

Profile of Rail-Related Injuries for Minneapolis–St. Paul

A pedestrian or other road user is involved in a collision with a train every three hours in the U.S., and 1 in 10 of these involves children ages 19 and under.^{1,2} These incidents are often deadly, and, most importantly, are preventable. They are primarily the result of two types of incidents:

- **Trespassing injuries** occur when a person is injured while on private railroad property without permission. They are most often pedestrians taking a shortcut across or along tracks, but also include loiterers and those engaging in recreational activities such as hunting or jogging.¹
- **Railroad crossing injuries** are when a person or highway user is struck by a train while attempting to cross at a designated crossing where tracks intersect a roadway or walkway at the same level.

This profile describes data reported to the Federal Railroad Administration (FRA) on rail-related injuries occurring in Minneapolis–St. Paul. Data are for years 2011 to 2020 and are combined for the Minnesota counties of Ramsey, Anoka, Hennepin, Washington, Dakota, and Scott (no injuries reported for Carver County). Injuries are divided into trespassing injuries and railroad crossing injuries. Data include both fatal and nonfatal rail-related injuries. Excluded from this profile are injuries to rail passengers and rail workers, as well as cases of suicides and attempted suicide.

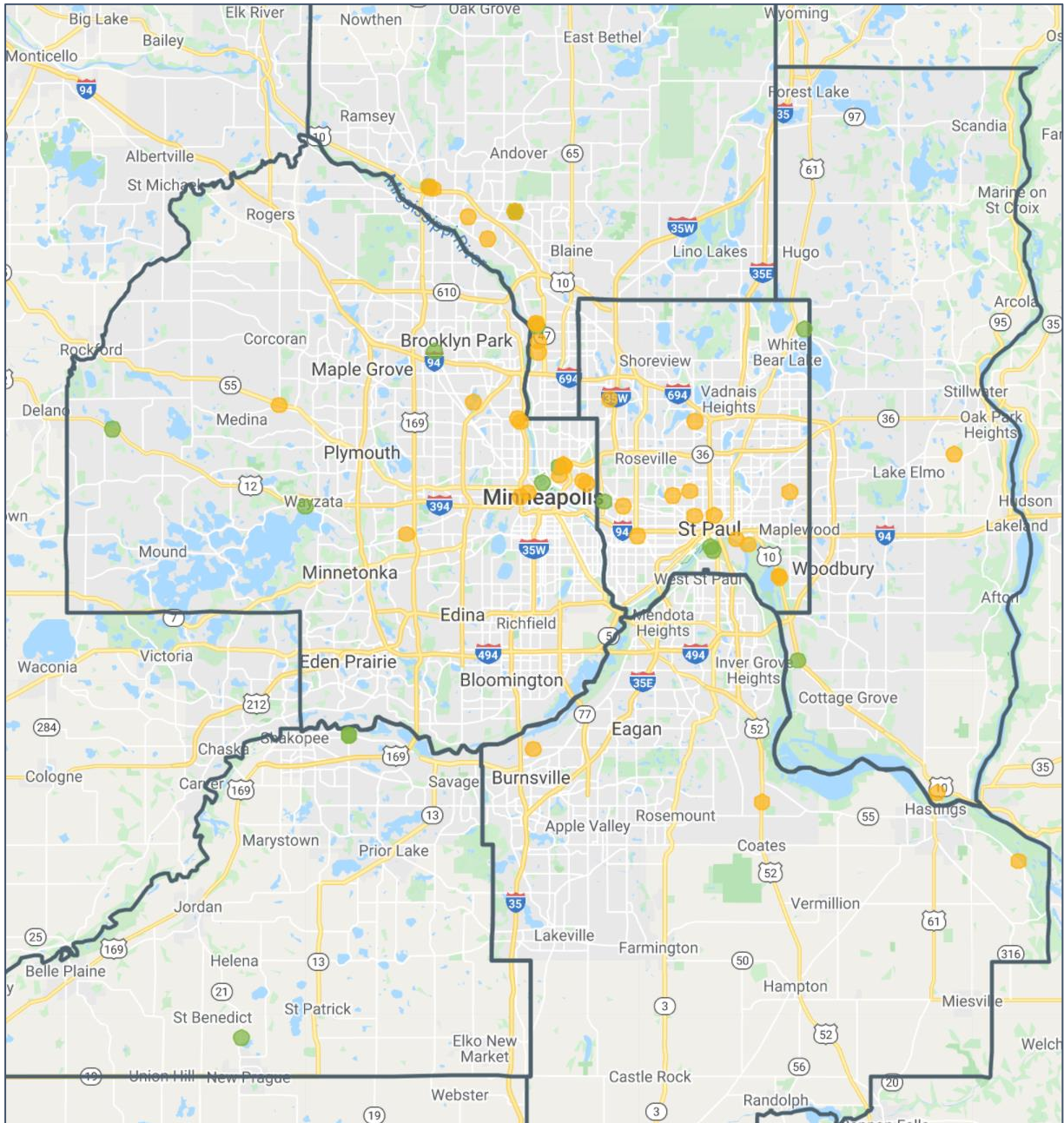
This report and other rail safety resources for families, educators and community partners can be downloaded from the **Safe Kids Rail Safety Station** online hub at safekids.org/RailSafetyStation.

Summary

- There were 68 rail-related injuries in Minneapolis–Saint Paul from 2011 to 2020, a third of which occurred in Ramsey County.
- Of those who were injured, 1 in 4 were children ages 19 and under and 1 in 4 were between the ages of 20 and 29 years old.
- Rail-related injuries were more often the results of trespassing incidents, which were more often fatal than railroad crossing injuries.
- More than 9 in 10 injuries involved on-track equipment, most of which were freight trains.
- Trespassing injuries predominated during warmer months (Jun–Nov), while railroad crossing injuries predominated during Winter months (Dec–Feb).
- Trespassing injuries were most frequent on Friday, while railroad crossing injuries were most frequent on Saturday and Sunday.
- Overall, injuries were most frequent between 12:00 PM and 5:59 PM.
- About 8 in 10 of those injured at railroad crossings were motor vehicle occupants.
- Most of those injured at railroad crossings either had gone through or around the gates or failed to stop for the train.
- Of the 7 in 10 trespassers who were struck by on-track equipment, nearly half were on the tracks when they were struck.



**Map 1. Rail-Related Injuries by Incident Type;
Ramsey, Anoka, Hennepin, Washington, Dakota and Scott Counties, MN**



● Railroad crossing injury ● Trespassing injury

See pages 8-19 for county-level maps by incident type and for children versus adults.



| Overview | Distribution of Rail-Related Injuries by County | | | | | | | | | | | | | | |
|---|--|--------|------------|--------|-----|-------|-----|----------|-----|------------|----|--------|----|-------|----|
| <p>2019 Population³</p> <p>3,013,559</p> <p>Number of Railroad Crossings⁴</p> <p>2,340</p> <p>Total Rail-Related Injuries, 2011–2020</p> <p>68</p> <p>Injuries per 100,000 People, 2011–2020</p> <p>0.23</p> <p>Percent Injured that were Ages 0–19 yr.</p> <p>26%</p> | <p>Figure 1. One in 3 injuries occurred in Ramsey county.</p> <table border="1"> <caption>Data for Figure 1: Distribution of Rail-Related Injuries by County</caption> <thead> <tr> <th>County</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ramsey</td> <td>34%</td> </tr> <tr> <td>Anoka</td> <td>25%</td> </tr> <tr> <td>Hennepin</td> <td>25%</td> </tr> <tr> <td>Washington</td> <td>6%</td> </tr> <tr> <td>Dakota</td> <td>6%</td> </tr> <tr> <td>Scott</td> <td>4%</td> </tr> </tbody> </table> <p>Red indicates the category with the highest percent.</p> | County | Percentage | Ramsey | 34% | Anoka | 25% | Hennepin | 25% | Washington | 6% | Dakota | 6% | Scott | 4% |
| County | Percentage | | | | | | | | | | | | | | |
| Ramsey | 34% | | | | | | | | | | | | | | |
| Anoka | 25% | | | | | | | | | | | | | | |
| Hennepin | 25% | | | | | | | | | | | | | | |
| Washington | 6% | | | | | | | | | | | | | | |
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| Overall Injuries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|--------------------|------|----|------|---|------|---|------|---|------|---|------|---|------|---|------|----|------|---|------|---|-----------|------------|-----|----|-------|-----|-------|-----|-------|-----|-------|-----|-------|----|-----|-----|
| <p>Figure 2. On average, there were 7 injuries per year in the decade from 2011 to 2020. For that period, 2011 and 2018 had the highest number of injuries.</p> <table border="1"> <caption>Data for Figure 2: Number of Rail-Related Injuries by Year (N=68)</caption> <thead> <tr> <th>Year</th> <th>Number of Injuries</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>10</td> </tr> <tr> <td>2012</td> <td>8</td> </tr> <tr> <td>2013</td> <td>7</td> </tr> <tr> <td>2014</td> <td>7</td> </tr> <tr> <td>2015</td> <td>8</td> </tr> <tr> <td>2016</td> <td>5</td> </tr> <tr> <td>2017</td> <td>2</td> </tr> <tr> <td>2018</td> <td>10</td> </tr> <tr> <td>2019</td> <td>4</td> </tr> <tr> <td>2020</td> <td>7</td> </tr> </tbody> </table> <p>Figure 3. Of those who were injured, 1 in 4 were children ages 19 and under and 1 in 4 were between the ages of 20 and 29 years old.*</p> <table border="1"> <caption>Data for Figure 3: Rail-Related Injuries by 10-Year Age Groups (N=66)</caption> <thead> <tr> <th>Age Group</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>0-9</td> <td>8%</td> </tr> <tr> <td>10-19</td> <td>18%</td> </tr> <tr> <td>20-29</td> <td>24%</td> </tr> <tr> <td>30-39</td> <td>18%</td> </tr> <tr> <td>40-49</td> <td>15%</td> </tr> <tr> <td>50-59</td> <td>6%</td> </tr> <tr> <td>60+</td> <td>11%</td> </tr> </tbody> </table> <p>Red indicates the category with the highest percent.</p> <p>*Age data missing for 2 cases. Total percent does not equal 100 due to rounding.</p> | Year | Number of Injuries | 2011 | 10 | 2012 | 8 | 2013 | 7 | 2014 | 7 | 2015 | 8 | 2016 | 5 | 2017 | 2 | 2018 | 10 | 2019 | 4 | 2020 | 7 | Age Group | Percentage | 0-9 | 8% | 10-19 | 18% | 20-29 | 24% | 30-39 | 18% | 40-49 | 15% | 50-59 | 6% | 60+ | 11% |
| Year | Number of Injuries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Age Group | Percentage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Figure 4. Trespassing incidents accounted for 6 in 10 injuries, while railroad crossing incidents accounted for 4 in 10 injuries. Trespassing injuries were more often fatal than were railroad crossing injuries.

