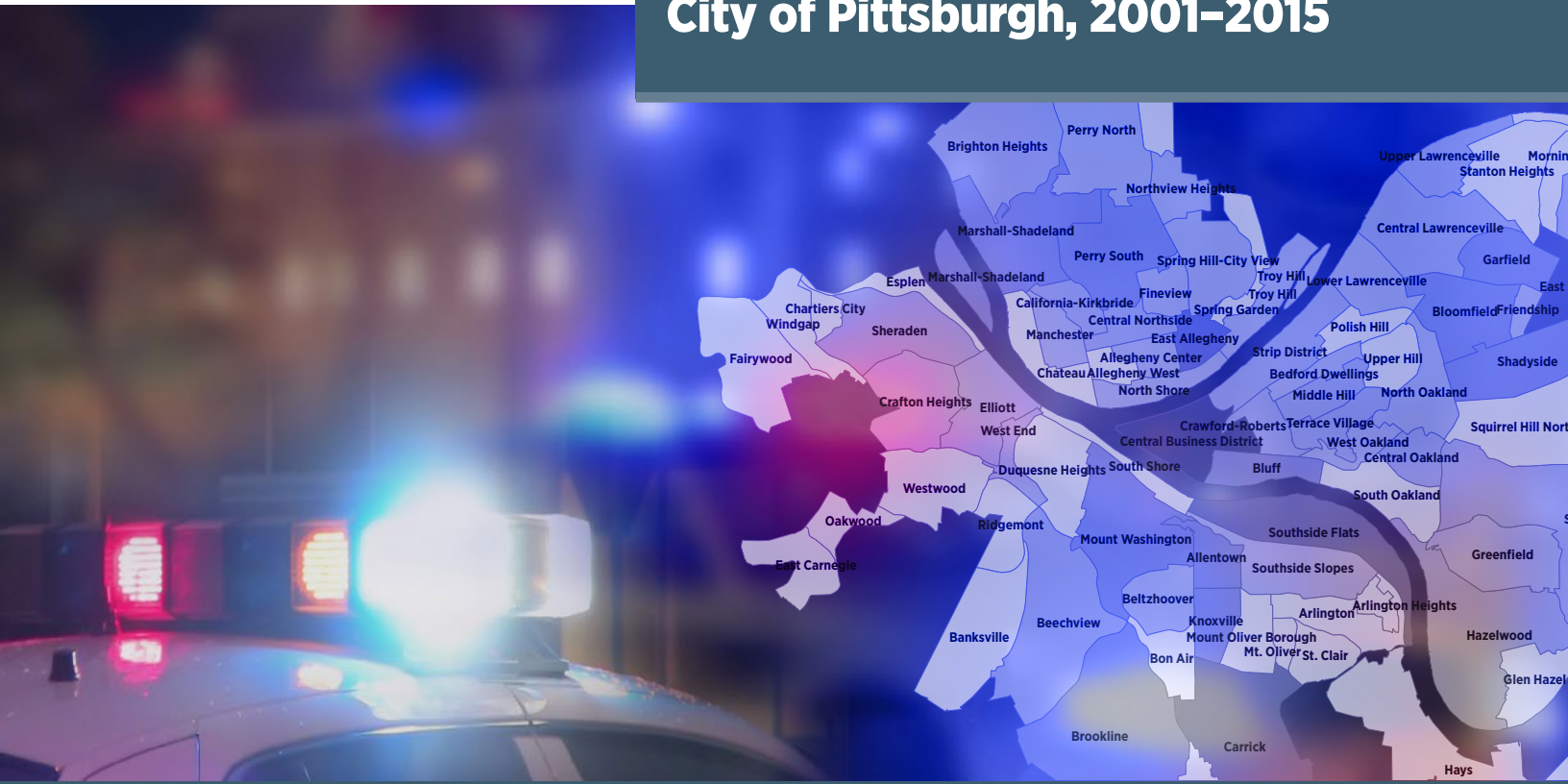


Arrest Trends in the City of Pittsburgh, 2001–2015



December 2018



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ACRONYMS AND DEFINITIONS

Arrest: An arrest is the apprehension of a person for an unlawful incident. If a person is arrested for more than one offense, it is still counted as one arrest, and the less serious offense records are dropped from the statistics, based on the Federal Bureau of Investigation's Uniform Crime Reporting hierarchy. If a person is arrested more than once over a course of time, then each of those instances of apprehension is counted as a separate arrest.

Arrest rate: Arrest rate is the volume of arrests standardized by population to facilitate comparison over time and across geography. In this report, arrest rate is the number of arrests per 100,000 residents. By including the population of the city or neighborhoods as a denominator, arrest rate allows one to compare arrest activity over time or across neighborhoods.

Crime: Crime is an incident in which an action (or inaction) occurs in violation of the law. While one incident might constitute one or more offenses/violations of the law, the most serious offense is chosen for each incident in accordance with FBI's UCR hierarchy.

Crime rate: Crime rate is the volume of crime activity standardized by population to facilitate comparison over time and across geography. In this report, crime rate is the number of crimes per 100,000 residents. By including the population of the city or neighborhoods as a denominator, crime rate allows one to compare crime activity over time or across neighborhoods.

Part I crimes: Part I crimes are serious crimes, which are categorized as either violent crimes (homicide, rape, robbery and aggravated assault) or property crimes (burglary, theft, motor vehicle theft and arson). Full definitions for each of these crime types can be found [here](#).

Part II crimes: Part II crimes are less serious crimes, which are categorized as one of the following: simple assaults, forgery, fraud, embezzlement, stolen property, vandalism, weapons law violation, prostitution, sex offenses, drug violations, gambling, endangering children, driving under the influence, liquor law violation, drunkenness, disorderly conduct, vagrancy and other offenses. Full definitions for each of these crime types can be found [here](#).

UCR: Uniform Crime Reporting. The FBI's UCR Program is a nationwide, cooperative statistical effort of more than 18,000 law enforcement agencies that voluntarily report data on crimes brought to their attention. The program's primary objective is to generate reliable information for use in law enforcement administration, operation and management.

EXECUTIVE SUMMARY

Arrest totals and rates can vary considerably over time and across crime type, age group, race, gender and neighborhood. Analyses of arrest trends provide valuable insights about a city's changing experiences in crime and law enforcement, especially when compared to other jurisdictions and the national average. While crime and arrest rates offer a perspective on trends in criminal behavior, this type of analysis can, perhaps more importantly, point to a system's response to criminal behavior. For example, changes in law enforcement policies and practices can have an effect on arrest rates and, in addition, some crimes are more easily solved (cleared with arrest) than others.

This report, prepared by the Allegheny County Department of Human Services (DHS) with support from the Pittsburgh Bureau of Police (PBP), describes crime and arrest data for the City of Pittsburgh over the 15-year period from 2001 through 2015. We highlight notable characteristics of the data and trends over time, and we also compare them to similar data for U.S. cities.

Arrest rates and crime rates have fluctuated, with both decreasing between 2001 and 2015. In general, arrest rates declined more than crime rates (31 percent compared to 26 percent over the period of study). A variety of factors could have caused arrest rates to fall more quickly. For example, recent changes in enforcing low-level crimes such as possession of small amounts of marijuana may have led to fewer arrests for those types of crimes. However, for more serious Part I crimes, arrest rates have decreased less than crime rates, perhaps due to improved ability to solve crimes or a greater decline in harder-to-clear crimes compared to crimes that are easier to clear. (For more information, see the section below on Part I and Part II crimes).

The demographics of people arrested also fluctuated over the period. As of 2015, female arrests constituted one-fourth of all arrests, up from one-fifth at the beginning of the study period. The racial distribution of arrests remained relatively consistent throughout the 15 years, while arrest rates for teenagers ages 15 through 19 declined significantly.

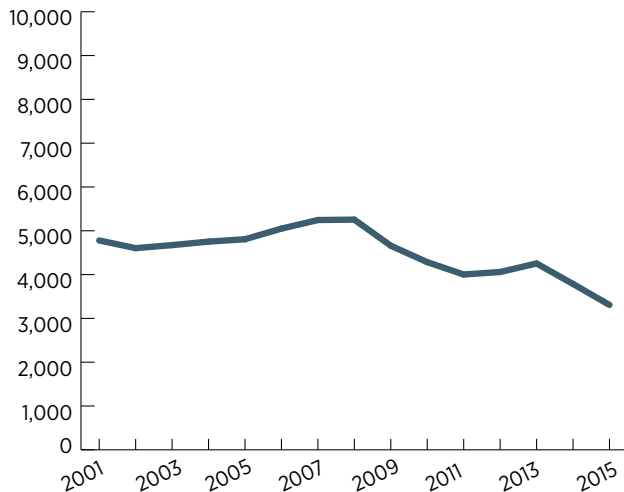
We also provide data indicating the Pittsburgh neighborhoods with the highest arrest rates as of 2001, 2008 and 2015. Although these data are skewed by the fact that some neighborhoods attract far greater numbers of nonresidents than others, they do point to substantial changes over 15 years in Pittsburgh's social fabric.

