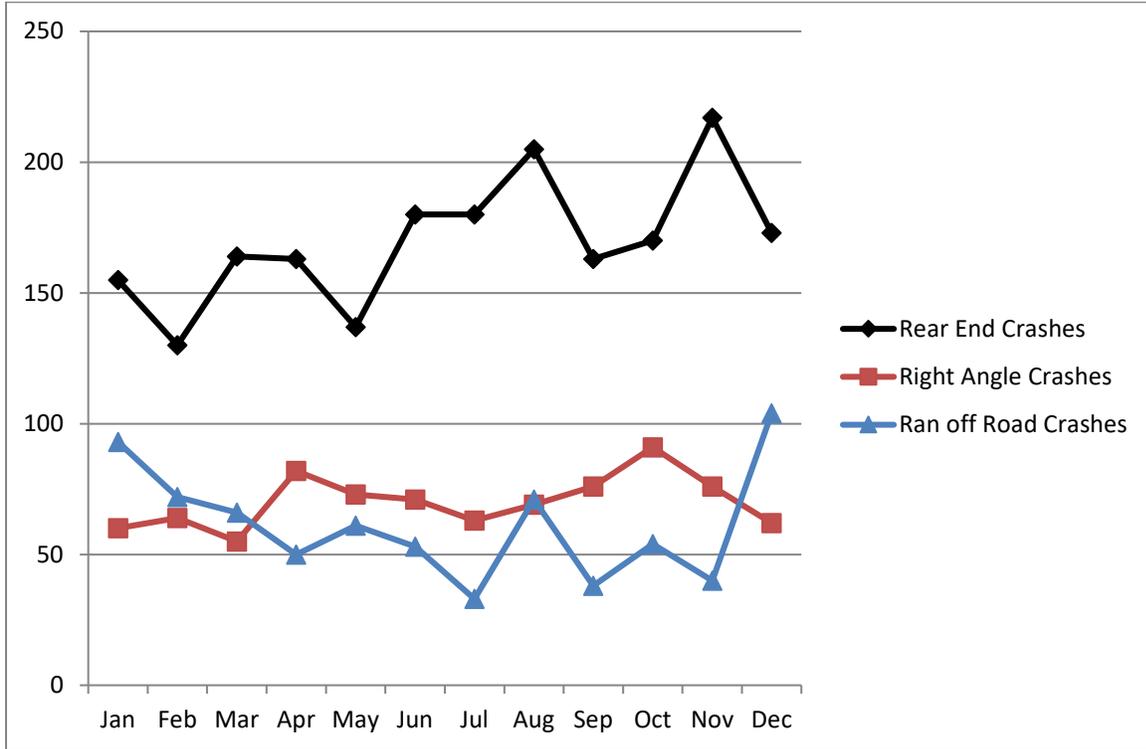
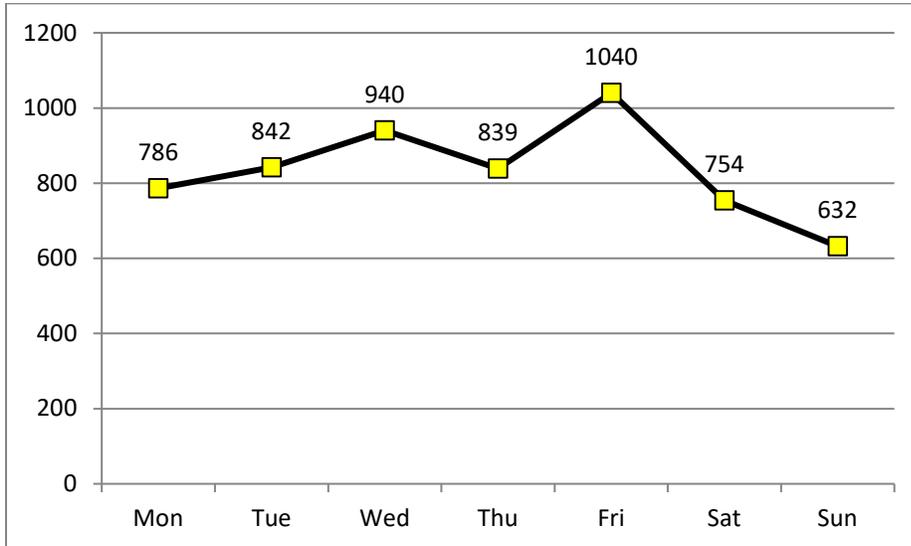


Figure 9 and Table 17 show that Friday had the highest number of crashes.

**Figure 9: Crashes by Day of the Week**



**Table 17: Crash Percentages by Day of the Week**

|                   | Mon   | Tue   | Wed   | Thu   | Fri   | Sat   | Sun   | Total  |
|-------------------|-------|-------|-------|-------|-------|-------|-------|--------|
| <b>Crashes</b>    | 786   | 842   | 940   | 839   | 1040  | 754   | 632   | 5833   |
| <b>Percentage</b> | 13.5% | 14.4% | 16.1% | 14.4% | 17.8% | 12.9% | 10.8% | 100.0% |

Figure 10 shows crashes by day of the week for the three most common crash types.

**Figure 10: 3 Most Common Crash Types by Day of the Week**

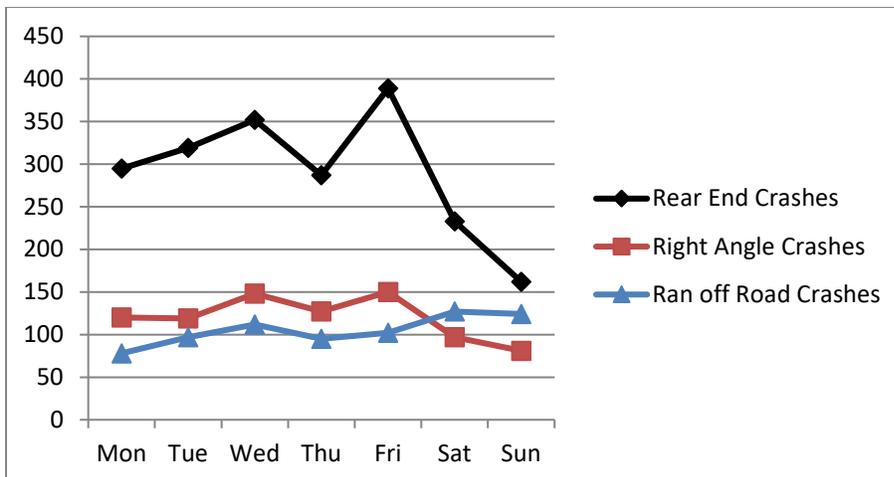


Figure 11 shows that most crashes occurred during the daylight hours (from 7 a.m. to 7 p.m.).

**Figure 11: Crashes by Time of Day**

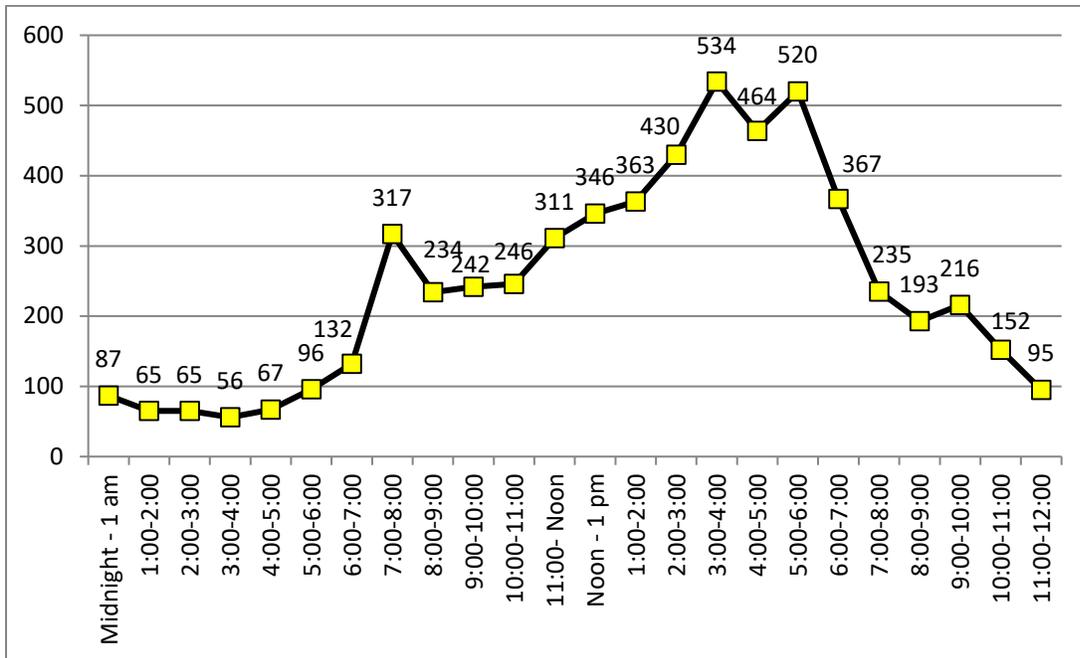
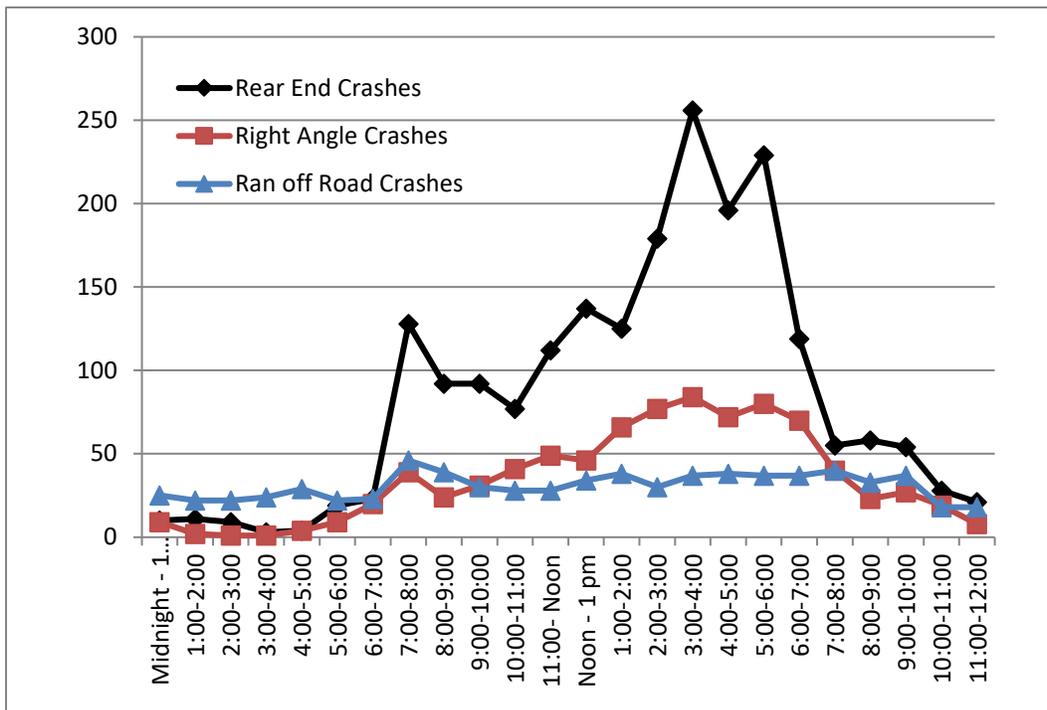


Figure 12 shows crashes by time of day for the three most common crash types.

**Figure 12: 3 Most Common Crash Types by Time of Day**



## Chapter 4: Weather and Road Conditions

Weather and road conditions can contribute to crashes. Decreased visibility, slick pavement, and other weather/road factors increase the chances for crashes. This chapter analyzes trends in crashes with different weather and pavement conditions.

Table 18 shows that the highest number of crashes occurred when weather conditions were clear; however, many crashes also occurred when weather conditions were cloudy.

**Table 18: Crashes by Weather Conditions**

| <b>Weather Conditions</b>       | <b>Crashes</b> |
|---------------------------------|----------------|
| <b>Blowing Sand/Soil/Snow</b>   | 21             |
| <b>Clear</b>                    | 3729           |
| <b>Cloudy</b>                   | 984            |
| <b>Fog/Smoke/Smog</b>           | 23             |
| <b>Rain</b>                     | 705            |
| <b>Severe Cross Wind</b>        | 5              |
| <b>Sleet/Hail/Freezing Rain</b> | 93             |
| <b>Snow</b>                     | 264            |
| <b>Unknown</b>                  | 9              |
| <b>Total</b>                    | 5833           |

Figures 13 and 14 show the location of crashes in clear weather conditions.

Figure 13: Tippecanoe County Crashes in Clear Weather Conditions

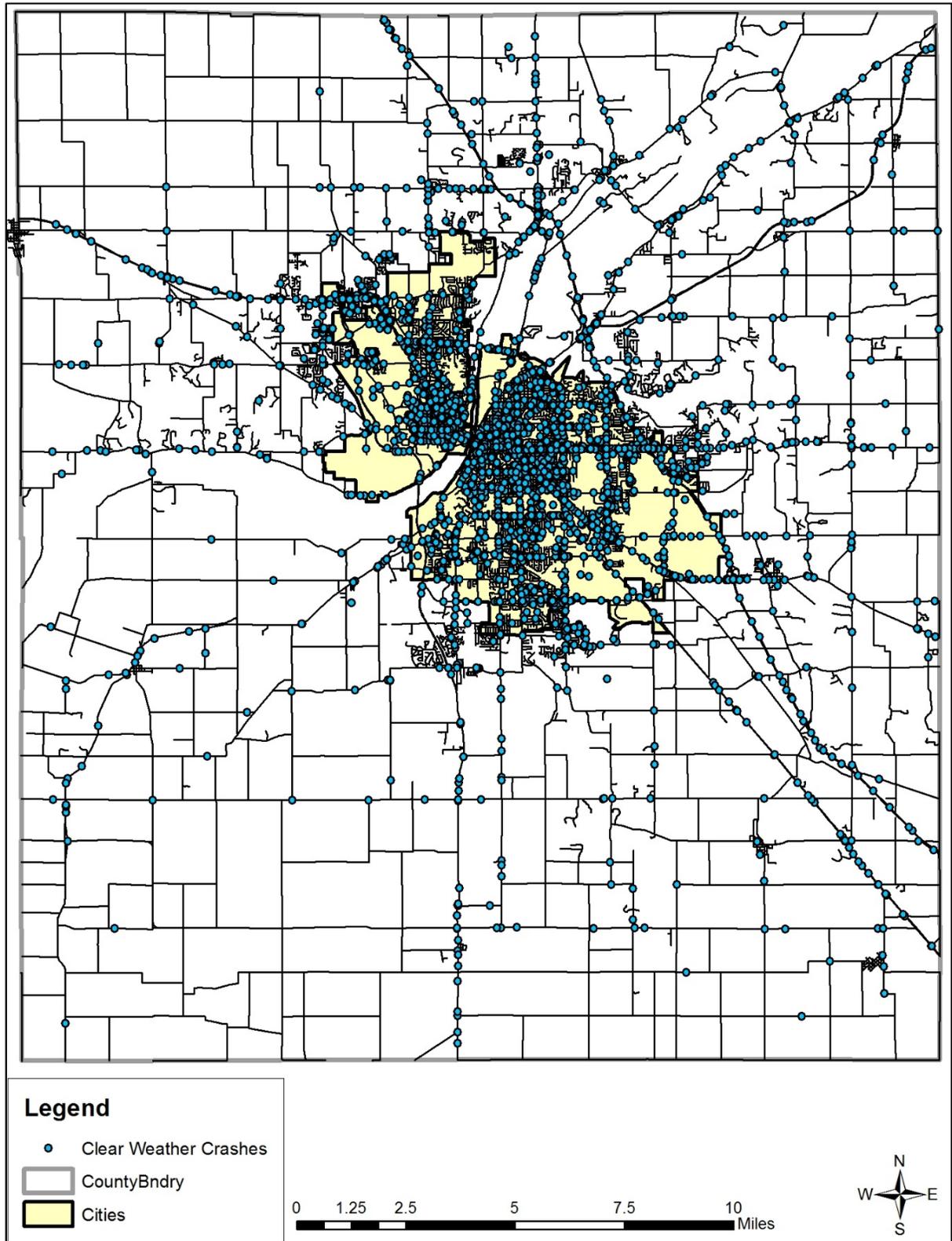
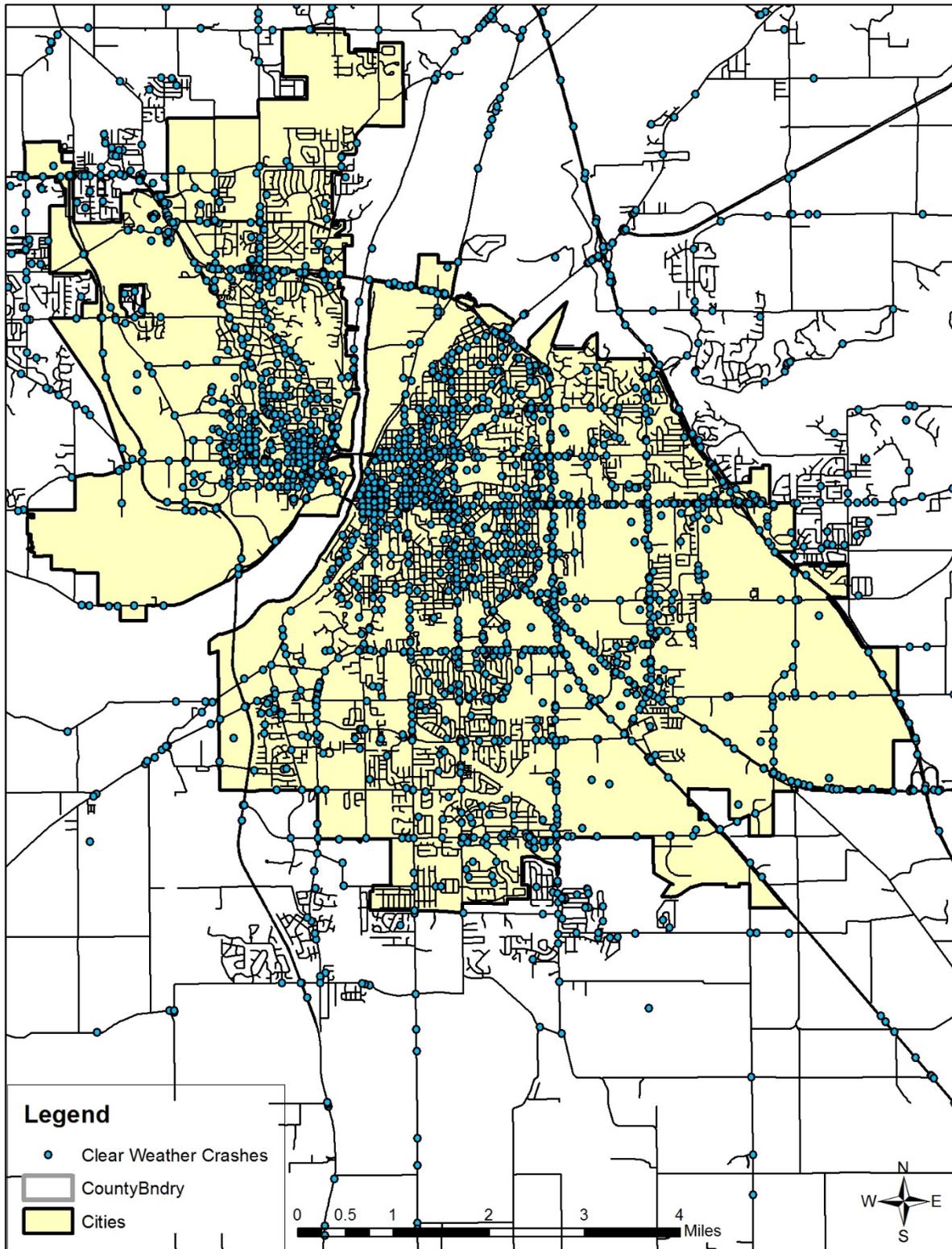


Figure 14: Lafayette and West Lafayette Crashes in Clear Weather



Figures 15 and 16 show the location of winter weather crashes (where the road surface had snow, ice, or slush on it).