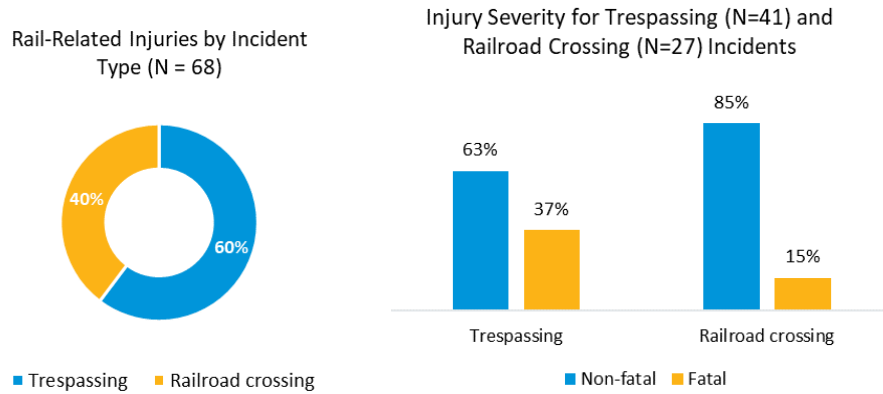
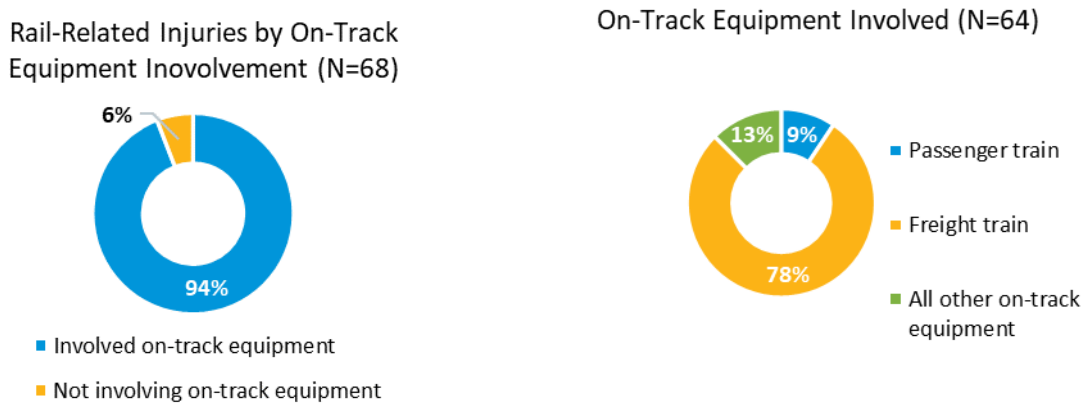
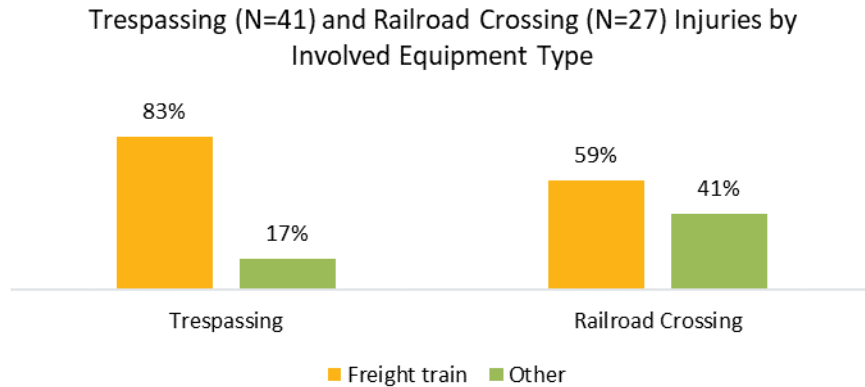


Figure 5. More than 9 in 10 injuries involved on-track equipment,* most of which were freight trains.



* On-track equipment includes freight cars and trains, passenger trains and cars, locomotives, inspection vehicles, maintenance of way equipment and other on-track equipment.

Figure 6. Freight trains were involved in 8 in 10 trespassing injuries and 6 in 10 railroad crossing injuries.*



* Other includes on-track and not on-track equipment. On-track equipment includes freight cars and trains, passenger trains and cars, locomotives, inspection vehicles, maintenance of way equipment and other on-track equipment.

Figure 7. Trespassing injuries most frequently occurred in the warmer months from summer through fall, while injuries at railroad crossings most frequently occurred during winter months.

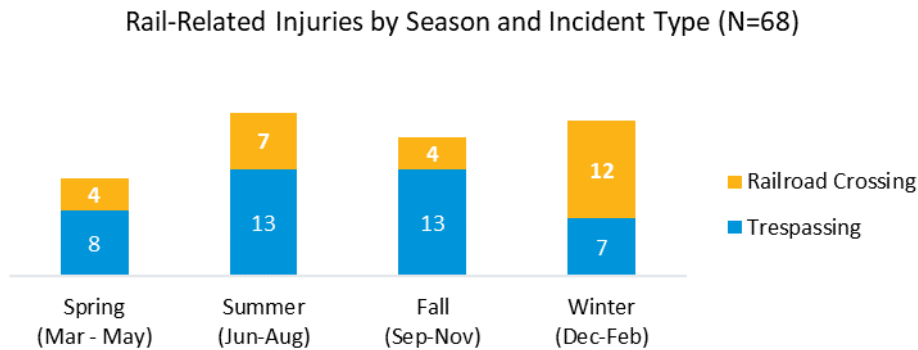


Figure 8. Trespassing injuries were most frequent on Friday, while railroad crossing injuries were most frequent on Saturday and Sunday.

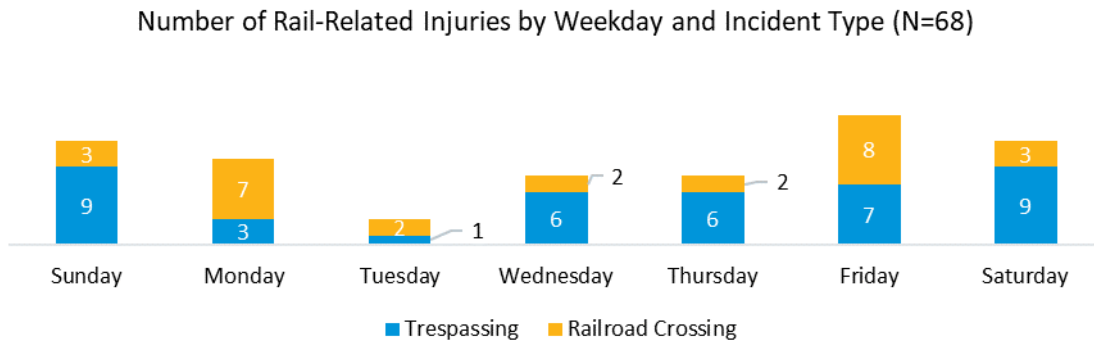
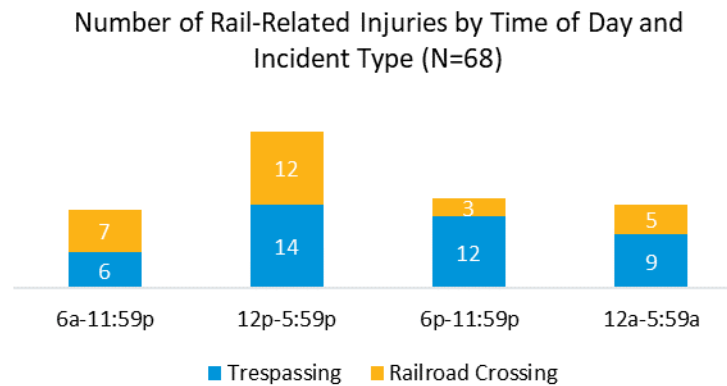


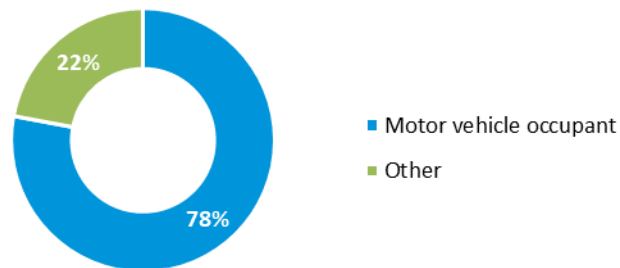
Figure 9. Overall, injuries were most frequent between 12 PM and 5:59 PM.