ACKNOWLEDGMENTS

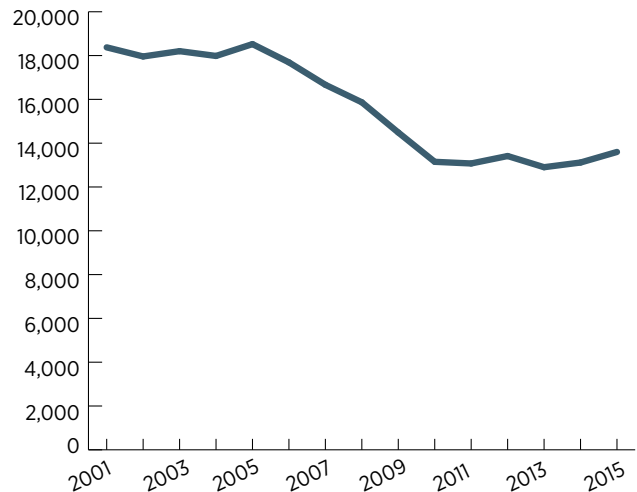
We appreciate the City of Pittsburgh Bureau of Police and its leadership for sharing data to make this analysis possible. We are grateful for the collaboration of Bureau crime analysts Daniel King and Heath Johnson, who assisted with data retrieval and quality checks, answered numerous questions, and gave feedback on the report.

KEY FINDINGS

Arrest Rate, 2001–2015 (per 100,000 people)



Crime Rate, 2001–2015 (per 100,000 people)



Trends in arrest rate: Overall, the annual rate of arrests in Pittsburgh declined by 31 percent from 2001 to 2015, even though the general declining trend was interrupted twice (during 2002–2008 and 2011–2013). The greatest percentage of decline in arrest rate was in the most serious (i.e., Part I) category of crimes, which dropped by 38 percent during the period studied.

Trends in crime rate: The annual rate of crimes declined by 26 percent over the same period, though the crime rate did not begin decreasing until 2005.

Trends in types of arrests: Drug offenses were the most common category of arrest for the first half of the period studied, but were surpassed by simple assaults as of 2015.

Comparison to the nation and other cities: Pittsburgh’s downward trend in arrest rate was comparable to the trend in other U.S. cities over the period studied, though Pittsburgh experienced a bumpier trajectory. During the first half of the time period studied, Pittsburgh’s arrest rate was higher than that of other U.S. cities, but in the past five years, it has moved closer to rates in other cities.

Gender of people arrested: Arrest rates for men dropped steeply from 2001 to 2015, though they continued to be higher than arrest rates for women.

Race of people arrested: During the period studied, black residents were about four times more likely to be arrested than white residents. Hispanic people were only half as likely to experience arrest as white people.

Age of people arrested: The most common age at time of arrest was 21; however, the age group with the largest decline in arrest rates was teenagers (age 15 to 19), especially for serious crimes.

Neighborhoods where arrests occurred: Arrest rates declined substantially in nearly all East End neighborhoods, whereas increases were observed in some neighborhoods of the North Side and (particularly for less serious, Part II, crimes) the Southside.

INTRODUCTION

This report summarizes available data on all arrests that occurred in Pittsburgh over the 15-year period from 2001 through 2015. Crime data for the same period were also analyzed to provide a context for interpreting the arrest rates. Whereas the arrest rate measures the number of arrests per 100,000 people in the city, the crime rate measures the number of reported crimes per 100,000 people. The two measures differ because not all crimes reported to police are solved with an arrest.

After presenting overall trends in arrest totals and rates, the report analyzes these data by demographic factors, city neighborhood, time and type of offense. Comparisons are also made to arrest rates in other jurisdictions. See the accompanying dataset for detailed arrest data for each of the Uniform Crime Reporting (UCR) crime types.

DATA SOURCES

The following data sources were used:

- Arrest data from the Pittsburgh Bureau of Police (PBP) for the years 2001 to 2015
- Population estimates from Pittsburgh’s Department of City Planning¹ and the U.S. Census and American Community Surveys²
- The Arrest Data Analysis Tool of the U.S. Bureau of Justice Statistics³ for estimates of national arrest rates
- FBI Unified Crime Reporting (UCR)⁴ for crime data from U.S. cities and for guidance on how to count crimes and arrests
- Pennsylvania Unified Crime Reporting⁵ for state-level arrest data

¹ <http://pittsburghpa.gov/dcp>

² <https://factfinder.census.gov>

³ <https://www.bjs.gov/index.cfm?ty=datool&url=/arrests/index.cfm>

⁴ <https://ucr.fbi.gov>

⁵ <https://www.paucrs.pa.gov/UCR/ComMain.asp>

For a detailed description of data sources, see **Appendix B**.

METHODOLOGY

Arrest and crime rates are per 100,000 residents. Average annual change is calculated in percentages for both arrest rates and crime rates for the period under study. A detailed formula is provided in **Appendix A**.

In many cases, an arrested person is charged with more than one offense. In those instances, each arrest was counted only once and classified according to the most serious charge filed as determined by the UCR hierarchy (**Table 1**).

TABLE 1: FBI’s Unified Crime Reporting Offense Hierarchy

ARRESTS FOR ALL CRIMES			
ARRESTS FOR PART I CRIMES		ARRESTS FOR PART II CRIMES	ARRESTS FOR MISCELLANEOUS CRIMES
ARRESTS FOR VIOLENT CRIMES	ARRESTS FOR PROPERTY CRIMES		
1. Homicide	5. Burglary	9. Forgery	99. Miscellaneous Offenses
2. Rape	6. Theft	10. Simple Assault	
3. Robbery	7. Motor Vehicle Theft	11. Fraud	
4. Aggravated Assault	8. Arson	12. Embezzlement	
		13. Receiving Stolen Property	
		14. Vandalism	
		15. Weapons Law Violation	
		16. Prostitution	
		17. Sex Offense	
		18. Drug Offense	
		19. Gambling	
		20. Endangering Children	
		21. Driving Under the Influence	
		22. Liquor Law Violation	
		23. Public Drunkenness	
		24. Disorderly Conduct	
		25. Vagrancy	
		26. Other Offenses	
		27. Loitering	
		28. Runaway	

The numbers 1 to 28 denote UCR hierarchy in terms of seriousness/severity of the crime in descending order. The number 99 was chosen for miscellaneous offenses because of the different nature of these offenses.

When we analyzed arrests by neighborhood, those occurring at police headquarters (Chateau neighborhood) or at the Allegheny County Jail (Central Business District) were removed from the data so that arrests in those neighborhoods would not be artificially inflated. Even with these adjustments, the neighborhood-level analyses must be interpreted with caution, as missing values in the neighborhood data are not equally distributed across years. Similar caution must be exercised in interpreting breakdowns by age group, as missing age data also have unequal spreads.

For more detailed information on our methodology and data sources, see **Appendix A and B**.

OVERALL CRIME AND ARREST TRENDS

In 2015, the total number of arrests in Pittsburgh was 10,119. Compared to 2001, when the annual number of arrests stood at 15,509, the 2015 figure represents a 35 percent decline. The declining trend in the total number of arrests was interrupted twice, with an increase of 14 percent in 2008 compared to 2005 and a smaller increase of 6 percent in 2013 compared to 2011. Overall, the average annual change in arrests from 2001 through 2015 was a 3 percent decrease (**Figure 1**).

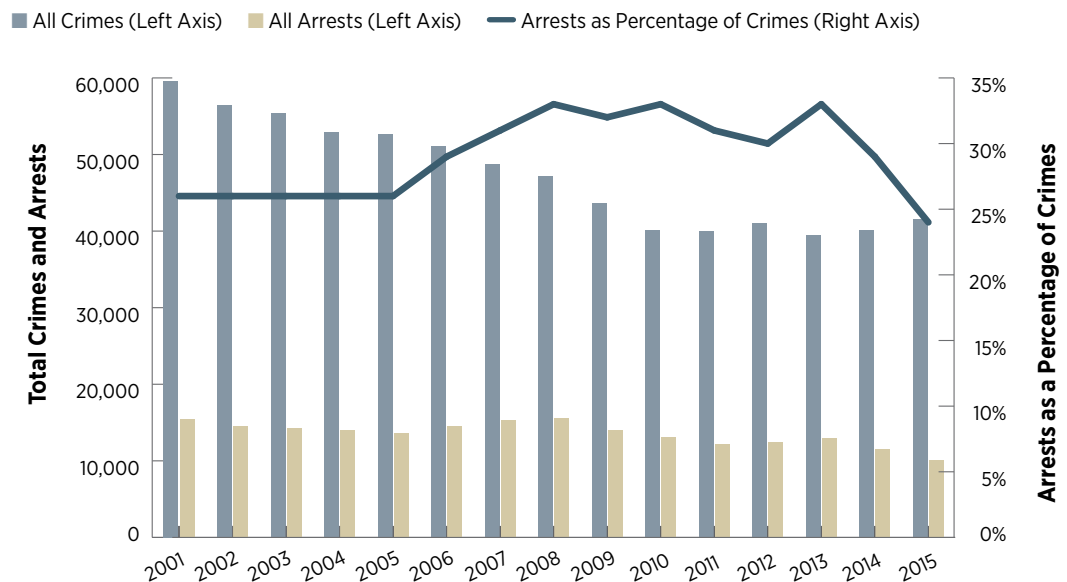
Reported crimes showed a more linear declining trend, especially during the period from 2001 through 2008. The number of reported crimes decreased by 30 percent between 2001 and 2015, or about 2 percent per year. More recently, however, there has been a 5 percent increase in crimes between 2013 and 2015.

