

NEIGHBORS AT RISK

Introduction

New York City experienced higher rates of gun violence in recent years. After declining for more than a decade, shooting incidents across the city grew from 752 in 2018 to 1,560 in 2021.

As in other cities,* many New York neighborhoods did not experience a shooting increase. Most areas, in fact, saw no increase. More than half (57%) of all New Yorkers live in communities that experienced no shooting incidents at all from 2015 through 2021.

Shootings were rare even in areas that did experience increased violence, often involving one or two incidents over the seven years from 2015 to 2021. Other neighborhoods were largely spared from 2015 through 2019, but shootings climbed during the social and economic upheavals of 2020 and 2021. Some areas, however, suffered a disproportionate and chronic share of the city's gun violence problem.

Data

Shooting incidents represent separate occurrences of gun violence in which one or more persons are hit by gunfire regardless of how many victims are involved in each incident. Information about the number of individual shooting victims across all incidents is also available from City sources, but it was not used in this analysis.

To examine the concentration of shooting incidents across New York City, researchers at John Jay College obtained data routinely compiled by the New York City Police Department and disseminated through the city's Open Data Portal.

* Johnson, Nicole J. and Caterina G. Roman (2022). [Community correlates of change: A mixed-effects assessment of shooting dynamics during COVID-19](#). PLoS ONE 17(2): e0263777.

Shooting Incidents in New York City: 2006-2021



Source: New York City Police Department (NYPD), as analyzed by the John Jay College Research and Evaluation Center.

To identify areas of New York City experiencing disproportionate shootings, researchers aggregated shooting data by Census Block Groups (CBG). According to the Census Bureau, CBGs are statistical divisions of census tracts, generally containing between 600 and 3,000 people. There are 6,587 CBGs in New York City, not including water areas.

Researchers excluded some CBGs from the analysis because they did not permit reliable calculation of shooting rates, either because they had populations under 500 or did not align properly with existing neighborhood tabulation areas (NTA). Only areas with population counts above 500 and falling 95% or more within an NTA were retained.

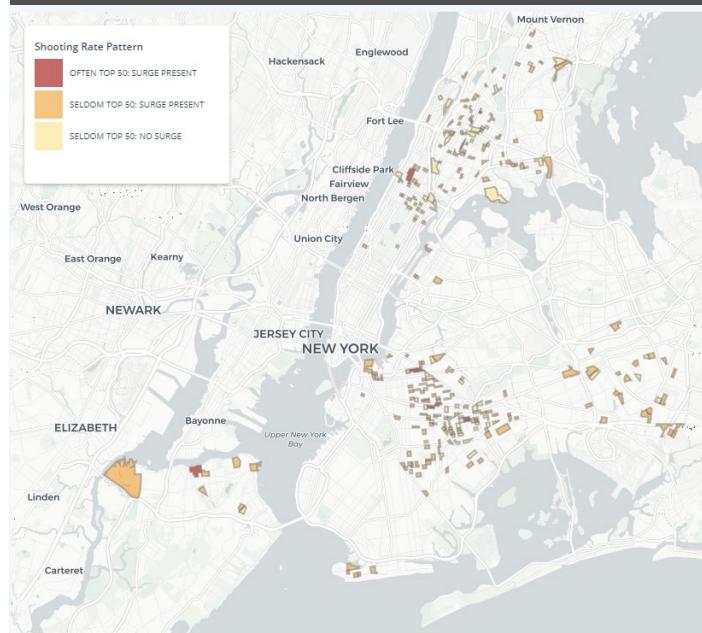
Notes: The New York City Mayor's Office of Criminal Justice (MOCJ) provided funding support for this analysis, but all conclusions are those of the authors. Funders and partners of the Research and Evaluation Center are not responsible for any findings presented in Center publications.