Figure 15: Tippecanoe County Winter Weather Crashes

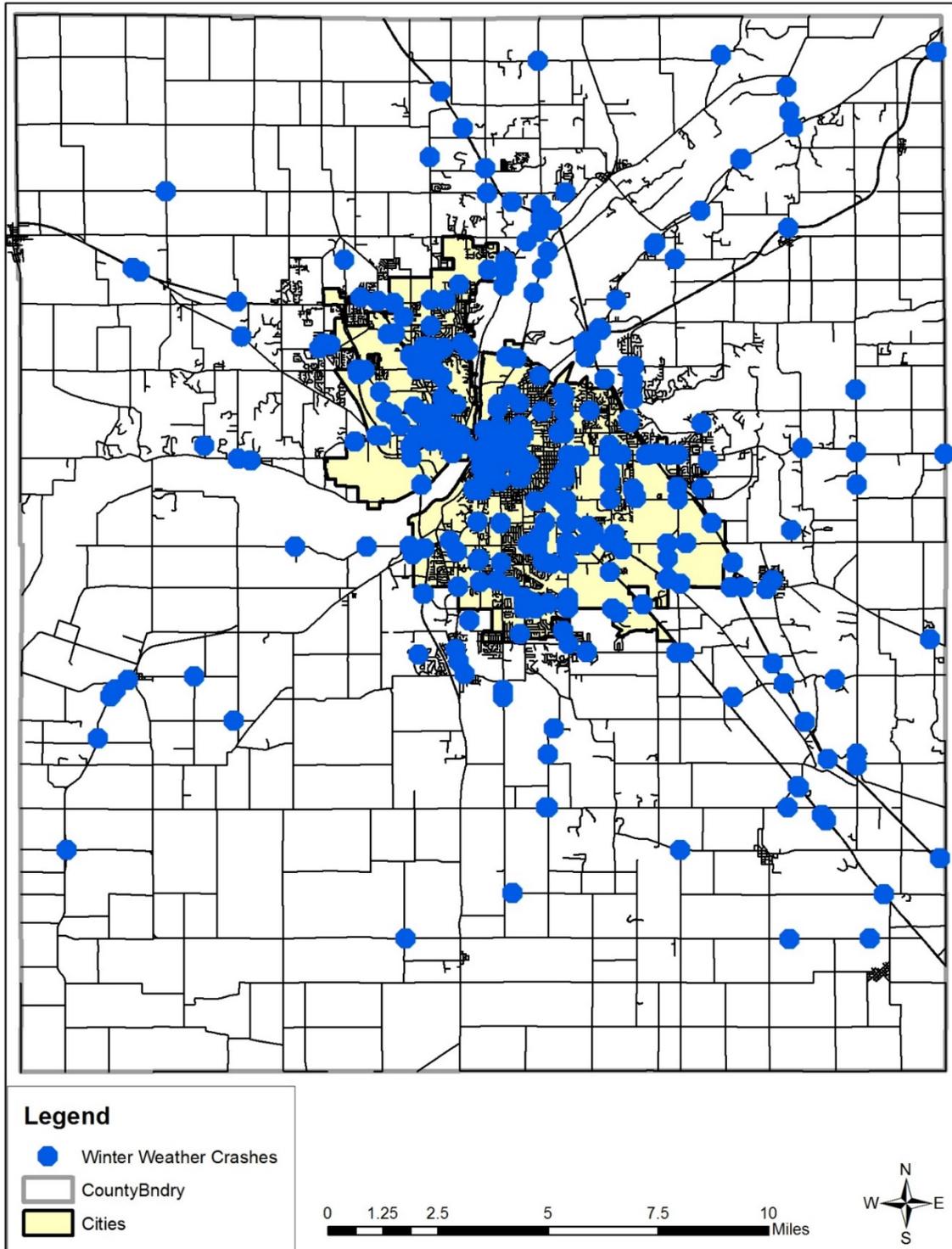
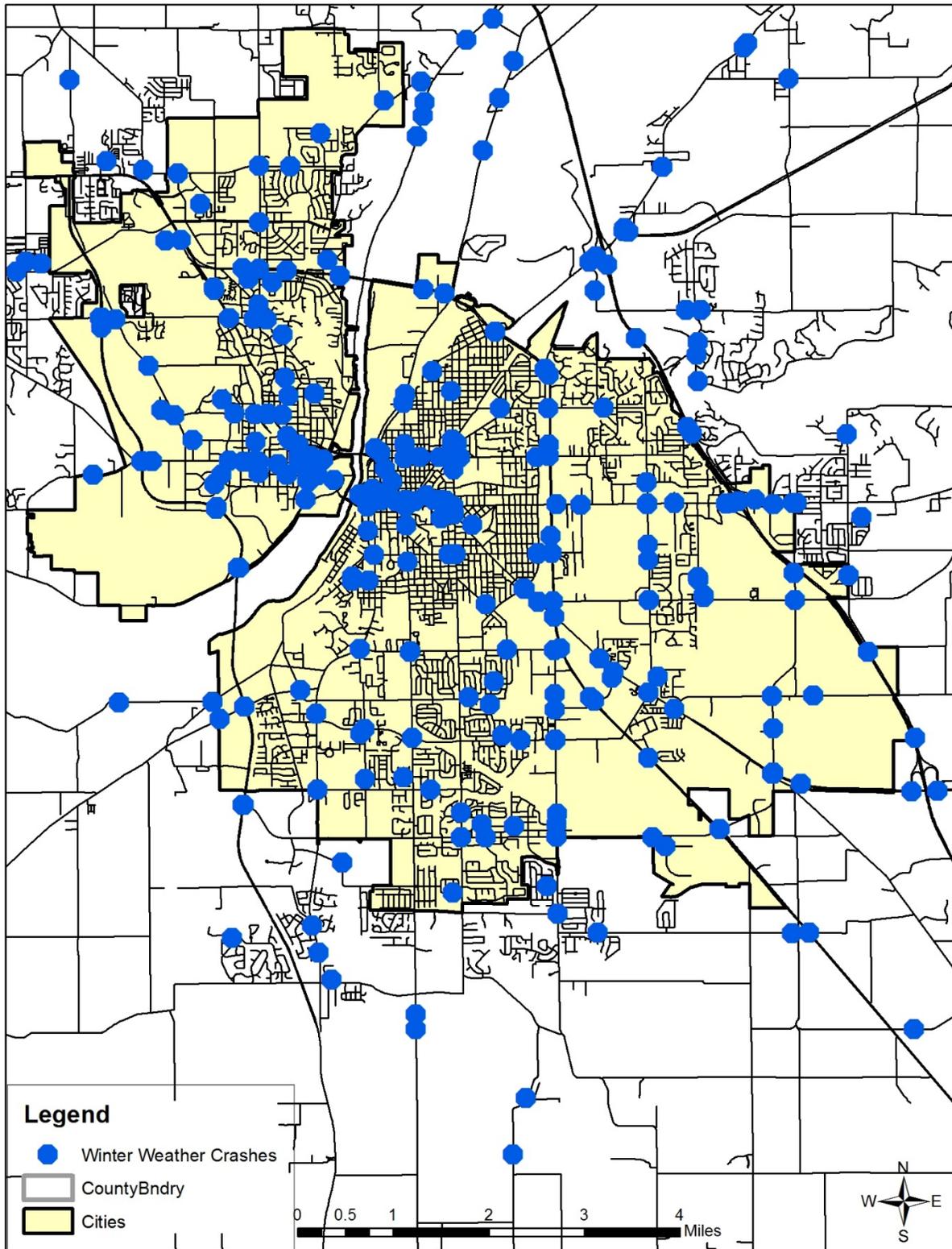


Figure 16: Lafayette and West Lafayette Winter Weather Crashes



Tables 19 and 20 shows that most crashes occurred when pavement was dry and during daylight hours.

**Table 19: Crashes by Road Surface Condition**

| <b>Road Surface Conditions</b> | <b>Crashes</b> |
|--------------------------------|----------------|
| Dry                            | 4294           |
| Ice                            | 161            |
| Loose Material On Road         | 14             |
| Muddy                          | 1              |
| Snow/Slush                     | 262            |
| Water (Standing Or Moving)     | 5              |
| Wet                            | 1085           |
| Unknown                        | 11             |
| <b>Total</b>                   | <b>5833</b>    |

**Table 20: Crashes by Amount of Sunlight**

| <b>Light Condition</b> | <b>Crashes</b> |
|------------------------|----------------|
| Dark (Lighted)         | 866            |
| Dark (Not Lighted)     | 645            |
| Dawn/Dusk              | 282            |
| Daylight               | 3993           |
| Unknown                | 47             |
| <b>Total</b>           | <b>5833</b>    |

## Chapter 5: Injuries and Fatalities

Although most crashes only cause property damage, some crashes result in an injury or fatality for a driver or passenger. Crashes with injuries or fatalities are much costlier to those involved than property damage crashes. The costs of a severe injury or fatality include high medical costs, lost income, and emotional distress. This chapter analyzes trends in crashes with at least one injury or fatality.

Injuries suffered range in severity. Some injuries are as minor as temporary pain, others are as major as paralysis. In ARIES, injuries are classified in two categories: non-incapacitating and incapacitating. This information is not always 100% reliable. The responding officer marks down an estimate of the category of the severity of the injury at the scene of the crash. This estimate does not have the same accuracy as medical records would. However, it is very difficult to obtain medical records to verify the severity of an injury in a crash after the crash has happened. Therefore, the officer's estimate is used in this report.

Table 21 shows data about injury and fatality crashes in Tippecanoe County.

**Table 21: Injury and Fatality Crashes**

| <b>Crash Statistic</b>      | <b>Number</b> |
|-----------------------------|---------------|
| <b>Injury Crashes</b>       | <b>1074</b>   |
| <b>Number of Injuries</b>   | <b>1430</b>   |
| <b>Fatality Crashes</b>     | <b>8</b>      |
| <b>Number of Fatalities</b> | <b>8</b>      |

Table 22 shows that failure to yield right of way was the biggest cause of injuries.

**Table 22: Injuries by Primary Factor**

| <b>Primary Factor</b>                           | <b>Injuries</b> |
|---|-----------------|
| <b>Failure To Yield Right Of Way</b>            | 404             |
| <b>Following Too Closely</b>                    | 277             |
| <b>Ran Off Road Right</b>                       | 143             |
| <b>Disregard Signal/Reg Sign</b>                | 138             |
| <b>Unsafe Speed</b>                             | 137             |
| <b>Speed Too Fast For Weather Conditions</b>    | 48              |
| <b>Other (Driver) - Explain In Narrative</b>    | 41              |
| <b>Left Of Center</b>                           | 40              |
| <b>Improper Lane Usage</b>                      | 32              |
| <b>Improper Turning</b>                         | 26              |
| <b>Driver Asleep Or Fatigued</b>                | 20              |
| <b>Driver Distracted - Explain In Narrative</b> | 19              |
| <b>Pedestrian Action</b>                        | 19              |
| <b>Animal/Object In Roadway</b>                 | 14              |
| <b>Unsafe Lane Movement</b>                     | 12              |
| <b>Overcorrecting/Oversteering</b>              | 12              |
| <b>Improper Passing</b>                         | 11              |
| <b>Driver Illness</b>                           | 8               |
| <b>Roadway Surface Condition</b>                | 7               |
| <b>Wrong Way On One Way</b>                     | 6               |
| <b>Unsafe Backing</b>                           | 3               |
| <b>Brake Failure Or Defective</b>               | 3               |
| <b>View Obstructed</b>                          | 3               |
| <b>Tire Failure Or Defective</b>                | 2               |
| <b>Obstruction Not Marked</b>                   | 2               |
| <b>Cell Phone Usage</b>                         | 1               |
| <b>Steering Failure</b>                         | 1               |
| <b>Engine Failure Or Defective</b>              | 1               |
| <b>Total</b>                                    | 1430            |

Table 23 shows that rear end crashes caused the highest number of injuries, followed closely by right angle crashes.

**Table 23: Injuries by Crash Type**

| <b>Crash Type</b>                         | <b>Injuries</b> |
|---|-----------------|
| <b>Rear End</b>                           | 469             |
| <b>Right Angle</b>                        | 421             |
| <b>Ran Off Road</b>                       | 210             |
| <b>Left Turn</b>                          | 90              |
| <b>Head On Between Two Motor Vehicles</b> | 75              |
| <b>Other - Explain In Narrative</b>       | 43              |
| <b>Same Direction Sideswipe</b>           | 39              |
| <b>Opposite Direction Sideswipe</b>       | 27              |
| <b>Right Turn</b>                         | 17              |
| <b>Non-Collision</b>                      | 15              |
| <b>Collision With Deer</b>                | 10              |
| <b>Left/Right Turn</b>                    | 5               |
| <b>Unknown</b>                            | 5               |
| <b>Collision With Object In Road</b>      | 3               |
| <b>Backing Crash</b>                      | 1               |
| <b>Total</b>                              | 1430            |

Table 24 shows that August had the highest number of injuries.

**Table 24: Injuries by Month**

| Month        | Injuries    |
|--------------|-------------|
| Jan          | 110         |
| Feb          | 95          |
| Mar          | 85          |
| Apr          | 121         |
| May          | 115         |
| Jun          | 143         |
| Jul          | 124         |
| Aug          | 165         |
| Sep          | 105         |
| Oct          | 133         |
| Nov          | 147         |
| Dec          | 87          |
| <b>Total</b> | <b>1430</b> |

Figure 17 shows that the highest number of injuries occurred between 3 and 4 p.m.

**Figure 17: Injuries by Time of Day**

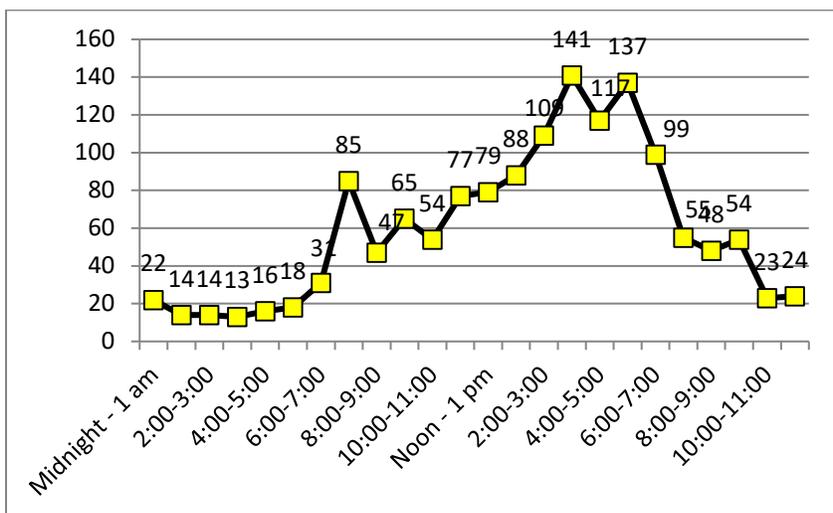


Figure 18 shows that Friday had the highest number of injuries.

**Figure 18: Injuries by Day of the Week**

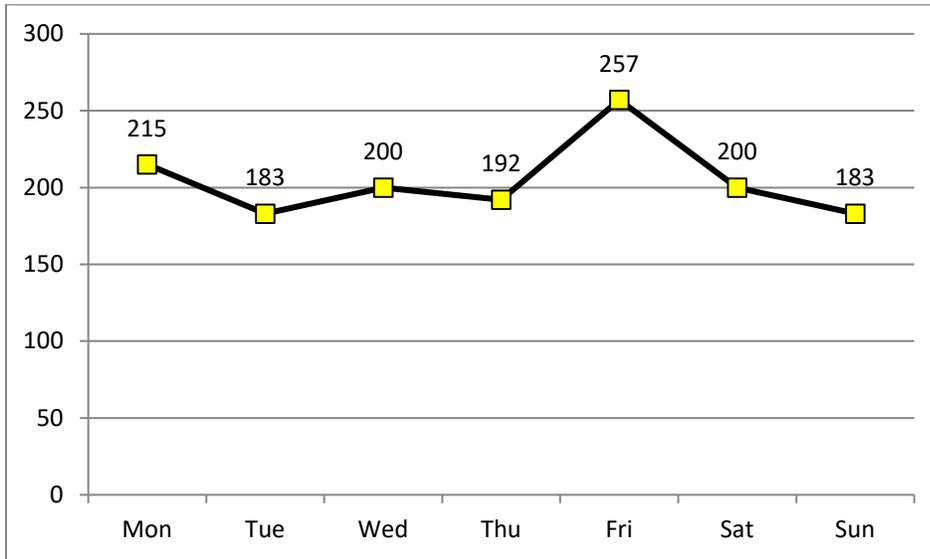


Table 25 shows that most of the injuries were to those 44 years old or younger.

**Table 25: Injuries by Age and Gender**

|               | <16 | 16-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|---------------|-----|-------|-------|-------|-------|-------|-----|-------|
| <b>Male</b>   | 42  | 193   | 136   | 74    | 99    | 63    | 64  | 671   |
| <b>Female</b> | 52  | 201   | 136   | 104   | 92    | 84    | 73  | 742   |
| <b>Total</b>  | 94  | 394   | 272   | 178   | 191   | 147   | 137 | 1413  |

Table 26 shows that most of the injuries suffered in crashes were categorized as non-incapacitating.

Crashes with fatal or incapacitating injuries are considered very severe. In 2016, there were 123 of these crashes.

**Table 26: Severity of Injuries in Crashes**

| Injury Type               | Injuries |
|---------------------------|----------|
| <b>Fatal</b>              | 8        |
| <b>Incapacitating</b>     | 115      |
| <b>Non-Incapacitating</b> | 1299     |
| <b>Possible</b>           | 13       |
| <b>Refused</b>            | 12       |
| <b>Unknown</b>            | 1        |
| <b>Total</b>              | 1448     |

Figure 19 shows the locations of incapacitating injuries in the county.

Figure 19: Tippecanoe County Incapacitating Injuries

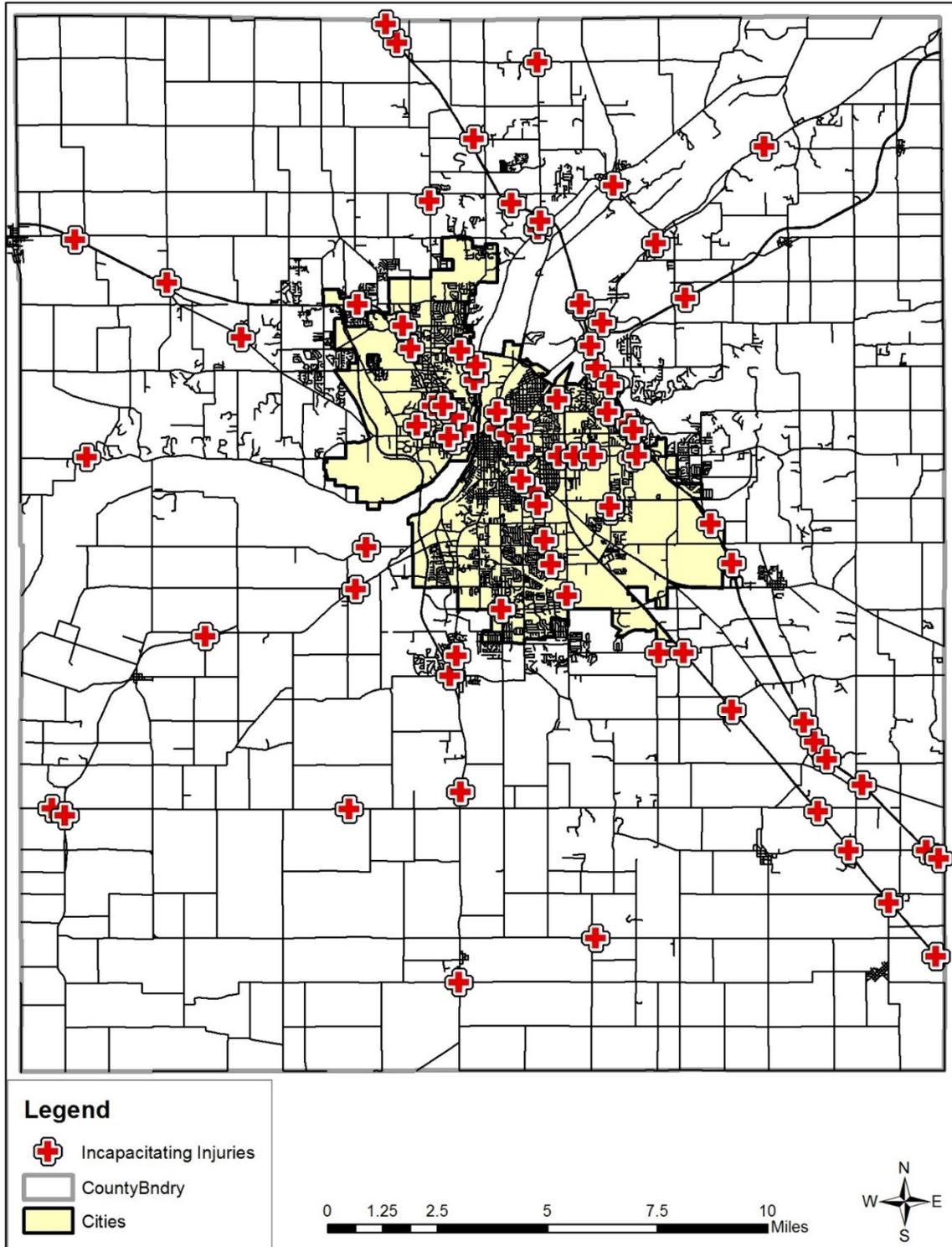


Table 27 shows that crashes where a driver failed to yield the right of way led to the highest number of incapacitating injuries.