Arrests as a percentage of crimes was relatively flat at about 26 percent until 2005, suggesting that crimes and arrests were declining at a similar rate. [footnote 6] From 2006 to 2013, arrests as a percentage of crimes rose to 33 percent because the number of arrests declined at a slower rate than the number of crimes in that period. The last two years in the period saw a sharp decline in arrests as a percentage of crimes as crimes increased while arrests decreased.⁷

⁶ The measure “arrests as a percentage of crimes” is different from clearance rates in that the latter includes “exceptionally cleared crimes” — crimes for which no arrests were made due to factors outside the control of law enforcement. For further information, visit <https://ucr.fbi.gov/crime-in-the-u.s./2012/crime-in-the-u.s.-2012/offenses-known-to-law-enforcement/clearances>

⁷ Not all crimes result in arrests, even when the alleged perpetrator is identified. Some crimes result in a citation (also known as a summons), which can be issued for less serious crimes such as vandalism, prostitution, public drunkenness, disorderly conduct, liquor law violations, theft of services and shoplifting. However, citations occur in only a very small portion of crimes. Arrests and citations combined to represent about 36 percent of the number of reported crimes from 2001 through 2015.

FIGURE 1: Annual Trends in Total Arrests and Crimes, 2001 to 2015



Note: The left vertical axis denotes the raw number of arrests and crimes; the right vertical axis refers to arrests as a percentage of crimes.

Several periods deserve a closer look due to substantial increases or drops in arrests:

- Between 2006 and 2008, the number of crimes decreased while the number of arrests increased. Comparing arrests during that time period to arrests in 2005 shows that most of the arrests leading to the increase were less serious Part II offenses such as simple assaults, drug offenses, driving under the influence (DUI), other offenses, and miscellaneous offenses.⁸ These increases involved mostly males, black offenders and people age 25 to 29. The majority of the increases in drug offense arrests were for marijuana possession.⁹ In 2009, the number of arrests dropped mainly due to reductions in the number of arrests involving black, male offenders age 25–29.
- In 2012, annual crime totals increased, and arrests also increased in 2012 and 2013. Most of the increases in arrests during this time period were for Part II offenses such as drug offenses, simple assaults, resisting arrest, and other offenses, as well as the Part I offense of theft (mostly shoplifting). Similar to the earlier arrest spike, the increase involved mostly males and black offenders, while offenders were more frequently in the 20–24 age group.¹⁰ In contrast to the 2006–2008 arrest increase, DUI arrests were not a factor in this spike. In fact, arrests for DUI went down in 2012 and 2013, compared to 2011.
- In 2014–2015, there was a 5 percent increase in crimes when compared to the previous year, as opposed to a 22 percent decrease in the number of arrests during that time. The majority of the decrease in arrests in 2014 and 2015 was due to a decrease in drug possession arrests. This change in enforcement activity precedes the change in city legislation under which punishment for possession of a small amount of marijuana was reduced to a \$25 ticket.¹¹

⁸ “Other offenses” are violations of state or local laws not specifically identified as Part I or Part II offenses, excluding traffic offenses. “Miscellaneous offenses” are offenses that do not fit any of the UCR categories.

⁹ As also noted in the 2015 City of Pittsburgh Bureau of Police report entitled “Drug Violations in the City of Pittsburgh” (pages 3–4, 8), accessed May 17, 2017, http://apps.pittsburghpa.gov/dps/Drug_Violations_in_the_City_of_Pittsburgh.pdf

¹⁰ These bumps happened mostly in the Central Business District, Bluff, East Allegheny and Southside Flats.

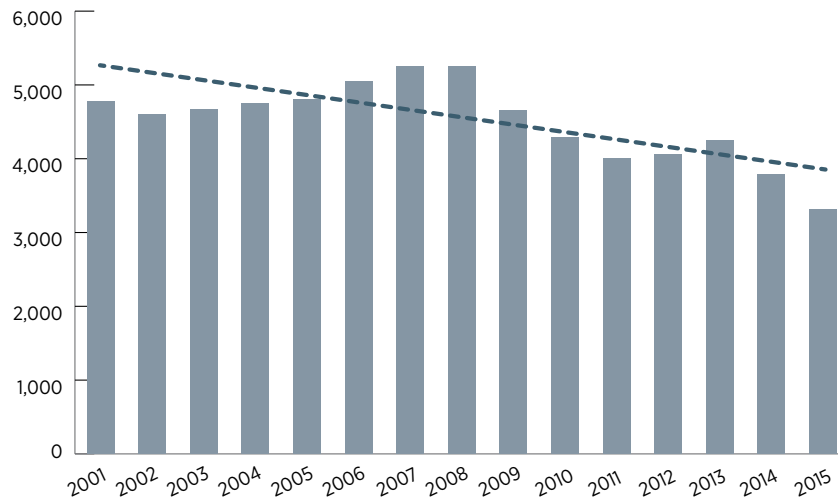
¹¹ More information about the changes in the city law are available here: <http://www.wtae.com/article/law-to-decriminalize-marijuana-hash-in-pittsburgh-takes-effect/7476659>

CRIME AND ARREST RATES

Counts of total crimes and arrests do not consider changes in population, so rates per 100,000 residents were also calculated. Between 2001 and 2005, the official population of the City of Pittsburgh declined by 12 percent, but it then increased by 8 percent from 2005 to 2010 and has stabilized since then.

In 2001, Pittsburgh’s arrest rate was 4,779 per 100,000 residents; in 2015, it was 3,308, which represents a decrease of 31 percent relative to 2001 (Figure 2). The decline was not linear, however, as the arrest rate increased by 10 percent between 2001 and 2007, and later by 6 percent from 2011 to 2013. Taking into account the uneven decline of arrest rates between 2001 and 2015, the average annual change in arrest rates for that period was a 3 percent decrease.

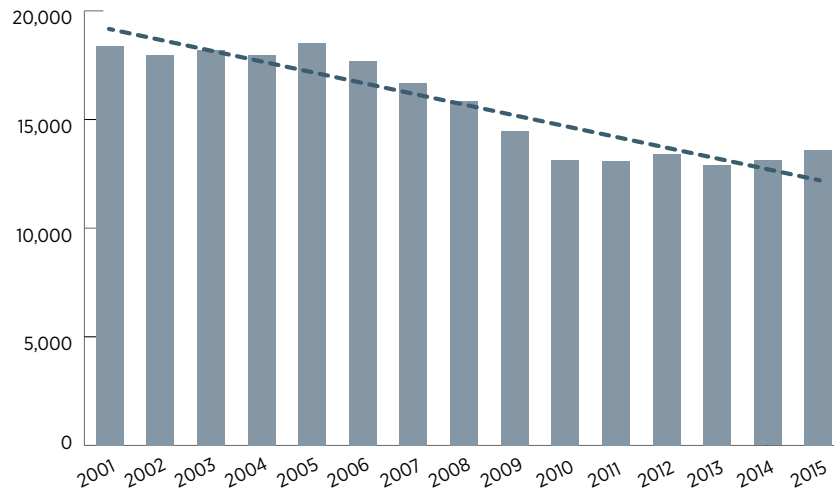
FIGURE 2: Arrest Rates per 100,000 People, 2001 to 2015



Note: Dashed line represents the trend in arrest rate. See **Appendix A** for the formula used to calculate the trend line.

Similarly, as **Figure 3** shows, the crime rate per 100,000 residents did not decrease during the first five years of the period analyzed but did decrease during the next five years. Overall, the average annual change in the crime rate per 100,000 persons for 2001 through 2015 was a 2 percent decrease.

FIGURE 3: Crime Rates per 100,000 People, 2001 to 2015



Note: Dashed line represents the trend in crime rate. See **Appendix A** for the formula used to calculate the trend line.

**Part I Crimes,
in order of
UCR hierarchy:**

1. Homicide
2. Rape
3. Robbery
4. Aggravated Assault
5. Burglary
6. Theft
7. MV Theft
8. Arson

**Part II Crimes,
in order of
UCR hierarchy:**

9. Forgery
10. Simple Assault
11. Fraud
12. Embezzlement
13. Receiving Stolen Property
14. Vandalism
15. Weapons Law Violation
16. Prostitution
17. Sex Offense
18. Drug Offense
19. Gambling
20. Endangering Children
21. Driving Under the Influence
22. Liquor Law Violation
23. Public Drunkenness
24. Disorderly Conduct
25. Vagrancy
26. Other Offenses
27. Loitering
28. Runaway