Neighborhoods at Highest Risk of Shootings

3 Categories	Description	Total CBGs
Seldom Top 50: No Surge in 2020, 2021	Area had one of the highest 50 shooting rates at least once from 2015 to 2019, and no surge in either 2020 or 2021.	184
Seldom Top 50: Surge Present in 2020 and/or 2021	Area had one of the highest 50 shooting rates no more than one time from 2015 to 2019, but experienced a surge in 2020, 2021, or both.	80
Often Top 50: Surge Present in 2020 and/or 2021	Area had one of the highest 50 shooting rates two or more times between 2015 and 2019, and experienced a surge in 2020, 2021 or both.	11

[View Detailed Tables in Appendix](#)

Neighborhoods at Highest Risk of Shootings



Finally, a small number of shooting incidents (7) had to be dropped from the analysis because of a mismatch between the City borough identified in the raw data file and the borough location indicated after spatial aggregation. The final study sample included 6,217 CBGs. Of these, 2,543 (or 41%) experienced at least one shooting from 2015 to 2021.

Most Affected Neighborhoods

The number of shootings reported in each census block group was divided over the 2020 population to create yearly rates of shooting incidents per 1,000 population. Researchers ranked all CBGs based on their rates of shooting incidents and identified the 50 CBGs with the highest rates in each year from 2015 to 2021. All city neighborhoods appearing in the list of 50 highest shooting rates at least once during those seven years were placed into one of three categories.

- CBGs among the highest 50 at least once from 2015 to 2019 that did not experience a COVID-era surge in 2020 or 2021 – i.e. they were not in the highest 50 areas either of those years (N=184).
- CBGs in the highest 50 no more than once between 2015 and 2019 that did experience a COVID-era surge, ranking among the highest 50 shooting rate CBGs in 2020, 2021, or both (N=80).

- CBGs frequently among the 50 highest shooting rate areas (at least twice) from 2015 to 2019 that also experienced a COVID-era shooting surge in 2020, 2021, or both (N=11).

Of the eleven neighborhoods in the third group, seven were in Brooklyn, two in the Bronx, one in Manhattan, and one in Staten Island.

Communities experiencing high rates of gun violence were predictably those also scoring high on measures of concentrated socioeconomic disadvantage, with a high prevalence of female-headed households, and a large number of households receiving public assistance. All three risk factors were significantly associated with total shooting rates between 2015 and 2021 (i.e., correlation coefficients of 0.3 or higher).

Conclusion

Most New York City neighborhoods did not experience high rates of shootings in recent years, but others clearly did. Comparing crime rates across these relatively small geographic areas is important for officials considering where to invest in resources that support public safety and community wellbeing.

Citation:

Butts, Jeffrey A., Gina Moreno and Richard Espinobarros (2022). Neighbors At Risk. [Research Brief]. New York, NY: Research and Evaluation Center, John Jay College of Criminal Justice, City University of New York.

NYC NEIGHBORHOODS AT RISK

Appendix:

NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

[View Appendix Online](#)

NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

BRONX

	Shooting Incidents						
	2015	2016	2017	2018	2019	2020	2021
Bedford Park (view online)	-	-	-	-	1	-	-
Belmont	1	2	-	2	-	1	2
Belmont	-	-	1	2	-	1	-
Belmont	-	-	1	1	-	-	2
Belmont	-	2	-	-	3	3	-
Castle Hill-Unionport	-	1	-	2	-	-	2
Castle Hill-Unionport	-	1	-	-	1	-	-
Castle Hill-Unionport	-	-	-	-	-	3	-
Claremont Village-Claremont (East)	1	1	-	1	-	1	4
Claremont Village-Claremont (East)	1	-	-	-	1	-	3
Claremont Village-Claremont (East)	2	1	2	-	3	1	2
Claremont Village-Claremont (East)	-	-	2	-	1	-	1
Claremont Village-Claremont (East)	1	1	2	-	-	2	-
Concourse-Concourse Village	1	-	1	1	1	1	2
Concourse-Concourse Village	-	-	-	-	2	-	-
Concourse-Concourse Village	-	-	-	1	2	1	2
Concourse-Concourse Village	1	-	-	2	-	-	2
Concourse-Concourse Village	2	1	2	-	1	-	1
Concourse-Concourse Village	4	-	-	1	1	1	1
Co-op City	2	-	-	-	-	-	-
Crotona Park East	-	-	2	-	2	2	4
Crotona Park East	-	-	2	-	1	1	2
Eastchester-Edenwald-Baychester	-	1	-	-	1	4	3
Eastchester-Edenwald-Baychester	1	-	2	-	1	-	1
Eastchester-Edenwald-Baychester	3	1	1	-	1	-	-
Fordham Heights	-	-	-	-	-	2	1
Fordham Heights	-	-	2	-	-	-	-
Highbridge	1	1	-	2	-	1	-
Hunts Point	-	-	-	-	-	2	1
Hunts Point	2	2	-	-	3	-	-
Kingsbridge-Marble Hill	-	-	1	-	2	-	1
Longwood	-	-	-	-	-	1	3
Longwood	2	-	-	-	-	-	-
Melrose	2	1	1	-	-	-	1
Melrose	2	-	1	-	-	2	-
Morris Park	1	-	-	-	2	1	1
Morrisania	3	1	-	-	-	1	-
Mott Haven-Port Morris	1	-	3	3	-	2	1

