Data Visualization of Rochester Violence

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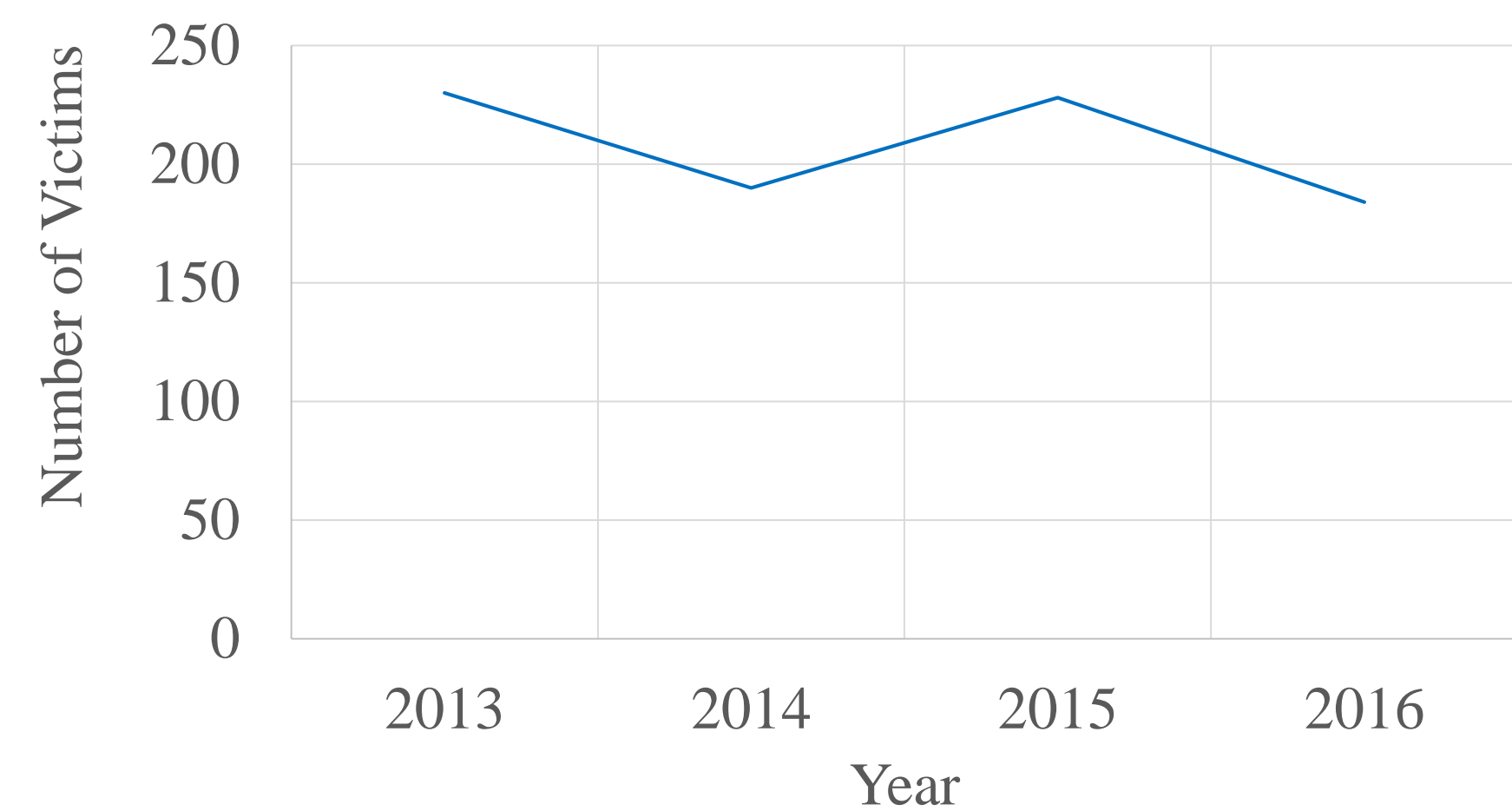
Introduction

This poster focuses on fluctuations of violence in the city of Rochester, NY. Focusing on year-to-year data misses important information and does not show the general trend of violence in the community. Assessing violence over a longer period has different implications for policies and practices to reduce violence than looking at violence over a short period of time.