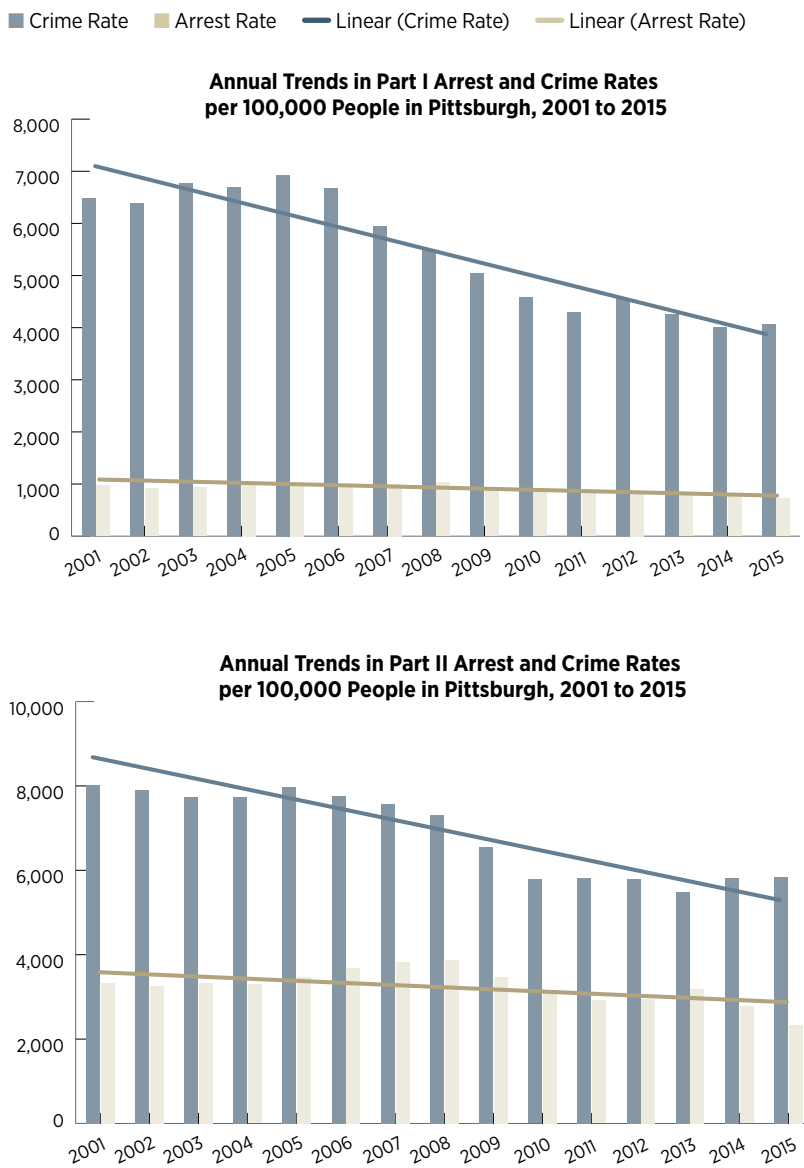
PART I AND PART II CRIME AND ARREST RATES

The FBI’s UCR Program divides offenses into two groups: serious Part I offenses and less serious Part II offenses.

During the time period analyzed, Part I crime rates decreased by 38 percent (Figure 4). Part I arrest rates also declined, but less steeply at 25 percent. As a result, the arrest-to-crime ratio increased. This could mean that the police’s ability to clear Part I crimes improved, or that the proportion of easier-to-clear Part I crimes increased over the time period.

Part II crime rates fell by 27 percent while Part II arrest rates declined by 30 percent. This is expected because less serious crimes such as possession of a small amount of marijuana might have been reported but not cleared with an arrest.

FIGURE 4: Part I and Part II Crime and Arrest Rates per 100,000 People, 2001 to 2015



Arrests for Violent and Property Crimes

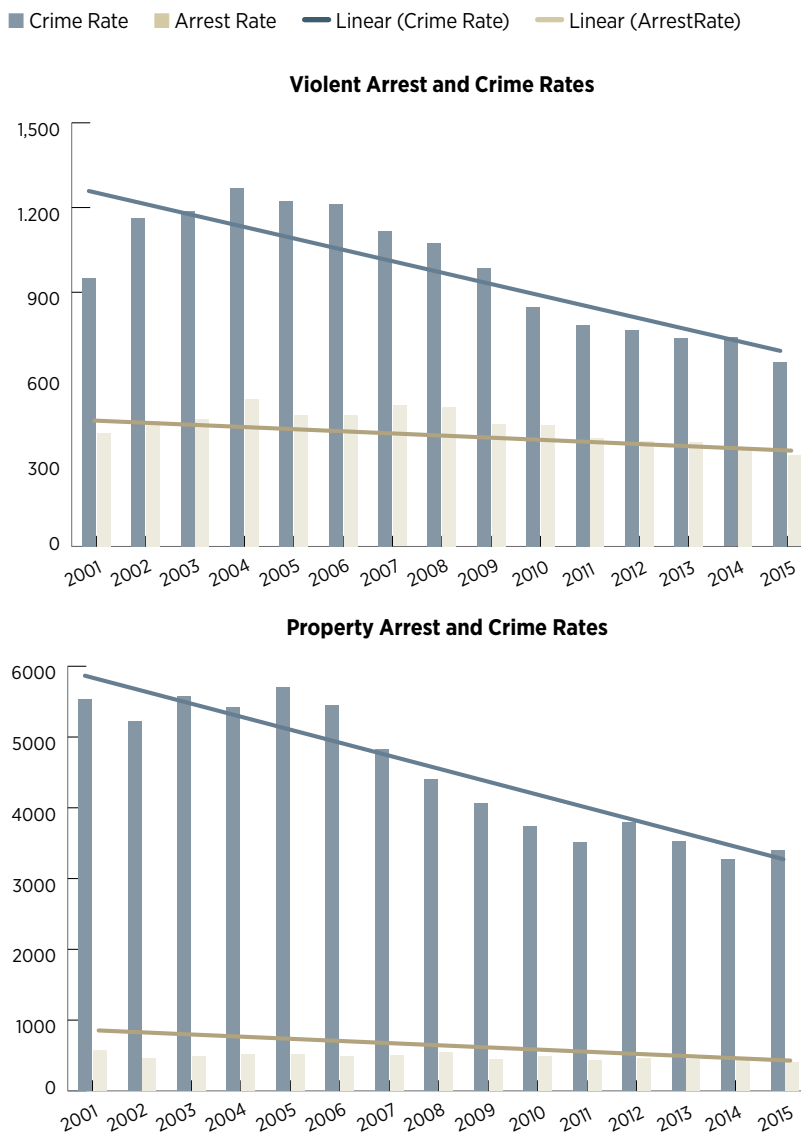
The UCR categorizes Part I offenses into two groups: violent crimes and property crimes. Violent crimes include homicide, rape, robbery and aggravated assault. Property crimes include burglary, theft, motor vehicle theft and arson.

Figure 5 below shows crime and arrest rates for violent and property offenses.

The rate of reported violent crimes declined by 31 percent between 2001 and 2015. Arrest rates for violent crimes fell less quickly, decreasing by 20 percent over the same time period. Therefore, arrests as a percentage of crimes for Type I violent offenses has increased.

The rate of property crimes declined more sharply than violent crimes, decreasing by 39 percent between 2001 and 2015. As with violent crimes, the arrest rate declined (a decrease of 29 percent), but not as quickly as the crime rate decreased, leading to an increase in the arrest-to-crime ratio.

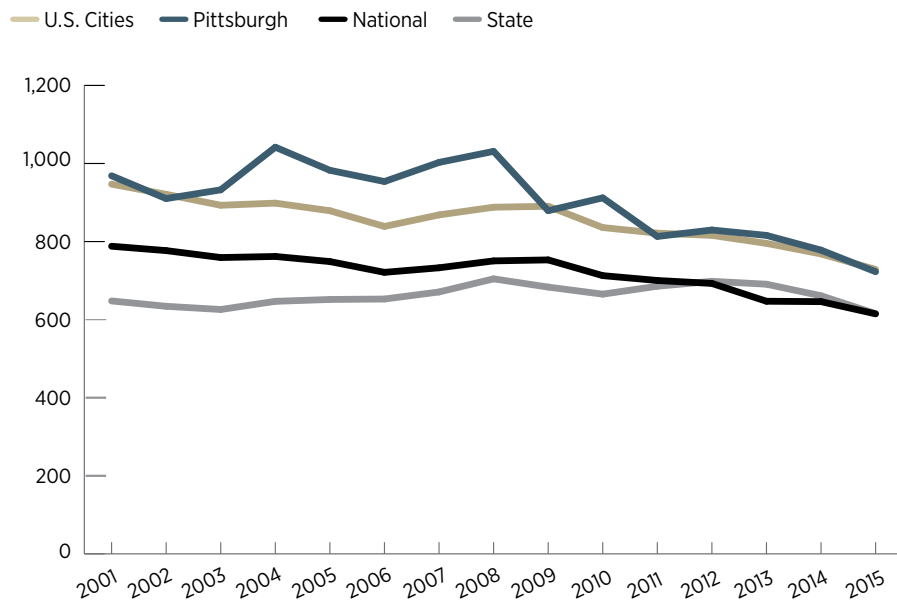
FIGURE 5: Violent and Property Crime and Arrest Rates per 100,000 People, 2001 to 2015



COMPARISON WITH OTHER JURISDICTIONS

Nationally, Part I arrest rates have trended downward, as have those of U.S. cities (Figure 6). Pennsylvania did not participate in this downward trend until 2013. Pittsburgh, while also trending downward, shows an uneven decline, suggesting that particular local dynamics may have affected arrest rates at several points. In recent years, arrest rates in Pittsburgh have converged more closely to those in other U.S. cities, while arrest rates in the state have achieved some degree of convergence with the national arrest rates.

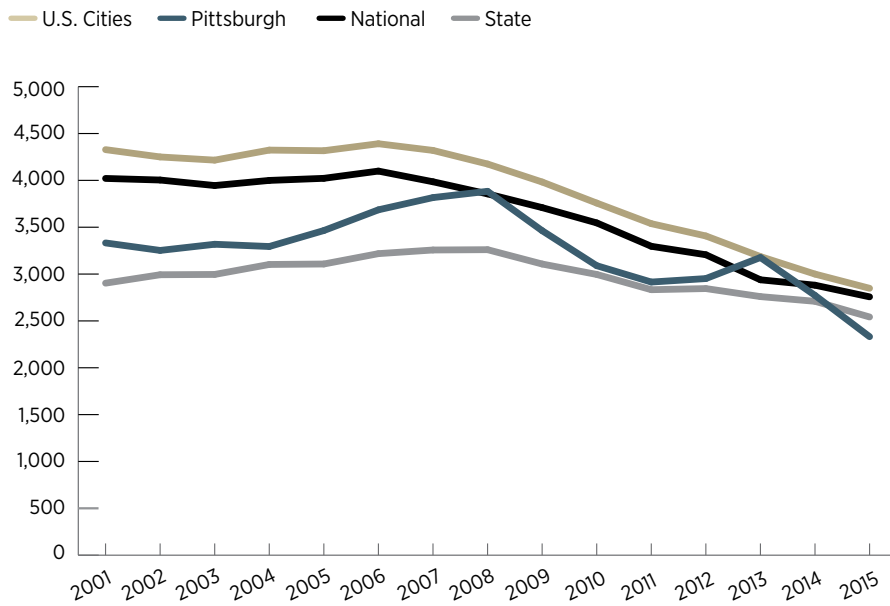
FIGURE 6: Part I Arrest Rates (per 100,000 people) Trend Comparison, 2001 to 2015



Note: U.S. cities are city jurisdictions of all sizes that voluntarily send data to the FBI's UCR Program. The number of reporting cities varies from year to year, in the range of 7,000 to 9,000.

