

# Crime in New York City and The Quality of Public Schools

## Links Between Chronic Absenteeism, Crime, and the Support a School Provides For Its Students

### Introduction

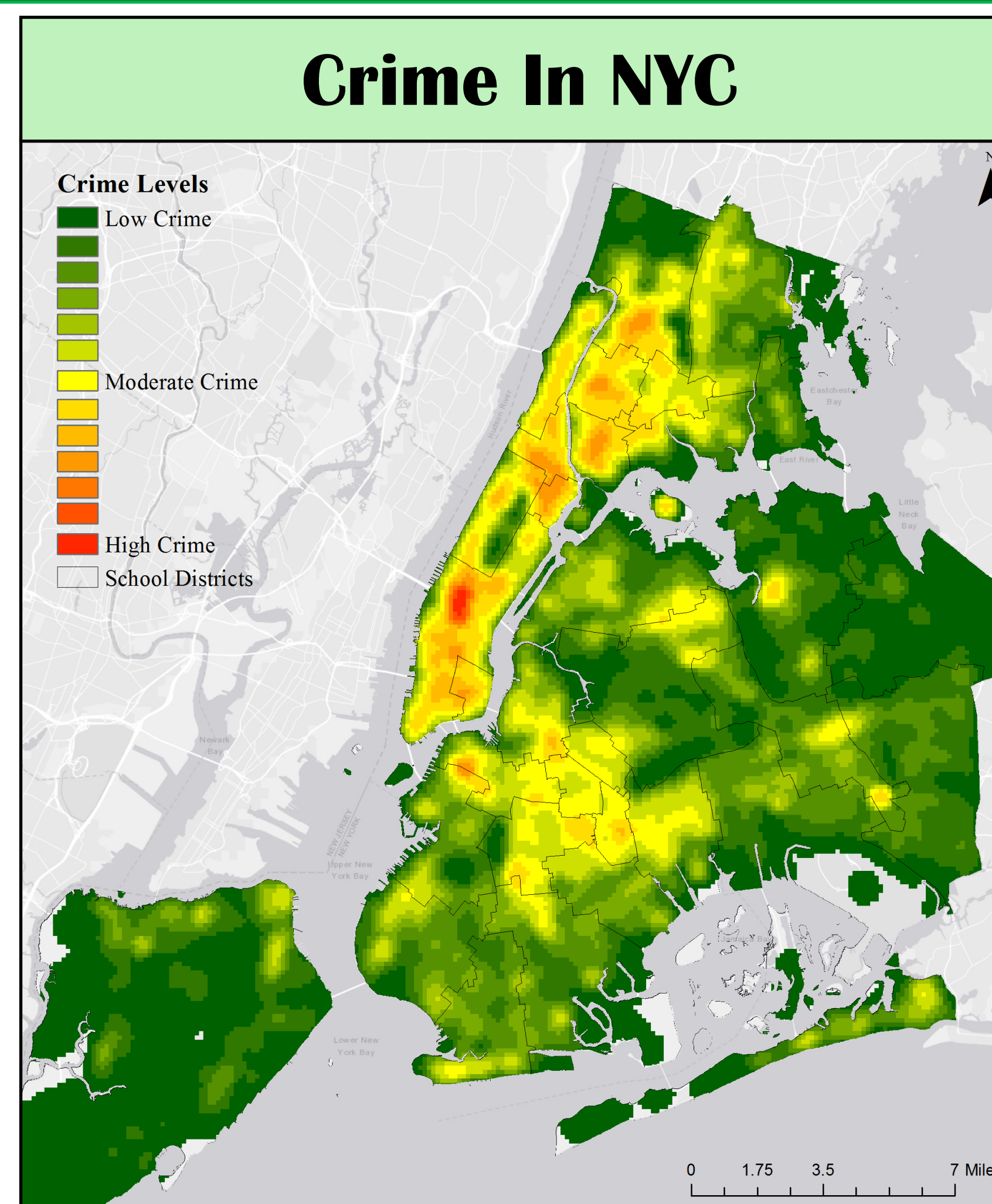
Reports on the relation between crime and education remain inconclusive, but potential benefits of increased educational attainment, or increased educational quality, include an effect on a person's behavior, their ability to earn a living wage through legal means, and the way a person perceives risks associated with criminal activity (1). The U.S. Bureau of Justice reports that 56% of federal inmates, 67% of state prison inmates, and 69% of local jail inmates did not complete high school (2). Many factors are at play in a child's ability to succeed well, including, but not limited to, the support network a school provides, a school's ability to keep students present and engaged in class, the stressors a child experiences as a result of their environmental and economic condition, and the ways a child's race affects the care and discipline they receive. To tackle all possible factors at play in potentiality to commit a crime would be difficult, so I sought to explore the ways different measures of school quality could be linked to crimes within schools, and whether these measures map onto a city wide visualization of crime.