**Table 27: Incapacitating Injuries by Primary Factor**

| <b>Primary Factor</b>                           | <b>Incapacitating Injuries</b> |
|---|--------------------------------|
| <b>Failure To Yield Right Of Way</b>            | 24                             |
| <b>Ran Off Road Right</b>                       | 16                             |
| <b>Unsafe Speed</b>                             | 11                             |
| <b>Other (Driver) - Explain In Narrative</b>    | 11                             |
| <b>Following Too Closely</b>                    | 10                             |
| <b>Speed Too Fast For Weather Conditions</b>    | 9                              |
| <b>Unsafe Lane Movement</b>                     | 7                              |
| <b>Left Of Center</b>                           | 5                              |
| <b>Disregard Signal/Reg Sign</b>                | 4                              |
| <b>Driver Asleep Or Fatigued</b>                | 4                              |
| <b>Pedestrian Action</b>                        | 3                              |
| <b>Wrong Way On One Way</b>                     | 3                              |
| <b>Improper Turning</b>                         | 2                              |
| <b>Improper Passing</b>                         | 2                              |
| <b>Driver Distracted - Explain In Narrative</b> | 2                              |
| <b>Improper Lane Usage</b>                      | 1                              |
| <b>Roadway Surface Condition</b>                | 1                              |
| <b>Total</b>                                    | 115                            |

Table 28 shows that run off the road crashes caused the highest number of incapacitating injuries, followed closely by right angle and rear end crashes.

**Table 28: Incapacitating Injuries by Crash Type**

| <b>Crash Type</b>                         | <b>Incapacitating Injuries</b> |
|---|--------------------------------|
| <b>Ran Off Road</b>                       | 37                             |
| <b>Right Angle</b>                        | 23                             |
| <b>Rear End</b>                           | 22                             |
| <b>Head On Between Two Motor Vehicles</b> | 10                             |
| <b>Same Direction Sideswipe</b>           | 7                              |
| <b>Other - Explain In Narrative</b>       | 5                              |
| <b>Left Turn</b>                          | 4                              |
| <b>Opposite Direction Sideswipe</b>       | 3                              |
| <b>Right Turn</b>                         | 3                              |
| <b>Non-Collision</b>                      | 1                              |
| <b>Total</b>                              | 115                            |

Table 29 shows that people under the age of 44 were more likely to suffer incapacitating injuries than older people.

**Table 29: Incapacitating Injuries by Age and Gender**

|               | <b>&lt;16</b> | <b>16-24</b> | <b>25-34</b> | <b>35-44</b> | <b>45-54</b> | <b>55-64</b> | <b>65+</b> | <b>Total</b> |
|---------------|---------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| <b>Male</b>   | 7             | 22           | 10           | 3            | 10           | 6            | 7          | 65           |
| <b>Female</b> | 4             | 11           | 12           | 9            | 2            | 5            | 7          | 50           |
| <b>Total</b>  | 11            | 33           | 22           | 12           | 12           | 11           | 14         | 115          |

Figure 20 shows that males were more likely to suffer incapacitating injuries than females.

**Figure 20: Incapacitating Injuries by Gender**

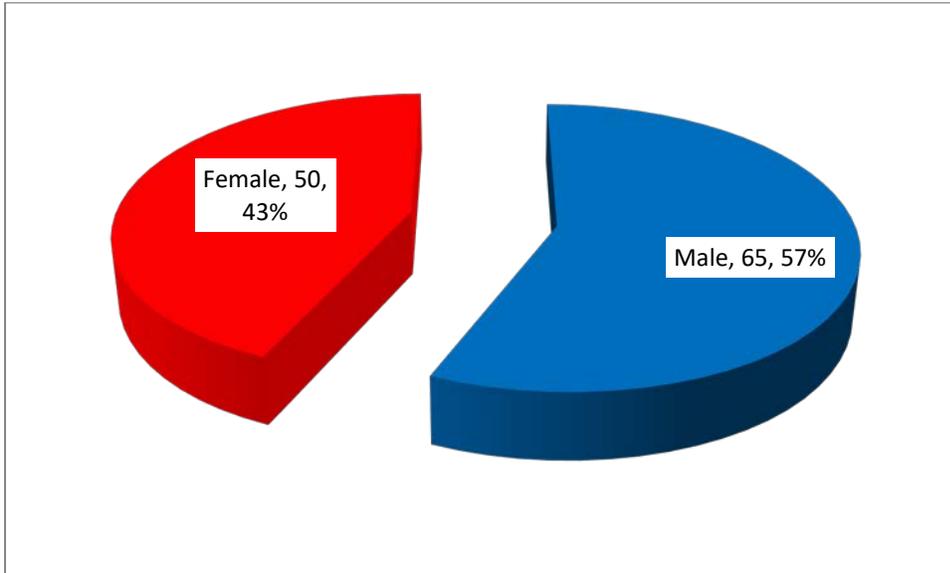


Table 30 shows that August had the most incapacitating injuries.

**Table 30: Incapacitating Injuries by Month**

| Month | Incapacitating Injuries |
|-------|-------------------------|
| Jan   | 8                       |
| Feb   | 1                       |
| Mar   | 10                      |
| Apr   | 7                       |
| May   | 8                       |
| Jun   | 9                       |
| Jul   | 14                      |
| Aug   | 17                      |
| Sep   | 4                       |
| Oct   | 14                      |
| Nov   | 11                      |
| Dec   | 12                      |
| Total | 115                     |

Figure 21 shows that Sunday had the most incapacitating injuries.

**Figure 21: Incapacitating Injuries by Day of the Week**

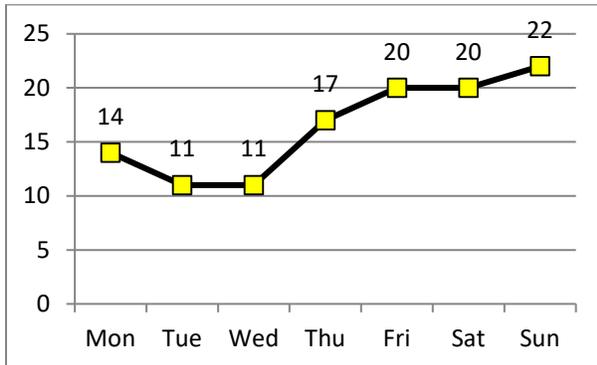


Table 31 shows that the highest number of incapacitating injuries occurred between 5 and 6 p.m.

**Table 31: Incapacitating Injuries by Time of Day**

| Time of Day     | Incapacitating Injuries |
|-----------------|-------------------------|
| Midnight - 1 am | 5                       |
| 1:00-2:00       | 0                       |
| 2:00-3:00       | 2                       |
| 3:00-4:00       | 2                       |
| 4:00-5:00       | 3                       |
| 5:00-6:00       | 2                       |
| 6:00-7:00       | 1                       |
| 7:00-8:00       | 7                       |
| 8:00-9:00       | 5                       |
| 9:00-10:00      | 5                       |
| 10:00-11:00     | 5                       |
| 11:00- Noon     | 1                       |
| Noon - 1 pm     | 4                       |
| 1:00-2:00       | 10                      |
| 2:00-3:00       | 1                       |
| 3:00-4:00       | 10                      |
| 4:00-5:00       | 9                       |
| 5:00-6:00       | 11                      |
| 6:00-7:00       | 6                       |
| 7:00-8:00       | 10                      |
| 8:00-9:00       | 9                       |
| 9:00-10:00      | 3                       |
| 10:00-11:00     | 0                       |
| 11:00-12:00     | 4                       |
| <b>Total</b>    | <b>115</b>              |

Fatalities (and injuries that lead to fatalities) are the most severe consequences that come from crashes. Figures 22 and 23 show the locations of fatality crashes in 2016.

**Figure 22: Tippecanoe County Fatality Crashes**

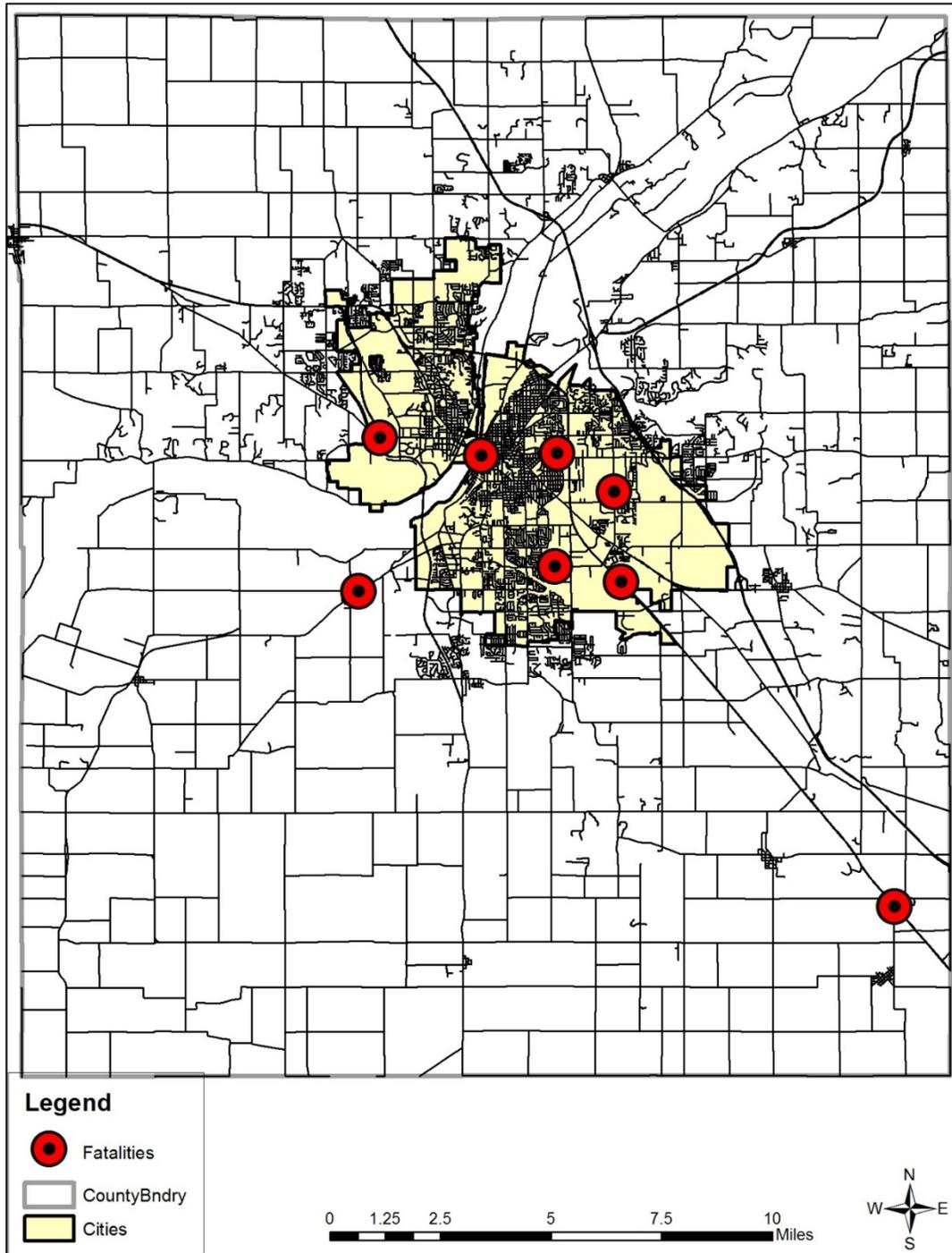


Figure 23: Lafayette and West Lafayette Fatality Crashes

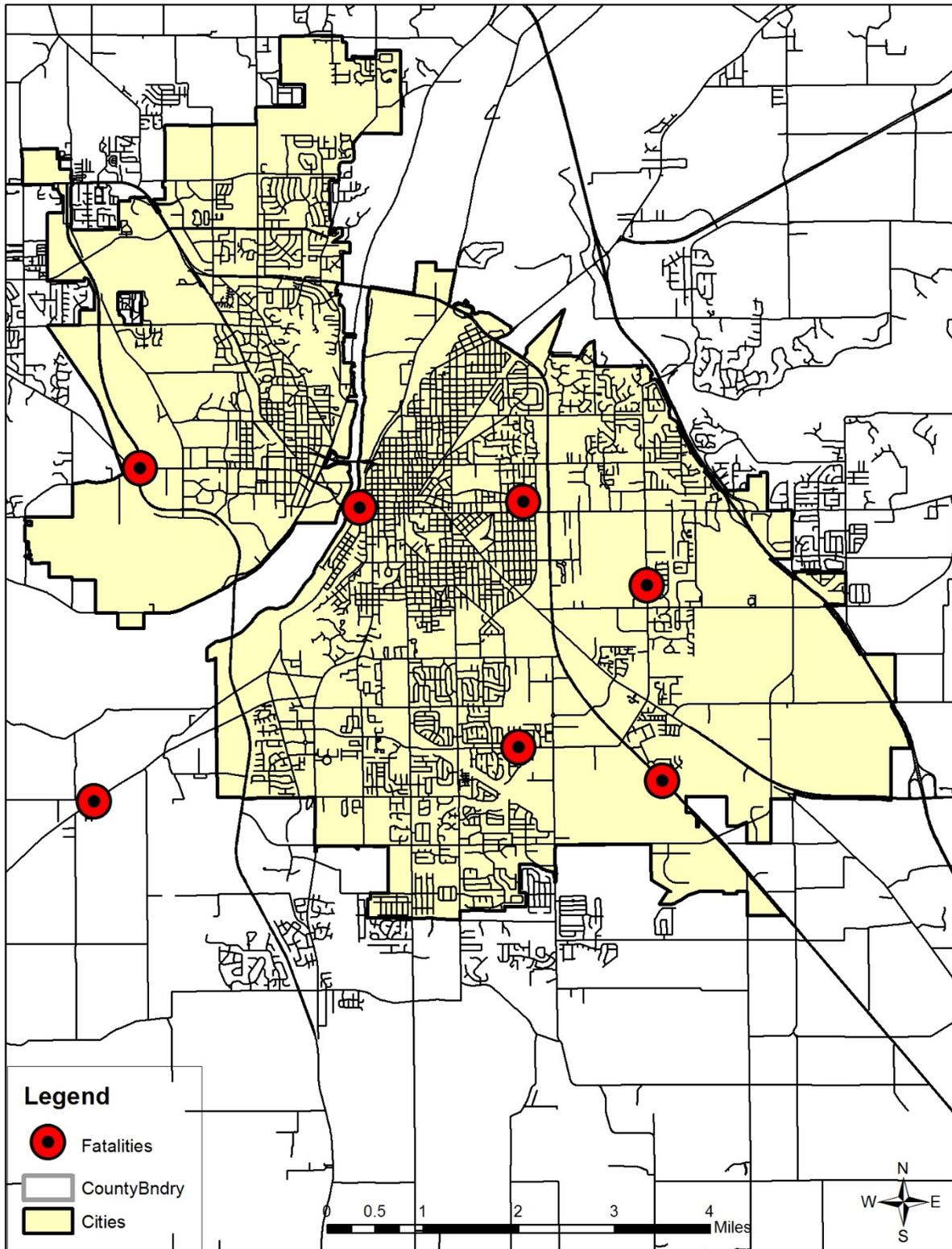


Table 32 shows that the most common cause of fatalities was a failure to yield the right of way.

**Table 32: Fatalities by Primary Factor**

| Primary Factor                | Fatalities |
|-------------------------------|------------|
| Failure To Yield Right Of Way | 3          |
| Ran Off Road Right            | 2          |
| Left Of Center                | 1          |
| Disregard Signal/Reg Sign     | 1          |
| Driver Illness                | 1          |
| <b>Total</b>                  | <b>8</b>   |

Table 33 shows that running off the road, right angle, and head on were the most common causes of fatalities in 2016.

**Table 33: Fatalities by Crash Type**

| Crash Type                         | Fatalities |
|------------------------------------|------------|
| Ran Off Road                       | 2          |
| Right Angle                        | 2          |
| Head On Between Two Motor Vehicles | 2          |
| Rear End                           | 1          |
| Same Direction Sideswipe           | 1          |
| <b>Total</b>                       | <b>8</b>   |

Table 34 shows that people of various age groups died in crashes.

**Table 34: Fatalities by Age and Gender**

|               | <16 | 16-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|---------------|-----|-------|-------|-------|-------|-------|-----|-------|
| <b>Male</b>   | 0   | 0     | 1     | 0     | 0     | 2     | 2   | 5     |
| <b>Female</b> | 0   | 0     | 0     | 1     | 0     | 0     | 2   | 3     |
| <b>Total</b>  | 0   | 0     | 1     | 1     | 0     | 2     | 4   | 8     |

Table 35 shows that January had the most fatalities.

**Table 35: Fatalities by Month**

| Month        | Fatalities |
|--------------|------------|
| Jan          | 3          |
| Feb          | 0          |
| Mar          | 0          |
| Apr          | 0          |
| May          | 0          |
| Jun          | 0          |
| Jul          | 2          |
| Aug          | 0          |
| Sep          | 0          |
| Oct          | 0          |
| Nov          | 2          |
| Dec          | 1          |
| <b>Total</b> | <b>8</b>   |

Figure 24 shows that Monday had the highest number of fatalities.

**Figure 24: Fatalities by Day of the Week**

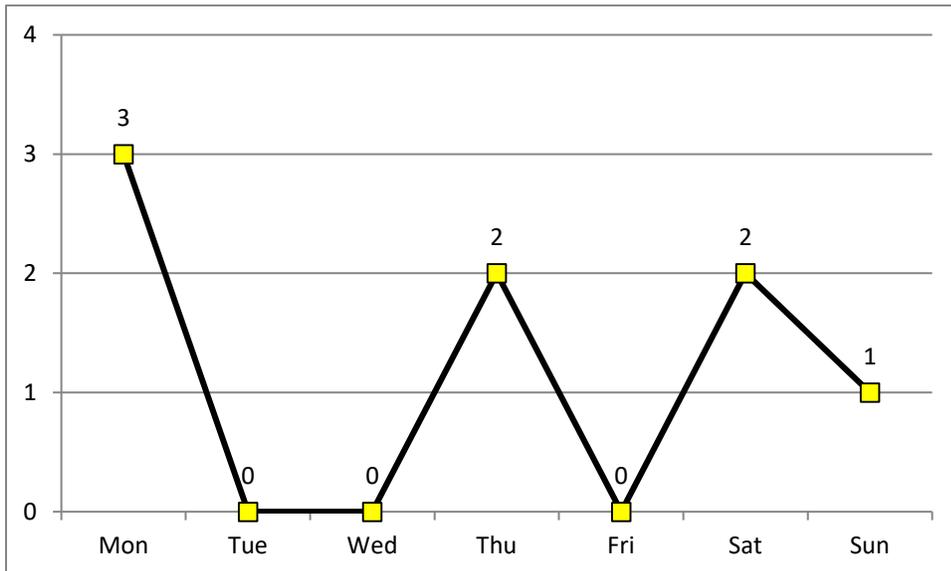
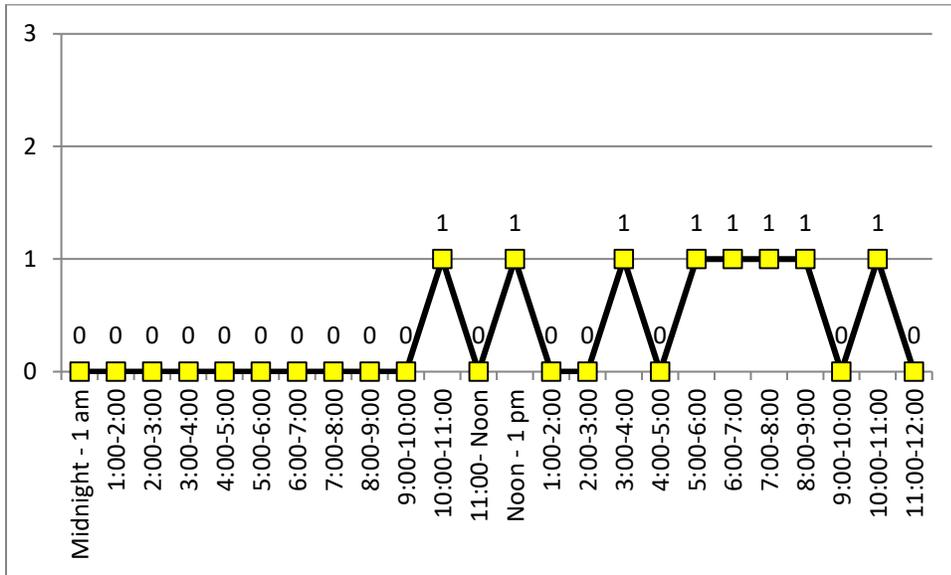


Figure 25 shows that fatalities occurred at many different times.