Railroad Crossing Circumstances

Figure 10. About 8 in 10 of those injured at railroad crossings were motor vehicle occupants.*

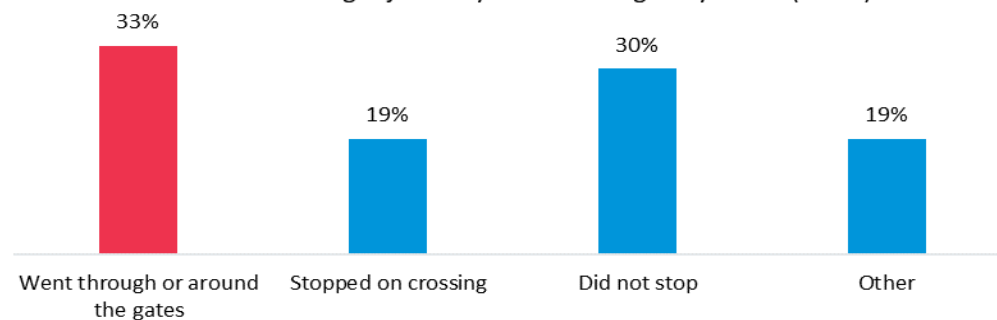
Railroad Crossing Injuries by Highway User Type (N=27)



* Other includes pedestrian and other unspecified highway users.

Figure 11. Most of those injured in railroad crossing incidents were either going through or around the gates or failed to stop for the train when injured.*

Railroad Crossing Injuries by Action of Highway Users (N=27)

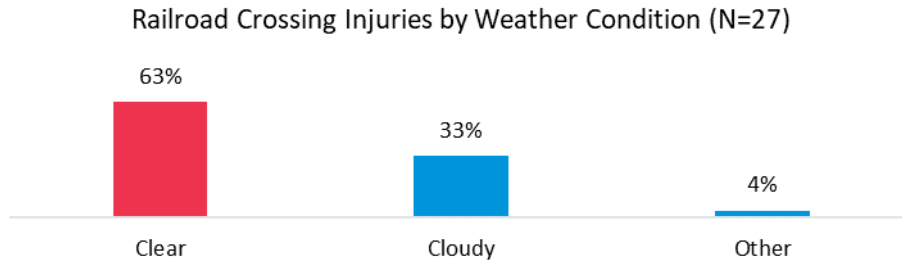


Red indicates the category with the highest percent.

*Total percent does not equal 100 due to rounding



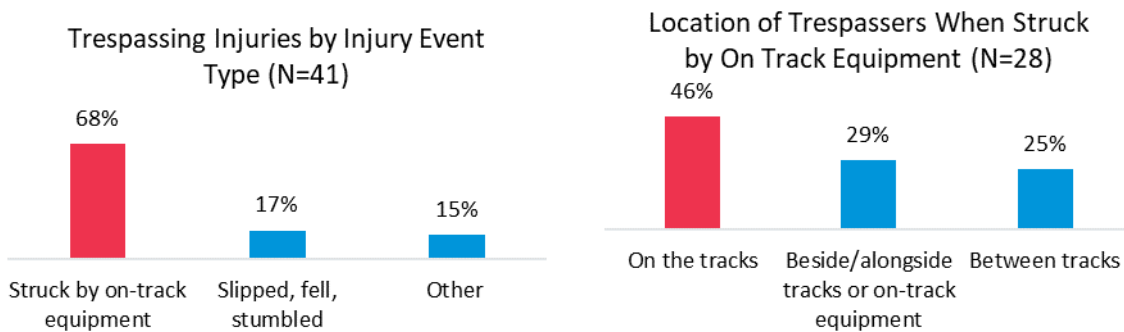
Figure 12. Six in 10 railroad crossing injuries occurred when the weather was clear, and 1 in 3 occurred when the weather was cloudy.



Red indicates the category with the highest percent.

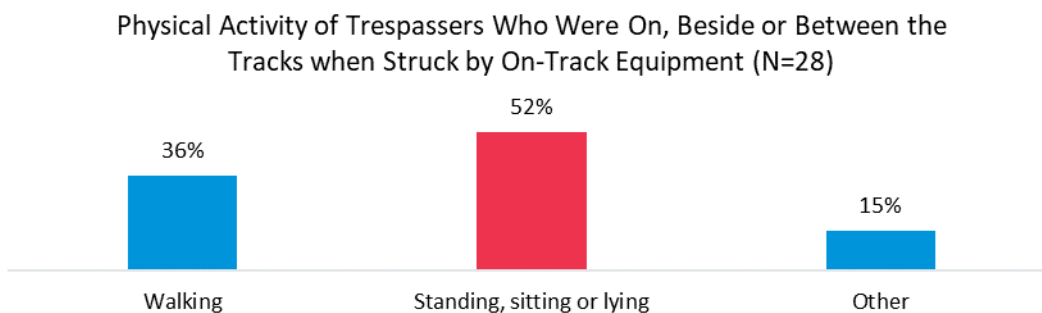
Trespassing Circumstances

Figure 13. About 7 in 10 trespassers who were injured had been struck by on-track equipment. Of those, nearly half were on the tracks at the time of impact.



Red indicates the categories with the highest percents.

Figure 14. Of trespassers who were struck by on-track equipment, half were either standing, sitting or lying on or near the tracks at the time of impact.*