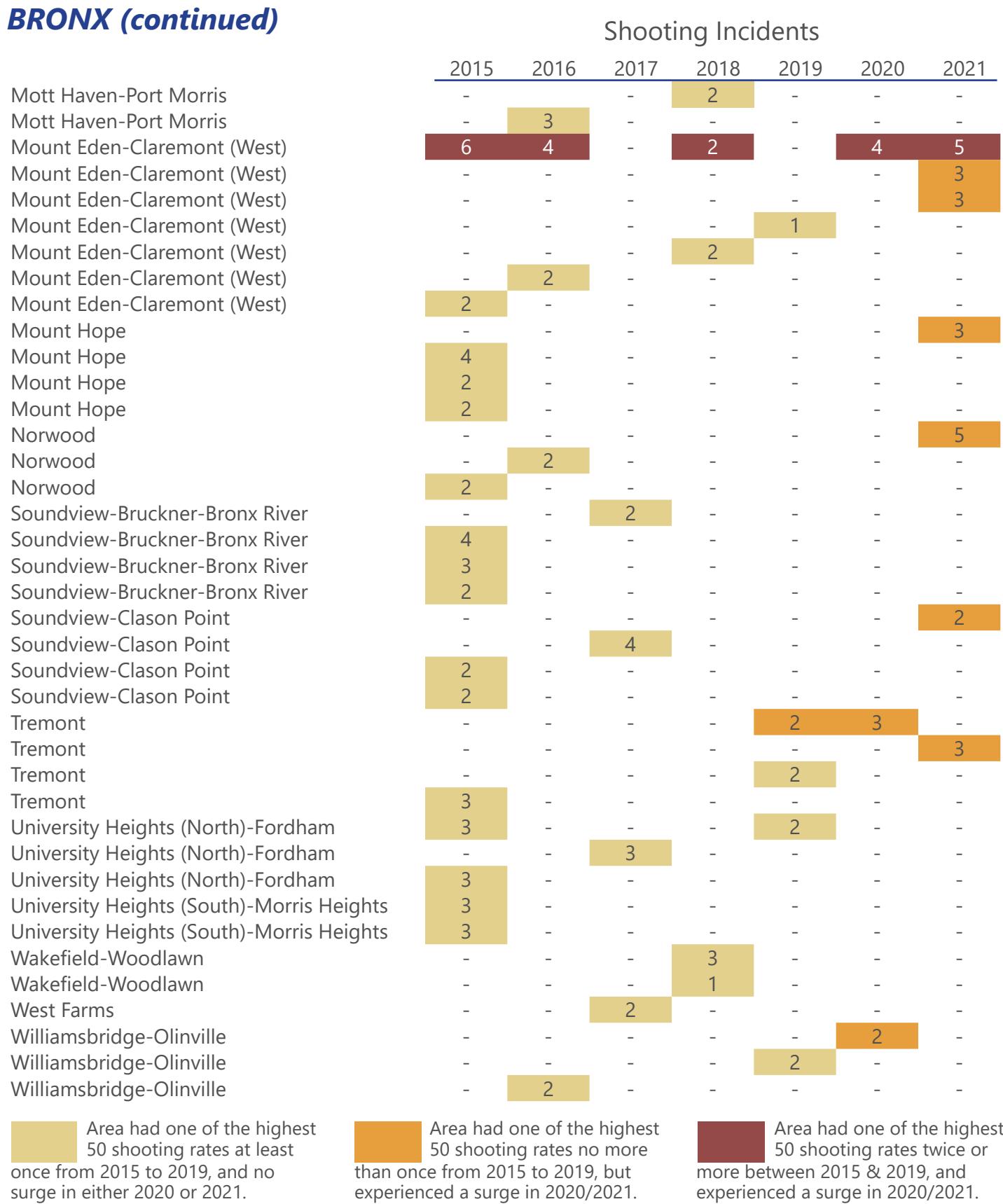
Area had one of the highest 50 shooting rates at least once from 2015 to 2019, and no surge in either 2020 or 2021.