Figure 25: Fatalities by Time of Day



## Chapter 6: Drug and Alcohol Involvement in Crashes

When drivers operate a vehicle in an impaired state, it hinders their ability to safely use the road. Not only does this endanger the driver, but also others around them. Some drivers operating in an impaired state may not end up in a crash, but they increase their risk of being involved in a crash when they drive impaired. This chapter analyzes factors that may contribute to drug and alcohol crashes.

In 2016, there were at least 130 drivers under the influence of alcohol and 4 drivers under the influence of drugs involved in crashes. It should be noted that for some of the data used, test results were listed as “pending” for alcohol or drug use.

Tables 36 and 37 show information on alcohol and drug crashes.

**Table 36: Drug and Alcohol Crash Statistics**

| <b>OWI/Drug Crash Data</b>   | <b>Statistic</b> |
|--|------------------|
| <b>Drivers in Crashes Operating Under the Influence of Alcohol</b>               | 130              |
| <b>Percentage of Drivers in Crashes Operating Under the Influence of Alcohol</b> | 1.34%            |
| <b>Maximum Recorded Blood Alcohol Content in Crash</b>                           | 0.39             |
| <b>Drivers in Crashes Operating Under the Influence of Drugs</b>                 | 4                |
| <b>Percentage of Drivers in Crashes Operating Under the Influence of Drugs</b>   | 0.04%            |

**Table 37: Drug and Alcohol Crash Data**

| <b>Statistic</b>                         | <b>Alcohol</b> | <b>Drug</b> |
|--|----------------|-------------|
| <b>Fatality or Incapacitating Injury</b> | 3              | 2           |
| <b>Non-Incapacitating Injuries</b>       | 25             | 1           |
| <b>Motorcycle Crashes</b>                | 4              | 0           |
| <b>Bicycle Crashes</b>                   | 1              | 0           |
| <b>Pedestrian Crashes</b>                | 0              | 0           |

Figure 26 shows the location of alcohol related crashes and Figure 27 shows the location of drug crashes.

**Figure 26: Tippecanoe County Alcohol Crashes**

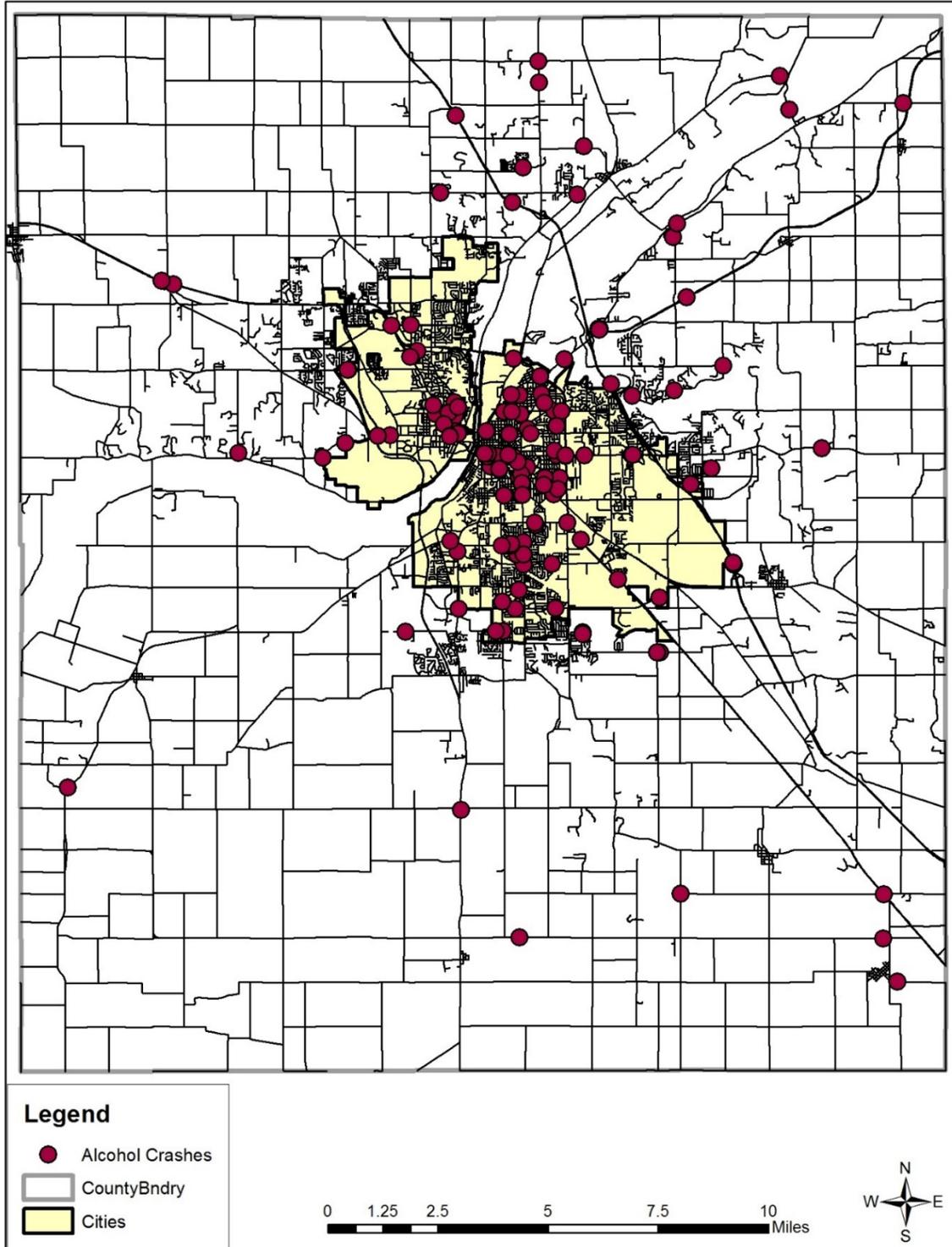


Figure 27: Tippecanoe County Drug Crashes

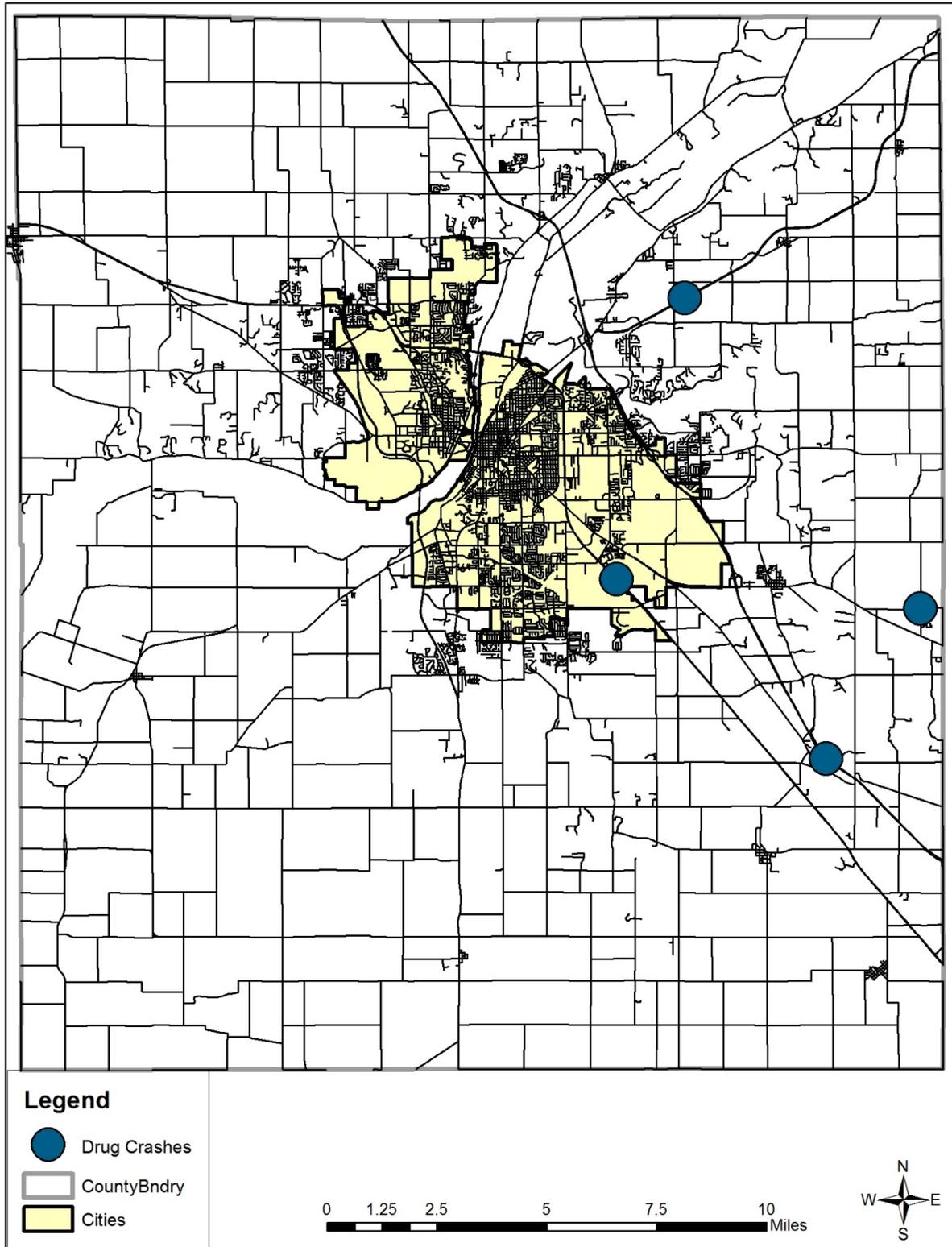


Table 38 shows that run off the road crashes were the most common type when alcohol or drugs were involved.

**Table 38: Crash Types for Drug and Alcohol Crashes**

| Crash Type                         | Participants Under Influence of Alcohol | Participants Under Influence of Drugs | Total      |
|------------------------------------|---|---------------------------------------|------------|
| Ran Off Road                       | 50                                      | 1                                     | 51         |
| Same Direction Sideswipe           | 19                                      | 0                                     | 19         |
| Rear End                           | 17                                      | 1                                     | 18         |
| Right Angle                        | 11                                      | 1                                     | 12         |
| Head On Between Two Motor Vehicles | 11                                      | 1                                     | 12         |
| Other - Explain In Narrative       | 6                                       | 0                                     | 6          |
| Opposite Direction Sideswipe       | 5                                       | 0                                     | 5          |
| Non-Collision                      | 3                                       | 0                                     | 3          |
| Right Turn                         | 2                                       | 0                                     | 2          |
| <b>Total</b>                       | <b>124</b>                              | <b>4</b>                              | <b>128</b> |

Figure 28 shows that January and March had the highest number of alcohol crashes. There were very few drug crashes, so monthly trends in drug crashes cannot reasonably be analyzed.

**Figure 28: Drug and Alcohol Crashes by Month**

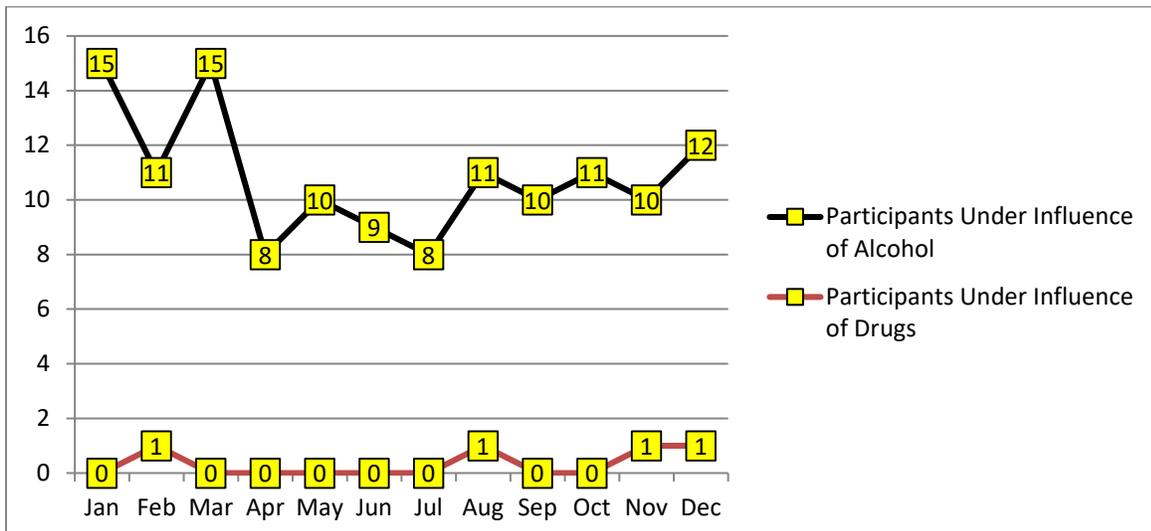


Figure 29 shows that Sunday had the highest number of drug and alcohol crashes combined.

Figure 29: Drug and Alcohol Crashes by Day of the Week

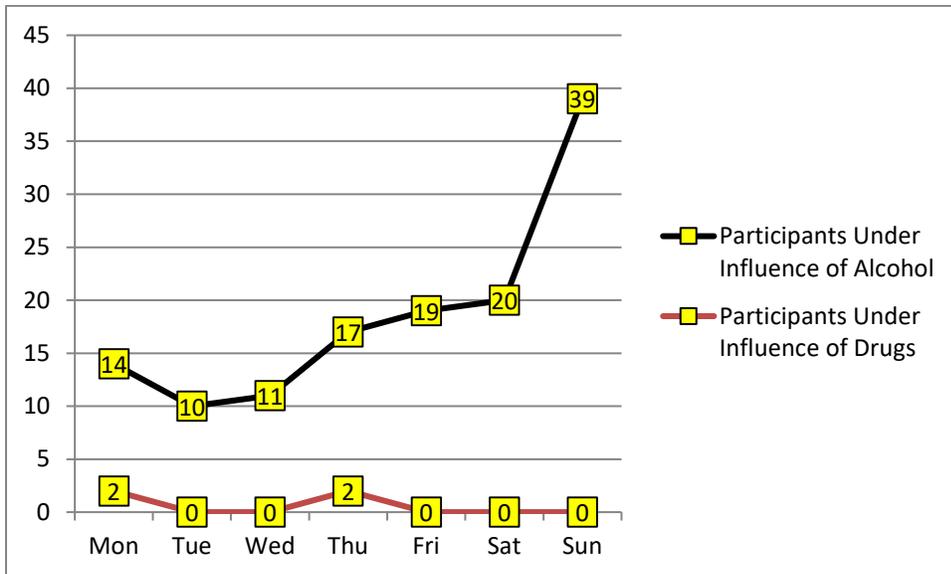


Figure 30 shows that the highest number of alcohol and drug crashes occurred in the early morning hours.

Figure 30: Drug and Alcohol Crashes by Time of Day

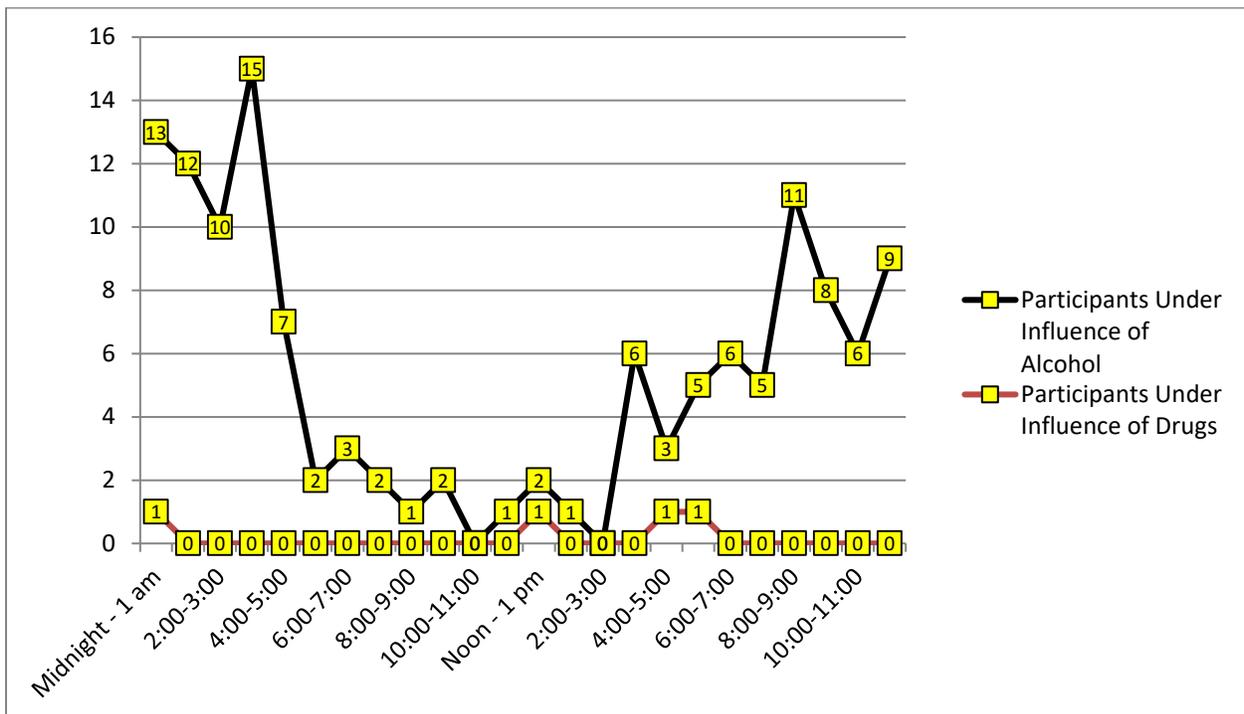


Table 39 shows that people under the age of 44 were most likely to be involved in an alcohol or drug crash.

**Table 39: Drug and Alcohol Crashes by Age and Gender**

|        | <16 | 16-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|--------|-----|-------|-------|-------|-------|-------|-----|-------|
| Male   | 0   | 22    | 31    | 26    | 16    | 4     | 2   | 101   |
| Female | 0   | 9     | 9     | 10    | 3     | 2     | 0   | 33    |
| Total  | 0   | 31    | 40    | 36    | 19    | 6     | 2   | 134   |

## Chapter 7: Curve Crashes

There are a variety of reasons why crashes may occur on curves. Poor pavement conditions, distracted driving, or the presence of drugs or alcohol are a few of these reasons. This chapter analyzes trends in curve crashes.

Table 40 shows that, although we know curves can be dangerous, most crashes still occur on segments of roadway that are straight or level.

**Table 40: Crashes by Road Curvature**

| <b>Road Curvature</b>     | <b>Crashes</b> |
|---------------------------|----------------|
| <b>Curve/Grade</b>        | 178            |
| <b>Curve/Hillcrest</b>    | 19             |
| <b>Curve/Level</b>        | 310            |
| <b>Non-Roadway Crash</b>  | 17             |
| <b>Straight/Grade</b>     | 463            |
| <b>Straight/Hillcrest</b> | 94             |
| <b>Straight/Level</b>     | 4751           |
| <b>Unknown</b>            | 1              |
| <b>Total</b>              | 5833           |

Figures 31 and 32 show the locations of curve crashes.