### Methodology

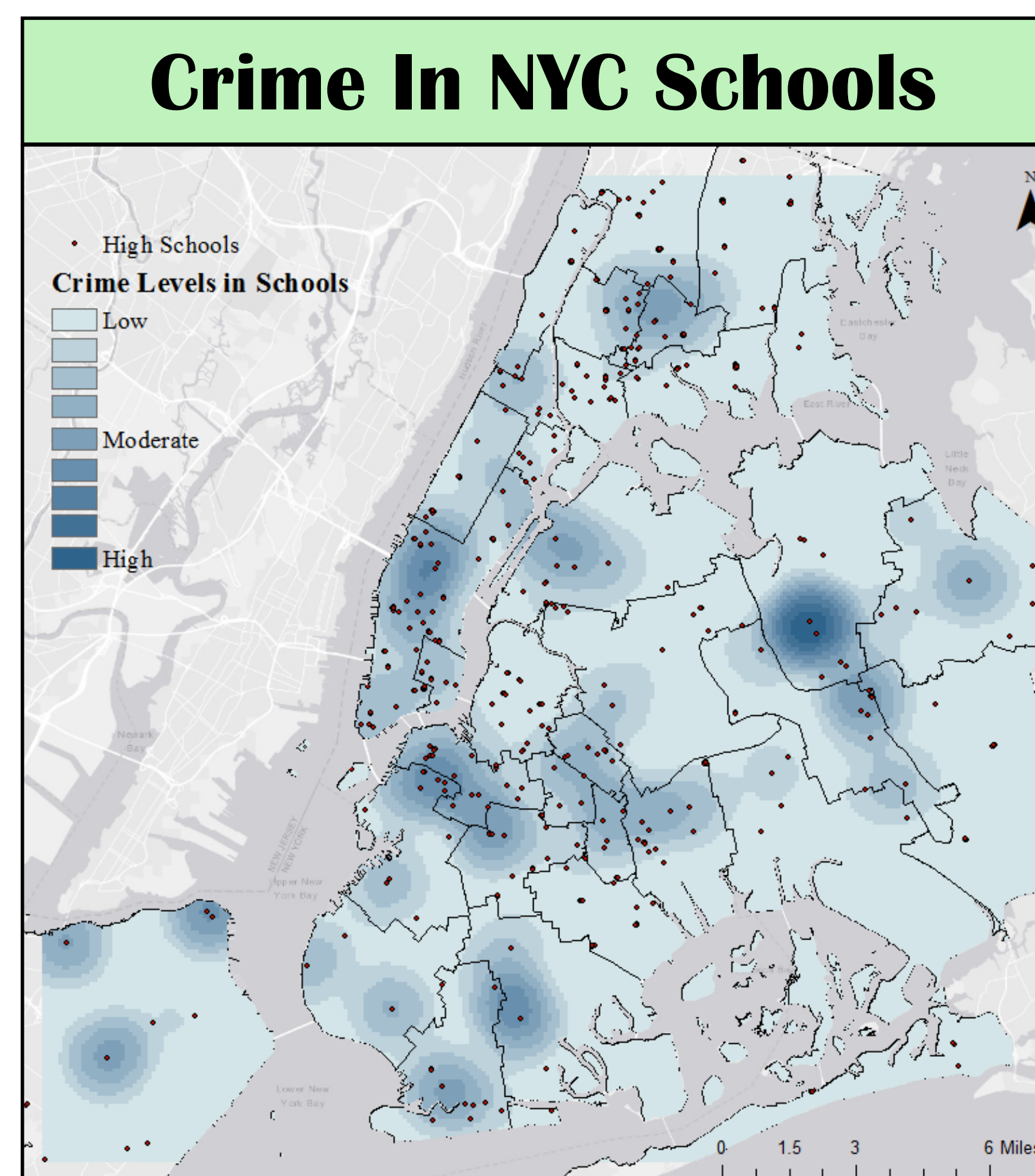
I first looked to gain an understanding of the distribution of crime in New York City. To do this, I downloaded a city-wide 2017 criminal report document, and a 2015-2016 report of criminal incidents in public high schools, drawing my information from the police department and NYC Open Data. After geocoding the information, I created kernel density maps as a way to easily visualize the large number of data points.