Part II arrest rate trends are similar to Part I trends. Rates decreased nationally and in U.S. cities, with Pennsylvania behind the trend and Pittsburgh showing an uneven decline. Here, Pittsburgh's rates are generally below the national and major-city averages (Figure 7).

FIGURE 7: Part II Arrest Rates (per 100,000 people) Trend Comparison, 2001 to 2015



Note: U.S. cities are city jurisdictions of all sizes that voluntarily send data to the FBI's UCR Program. The number of reporting cities varies from year to year, in a range of 7,000 to 9,000.

ARRESTS BY OFFENSE TYPE

From 2001 through 2015, about 22 percent of all arrests were for drug offenses and 18 percent for simple assaults (Table 2), making these the two most frequent arrest types in this period. Whereas drug arrests were the most common arrest type in 2001, more recently simple assault has become the most common, dropping drug arrests down to the second rank. Arrests for miscellaneous offenses (such as attachment order arrests and bench warrant arrests), while not included in the UCR reports, made up 8 percent of all arrests in the study period, making them the third most common arrest type overall. DUI arrests ranked third in 2008 but have since declined in frequency to rank sixth, with theft taking over the third spot.

TABLE 2: Arrests by Offense Type (Top 10)

2001 THROUGH 2015		2001		2008		2015	
OFFENSE TYPE	ARRESTS	OFFENSE TYPE	ARRESTS	OFFENSE TYPE	ARRESTS	OFFENSE TYPE	ARRESTS
Drug Offense	22%	Drug Offense	22%	Drug Offense	25%	Simple Assault	24%
Simple Assault	18%	Simple Assault	17%	Simple Assault	17%	Drug Offense	17%
Miscellaneous	8%	Miscellaneous	10%	DUI	8%	Theft	8%
Other Offenses ¹²	7%	DUI	7%	Other	7%	Miscellaneous	8%
DUI	7%	Theft	7%	Miscellaneous	6%	Other	7%
Theft	6%	Other	6%	Theft	6%	DUI	5%
Aggravated Assault	5%	Assault	4%	Assault	5%	Assault	5%
Robbery	4%	Prostitution	4%	Robbery	4%	Robbery	3%
Weapons Violation	3%	Robbery	3%	Prostitution	3%	Burglary	3%
Burglary	3%	Burglary	3%	Weapons Violation	3%	Forgery	3%
All others	17%		18%		16%		16%
Total %	100%		100%		100%		100%
Total N	203,926		15,509		15,615		10,119

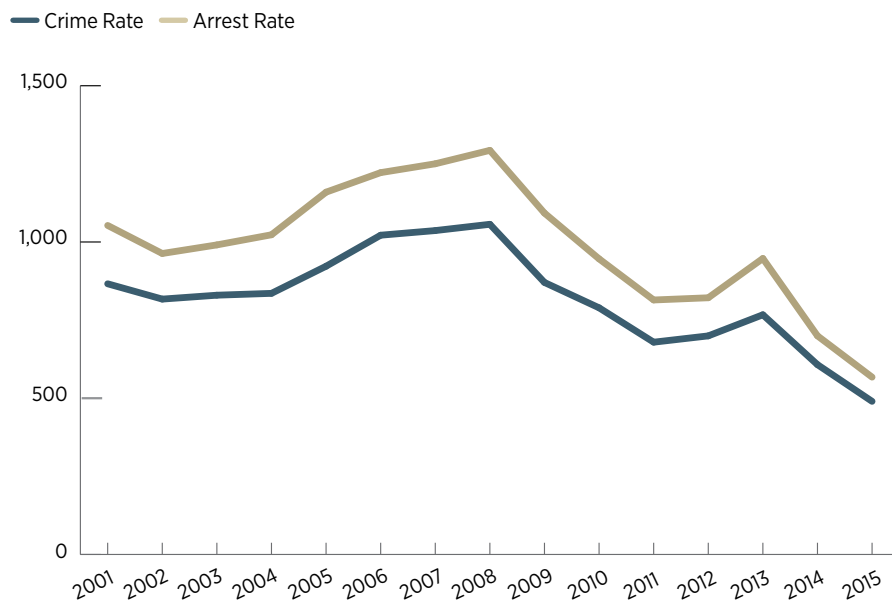
¹²“Other Offenses” are violations of state or local laws not specifically identified as Part I or Part II offenses, excluding traffic violations.

Analysis of the most frequent offense types is provided below; see the accompanying dataset for data related to all other offense types.

Drug Offenses

Crime and arrest rates for drug offenses, which represented 22 percent of all arrests from 2001 through 2015, have shown substantial decline overall, despite increases during 2005–2008 and 2012–2013 (Figure 8).

FIGURE 8: Crime and Arrest Rates per 100,000 People for Drug Offenses, 2001 to 2015

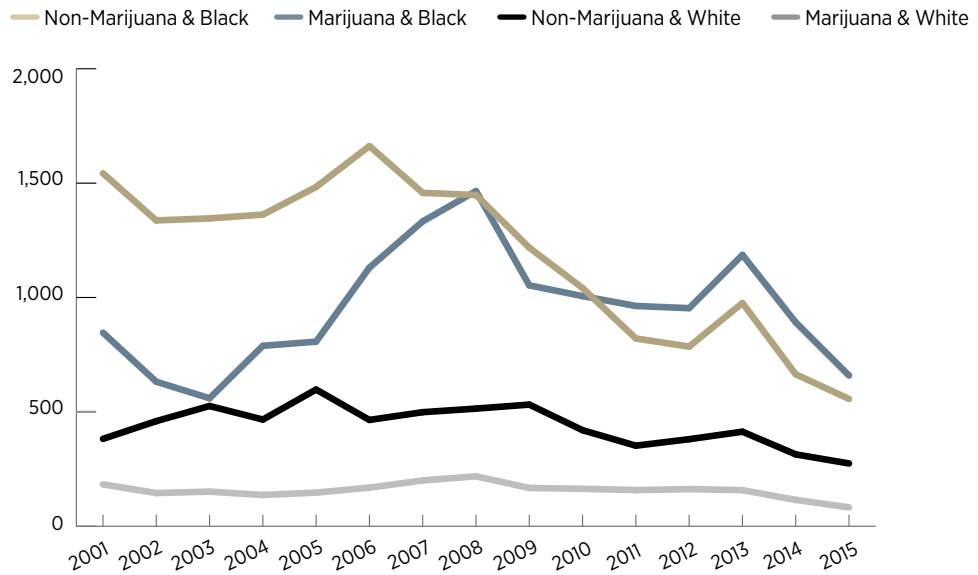


Note: Arrest rates appear to be higher than crime rates for drug offenses during this period because when people are arrested for both a drug offense and a more serious crime simultaneously, only the arrest for the most serious crime is recorded in UCR data.

About 49 percent of all drug offense arrests were for possession of cocaine, followed by possession of marijuana (35%), sale of cocaine (8%) and sale of marijuana (2%).

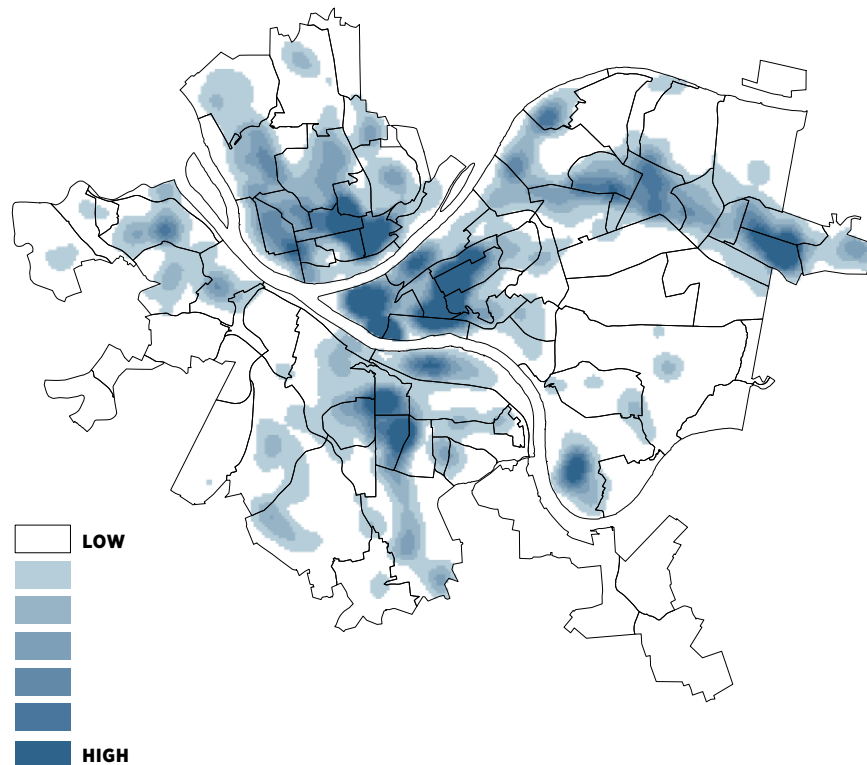
Arrest rates for drug offenses differed significantly by race, as black people were arrested at much higher rates than white people across all years in this period. The arrest rate of black people fluctuated more than that of white people, with a steep decline in arrests for non-marijuana drugs over the study period. The decline in arrest rates for marijuana use in 2014 and 2015 was especially prevalent for black residents (**Figure 9**). For further information on arrest rates by race, see the section “Arrest Trends by Demographics.”