**Figure 31: Tippecanoe County Curve Crashes**

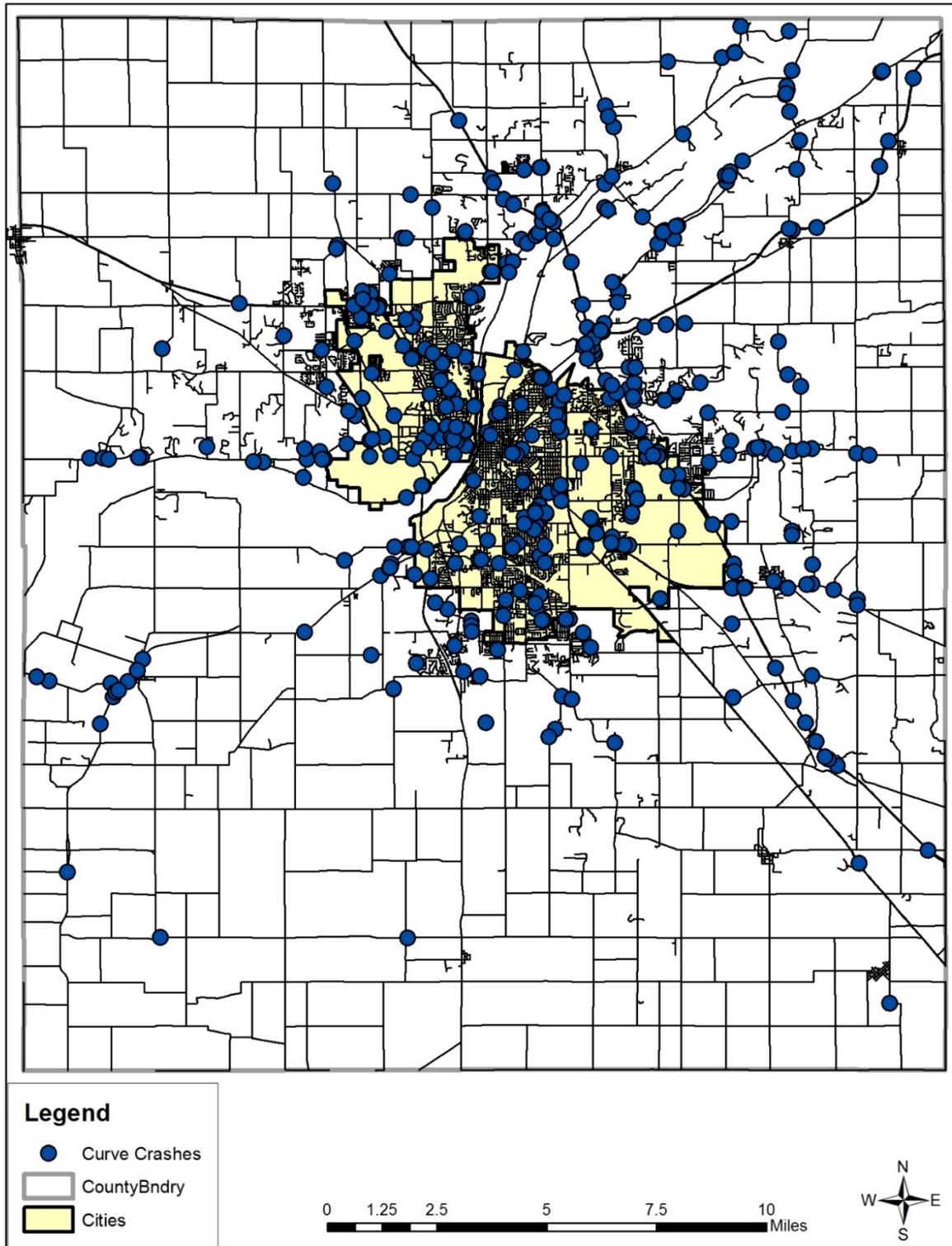


Figure 32: Lafayette and West Lafayette Curve Crashes

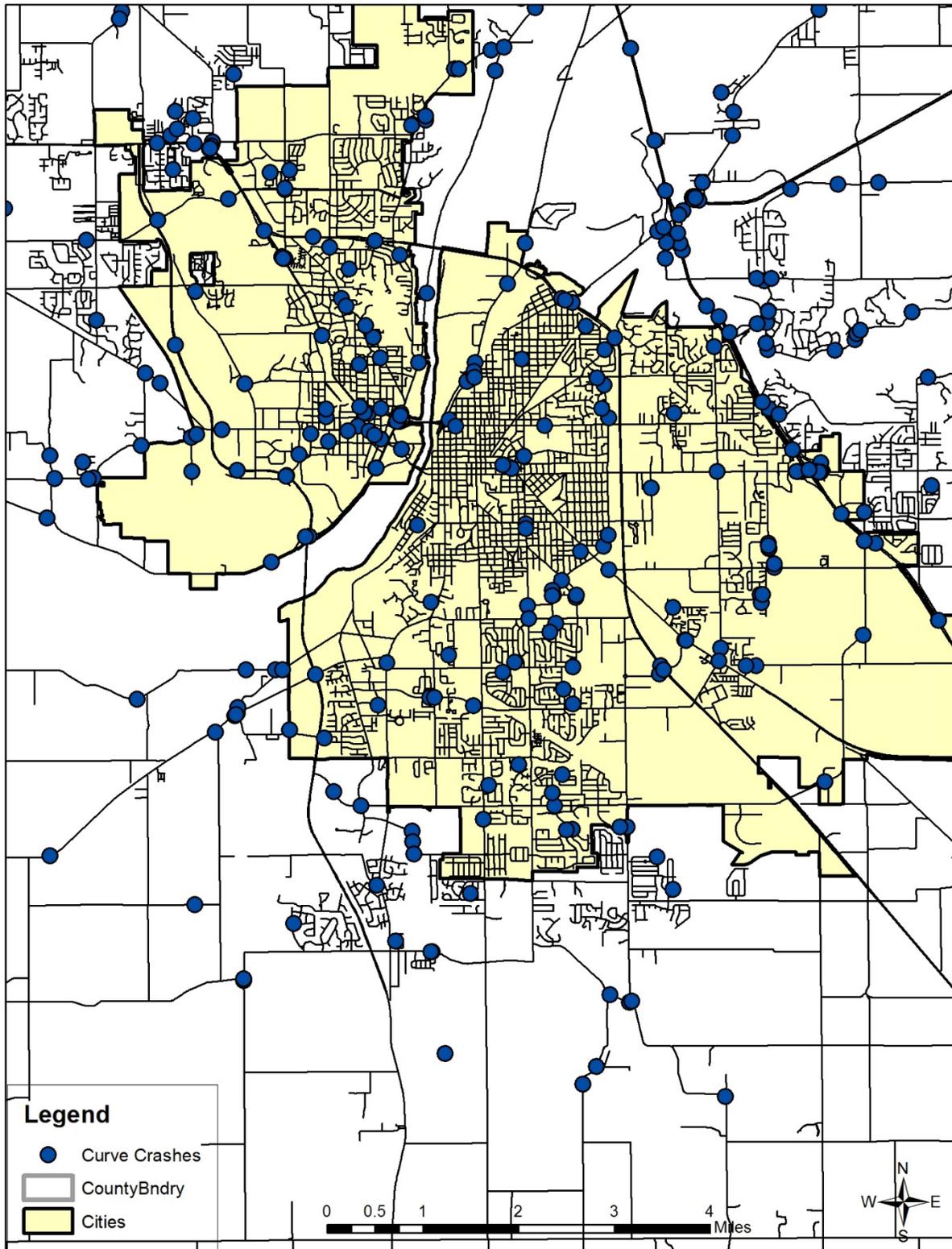


Table 41 shows that running off the road was the most common primary factor in curve crashes.

**Table 41: Primary Factors for Curve Crashes**

| <b>Primary Factor</b>                           | <b>Crashes</b> |
|---|----------------|
| <b>Ran Off Road Right</b>                       | 120            |
| <b>Following Too Closely</b>                    | 58             |
| <b>Unsafe Speed</b>                             | 56             |
| <b>Speed Too Fast For Weather Conditions</b>    | 51             |
| <b>Failure To Yield Right Of Way</b>            | 49             |
| <b>Other (Driver) - Explain In Narrative</b>    | 38             |
| <b>Animal/Object In Roadway</b>                 | 26             |
| <b>Left Of Center</b>                           | 21             |
| <b>Roadway Surface Condition</b>                | 21             |
| <b>Improper Lane Usage</b>                      | 14             |
| <b>Unsafe Backing</b>                           | 11             |
| <b>Unsafe Lane Movement</b>                     | 10             |
| <b>Improper Turning</b>                         | 9              |
| <b>Overcorrecting/Oversteering</b>              | 8              |
| <b>Improper Passing</b>                         | 3              |
| <b>Driver Asleep Or Fatigued</b>                | 2              |
| <b>Steering Failure</b>                         | 2              |
| <b>Driver Distracted - Explain In Narrative</b> | 1              |
| <b>Brake Failure Or Defective</b>               | 1              |
| <b>Cell Phone Usage</b>                         | 1              |
| <b>Other (Environmental) - Explain In Narr</b>  | 1              |
| <b>Tire Failure Or Defective</b>                | 1              |
| <b>Driver Illness</b>                           | 1              |
| <b>Wrong Way On One Way</b>                     | 1              |
| <b>View Obstructed</b>                          | 1              |
| <b>Total</b>                                    | 507            |

Table 42 shows that run off the road crashes were the most common crash type for curve crashes.

**Table 42: Crash Type for Curve Crashes**

| <b>Crash Type</b>                         | <b>Crashes</b> |
|---|----------------|
| <b>Ran Off Road</b>                       | 213            |
| <b>Rear End</b>                           | 94             |
| <b>Same Direction Sideswipe</b>           | 58             |
| <b>Other - Explain In Narrative</b>       | 37             |
| <b>Right Angle</b>                        | 24             |
| <b>Opposite Direction Sideswipe</b>       | 19             |
| <b>Collision With Deer</b>                | 18             |
| <b>Head On Between Two Motor Vehicles</b> | 16             |
| <b>Unknown</b>                            | 8              |
| <b>Backing Crash</b>                      | 6              |
| <b>Left Turn</b>                          | 3              |
| <b>Right Turn</b>                         | 3              |
| <b>Non-Collision</b>                      | 2              |
| <b>Collision With Object In Road</b>      | 2              |
| <b>Collision With Animal Other</b>        | 2              |
| <b>Left/Right Turn</b>                    | 1              |
| <b>Rear To Rear</b>                       | 1              |
| <b>Total</b>                              | 507            |

Figure 33 shows that the highest number of curve crashes occurred in December.

**Figure 33: Curve Crashes by Month**

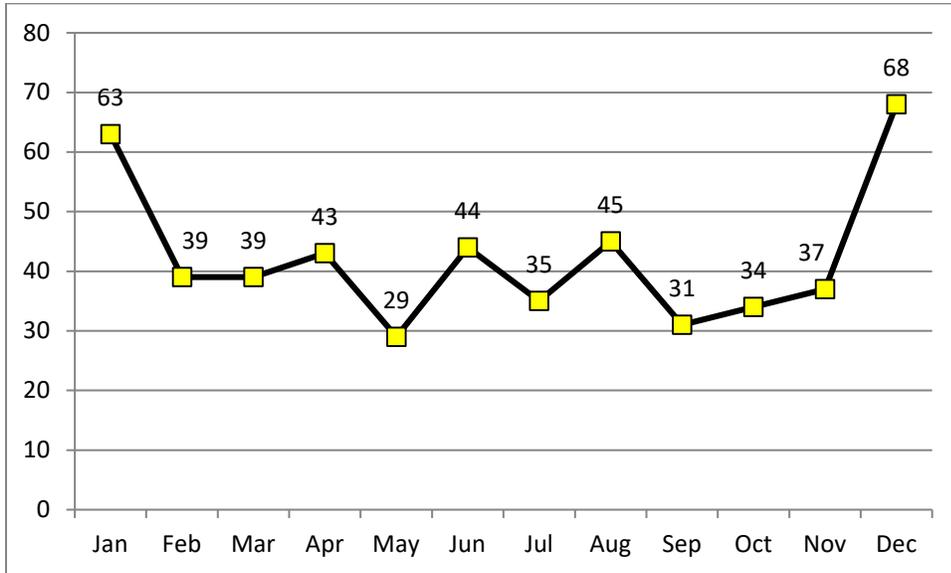


Figure 34 shows that the highest number of curve crashes occurred on Saturdays.

**Figure 34: Curve Crashes by Day of the Week**

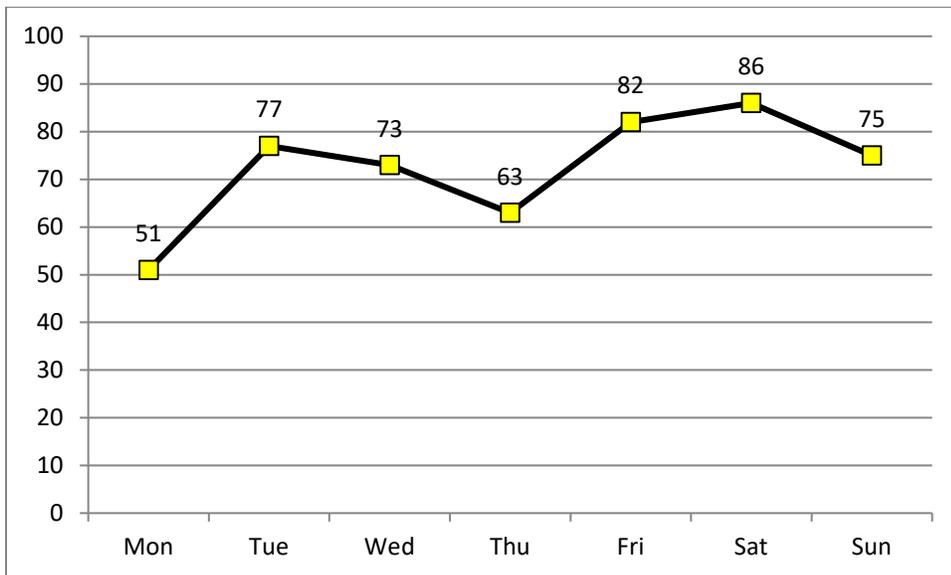


Figure 35 shows that the highest number of curve crashes occurred between 7 and 8 a.m.

**Figure 35: Curve Crashes by Time of Day**

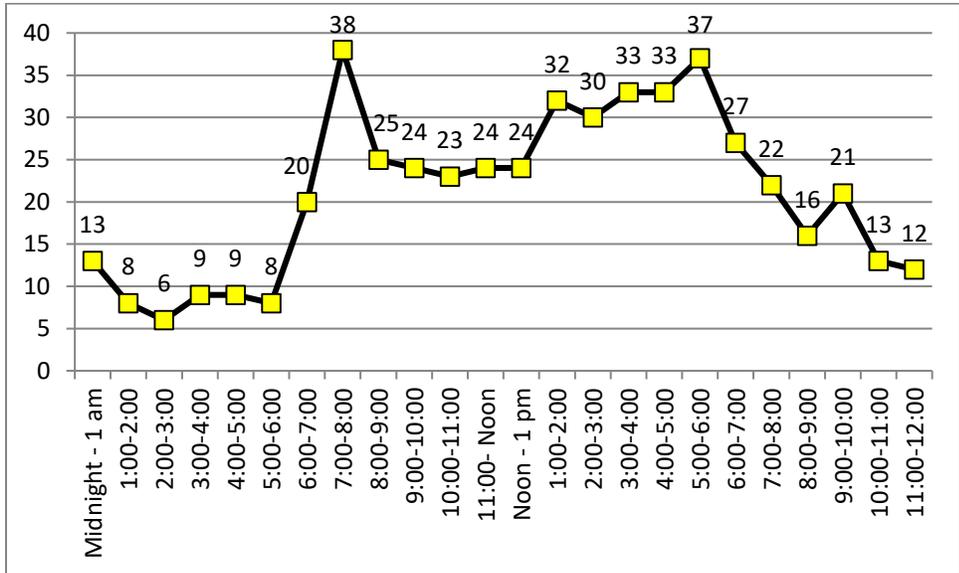


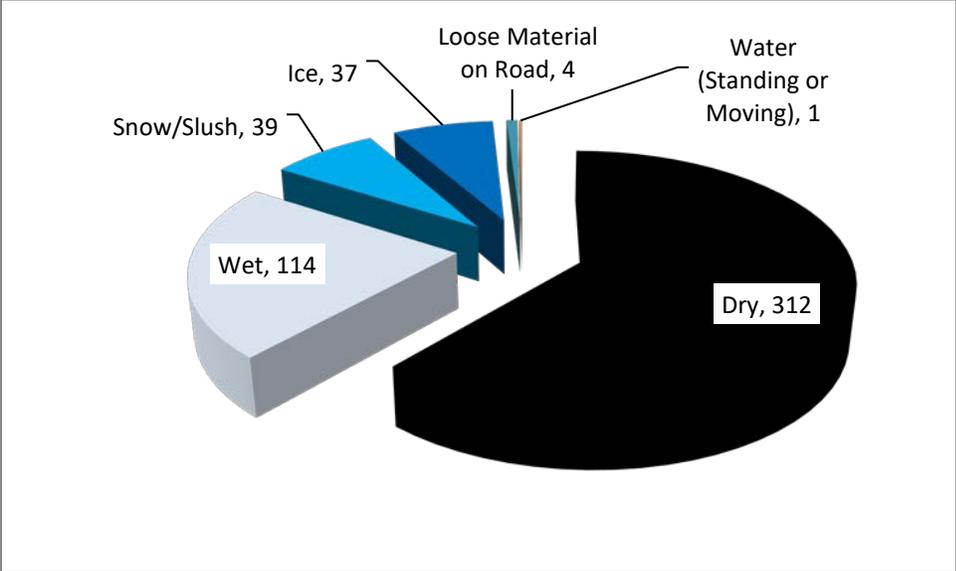
Table 43 shows that most curve crashes occur when weather conditions are clear.

**Table 43: Curve Crashes by Weather Conditions**

| Weather Conditions       | Crashes    |
|--------------------------|------------|
| Clear                    | 289        |
| Rain                     | 75         |
| Cloudy                   | 74         |
| Snow                     | 51         |
| Sleet/Hail/Freezing Rain | 11         |
| Fog/Smoke/Smog           | 4          |
| Blowing Sand/Soil/Snow   | 3          |
| <b>Total</b>             | <b>507</b> |

Figure 36 shows that most curve crashes occur when the road is dry.

**Figure 36: Curve Crashes by Road Surface Condition**



## Chapter 8: Motorcycle Crashes

In 2016, there were 57 crashes involving motorcycles or mopeds. Of those crashes, 45 had at least one injury, but none had a fatality. There were 54 total injuries in those crashes. This chapter further analyzes trends in this data.

Table 44 shows how 2016 motorcycle crash data compares to data from 2014 and 2015.

**Table 44: Motorcycle Crash Injuries and Fatalities**

| <b>Motorcycle Crash Statistic</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|-----------------------------------|-------------|-------------|-------------|
| <b>Crashes with Injuries</b>      | 45          | 58          | 92          |
| <b>Number of Injuries</b>         | 51          | 64          | 109         |
| <b>Crashes with Fatalities</b>    | 0           | 5           | 1           |
| <b>Number of Fatalities</b>       | 0           | 5           | 1           |

Most of the motorcycle crashes in 2016 occurred within the city limits of Lafayette or West Lafayette. There were no areas outside of the city limits where crashes were concentrated (Figures 37 and 38).