The data includes homicides and shootings from 2000 through 2016, which was provided by the Rochester Police Department.
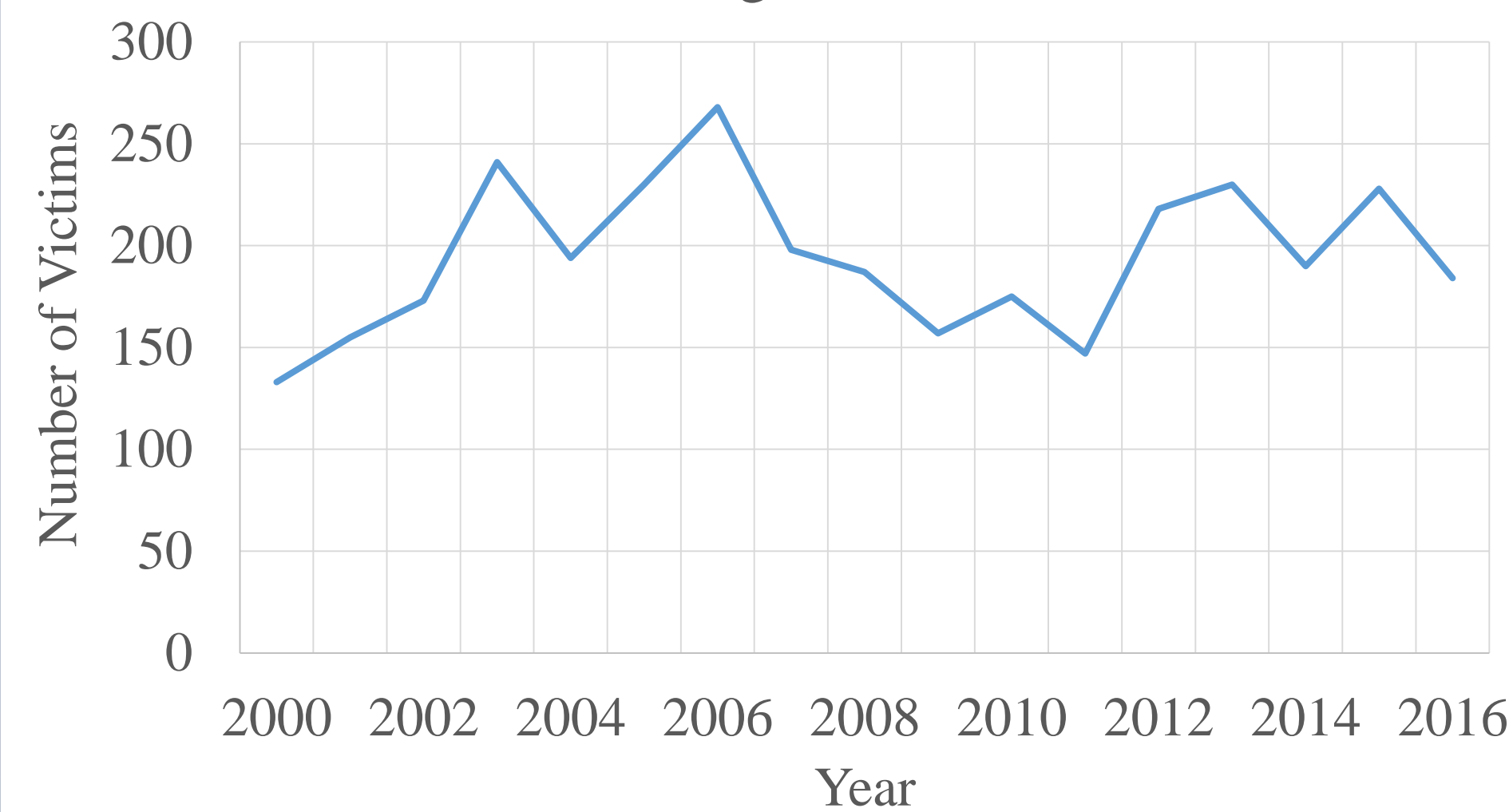
Data