I also obtained data on school quality from the Department of Education, which utilizes an extensive number of measures to determine school success. I created scatterplots in Excel from many of these measures, focusing on graduation rate, chronic absence, economic need index and six categorical ratings (Collaborative Teachers, Supportive Environment, Effective School Leadership, Strong Family-Community Ties, Trust and Student Achievement) based on reports from students, parents/guardians, and teachers. I used the raw ratings provided by respondents for these measures, rather than the ratings that take improvement over time into account, with individualized targets for each school. The map showing chronic absence compared to economic need index was made by using the Kernel Density tool on schools that report 40% or more of its students as chronically absent.

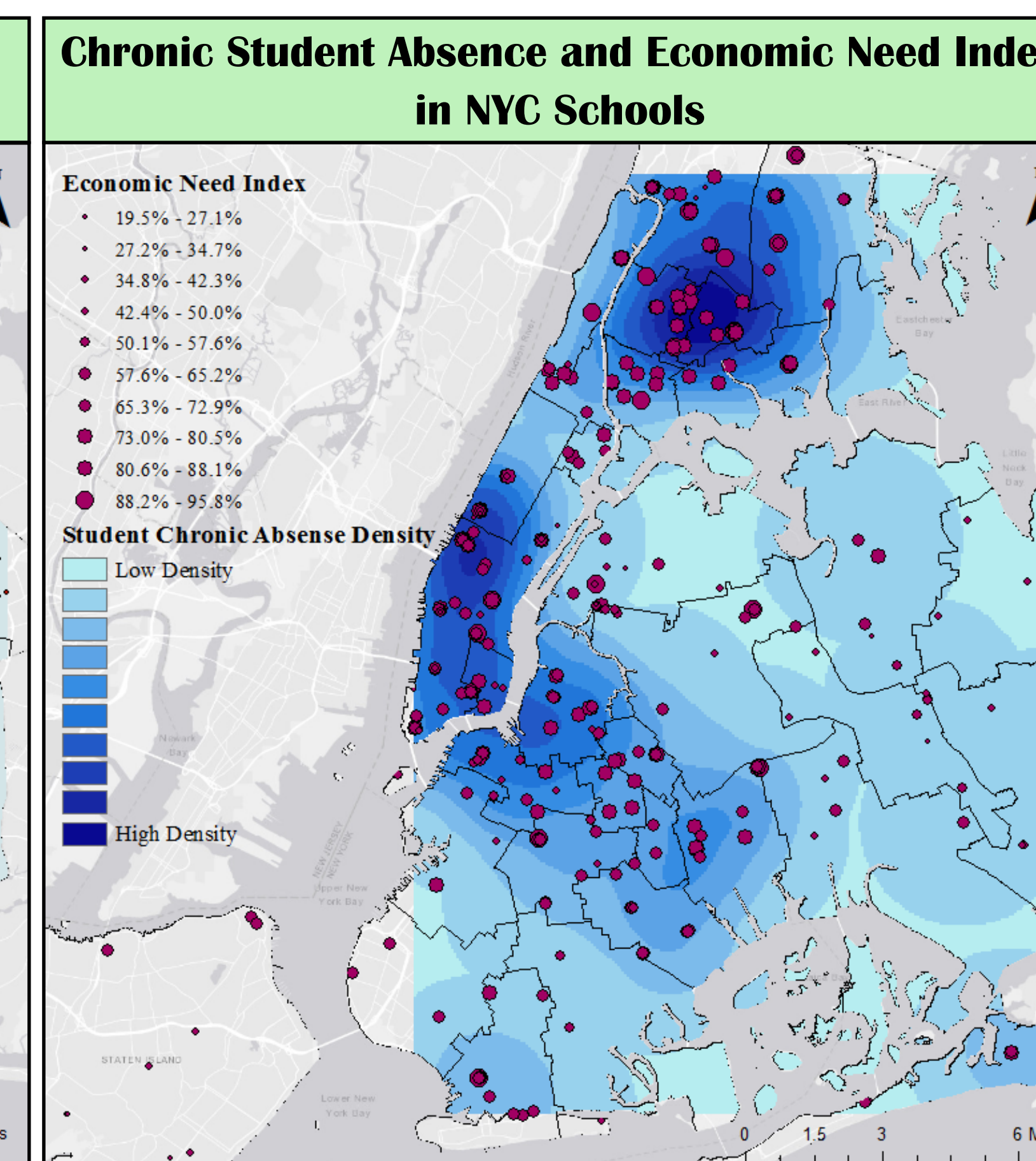
### Crime In NYC



### Crime In NYC Schools



### Chronic Student Absence and Economic Need Index in NYC Schools



### Results and Conclusions

There appears to be a strong correlation between locations of adult crime, locations of school crimes, and areas where there are high rates of student absences. Economic need index is correlated with graduation rate and chronic absence. This indicates that greater economic stress within a family means that the child is more likely to miss school and drop out, which studies show are linked to an increased chance of committing a crime later in life. I found that a greater percentage of students are likely to frequently miss school when their educators do not provide them with a supportive environment. This correlation holds when all six