Area had one of the highest 50 shooting rates no more than once from 2015 to 2019, but experienced a surge in 2020/2021.

Area had one of the highest 50 shooting rates twice or more between 2015 & 2019, and experienced a surge in 2020/2021.

NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

BRONX (continued)



NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

BROOKLYN

	Shooting Incidents						
	2015	2016	2017	2018	2019	2020	2021
Bedford-Stuyvesant (East) (view online)	1	3	2	2	-	4	2
Bedford-Stuyvesant (East)	2	1	-	1	-	2	1
Bedford-Stuyvesant (East)	-	3	-	-	-	3	-
Bedford-Stuyvesant (East)	2	-	1	-	-	1	1
Bedford-Stuyvesant (East)	2	2	-	-	-	-	-
Bedford-Stuyvesant (East)	-	2	-	-	-	1	3
Bedford-Stuyvesant (East)	2	1	-	1	-	3	-
Bedford-Stuyvesant (East)	-	1	-	-	1	4	1
Bedford-Stuyvesant (East)	-	1	1	1	3	-	-
Bedford-Stuyvesant (East)	1	2	2	4	-	3	1
Bedford-Stuyvesant (East)	-	1	1	2	-	1	2
Bedford-Stuyvesant (East)	-	-	-	1	-	1	-
Bedford-Stuyvesant (East)	2	2	4	1	2	4	1
Bedford-Stuyvesant (East)	1	2	-	-	-	-	-
Bedford-Stuyvesant (East)	-	2	-	-	-	-	-
Bedford-Stuyvesant (East)	1	2	-	-	-	2	-
Bedford-Stuyvesant (East)	-	2	-	-	-	-	-
Bedford-Stuyvesant (East)	3	1	-	1	-	1	-
Bedford-Stuyvesant (West)	-	1	2	1	1	2	-
Bedford-Stuyvesant (West)	-	-	1	-	1	3	-
Bedford-Stuyvesant (West)	-	1	4	-	-	4	1
Bedford-Stuyvesant (West)	-	-	-	-	-	-	3
Bedford-Stuyvesant (West)	-	1	-	2	3	-	-
Bedford-Stuyvesant (West)	-	-	-	-	2	-	2
Bedford-Stuyvesant (West)	2	1	1	3	-	3	2
Bedford-Stuyvesant (West)	1	1	3	4	-	4	2
Brownsville	3	2	3	1	-	5	8
Brownsville	3	-	2	1	1	3	3
Brownsville	-	1	1	3	-	1	4
Brownsville	1	-	-	1	-	-	2
Brownsville	4	1	2	1	2	6	5
Brownsville	-	2	1	2	-	4	-
Brownsville	1	1	1	1	2	3	2
Brownsville	-	2	1	2	1	1	-
Brownsville	2	-	-	-	-	1	3
Brownsville	1	-	-	-	-	4	2
Brownsville	-	-	1	1	-	3	-
Brownsville	-	-	1	-	-	3	-

Area had one of the highest 50 shooting rates at least once from 2015 to 2019, and no surge in either 2020 or 2021.

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Area had one of the highest 50 shooting rates twice or more between 2015 & 2019, and experienced a surge in 2020/2021.

NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

BROOKLYN (continued)

	Shooting Incidents						
	2015	2016	2017	2018	2019	2020	2021
Brownsville	1	-	-	2	-	-	-
Brownsville	1	2	-	1	1	1	-
Brownsville	3	-	-	-	-	-	-
Bushwick (East)	-	2	-	-	1	1	4
Bushwick (East)	-	-	-	-	-	-	3
Bushwick (East)	1	-	2	-	-	-	1
Bushwick (West)	-	-	1	-	-	-	3
Canarsie	1	-	-	-	2	4	4
Canarsie	-	-	2	-	1	-	-
Canarsie	1	2	-	-	-	-	-
Carroll Gardens-Cobble Hill-Gowanus-Red Hook	3	3	2	-	-	2	-
Coney Island-Sea Gate	-	2	2	-	-	-	-
Coney Island-Sea Gate	-	1	1	1	5	1	-
Coney Island-Sea Gate	3	-	1	1	3	4	1
Coney Island-Sea Gate	-	-	-	-	2	-	1
Coney Island-Sea Gate	4	1	-	-	1	3	-
Crown Heights (North)	4	3	-	1	1	3	-
Crown Heights (North)	-	2	1	-	2	4	4
Crown Heights (North)	-	-	-	2	1	5	1
Crown Heights (North)	-	-	-	-	1	3	-
Crown Heights (North)	-	2	1	1	3	1	-
Crown Heights (North)	-	-	-	1	-	-	-
Crown Heights (North)	-	-	-	1	-	-	1
Crown Heights (North)	3	1	-	-	-	-	-
Crown Heights (South)	1	1	-	-	-	2	2
Crown Heights (South)	2	-	-	2	1	-	-
Crown Heights (South)	-	1	1	-	1	4	1
Crown Heights (South)	-	1	-	-	2	2	-
Crown Heights (South)	-	3	1	-	1	1	2
Cypress Hills	-	-	-	-	-	4	1
Cypress Hills	-	-	-	-	3	2	-
Cypress Hills	-	-	-	2	-	2	1
Downtown Brooklyn-DUMBO-Boerum Hill	2	-	5	-	2	-	3
Downtown Brooklyn-DUMBO-Boerum Hill	-	3	-	1	-	2	1
East Flatbush-Erasmus	2	-	-	-	-	4	-
East Flatbush-Erasmus	-	-	2	1	1	-	1
East Flatbush-Erasmus	1	2	3	1	1	1	1
East Flatbush-Erasmus	-	3	-	-	-	-	-

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NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

BROOKLYN (continued)

	Shooting Incidents						
	2015	2016	2017	2018	2019	2020	2021
East Flatbush-Farragut	-	-	3	-	-	1	1
East Flatbush-Farragut	-	-	2	-	-	-	-
East Flatbush-Farragut	-	-	2	-	-	1	2
East Flatbush-Farragut	2	-	-	-	-	-	-
East Flatbush-Remsen Village	1	-	-	3	-	1	3
East Flatbush-Remsen Village	1	-	-	2	1	1	1
East Flatbush-Remsen Village	-	3	-	-	1	-	1
East Flatbush-Remsen Village	1	2	-	1	1	-	-
East Flatbush-Rugby	-	-	-	-	-	2	-
East Flatbush-Rugby	-	-	-	-	-	2	-
East Flatbush-Rugby	-	2	1	3	-	-	-
East Flatbush-Rugby	-	1	2	-	-	-	1
East Flatbush-Rugby	-	2	-	-	-	-	-
East Flatbush-Rugby	-	3	-	-	-	-	-
East New York (North)	-	-	-	-	-	3	-
East New York (North)	1	-	-	-	-	3	1
East New York (North)	-	-	-	-	-	2	1
East New York (North)	2	-	1	-	-	3	1
East New York (North)	-	-	-	1	2	1	1
East New York (North)	2	2	1	2	1	-	1
East New York (North)	-	2	-	1	-	1	-
East New York (North)	5	2	1	1	1	-	1
East New York (North)	3	-	1	1	-	3	1
East New York (North)	2	-	-	-	-	-	-
East New York-City Line	-	2	3	3	1	1	-
East New York-City Line	-	-	-	-	3	-	-
East New York-City Line	-	-	-	3	-	-	-
East New York-New Lots	-	3	1	-	2	2	-
East New York-New Lots	-	1	-	-	-	1	4
East New York-New Lots	-	-	-	-	1	3	4
East New York-New Lots	-	1	-	-	-	5	-
East New York-New Lots	2	3	1	-	-	2	2
East New York-New Lots	3	-	-	-	1	-	-
East Williamsburg	1	-	-	-	-	2	-
East Williamsburg	1	1	1	2	-	1	1
East Williamsburg	-	-	2	-	-	1	1
East Williamsburg	2	-	-	1	-	1	-