FIGURE 9: Arrest Rates per 100,000 People for Marijuana and Other Drugs, by Race, 2001 to 2015



Locations of arrests for drug-related offenses were also analyzed (**Figure 10**). The Central Business District saw the greatest number of drug arrests between 2001 and 2015, followed by Middle Hill and Homewood South.

FIGURE 10: Density of Drug Arrests in Pittsburgh, 2001 to 2015



Note: Only drug arrests for which geocodable addresses were available (93% of all drug arrests) are displayed on the map.

TABLE 3: Top 10 Pittsburgh Neighborhoods with the Greatest Number of Drug Arrests, 2001 to 2015

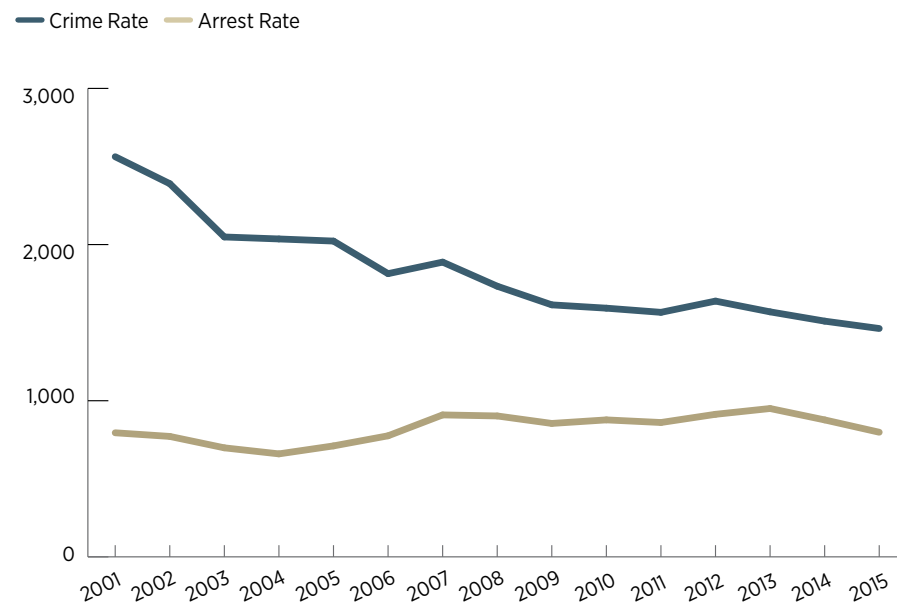
NEIGHBORHOOD	NUMBER OF ARRESTS
Central Business District	2,770
Middle Hill	1,618
Homewood South	1,406
Knoxville	1,251
East Liberty	1,247
East Allegheny	1,211
Bluff	1,169
Hazelwood	1,166
Carrick	1,111
Perry South	1,024

Arrests for Simple Assaults

Simple assault was the second most common offense category (18%) in the time period analyzed. Fifty-two percent of arrests for simple assaults included injuries to the victim. Eleven percent of simple assault charges were made for resisting arrest or other law enforcement.¹³ While crime rates in the simple assault category have trended downward, arrest rates for simple assaults have trended upward (**Figure 11**).

¹³The number of resisting arrest offenses as a percentage of all simple assault offenses varied from 9 percent in 2015 to 13 percent in 2009.

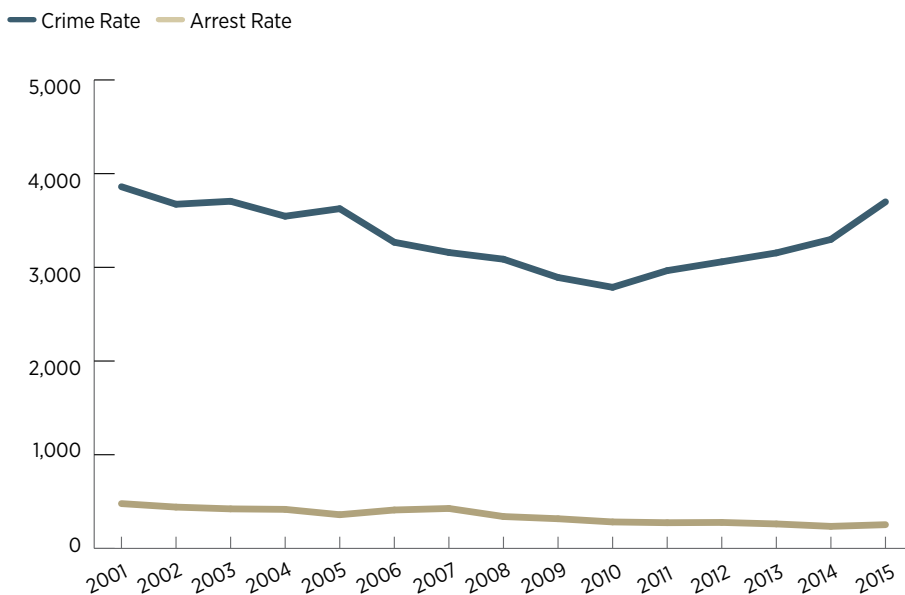
FIGURE 11: Crime and Arrest Rates per 100,000 People for Simple Assaults, 2001 to 2015



Arrests for Miscellaneous Offenses

Crime rates have gone up for miscellaneous offenses since 2010, while arrest rates have trended downward (Figure 12). Thirty-five percent of all arrests for miscellaneous offenses involved arrests for failing to repay debt or obey a restraining order. Thirty-four percent of all miscellaneous arrests were for failing to appear in court. Seventeen percent were for violation of auto laws and 3 percent for hit-and-run.

FIGURE 12: Crime and Arrest Rates per 100,000 People for Miscellaneous Offenses, 2001 to 2015



ARREST TRENDS BY DEMOGRAPHICS

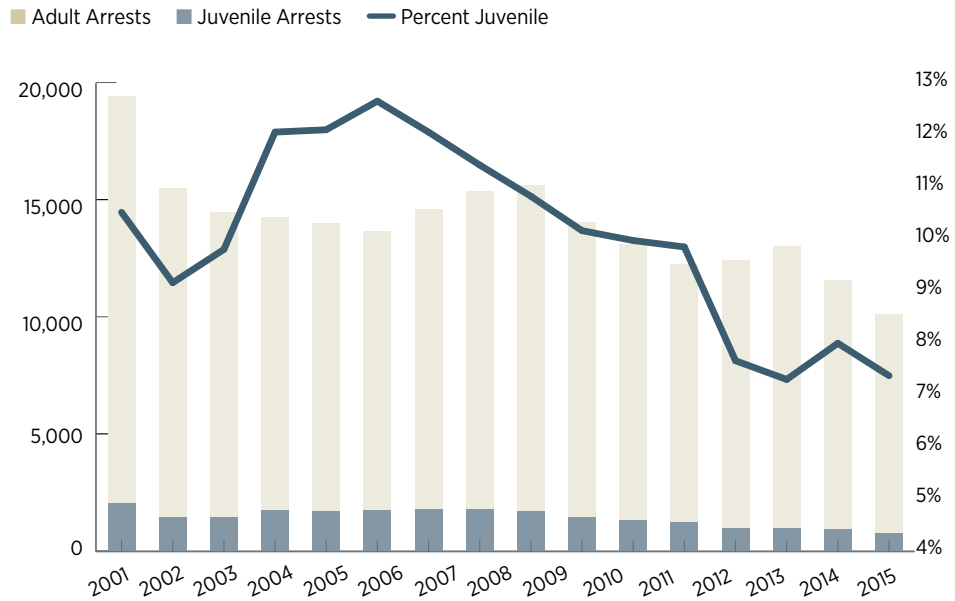
This section of the report presents arrest statistics by adult vs. juvenile status, gender, race/ethnicity and age groups. Note that demographic information is missing for some records and therefore affects the statistics. See Appendix B for further information on missing demographic data.

Adult and Juvenile Arrests

The number of juvenile arrests fell by 48 percent from 1,422 in 2001 to 747 in 2015. During the same period, adult arrests decreased by 34 percent (Figure 13). Although arrests for both adults and juveniles have declined, juvenile arrests as a percentage of all arrests increased from 9 percent in 2001 to 13 percent in 2005 and then decreased to 7 percent in 2015.¹⁴

¹⁴U.S. Census population estimates from birth through age 17 were used for calculating juvenile arrest rates, due to lack of population counts for the 10–17 age group for all years of interest.

FIGURE 13: Adult and Juvenile Arrests, by Number and as a Percentage, 2001 to 2015



Note: The left vertical axis indicates the raw number of adult and juvenile arrests; the right vertical axis refers to juvenile arrests as a percentage of all arrests.