Figure 37: Tippecanoe County Motorcycle Crashes

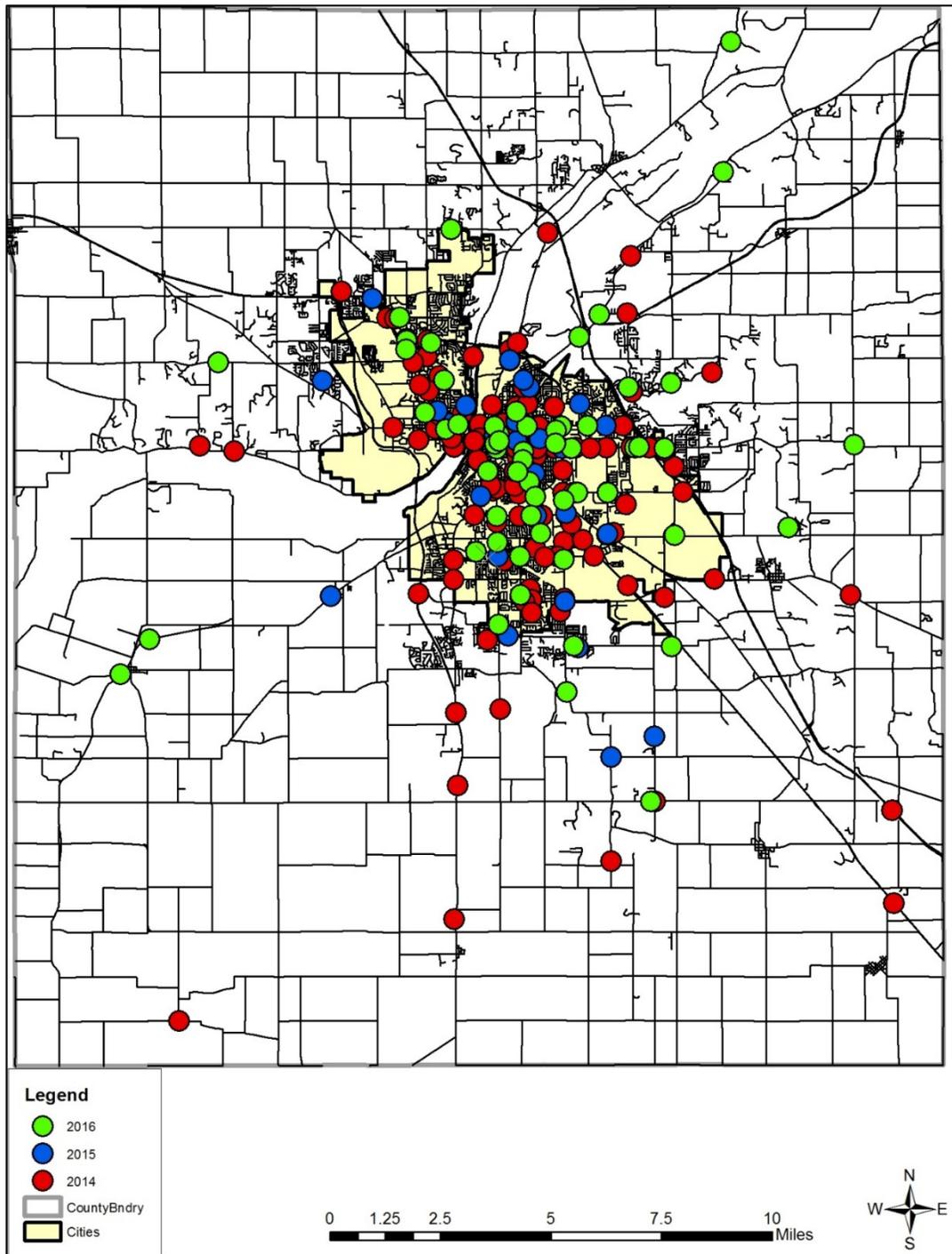


Figure 38: Lafayette and West Lafayette Motorcycle Crashes

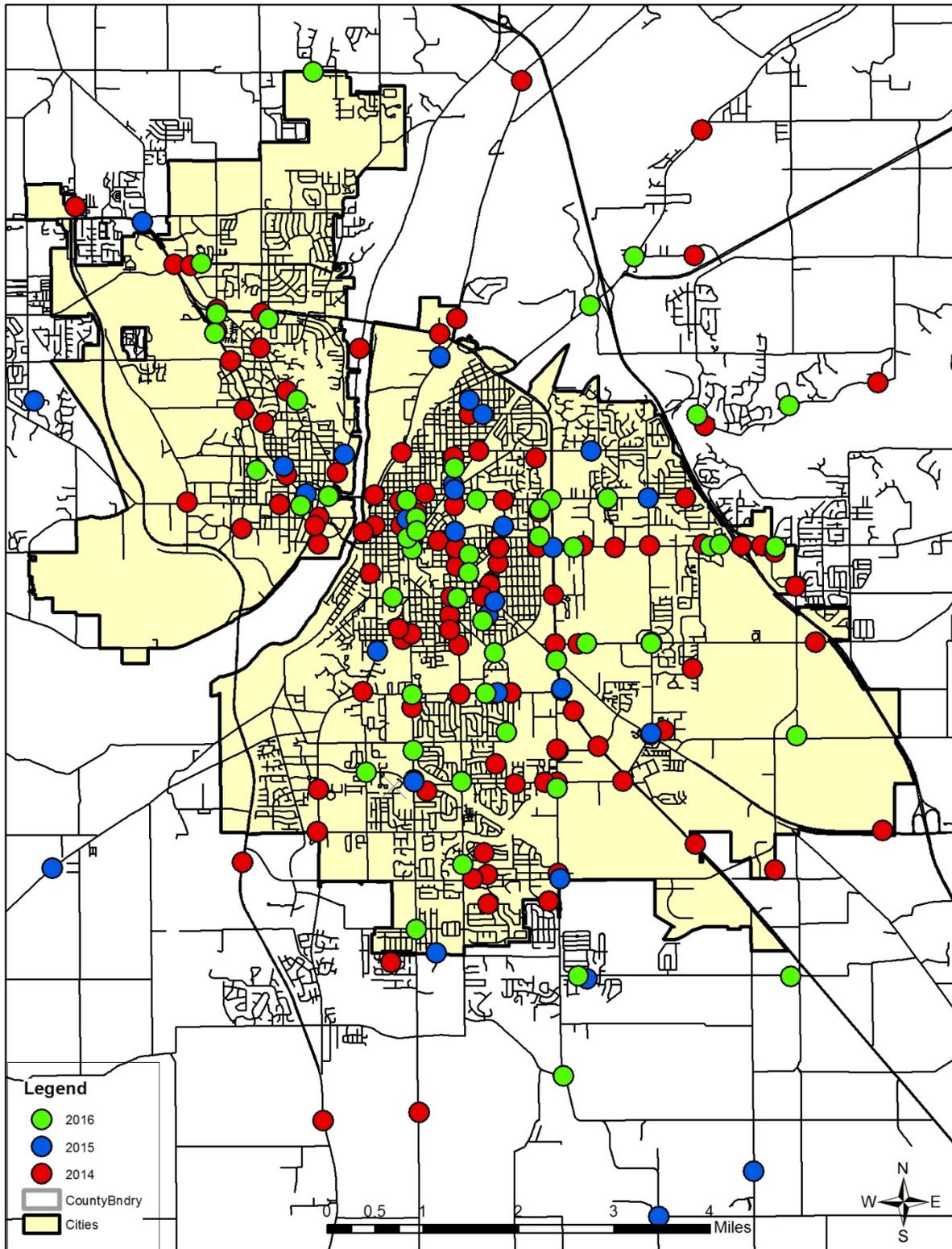


Table 45 shows that in 2016 “ran off road” and “right angle” were the two most common types.

**Table 45: Crash Types for Motorcycle Crashes**

| <b>Crash Type</b>                         | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>Total</b> |
|---|-------------|-------------|-------------|--------------|
| <b>Rear End</b>                           | 0           | 26          | 22          | 48           |
| <b>Non-Collision</b>                      | 10          | 7           | 27          | 44           |
| <b>Right Angle</b>                        | 11          | 14          | 17          | 42           |
| <b>Other - Explain In Narrative</b>       | 8           | 13          | 12          | 33           |
| <b>Ran Off Road</b>                       | 11          | 10          | 8           | 29           |
| <b>Same Direction Sideswipe</b>           | 5           | 4           | 11          | 20           |
| <b>Left Turn</b>                          | 3           | 5           | 7           | 15           |
| <b>Head On Between Two Motor Vehicles</b> | 5           | 6           | 4           | 15           |
| <b>Opposite Direction Sideswipe</b>       | 0           | 2           | 8           | 10           |
| <b>Right Turn</b>                         | 1           | 2           | 5           | 8            |
| <b>Backing Crash</b>                      | 1           | 2           | 1           | 4            |
| <b>Head On</b>                            | 0           | 0           | 3           | 3            |
| <b>Collision With Deer</b>                | 2           | 1           | 0           | 3            |
| <b>Left/Right Turn</b>                    | 0           | 1           | 0           | 1            |
| <b>Collision With Animal Other</b>        | 0           | 1           | 0           | 1            |
| <b>Total</b>                              | 57          | 94          | 125         | 276          |

Figure 39 shows that the months of June through September had the highest number of motorcycle crashes, and January and February had the lowest.

**Figure 39: Motorcycle Crashes by Month**

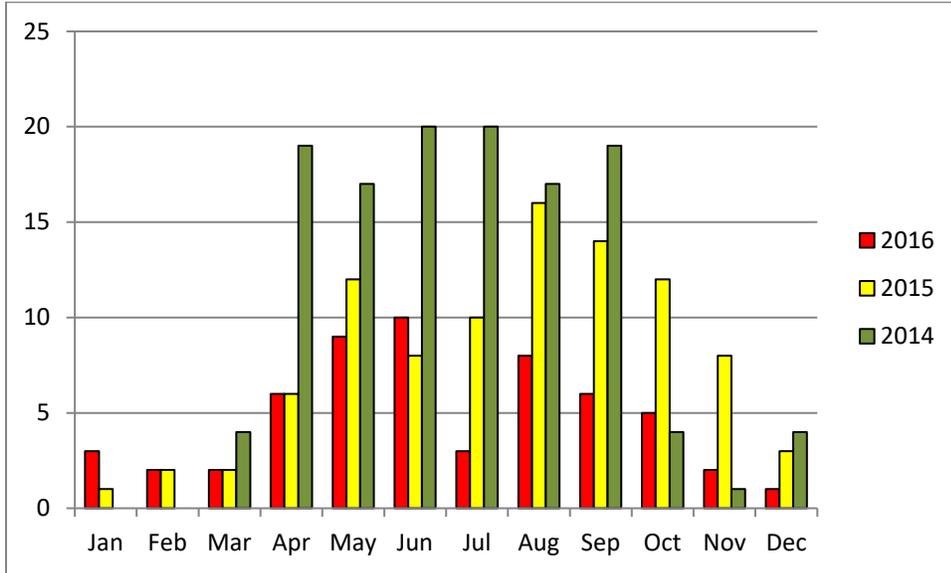


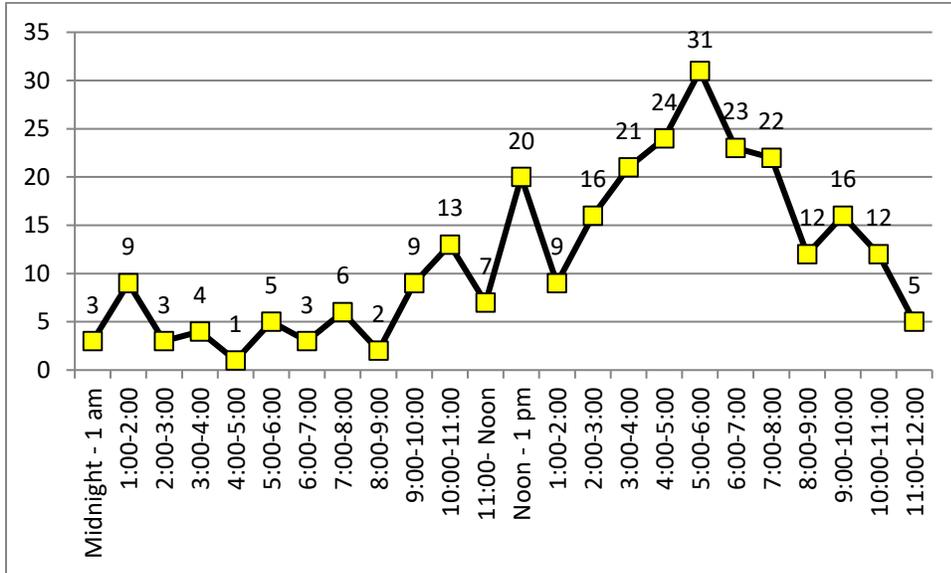
Table 46 shows that Wednesday and Saturday had the highest number of motorcycle crashes, but crashes were relatively high every day of the week.

**Table 46: Motorcycle Crashes by Day of Week**

|              | Mon | Tue | Wed | Thu | Fri | Sat | Sun | TOTAL |
|--------------|-----|-----|-----|-----|-----|-----|-----|-------|
| <b>2016</b>  | 7   | 5   | 7   | 5   | 11  | 9   | 13  | 57    |
| <b>2015</b>  | 11  | 9   | 19  | 9   | 12  | 20  | 14  | 94    |
| <b>2014</b>  | 16  | 18  | 21  | 18  | 21  | 18  | 13  | 125   |
| <b>Total</b> | 34  | 32  | 47  | 32  | 44  | 47  | 40  | 276   |

Figure 40 shows that the highest number of crashes (31) occurred from 5-6 p.m.

Figure 40: Motorcycle Crashes by Time of Day



## Chapter 9: Bicycle Crashes

In 2016, there were 33 crashes involving bicyclists that occurred on public right of way (crashes on private property are removed from this analysis). Of those crashes, 25 had at least one injury. There were 25 total injuries in those crashes. This chapter further analyzes bicycle crashes in 2016.

Table 47 compares bicycle crash statistics from 2014 to 2016.

**Table 47: Bicycle Crash Injuries and Fatalities**

| <b>Bicycle Crash Statistic</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>Total</b> |
|--------------------------------|-------------|-------------|-------------|--------------|
| <b>Crashes with Injuries</b>   | 25          | 28          | 23          | 76           |
| <b>Number of Injuries</b>      | 25          | 29          | 25          | 79           |
| <b>Crashes with Fatalities</b> | 0           | 0           | 0           | 0            |
| <b>Number of Fatalities</b>    | 0           | 0           | 0           | 0            |

Figures 41 and 42 show the locations of bicycle crashes.

**Figure 41: Tippecanoe County Bicycle Crashes**

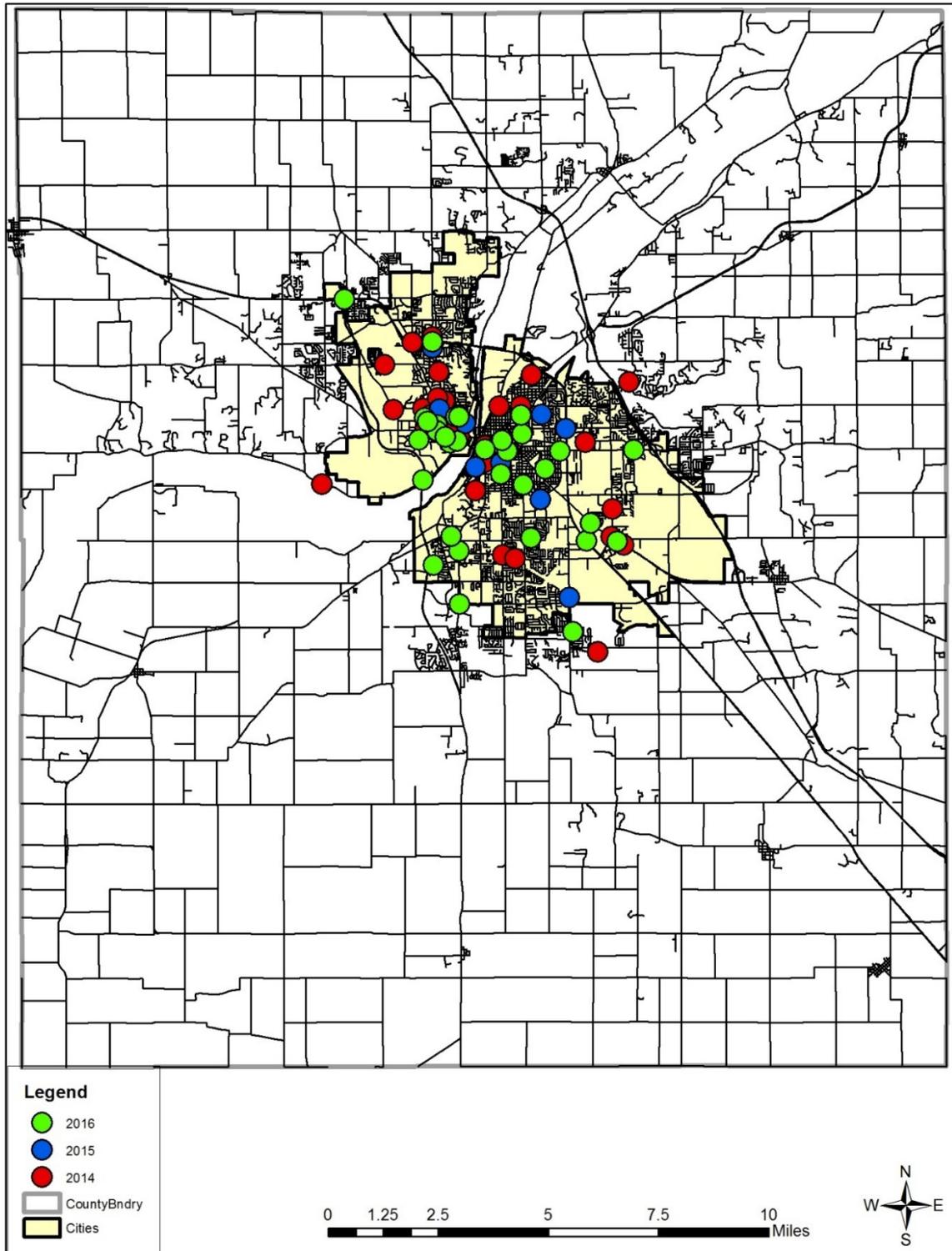


Figure 42: Lafayette and West Lafayette Bicycle Crashes

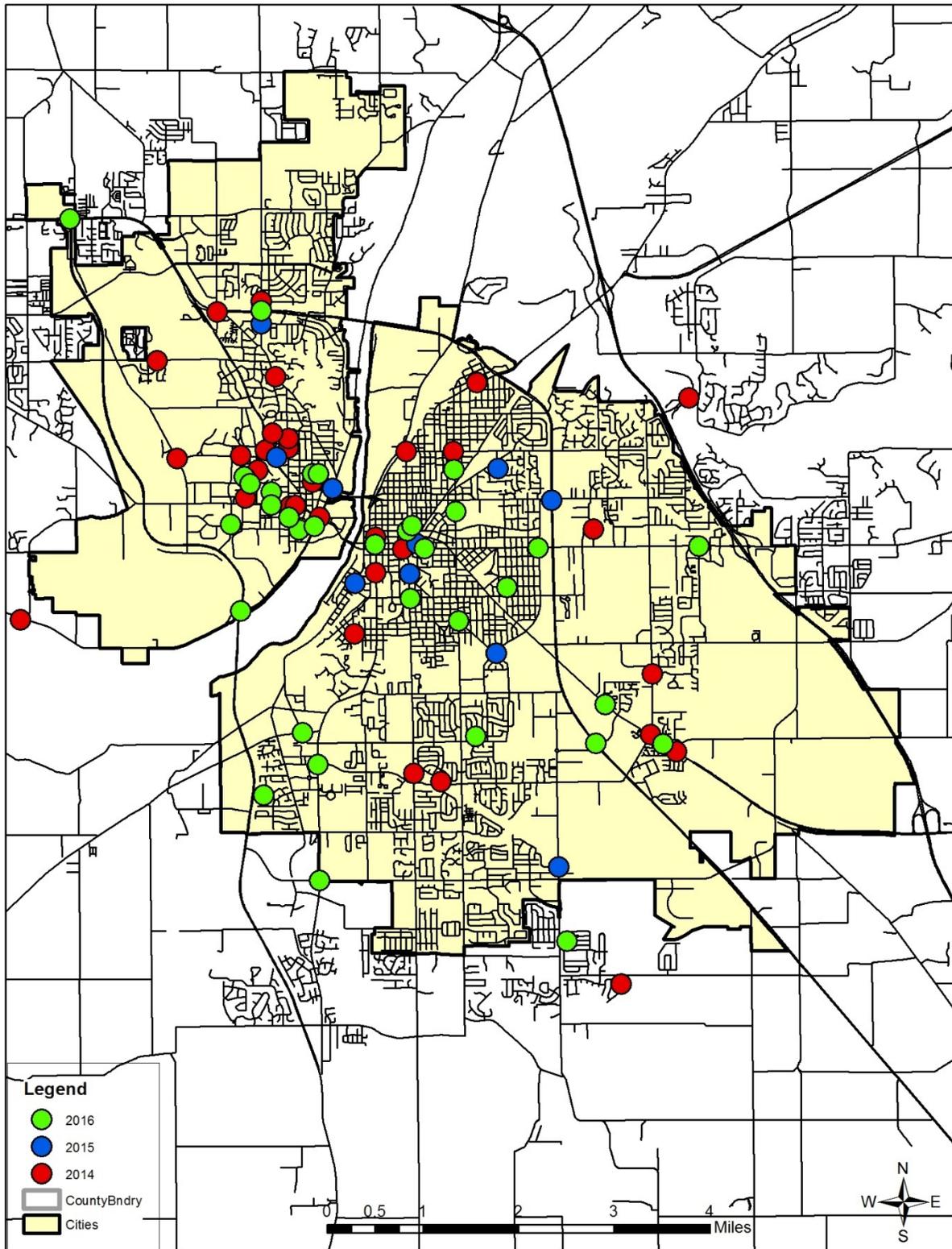


Table 48 shows that right angle crashes were the most common type of bicycle crashes.