measures of respondent-based school quality are aggregated together and compared to chronic absence. The tables indicate that students whose families are under greater economic stress are also less likely to be placed in a supportive environment and given the instruction they need to succeed. There needs to be greater attention and outreach given to the children who are missing school, as this a warning sign that they may drop out.

### Further Research

I did not get a chance to explore breakdowns of school statistics such as graduation and absence rate by race, and how a school supports minority students in the lowest third of citywide performance. This is important knowledge, as Black and Hispanic individuals, particularly those that have not graduated high school, are incarcerated at far greater rates than the White population. I would also like to explore changes in school quality measures and criminal activity within and outside of schools over multiple years to see if increasing quality leads to fewer arrests.

# Tufts

Cartographer: Nick Golin  
5/8/2018

GIS 101: Intro to GIS

Projection: Lambert Conformal Conic  
Coordinate System: NAD 1983 New York State Plane  
Data Sources: NYC Department of Education, NYC Open Data, NYC Capital Planning Program, New York City Police Department

References: (1) Lochner, Lance and Moretti, Enrico. "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports." October, 2003. <https://eml.berkeley.edu/~moretti/lm46.pdf>

(2) Alliance for Excellent Education. "Crime Rates Linked To Educational Attainment, 2013 Alliance Report Finds." 2013. <https://all4ed.org/press/crime-rates-linked-to-educational-attainment-new-alliance-report-finds/>