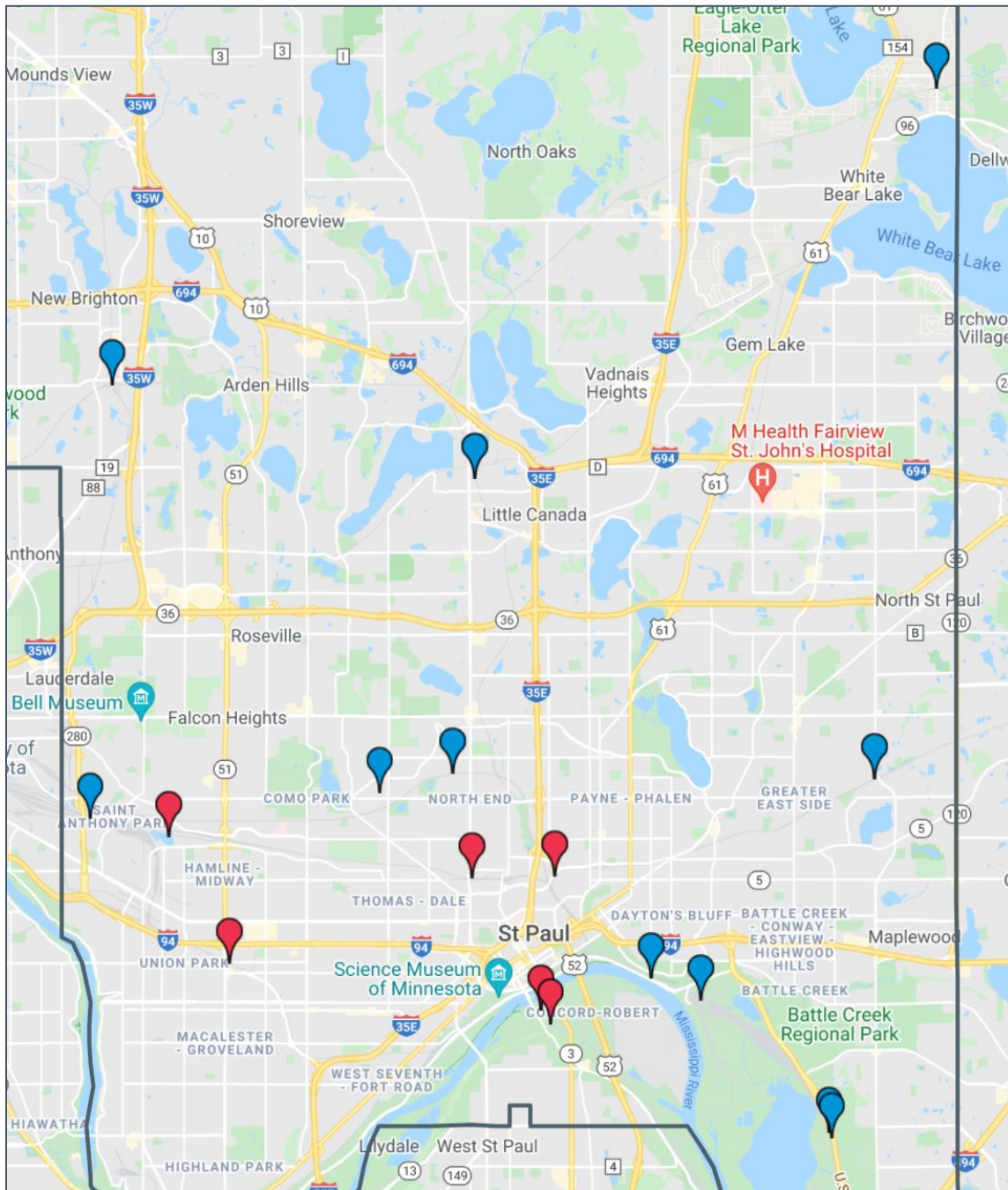


Red indicates the category with the highest percent.

*Total percent does not equal 100 due to rounding



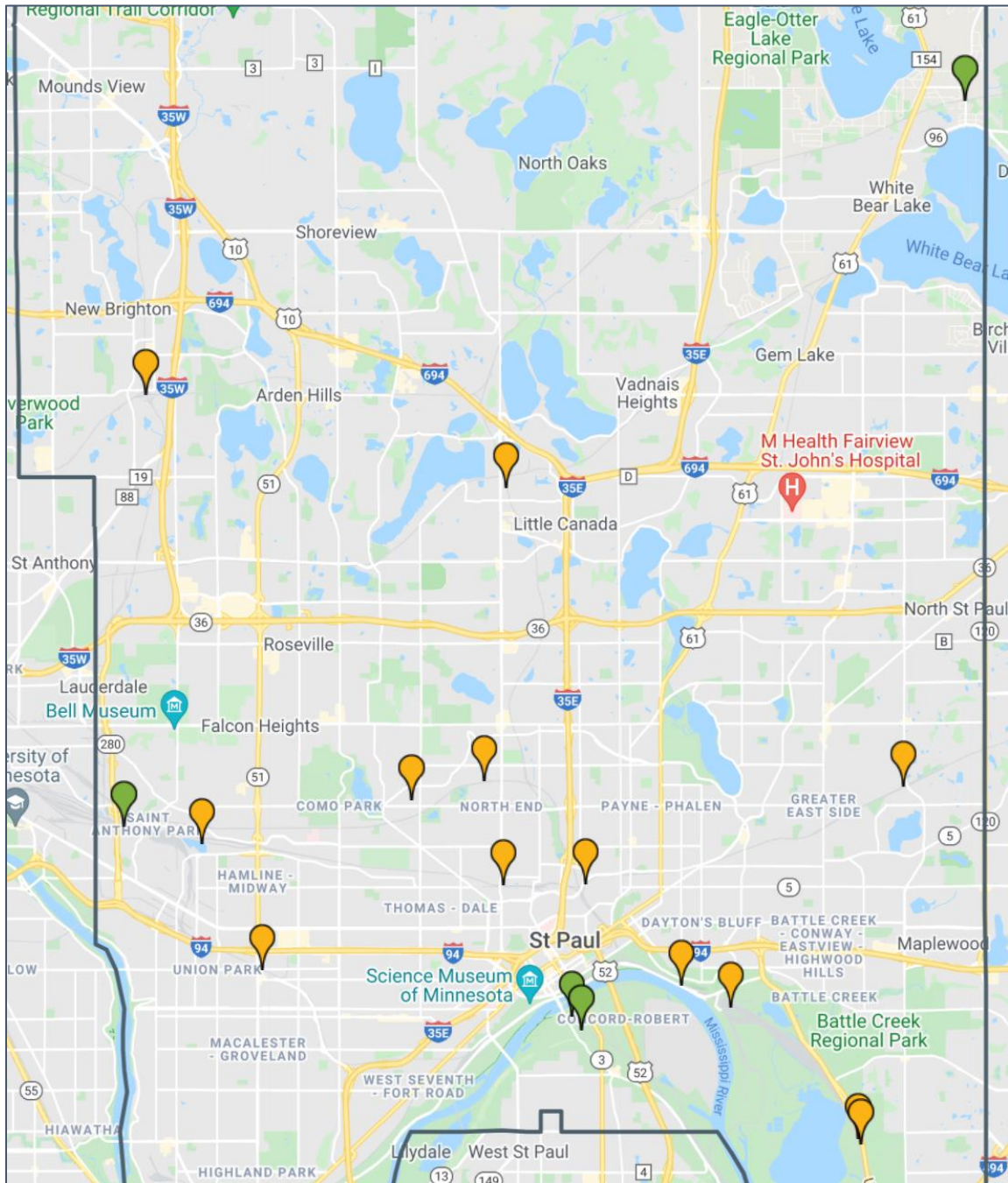
Map 2. Ramsey County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



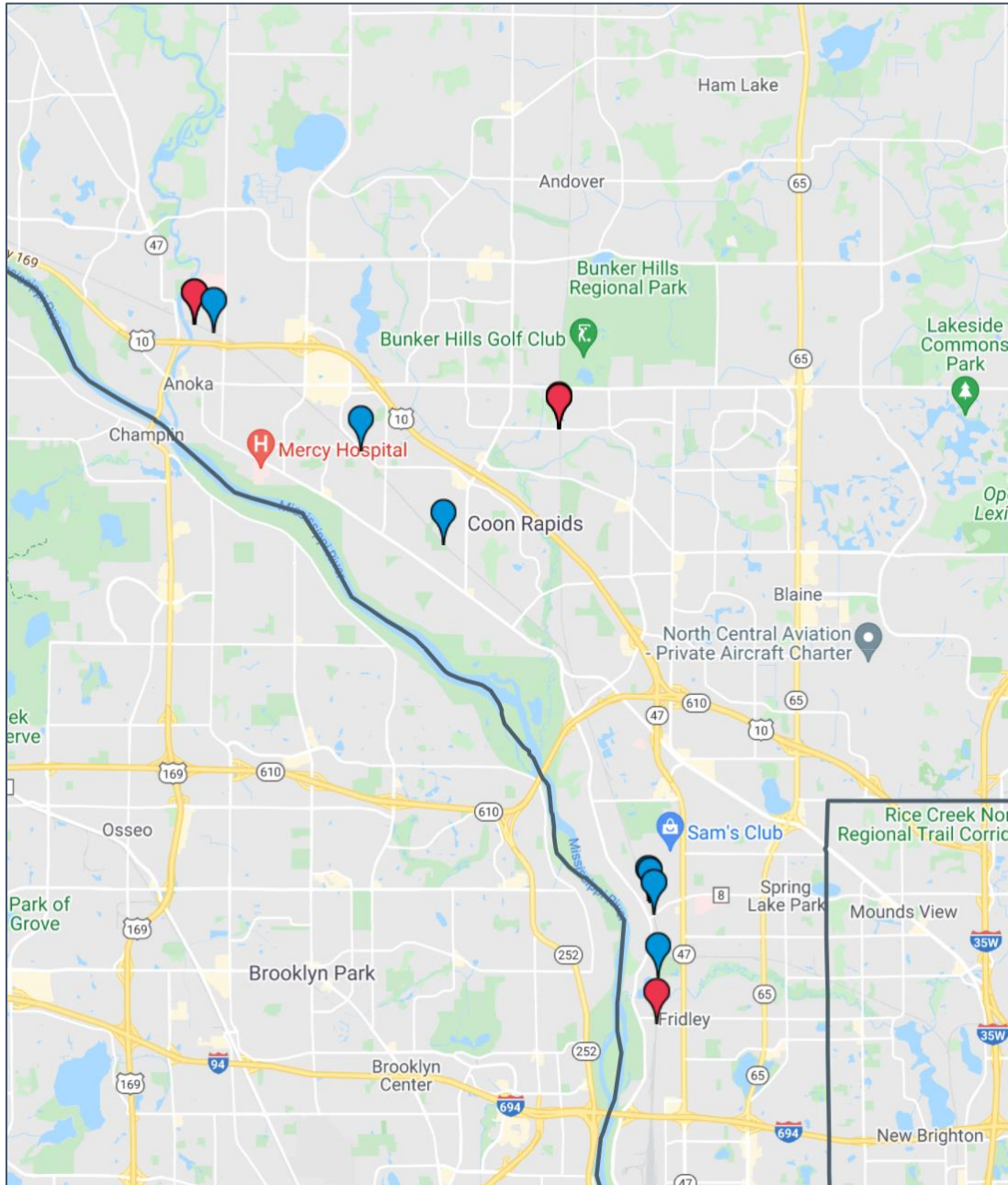
Map 3. Ramsey County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