**Table 48: Crash Types for Bicycle Crashes**

| <b>Crash Type</b>                         | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>Total</b> |
|---|-------------|-------------|-------------|--------------|
| <b>Right Angle</b>                        | 19          | 21          | 23          | 63           |
| <b>Right Turn</b>                         | 4           | 2           | 2           | 8            |
| <b>Same Direction Sideswipe</b>           | 2           | 3           | 2           | 7            |
| <b>Rear End</b>                           | 1           | 4           | 1           | 6            |
| <b>Left Turn</b>                          | 2           | 2           | 1           | 5            |
| <b>Other - Explain In Narrative</b>       | 1           | 1           | 3           | 5            |
| <b>Opposite Direction Sideswipe</b>       | 2           | 0           | 3           | 5            |
| <b>Head On Between Two Motor Vehicles</b> | 1           | 1           | 1           | 3            |
| <b>Backing Crash</b>                      | 1           | 1           | 0           | 2            |
| <b>Ran Off Road</b>                       | 0           | 0           | 1           | 1            |
| <b>Left/Right Turn</b>                    | 0           | 1           | 0           | 1            |
| <b>Total</b>                              | 33          | 36          | 37          | 106          |

Table 49 shows that September had the highest number of bicycle crashes.

**Table 49: Bicycle Crashes by Month**

|              | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>Total</b> |
|--------------|-------------|-------------|-------------|--------------|
| <b>Jan</b>   | 1           | 0           | 1           | 2            |
| <b>Feb</b>   | 2           | 0           | 0           | 2            |
| <b>Mar</b>   | 0           | 1           | 0           | 1            |
| <b>Apr</b>   | 3           | 2           | 1           | 6            |
| <b>May</b>   | 4           | 2           | 3           | 9            |
| <b>Jun</b>   | 4           | 5           | 2           | 11           |
| <b>Jul</b>   | 3           | 8           | 3           | 14           |
| <b>Aug</b>   | 2           | 5           | 7           | 14           |
| <b>Sep</b>   | 5           | 5           | 11          | 21           |
| <b>Oct</b>   | 4           | 7           | 4           | 15           |
| <b>Nov</b>   | 4           | 1           | 2           | 7            |
| <b>Dec</b>   | 1           | 0           | 3           | 4            |
| <b>Total</b> | 33          | 36          | 37          | 106          |

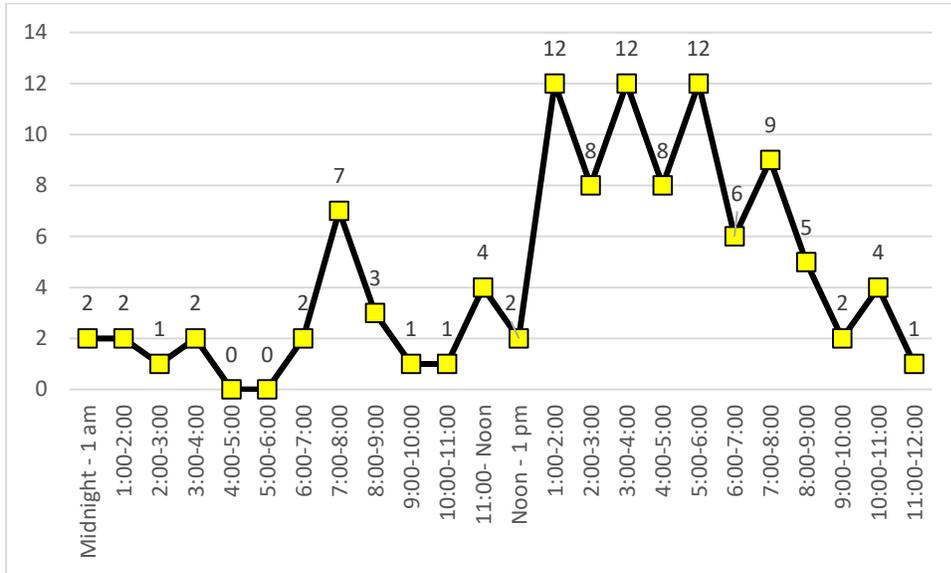
Table 50 shows that Monday had the highest number of bicycle crashes.

**Table 50: Bicycle Crashes by Day of the Week**

|              | <b>Mon</b> | <b>Tue</b> | <b>Wed</b> | <b>Thu</b> | <b>Fri</b> | <b>Sat</b> | <b>Sun</b> | <b>Total</b> |
|--------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| <b>2016</b>  | 6          | 3          | 4          | 5          | 7          | 5          | 3          | 33           |
| <b>2015</b>  | 5          | 5          | 8          | 7          | 4          | 5          | 2          | 36           |
| <b>2014</b>  | 9          | 7          | 3          | 6          | 6          | 3          | 3          | 37           |
| <b>Total</b> | 20         | 15         | 15         | 18         | 17         | 13         | 8          | 106          |

Figure 43 shows the peak period for bicycle crashes occurred between 1 and 6 p.m.

Figure 43: Bicycle Crashes by Time of Day



## Chapter 10: Pedestrian Crashes

In 2016, there were 32 crashes involving pedestrians. Of those crashes, 30 had at least one injury, but none had at any fatalities. There were 32 injuries in those crashes. This chapter further analyzes pedestrian crashes.

Table 51 compares pedestrian crash statistics from 2014 to 2016.

**Table 51: Pedestrian Injuries and Fatalities**

| <b>Pedestrian Crash Statistic</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>Total</b> |
|-----------------------------------|-------------|-------------|-------------|--------------|
| <b>Crashes With Injuries</b>      | 30          | 23          | 36          | 89           |
| <b>Number Of Injuries</b>         | 32          | 24          | 37          | 93           |
| <b>Crashes With Fatalities</b>    | 0           | 1           | 1           | 2            |
| <b>Number Of Fatalities</b>       | 0           | 1           | 1           | 2            |

Most of the pedestrian crashes in 2016 occurred within the city limits of Lafayette or West Lafayette. There were no areas outside of the city limits where crashes were concentrated. Figures 44 and 45 show the locations of these crashes.

Figure 44: Tippecanoe County Pedestrian Crashes

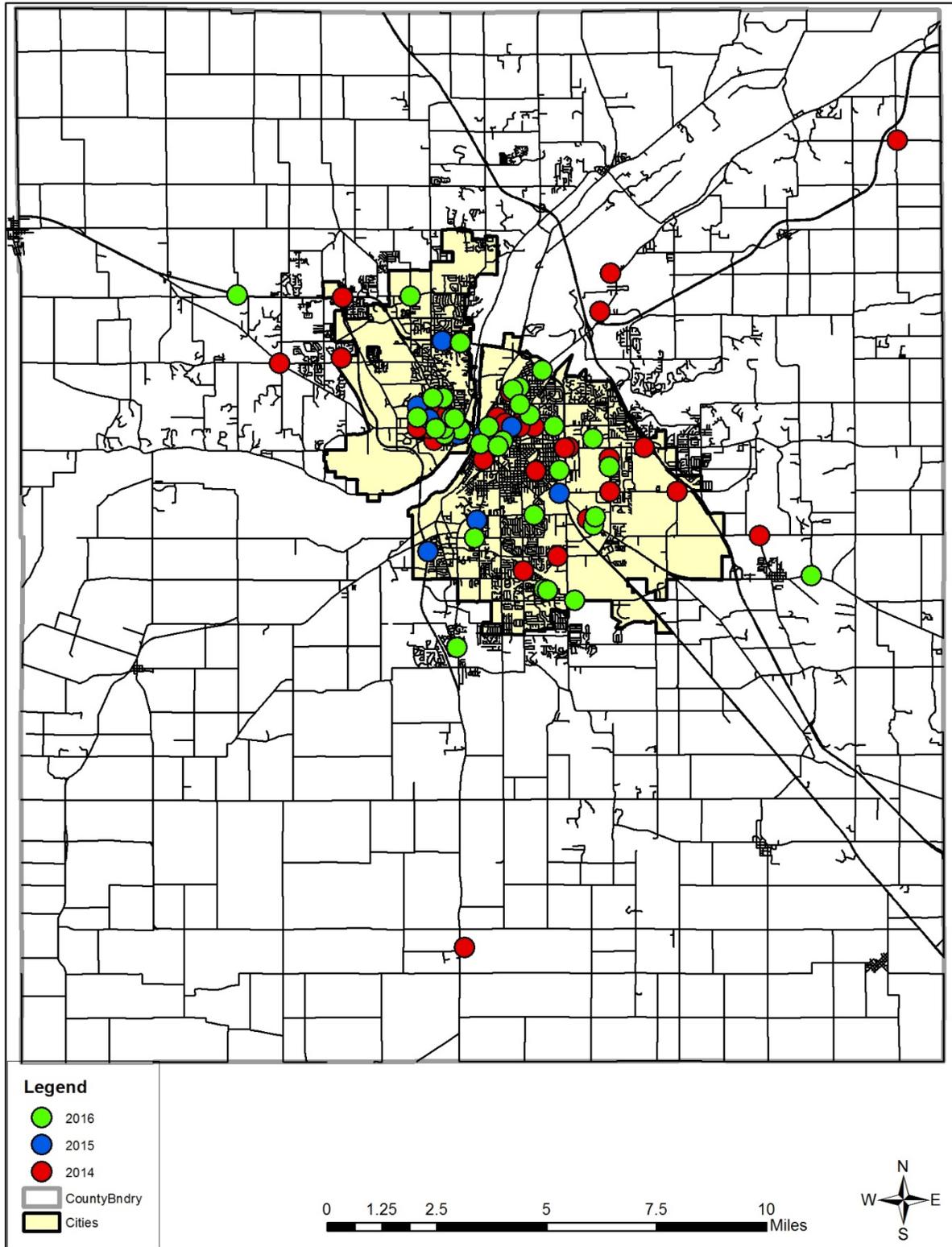


Figure 45: Lafayette and West Lafayette Pedestrian Crashes

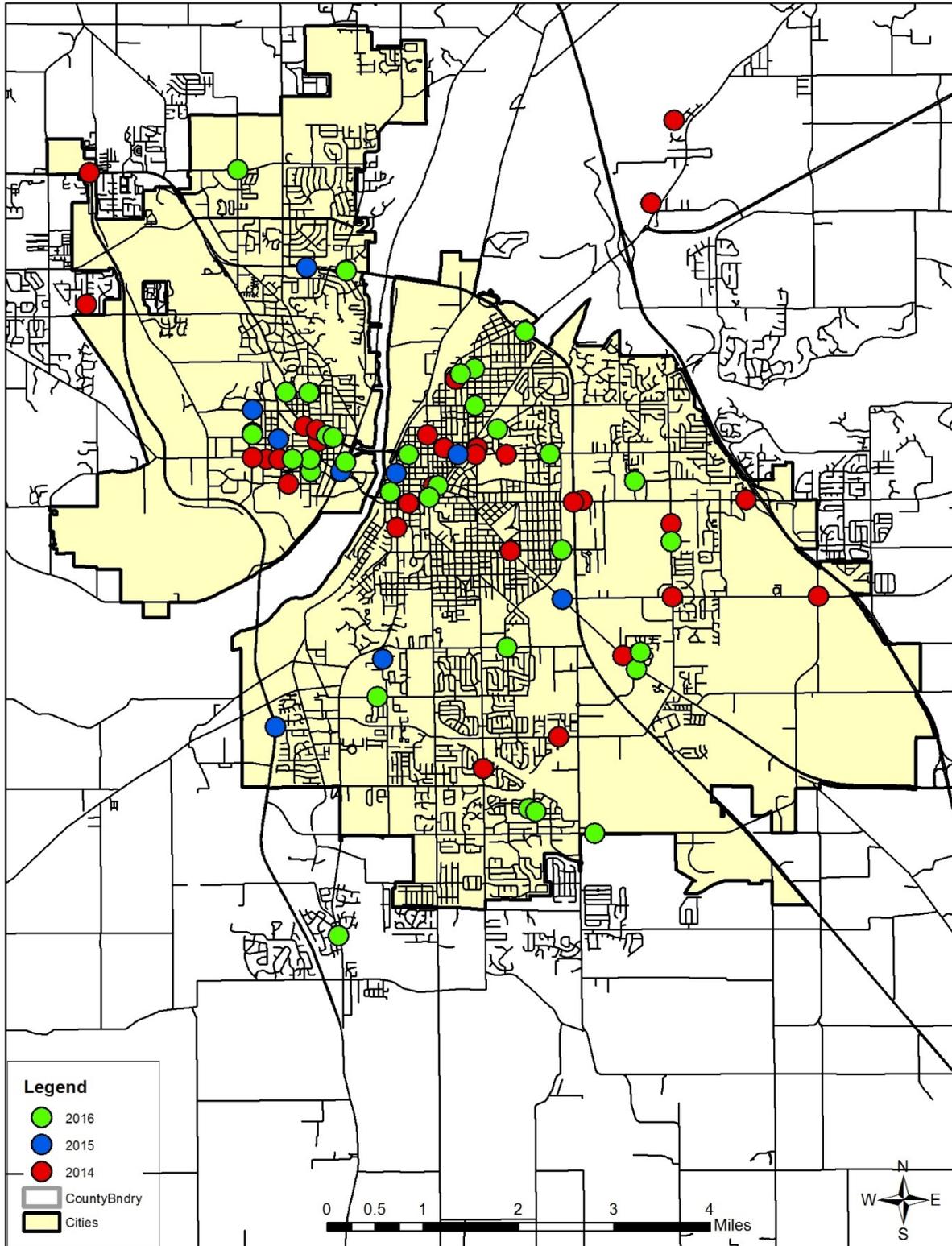


Table 52 shows that “Left Turn” was the most common type of pedestrian crash to occur.

**Table 52: Crash Types for Pedestrian Crashes**

| <b>Crash Type</b>                         | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>Total</b> |
|---|-------------|-------------|-------------|--------------|
| <b>Left Turn</b>                          | 7           | 6           | 10          | 23           |
| <b>Other - Explain In Narrative</b>       | 8           | 3           | 6           | 17           |
| <b>Head On Between Two Motor Vehicles</b> | 7           | 6           | 3           | 16           |
| <b>Right Angle</b>                        | 5           | 2           | 3           | 10           |
| <b>Same Direction Sideswipe</b>           | 0           | 0           | 7           | 7            |
| <b>Head On</b>                            | 0           | 0           | 5           | 5            |
| <b>Backing Crash</b>                      | 0           | 0           | 4           | 4            |
| <b>Right Turn</b>                         | 2           | 2           | 0           | 4            |
| <b>Non-Collision</b>                      | 0           | 1           | 2           | 3            |
| <b>Rear End</b>                           | 1           | 1           | 1           | 3            |
| <b>Left/Right Turn</b>                    | 1           | 1           | 0           | 2            |
| <b>Unknown</b>                            | 1           | 1           | 0           | 2            |
| <b>Ran Off Road</b>                       | 0           | 1           | 0           | 1            |
| <b>Total</b>                              | 32          | 24          | 41          | 97           |

Table 53 shows that November had the highest number of pedestrian crashes.

**Table 53: Pedestrian Crashes by Month**

|              | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>Total</b> |
|--------------|-------------|-------------|-------------|--------------|
| <b>Jan</b>   | 6           | 1           | 4           | 11           |
| <b>Feb</b>   | 1           | 1           | 5           | 7            |
| <b>Mar</b>   | 2           | 3           | 2           | 7            |
| <b>Apr</b>   | 1           | 0           | 3           | 4            |
| <b>May</b>   | 1           | 3           | 2           | 6            |
| <b>Jun</b>   | 2           | 1           | 2           | 5            |
| <b>Jul</b>   | 1           | 1           | 3           | 5            |
| <b>Aug</b>   | 2           | 1           | 3           | 6            |
| <b>Sep</b>   | 5           | 5           | 2           | 12           |
| <b>Oct</b>   | 5           | 3           | 2           | 10           |
| <b>Nov</b>   | 4           | 3           | 8           | 15           |
| <b>Dec</b>   | 2           | 2           | 5           | 9            |
| <b>Total</b> | 32          | 24          | 41          | 97           |

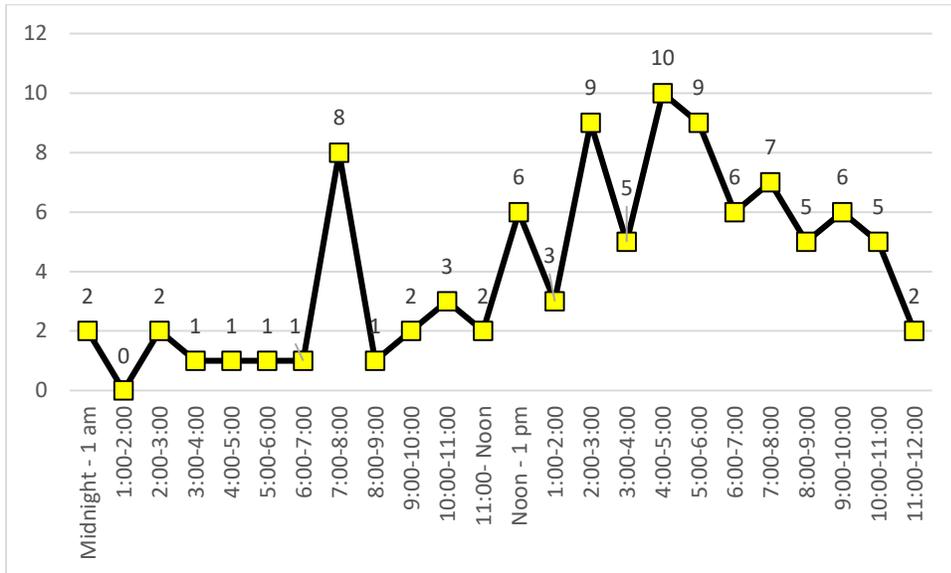
Table 54 shows that Thursday had the highest number of pedestrian crashes.

**Table 54: Pedestrian Crashes by Day of the Week**

|              | <b>Mon</b> | <b>Tue</b> | <b>Wed</b> | <b>Thu</b> | <b>Fri</b> | <b>Sat</b> | <b>Sun</b> | <b>Total</b> |
|--------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| <b>2016</b>  | 6          | 2          | 6          | 8          | 4          | 5          | 1          | 32           |
| <b>2015</b>  | 3          | 2          | 5          | 4          | 5          | 2          | 3          | 24           |
| <b>2014</b>  | 4          | 6          | 6          | 10         | 9          | 2          | 4          | 41           |
| <b>Total</b> | 13         | 10         | 17         | 22         | 18         | 9          | 8          | 97           |

Figure 46 shows that the highest number of pedestrian crashes occurred from 4-5 p.m.