Four Year Shooting Trend:
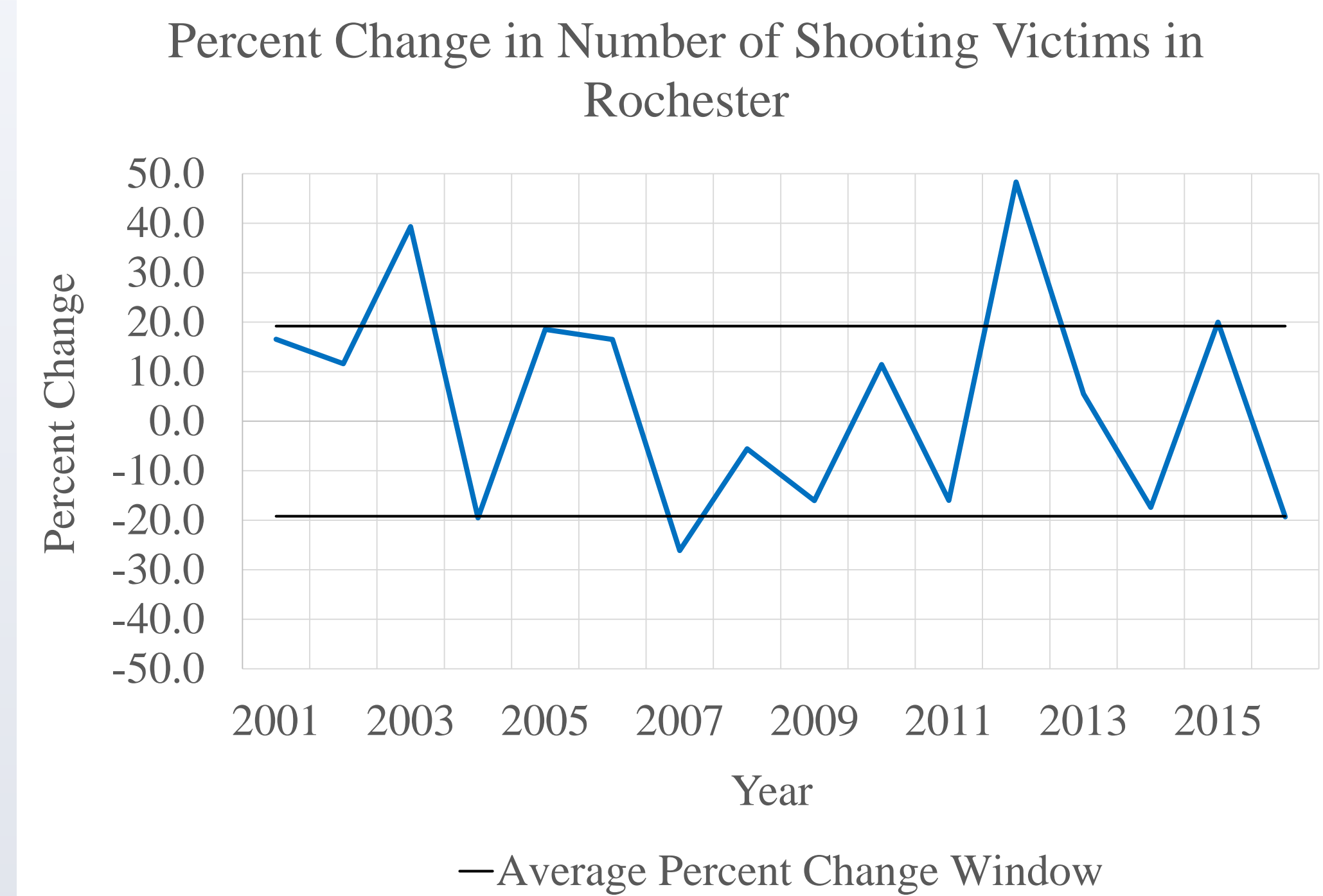

When looking only at data from the past four years, it appears the trend is decreasing.

**Seventeen Year Shooting Trend:**

When looking at data over a longer period, it shows that increases and decreases in the trend are normal.