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NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

BROOKLYN (continued)

	Shooting Incidents						
	2015	2016	2017	2018	2019	2020	2021
Flatbush	-	-	-	-	-	4	-
Flatbush	3	2	-	1	1	1	-
Flatlands	2	2	-	-	-	1	-
Flatlands	1	3	-	-	-	-	-
Fort Greene	1	-	-	1	-	1	4
Fort Greene	1	-	-	-	1	3	1
Fort Greene	2	1	1	1	4	2	1
Fort Greene	-	1	-	-	-	-	-
Fort Greene	2	1	-	-	-	1	-
Ocean Hill	1	1	-	1	2	3	3
Ocean Hill	-	1	-	-	2	2	2
Ocean Hill	2	1	-	2	2	1	-
Ocean Hill	1	-	1	-	-	3	1
Ocean Hill	1	2	-	2	1	2	-
Ocean Hill	-	-	2	1	-	-	-
Ocean Hill	3	1	-	1	1	1	-
Prospect Lefferts Gardens-Wingate	1	3	-	1	1	-	-
Williamsburg	-	-	-	1	-	-	-
Williamsburg	-	-	2	1	-	1	-

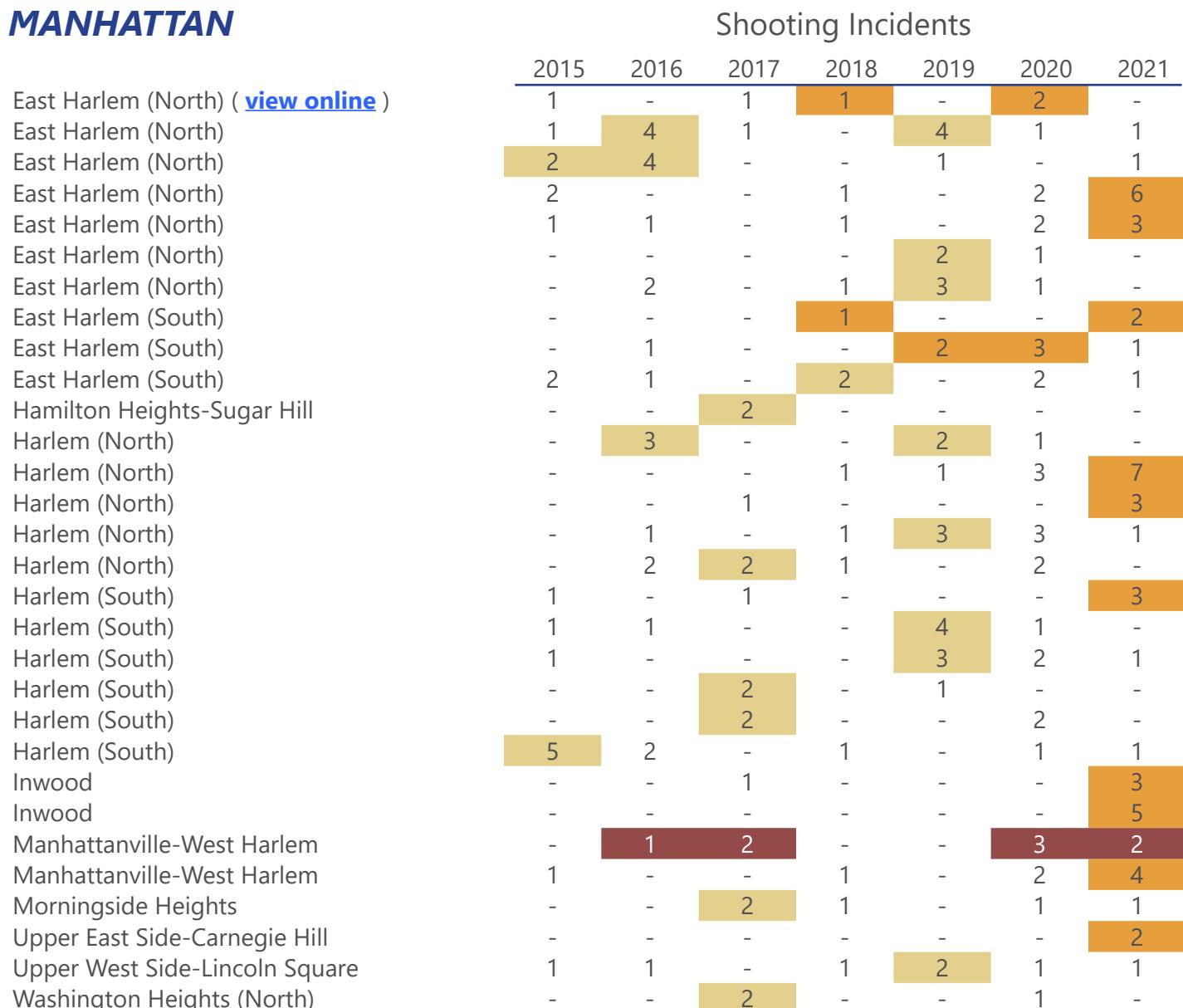
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NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