Measured as a rate per 100,000 people, the juvenile arrest rate fell by 31 percent between 2001 and 2015, and the arrest rate for adults fell by 33 percent over the same period. The difference between changes in the number of arrests and changes in the arrest rate for juveniles is because of the downward trend in the juvenile population in this period in the city.

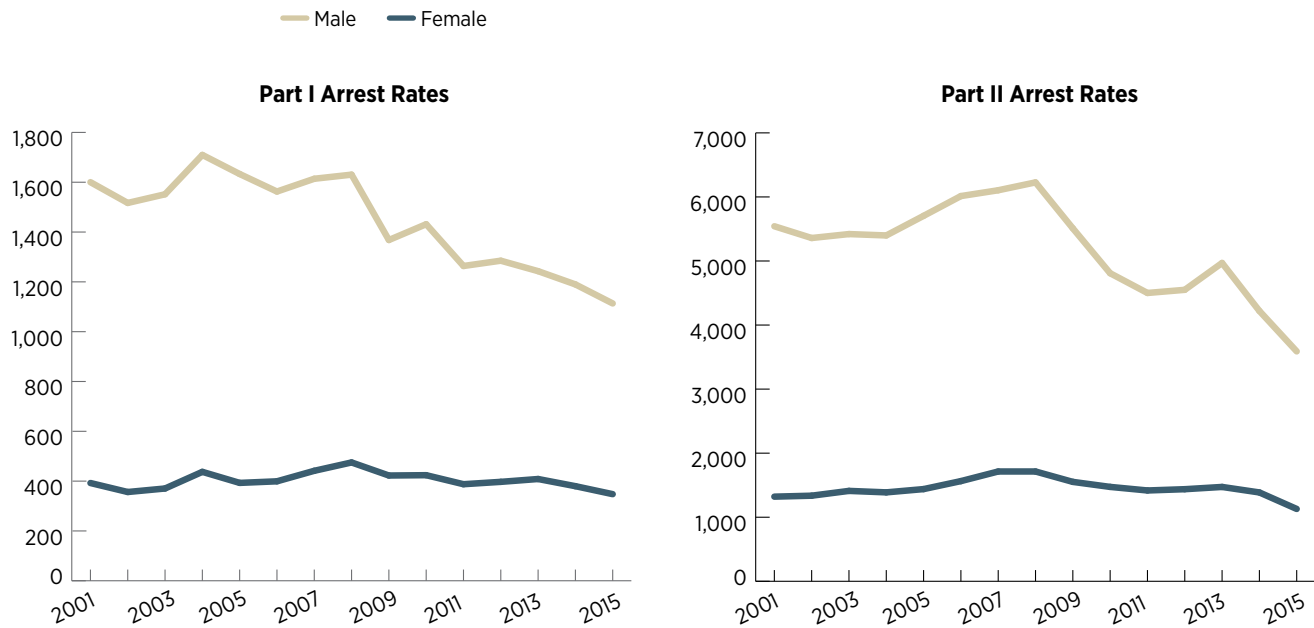
Gender

The arrest rate for men declined more than it did for women between 2001 and 2015. On average, the male arrest rate was about four times greater than the female arrest rate.

In 2001, there were 1,600 Part I arrests per 100,000 Pittsburgh male residents (**Figure 14**). By 2015, this rate had dropped to 1,113. For female residents, the Part I arrest rate went down from 392 to 348 per 100,000 residents. The male–female ratio in Part I arrest rates decreased from 4:1 to 3:1.

In the Part II offense category, the decline in arrest rates for men was even steeper, from 5,542 per 100,000 people in 2001 to 3,589 in 2015. In contrast, Part II arrest rates for women declined from 1,321 to 1,129. Again, the ratio thus changed from roughly 4:1 to 3:1.

FIGURE 14: Part I and Part II Arrest Rates per 100,000 People, by Gender, 2001 to 2015



Race and Ethnicity

From 2001 through 2015, the arrest rate of black people for Part I crimes was five times greater than that of white people. The rate for Hispanic residents was 0.6 times that of white residents. For Part II arrest rates, black people were three times more likely and Hispanic people only half as likely to be arrested when compared to white people (Table 4).

TABLE 4: Average Annual Arrest Rates per 100,000 People for Major Race/Ethnicity Categories

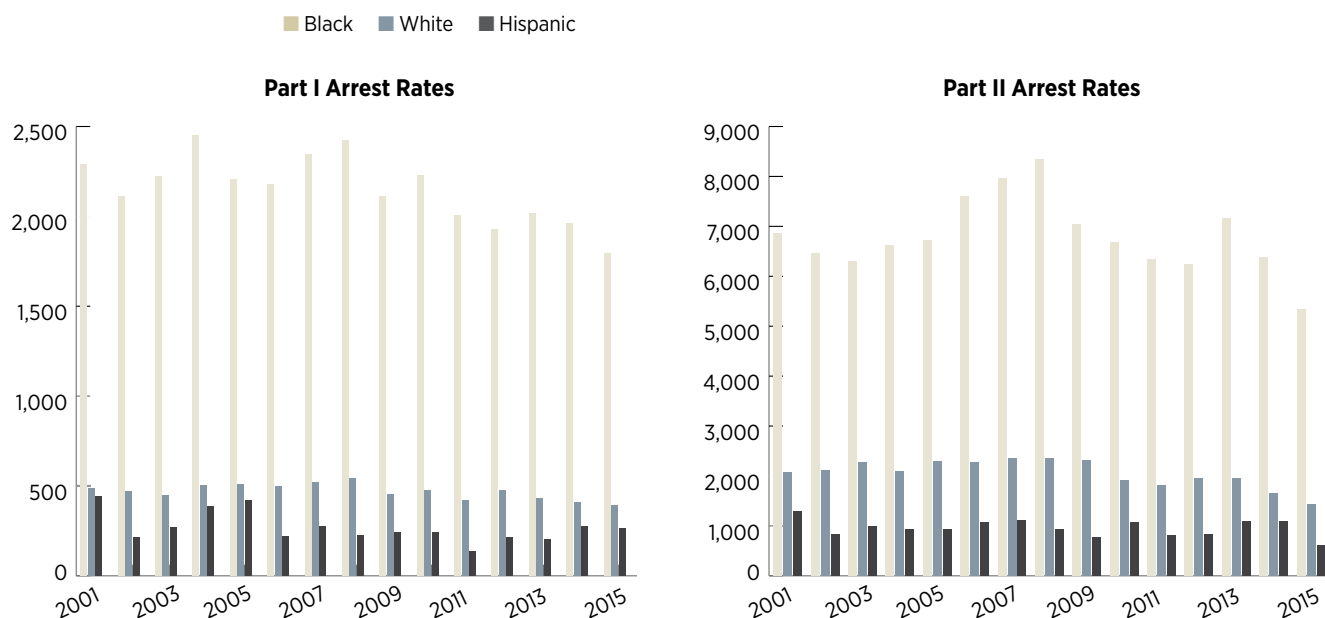
	BLACK	HISPANIC	WHITE	BLACK/ WHITE	HISPANIC/ WHITE
Part I Arrest Rate	2,151	269	469	5	0.6
Part II Arrest Rate	6,801	958	2,060	3	0.5

Part I arrest rates show a declining trend for all race categories (Figure 15). The Part I arrest rate for black residents declined by 22 percent, though arrest rates for black people remained higher than any other racial group during the period of analysis. Most of the decline in arrest rate for black people was driven by decreasing trends in arrest rates for property crimes (burglary, theft, motor vehicle theft and arson), which dropped by 32 percent. In comparison, the arrest rate for violent crimes (homicide, rape, robbery and aggravated assault) among black residents decreased by only 8 percent.

The Part I arrest rate for white residents declined by 20 percent, with the decrease driven more by a decline in violent crime arrests than by property crime arrests. For Hispanic residents, the Part I arrest rate declined by 40 percent, which is mostly attributable to a 64 percent drop in the property crime arrest rate.

The Part II arrest rate fell by 22 percent among black people, 31 percent among white people and 53 percent among Hispanic people.

FIGURE 15: Part I and Part II Arrest Rates per 100,000 People, by Race/Ethnicity, 2001 to 2015



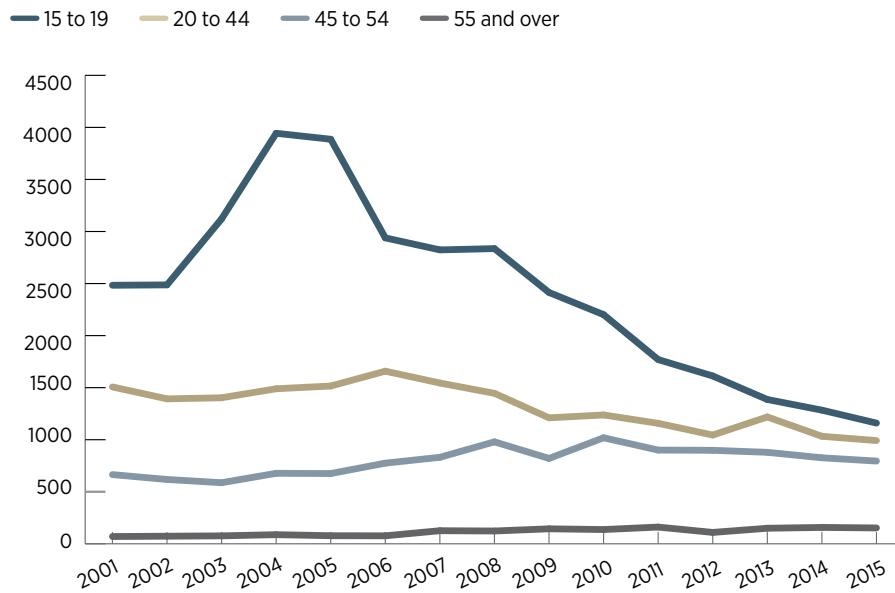
Age at Arrest

The most common age at arrest was 21, with a range between 10 and 90.