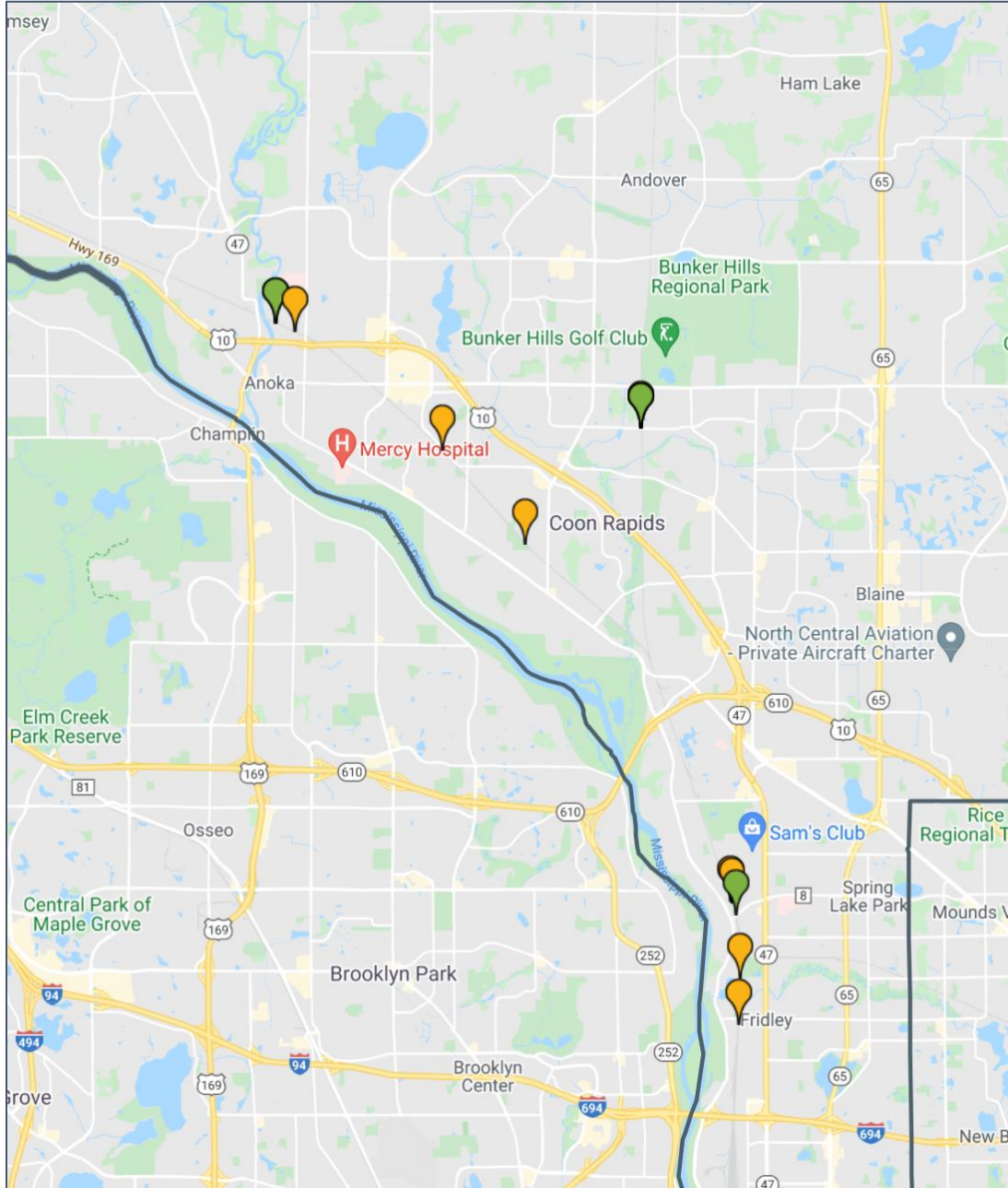
Map 4. Anoka County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



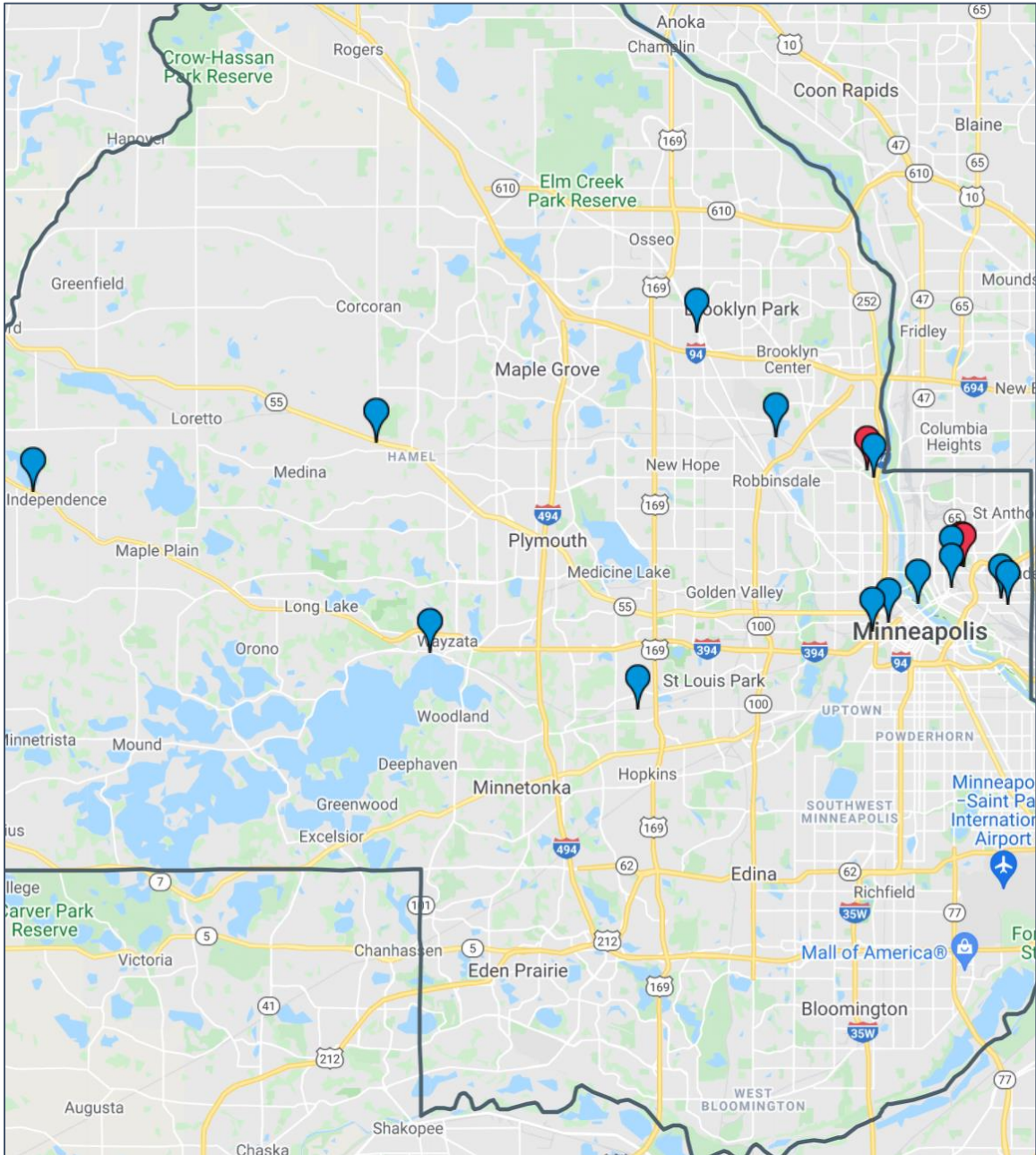
Map 5. Anoka County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