MANHATTAN



Area had one of the highest 50 shooting rates at least once from 2015 to 2019, and no surge in either 2020 or 2021.

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NYC Neighborhoods (Census Block Groups) with Highest Annual Shooting Rates

QUEENS

	Shooting Incidents						
	2015	2016	2017	2018	2019	2020	2021
Baisley Park (view online)	2	-	1	-	2	1	1
Baisley Park	-	2	1	-	-	-	-
Baisley Park	-	3	-	2	2	2	3
Cambria Heights	-	-	-	-	1	-	-
Hollis	-	-	-	-	-	2	1
Hollis	-	3	-	-	-	-	2
Jamaica	-	2	-	-	-	2	3
Jamaica	1	1	1	3	1	3	1
Jamaica Estates-Holliswood	-	2	-	-	-	-	-
Jamaica Hills-Briarwood	-	-	-	2	-	-	-
Laurelton	-	-	-	-	-	1	2
Laurelton	1	-	-	2	1	-	-
Laurelton	1	2	1	-	1	-	-
Old Astoria-Hallets Point	3	1	-	1	1	2	-
Queens Village	-	-	-	1	-	-	1
Queensbridge-Ravenswood-Dutch Kills	1	-	-	-	3	3	2
Queensbridge-Ravenswood-Dutch Kills	-	-	2	1	2	3	2
Queensbridge-Ravenswood-Dutch Kills	-	3	-	1	-	-	-
Richmond Hill	2	2	-	2	1	-	1
Rosedale	-	-	1	2	-	-	-
Rosedale	1	-	3	1	-	1	-
South Jamaica	-	1	-	-	1	1	-
South Ozone Park	1	-	2	-	-	-	-
Springfield Gardens (North)-Rochdale Village	1	1	5	-	1	-	5
Springfield Gardens (South)-Brookville	1	-	2	-	-	-	-
St. Albans	-	-	-	-	-	-	2
St. Albans	-	-	-	-	1	-	-
St. Albans	-	1	2	-	-	1	1

STATEN ISLAND

Mariner's Harbor-Arlington-Graniteville	1	-	4	-	1	1	1
Port Richmond	4	2	1	-	2	4	2
Rosebank-Shore Acres-Park Hill	2	1	4	-	-	8	1
St. George-New Brighton	-	-	-	3	-	-	-
St. George-New Brighton	3	2	3	-	-	2	1
Tompkinsville-Stapleton-Clifton-Fox Hills	1	4	1	1	-	-	2
West New Brighton-Silver Lake-Grymes Hill	-	-	-	1	-	-	-
West New Brighton-Silver Lake-Grymes Hill	1	1	3	1	-	-	2

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