**Figure 46: Pedestrian Crashes by Time of Day**

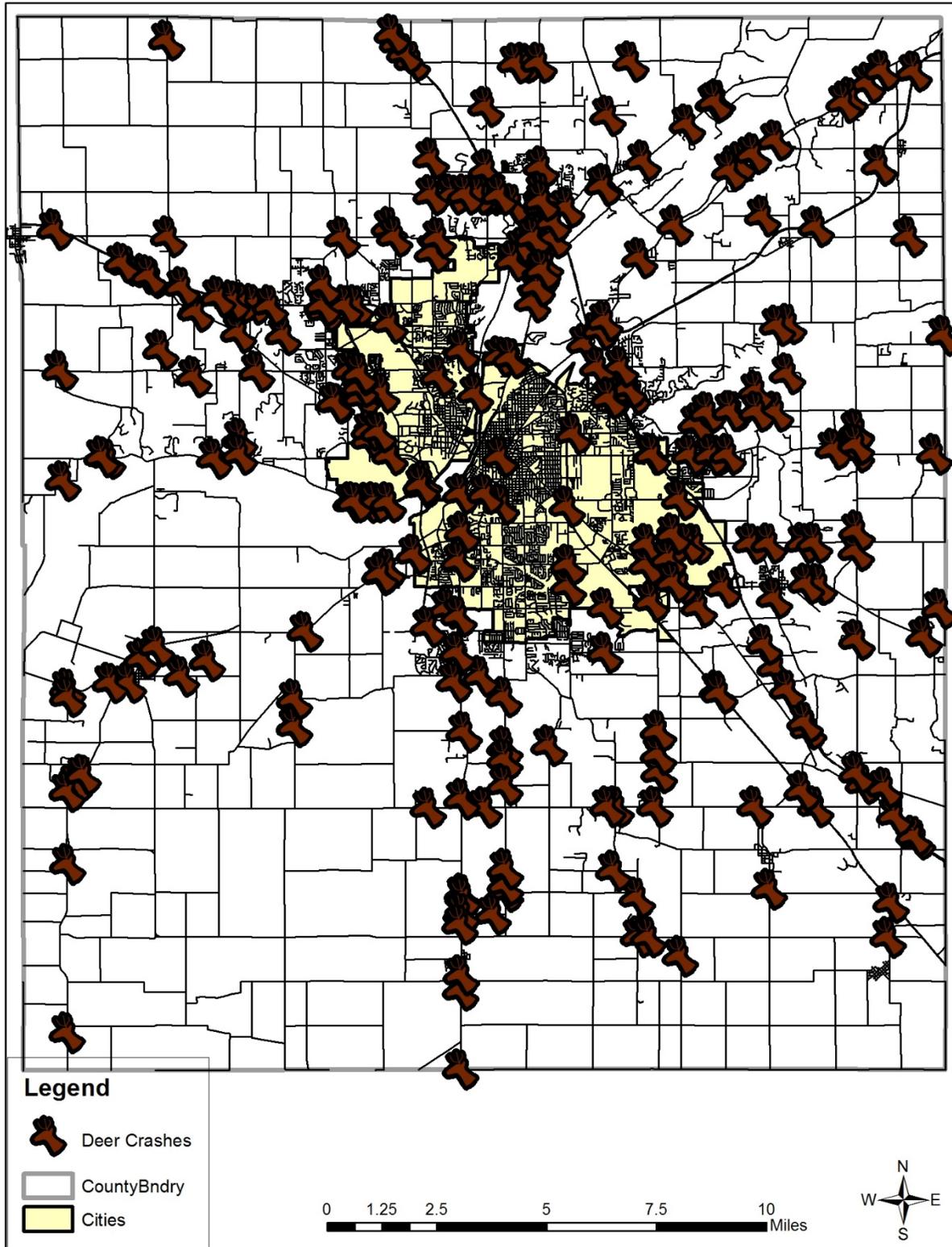


## **Chapter 11: Other Crash Types and Factors**

There were several other crash types and a few additional factors to analyze in 2016 crashes. These crash types and factors are not as prevalent as other crash types and factors; therefore, the analysis is not as in-depth as some of the previous analysis in this report. These crash types and factors are still important to consider; however, so this chapter analyzes them.

Figure 47 shows that deer crashes are distributed throughout Tippecanoe County.

Figure 47: Tippecanoe County Deer Crashes



Figures 48 and 49 show hit and run crashes, and it can be observed that most occur inside the city limits of Lafayette and West Lafayette.

Figure 48: Tippecanoe County Hit and Run Crashes

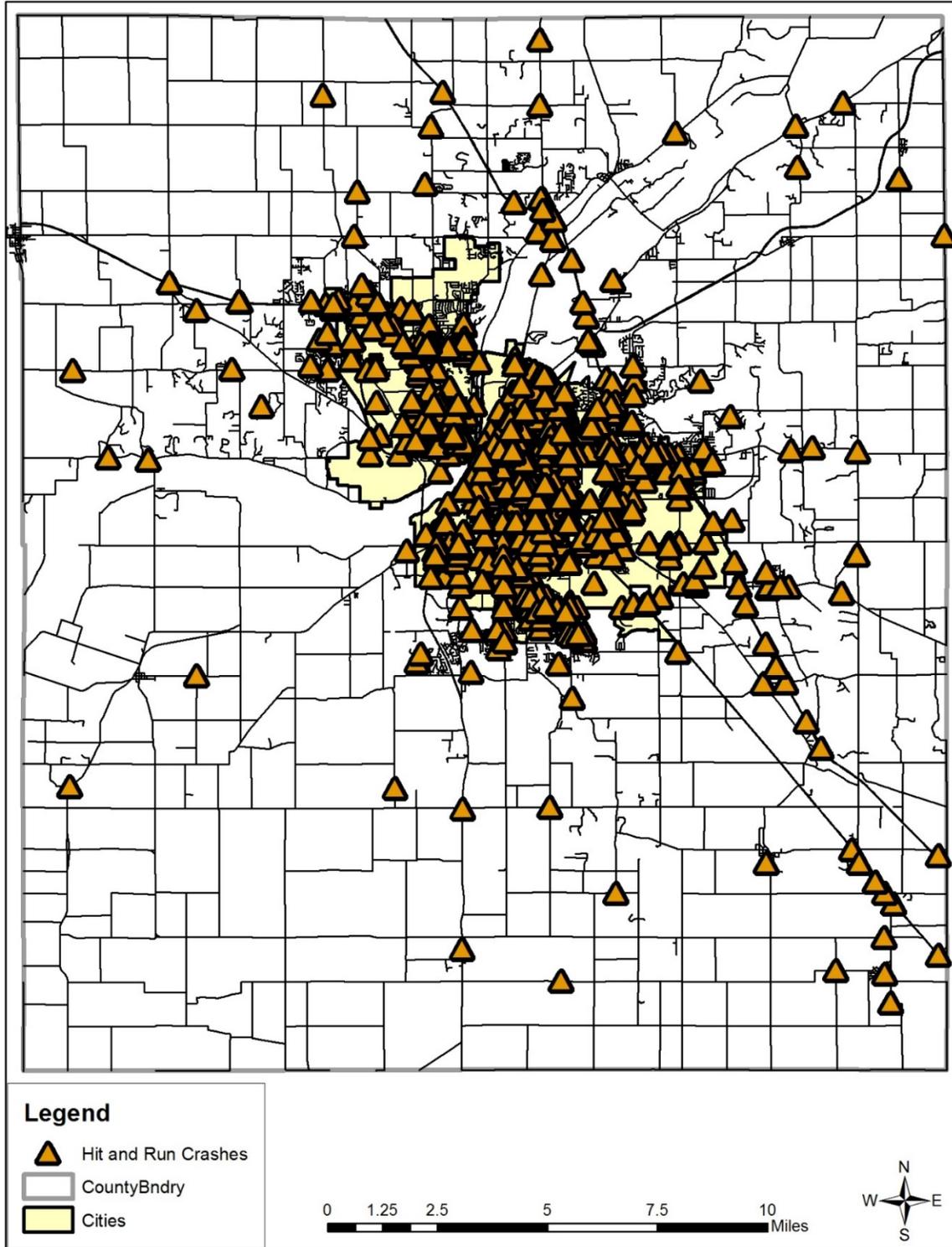


Figure 49: Lafayette and West Lafayette Hit and Run Crashes

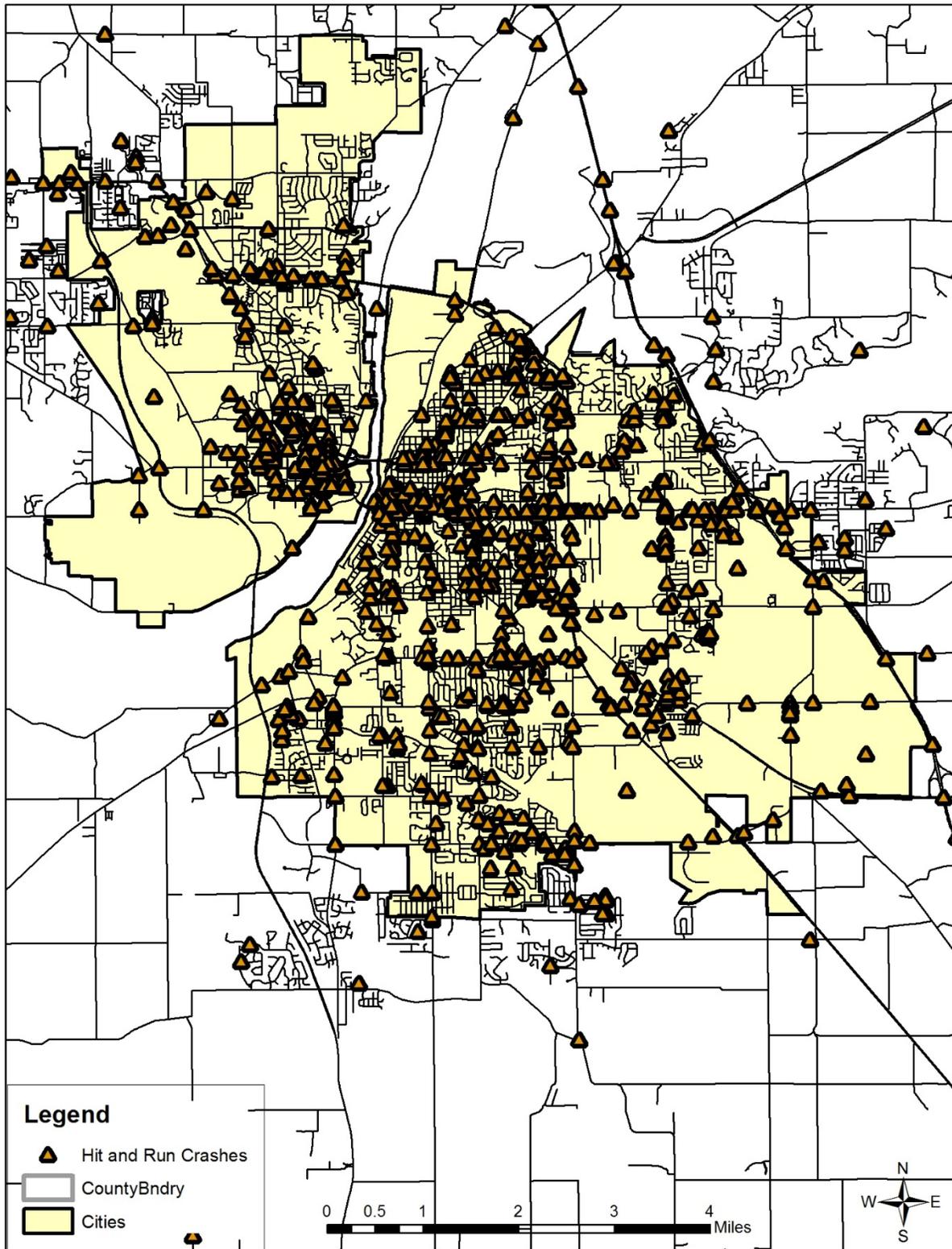


Table 55 shows that most of the crashes in 2016 involved two vehicles.

**Table 55: Summary of Number of Vehicles Involved in Crashes**

| <b>Number of Vehicles Involved</b> | <b>Crashes</b> |
|------------------------------------|----------------|
| <b>1</b>                           | 1400           |
| <b>2</b>                           | 4069           |
| <b>3</b>                           | 316            |
| <b>4</b>                           | 43             |
| <b>5</b>                           | 3              |
| <b>6</b>                           | 2              |
| <b>Total</b>                       | 5833           |

Although crashes with two vehicles were the most common type, the amount of single vehicle crashes was also significant. Single vehicle crashes can happen for a variety of reasons. Some of those reasons include driver confusion or unfamiliarity with a segment of road. If a road has dangerous or non-intuitive geometry, it may lead to a high number of crashes. Figures 50 and 51 show the locations of single vehicle crashes in 2016.

Figure 50: Tippecanoe County Single Vehicle Crashes

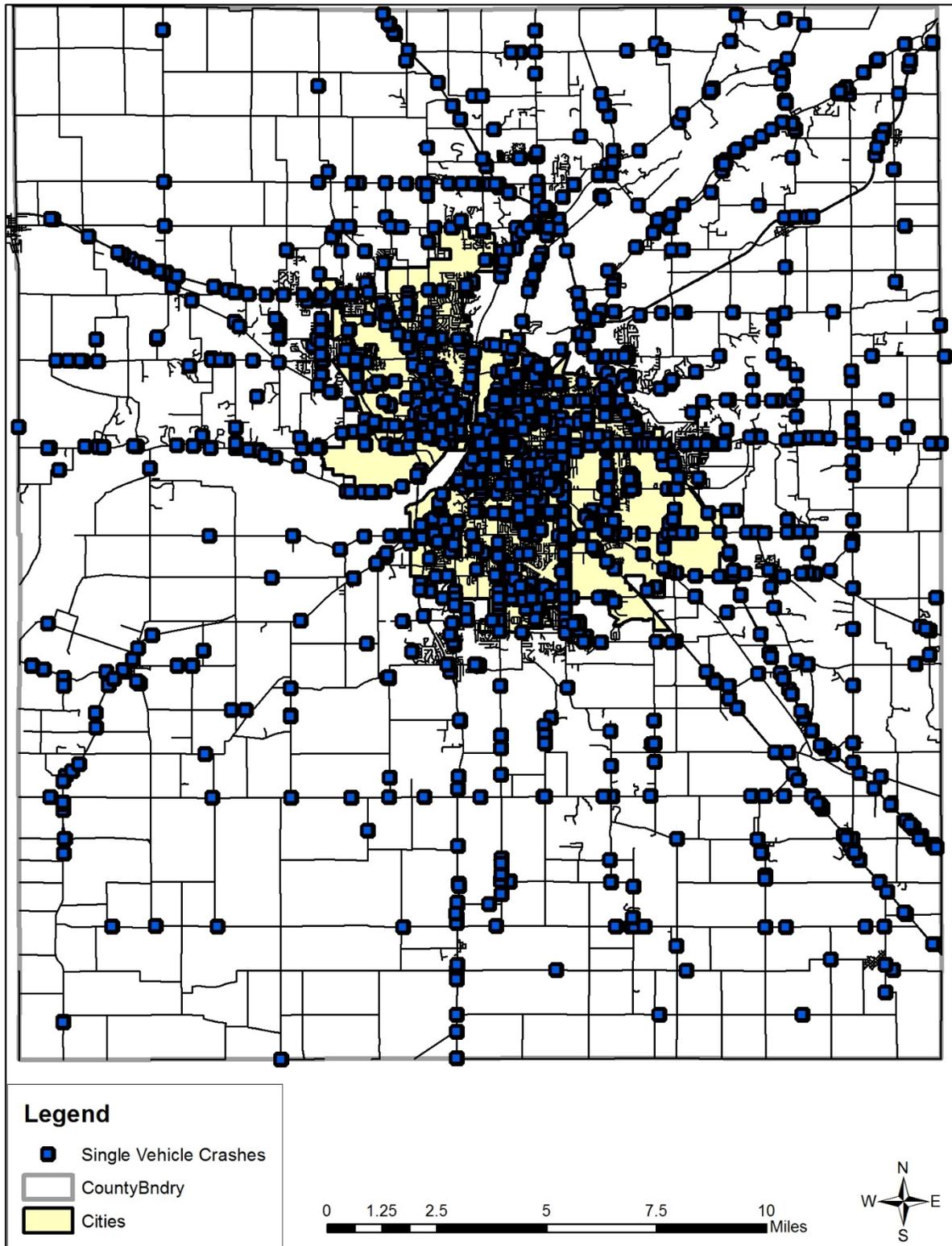


Figure 51: Lafayette and West Lafayette Single Vehicle Crashes

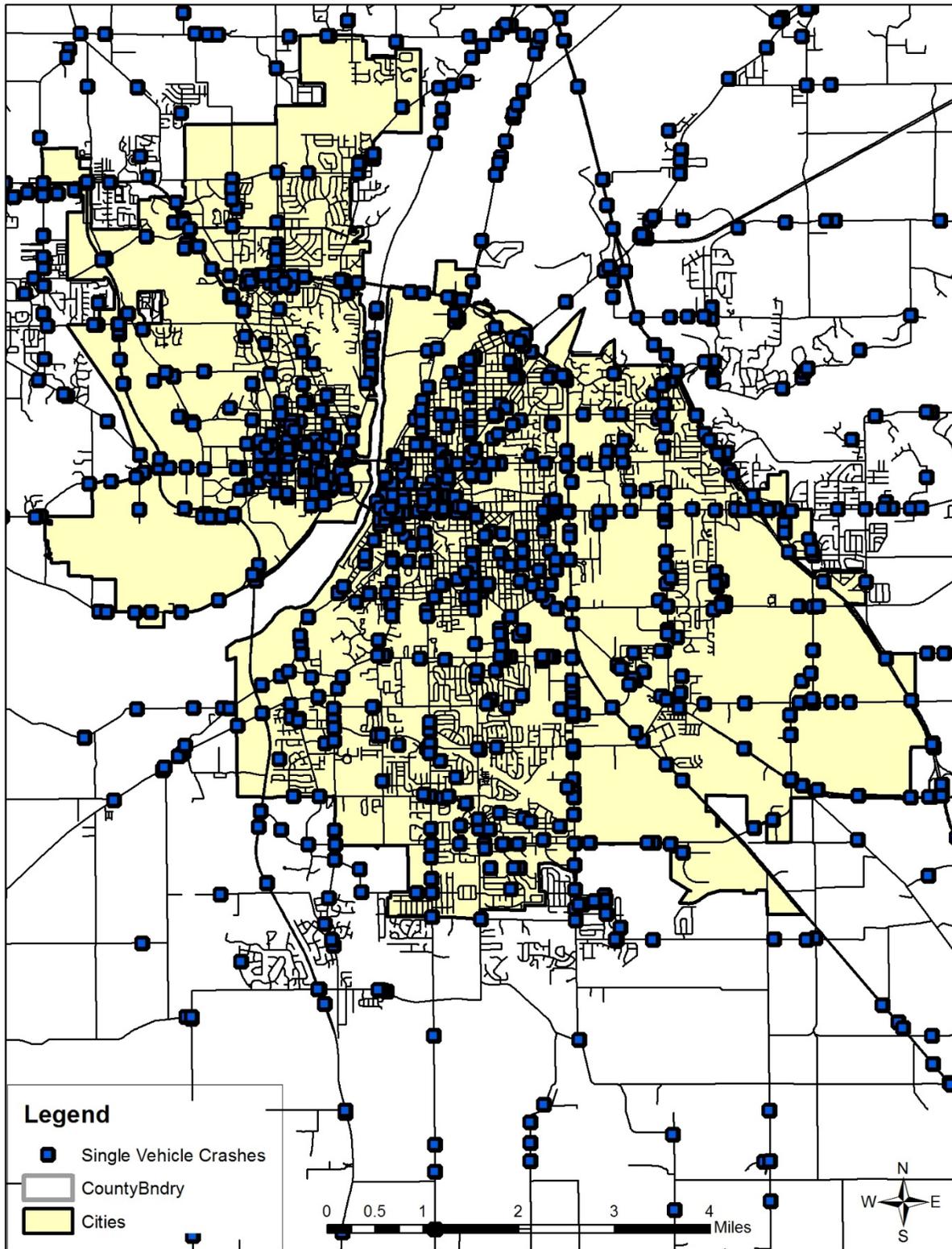


Table 56 shows that most crashes occur on roads with an asphalt surface.

**Table 56: Crashes by Road Surface**

| <b>Road Surface</b> | <b>Crashes</b> |
|---------------------|----------------|
| <b>Asphalt</b>      | 5244           |
| <b>Concrete</b>     | 555            |
| <b>Gravel</b>       | 19             |
| <b>Other</b>        | 12             |
| <b>Unknown</b>      | 3              |
| <b>Total</b>        | 5833           |

Table 57 shows that aside from Indiana, Illinois had the highest number of licensed drivers involved in crashes in Tippecanoe County.

**Table 57: Crashes by Driver's State of Residence**

| <b>State</b> | <b>Drivers</b> |
|--------------|----------------|
| AL           | 3              |
| AZ           | 8              |
| CA           | 21             |
| CO           | 3              |
| FL           | 28             |
| GA           | 13             |
| IA           | 8              |
| ID           | 3              |
| IL           | 232            |
| IN           | 9039           |
| KS           | 4              |
| KY           | 34             |
| LA           | 1              |
| MA           | 1              |
| MD           | 7              |
| MI           | 28             |
| MN           | 9              |
| MO           | 11             |
| MS           | 1              |
| NC           | 13             |
| NH           | 1              |
| NJ           | 6              |
| NM           | 1              |
| NV           | 1              |
| NY           | 9              |
| OH           | 60             |
| OK           | 1              |
| OR           | 1              |
| PA           | 6              |
| PR           | 1              |
| SC           | 6              |
| TN           | 17             |
| TX           | 20             |
| VA           | 8              |
| VT           | 1              |
| WA           | 1              |
| WI           | 30             |
| WY           | 1              |