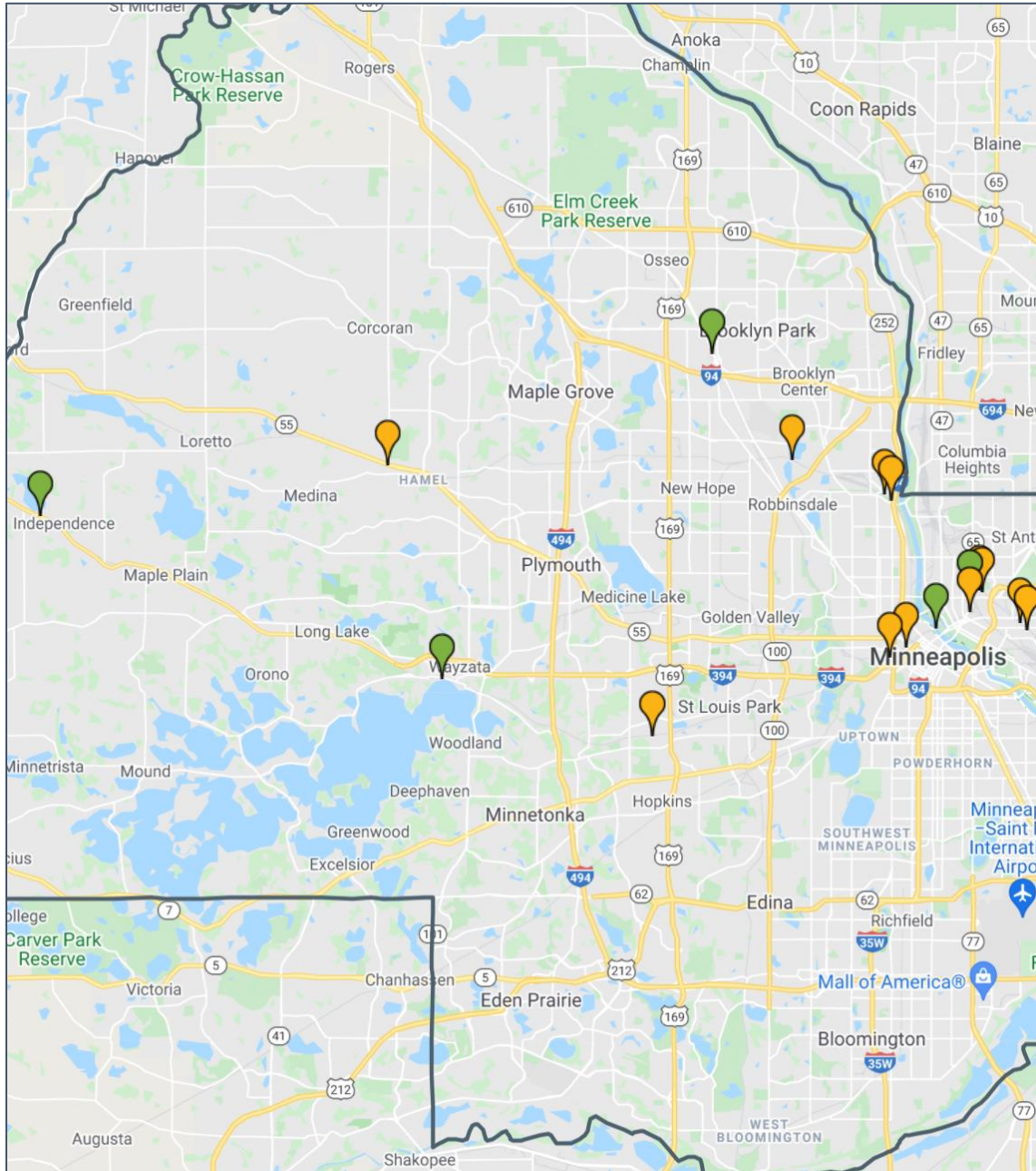
Map 6. Hennepin County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



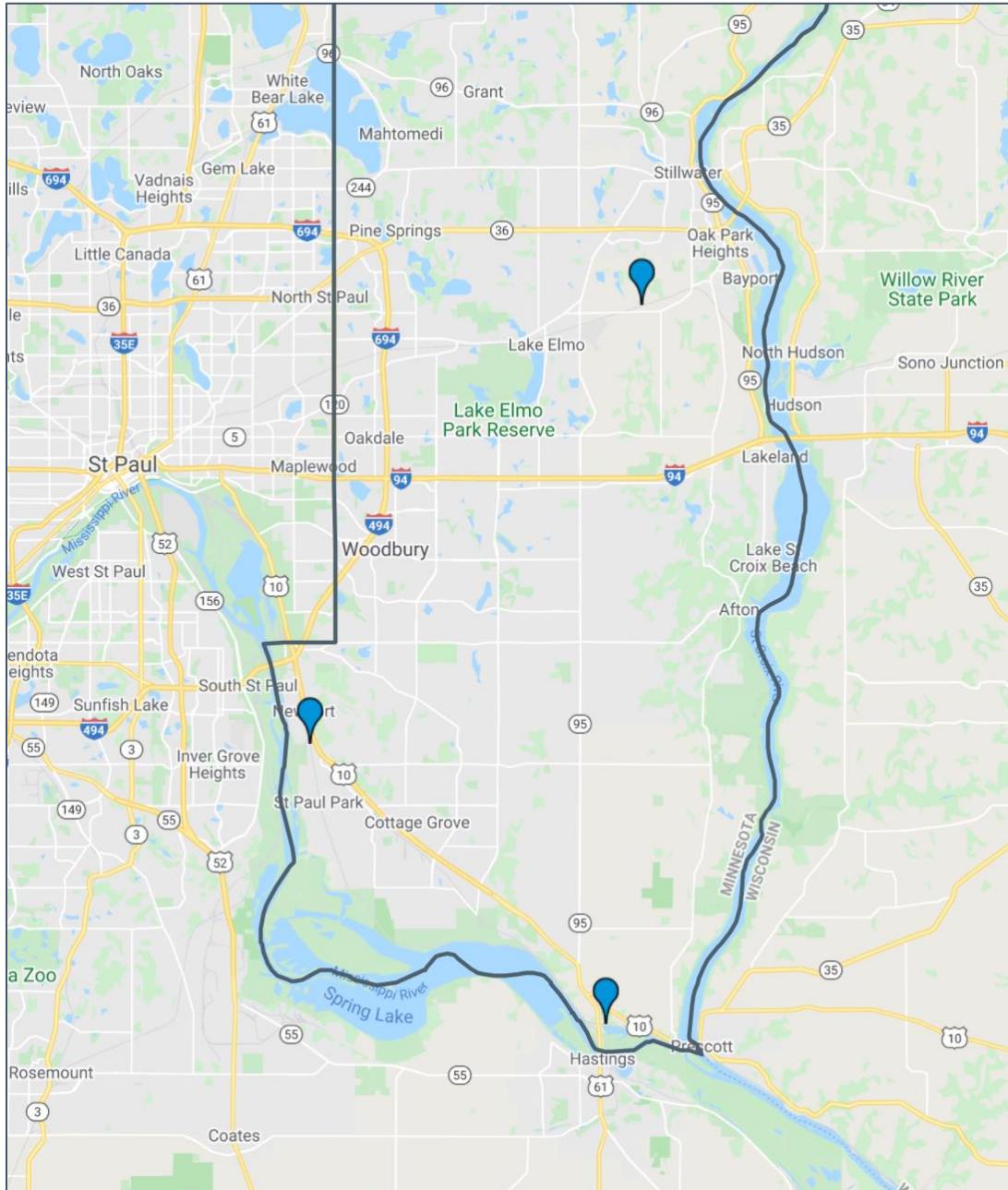
Map 7. Hennepin County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



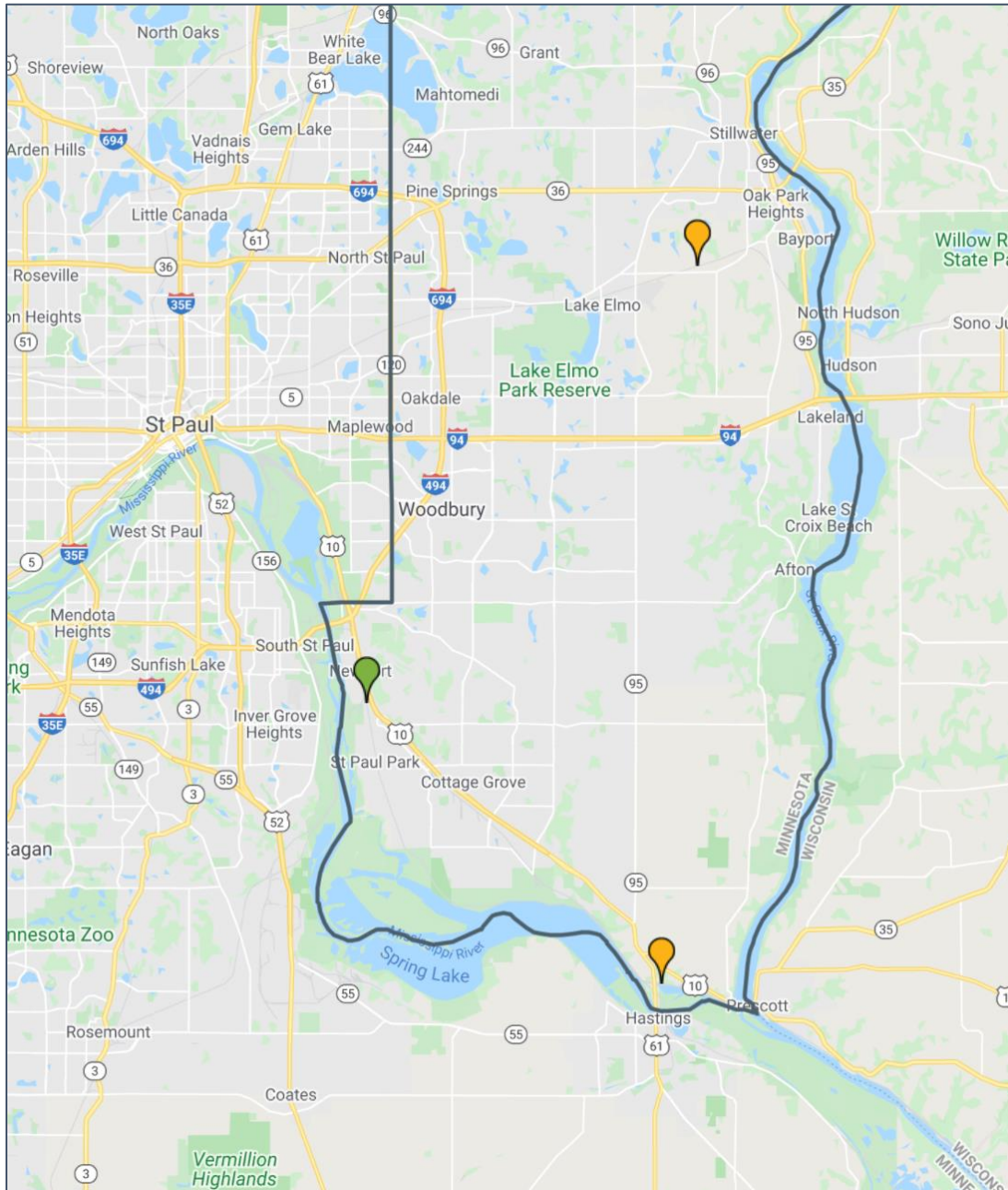
Map 8. Washington County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