Although some fluctuations occur year-to-year in the number of shooting victims, most changes that have occurred have been relatively normal (lie within the average window) for Rochester and are not substantial in terms of Rochester's history of violence.
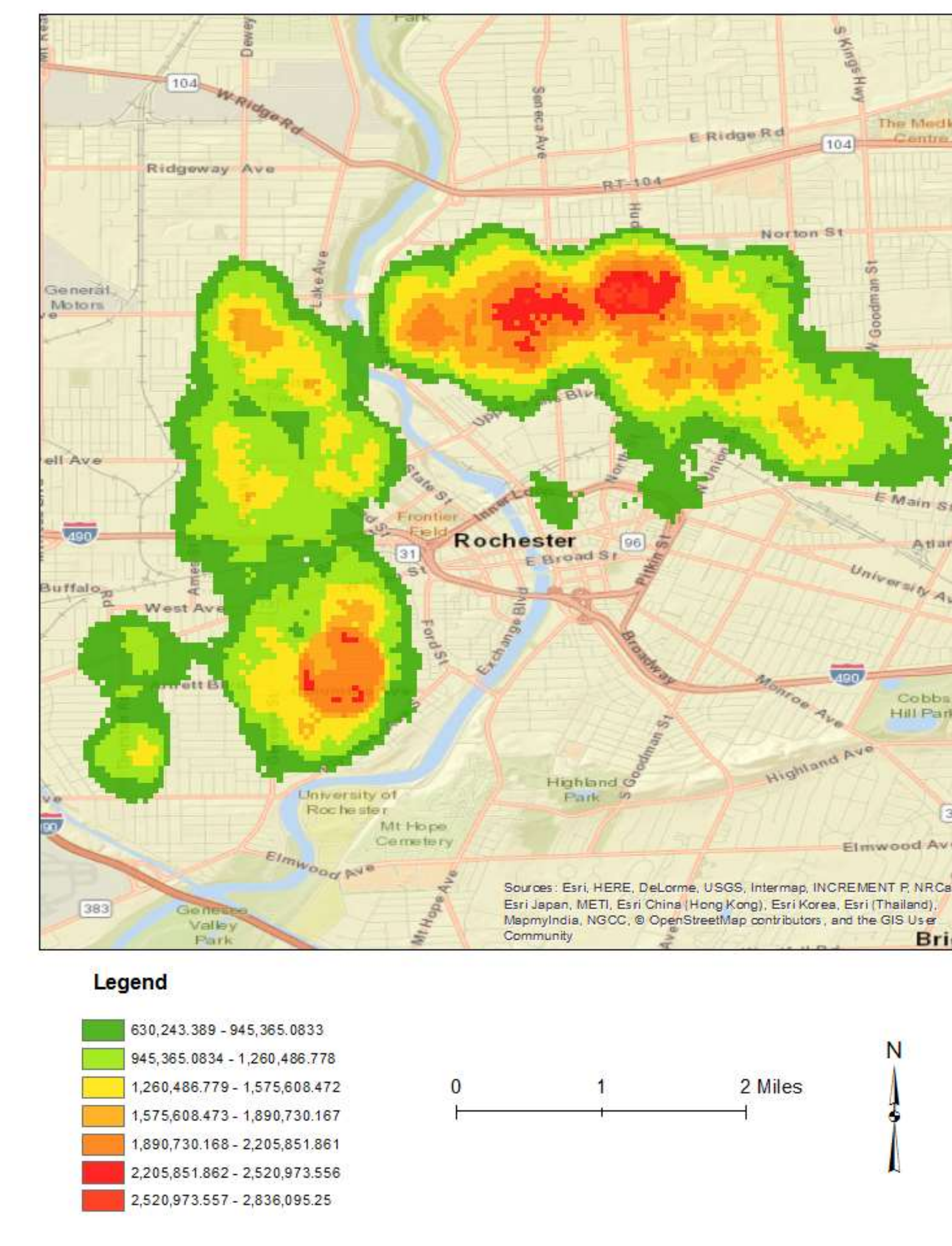
Map Visualization
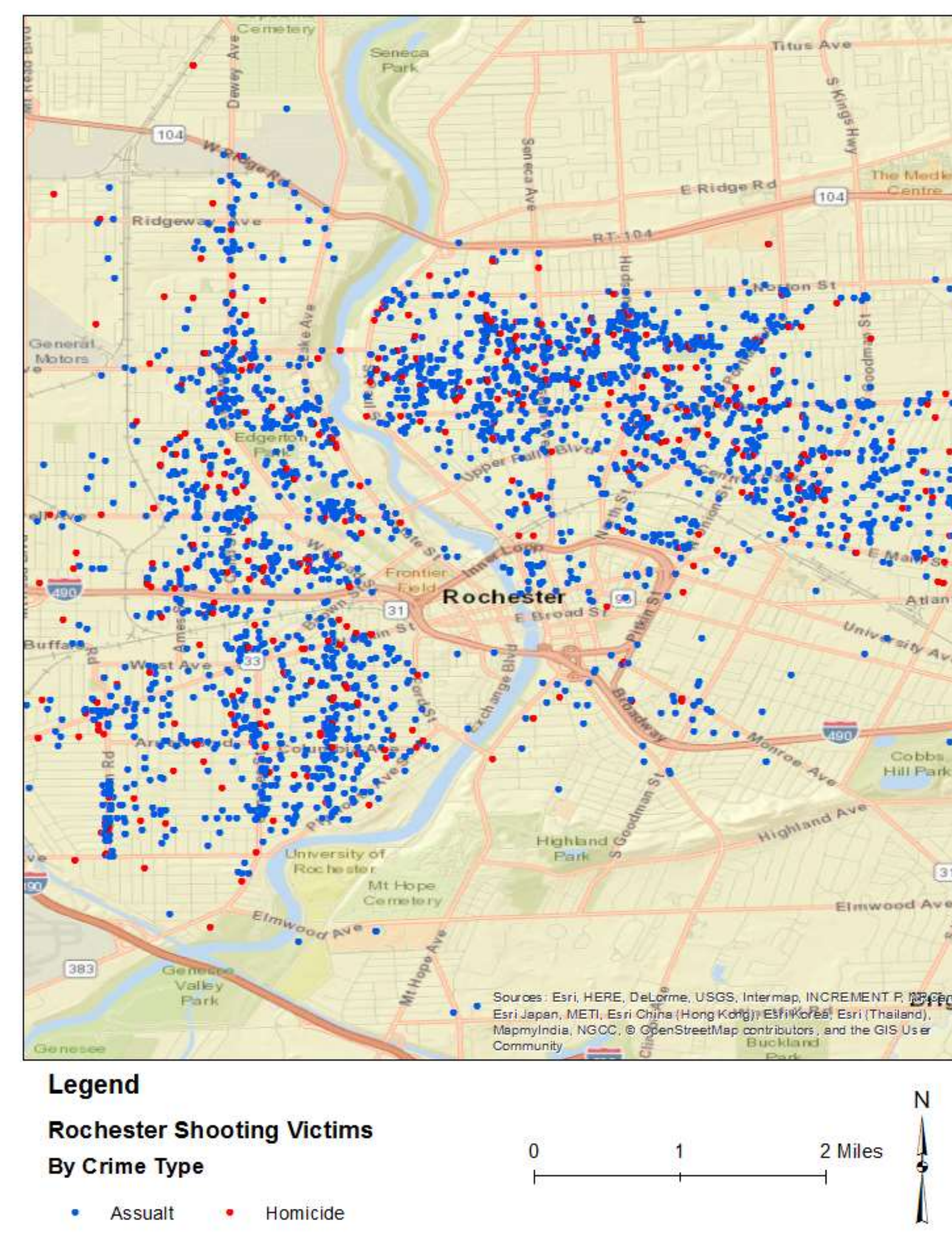
This map contains all shooting victims in Rochester for the years 2000 to 2016. The shootings are broken down by crime type, either shooting assault or homicide. It appears that crime occurs all throughout the city.

This map takes the data from Image 1 and runs the geoprocessing tool "Point Density" to create a hotspot map. It appears that most shootings occur in three distinct locations, the red "hot spots" of the city. Point Density calculates a magnitude-per-unit area from point features that fall within a map cell.

Conclusions

In order to understand the data as a whole, you must look at the long term trend to understand that crime has normal increase and decrease year to year.

In order to make policy implications you must look at the crime throughout the city as a whole. Hot spots can sometimes move from year to year and displacement can occur when resources are allocated to one area only, and you lose focus on the city in its entirety.

Data visualization is meant to present data and other information in a clear and efficient manner. This can be done in numerous formats as seen in this poster using graphs and maps as two different forms of data visualization. In order for the visualization to be effective, the reader must be able to reasonably analyze the data, such as making comparisons.

Questions

We want to know what you think!

1. Do you believe that the way data is displayed plays a role in how we interpret it?

2. How does policy change based on looking at one visualization versus another?

Contact

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