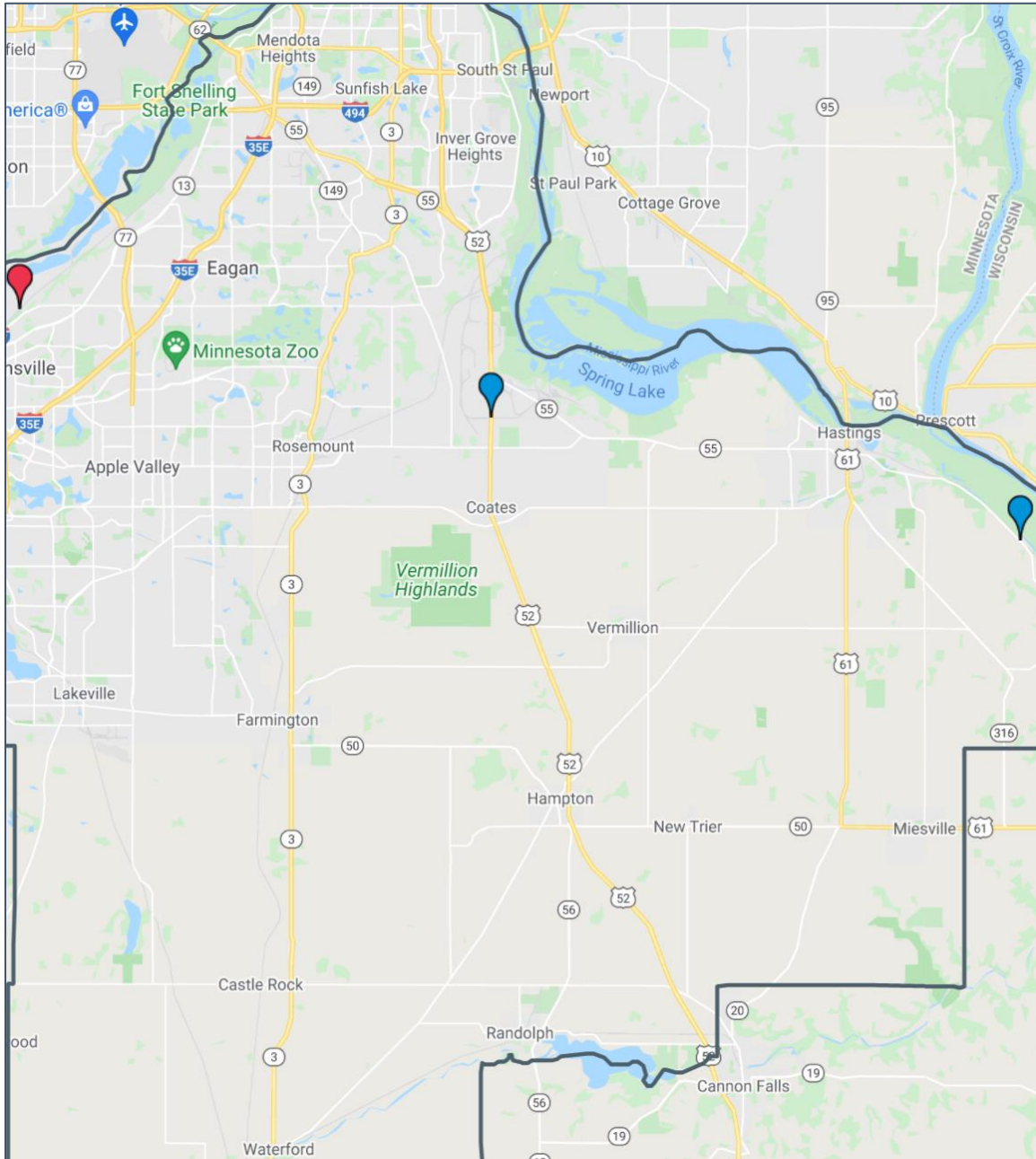
Map 9. Washington County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



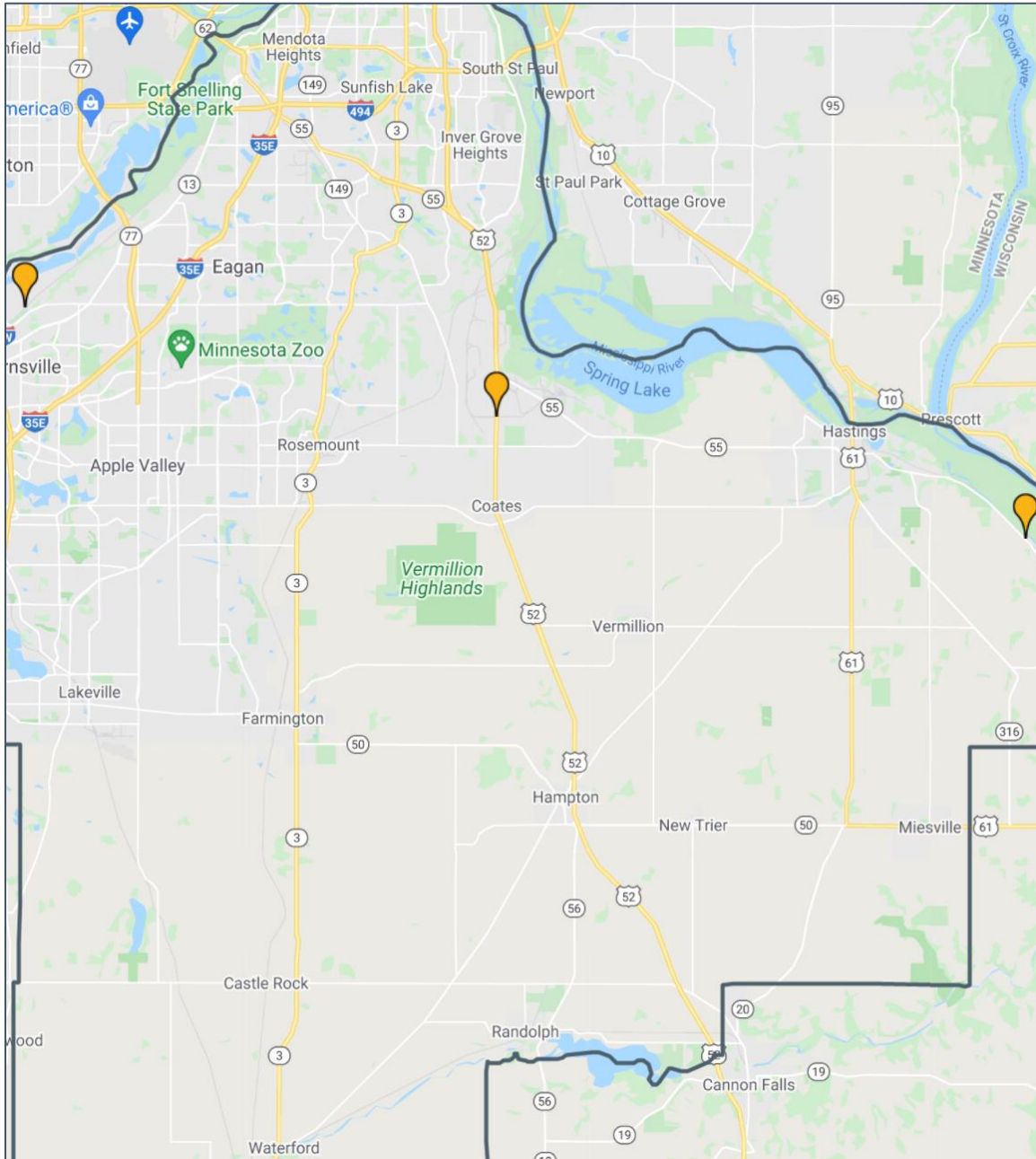
Map 10. Dakota County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



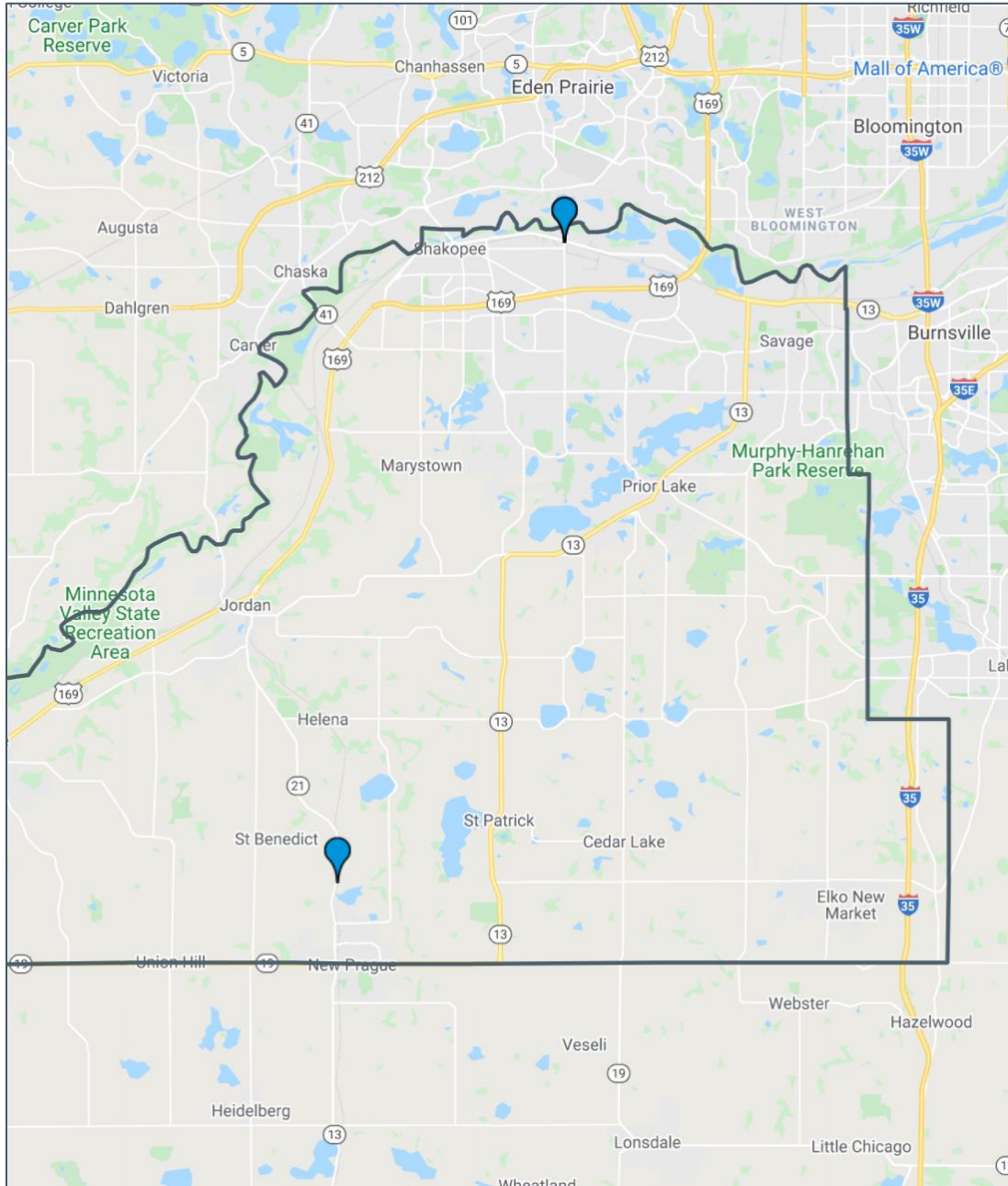
Map 11. Dakota County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



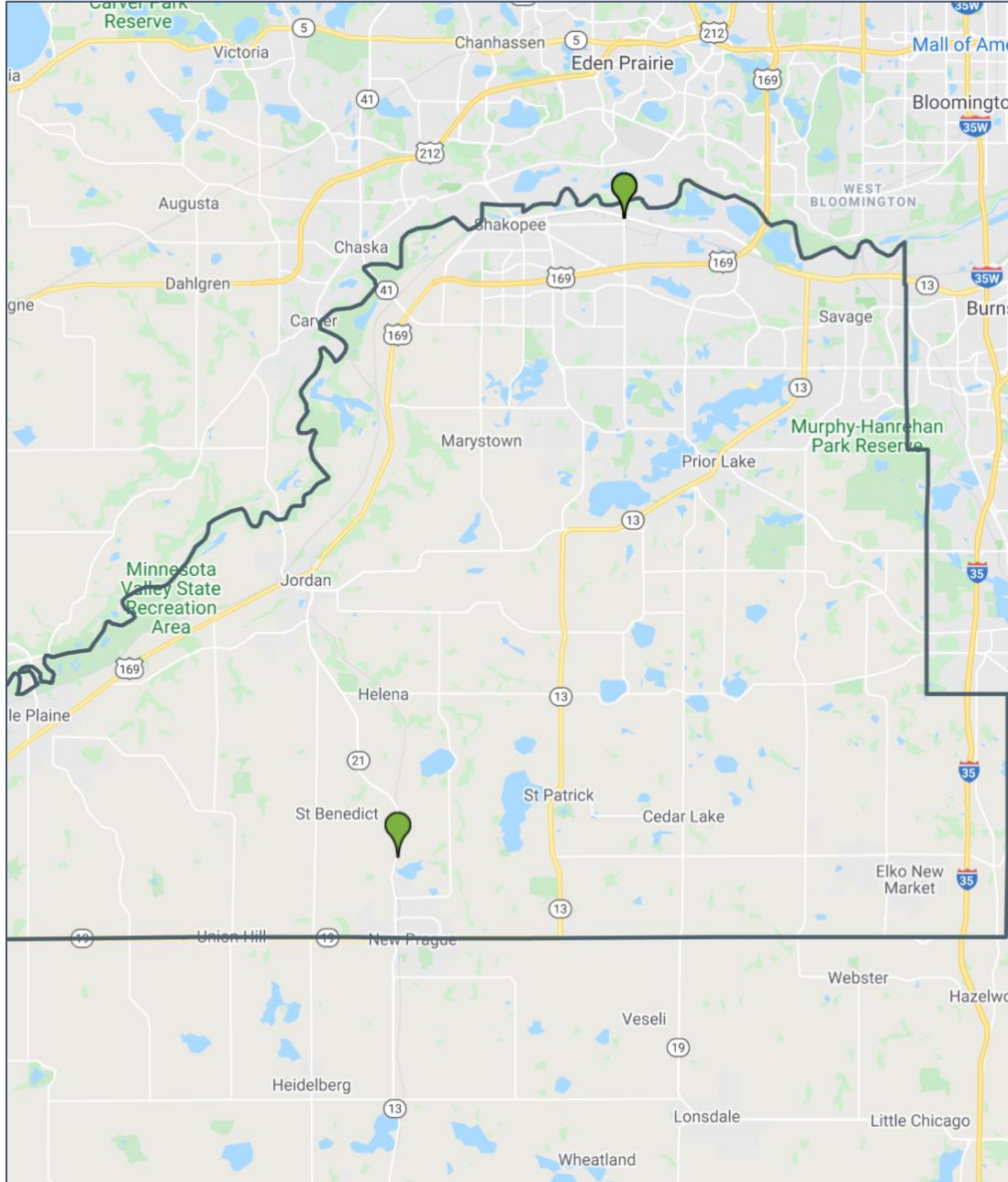
Map 12. Scott County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



Map 13. Scott County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



Notes

Data source

Data on rail-related injuries presented in this profile were obtained from the Federal Railroad Administration's (FRA) Safety Railroad Casualties (form 6180.55A) and Highway Rail Accidents (form 6180.57) databases for years 2011–2020. Excluded were rail workers and rail passengers as well as cases of suicide or attempted suicide. Maps reflect locations of injuries where longitude and latitude data are provided in each case file.

References

1. Federal Railroad Association. Fact Sheet - Highway Rail Crossing & Trespassing. 2016. Available from: <https://railroads.dot.gov/sites/fra.dot.gov/files/2019-10/rrx-fact-sheet-final12716.pdf>. Accessed August 26, 2021.
2. Federal Railroad Association. Accident Data as Reported by Railroads 2009-2018. Available from: https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/on_the_fly_download.aspx. Accessed August 26, 2021.
3. U.S. Census Bureau. Quick Facts. Available from: <https://www.census.gov/quickfacts>. Accessed August 26, 2021.
4. Current Crossing Data for State of Minnesota. 2021. Available from: <https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/DownloadCrossingInventoryData.aspx>. Accessed August 31, 2021.

This profile and other rail safety resources can be downloaded via the **Safe Kids Rail Safety Station** at <https://www.safekids.org/RailSafetyStation>.

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