The Part I arrest rate has declined precipitously for individuals age 15 through 19 (Figure 16), with a drop of 53 percent.¹⁵ The decline was 40 percent for violent crimes and 64 percent for property crimes. Part I arrest rates also decreased for age groups 10 through 14, 20 through 24, 25 through 34 and 35 through 44. The Part I arrest rate for 45- to 54-year-olds, meanwhile, increased by 20 percent between 2001 and 2015. This increasing trend was driven mainly by increases in arrests for violent crimes. There was an even sharper increase for the 55-and-older group, which had a very low Part I arrest rate in 2001; although it remained low in comparison to other groups, it doubled during the time period analyzed.

¹⁵ Age was grouped in the same way as in the U.S. census population estimates to enable the calculation of arrest rates.

FIGURE 16: Part I Arrest Rates per 100,000 People, by Age Category, 2001 to 2015



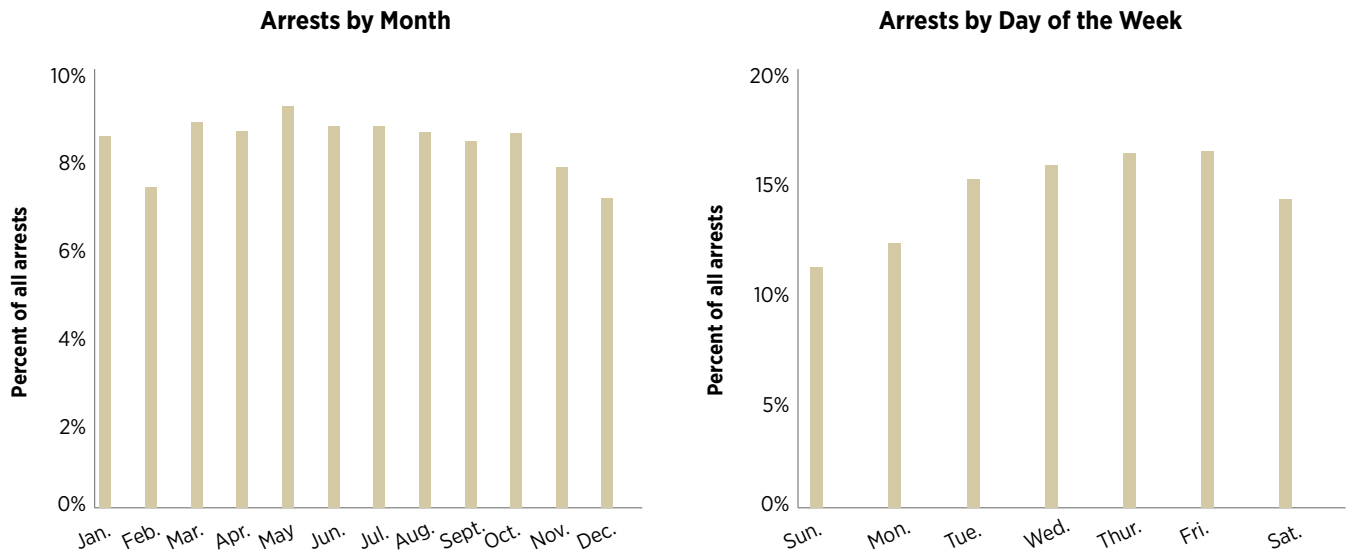
With respect to Part II arrest rates, the 15 through 19 age group again saw the sharpest decline, by 54 percent. The only increase was for the 55-and-over age group, which increased by 44 percent between 2001 and 2015.

ARREST TRENDS BY TIME

This section presents data about when arrest activity took place. These statistics highlight seasonality in arrests and may be informative for resource planning in law enforcement. In general, fewer arrests were made in cold months, most likely because crime activity goes down in winter months (Figure 17). Overall, May was the most active month for arrests, while February was the slowest. Arrests for the largest numbers of Part I crimes occurred in the summer months of June, July and August. Arrests for Part II crimes occurred most frequently in May, followed by March and April.

More arrests were made on weekdays than on weekends. The largest numbers of arrests were made from Wednesday through Friday. The fewest arrests happened on Sundays.

FIGURE 17: Arrests by Month and Day, 2001 to 2015



The busiest time for arrests, by far, was 5:00 p.m. to 11:00 p.m., except on weekends, when arrests were more likely between 11:00 p.m. and 5:00 a.m. (Figure 18).

FIGURE 18: Arrests by Day of Week and Time of Day, 2001 to 2015

	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL
Morning (5 a.m.–11 a.m.)	1%	2%	2%	2%	2%	1%	1%	11%
Afternoon (11 a.m.–5 p.m.)	4%	4%	4%	4%	4%	3%	2%	25%
Evening (5 p.m.–11 p.m.)	4%	6%	6%	6%	6%	4%	3%	36%
Night (11 p.m.–5 a.m.)	3%	3%	3%	4%	4%	6%	5%	28%
Total	12%	15%	16%	16%	16%	14%	11%	100%

ARREST TRENDS BY NEIGHBORHOOD

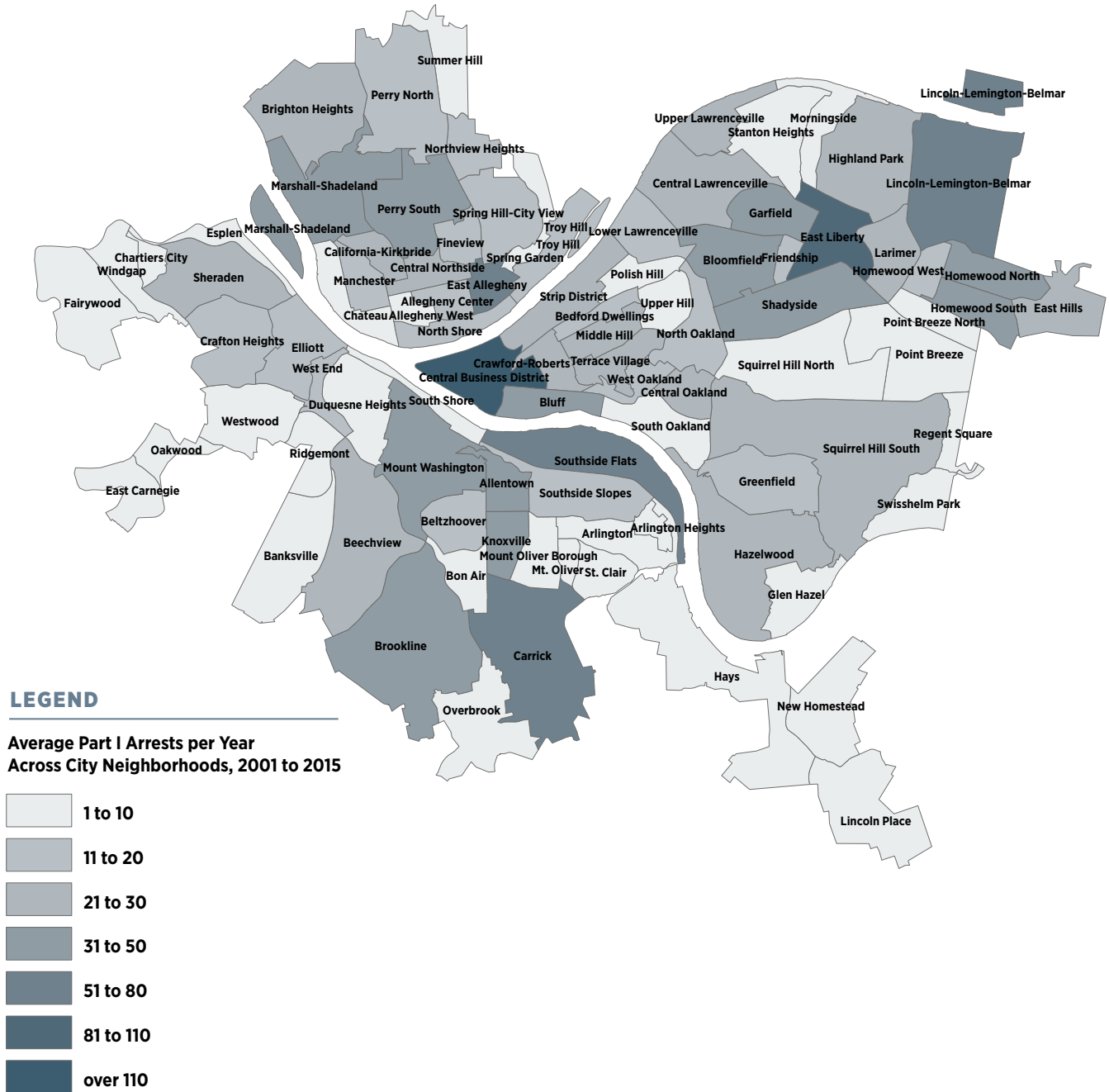
This section discusses arrest totals, arrest rates, and changes in arrest rates over time across Pittsburgh’s neighborhoods. Note that geographic information is missing for some records and therefore affects the statistics presented. See Appendix B for further information on missing data.

Figures 19 and 20 below illustrate average yearly arrest totals for Part I and Part II offenses across city neighborhoods. Light gray neighborhoods experienced the smallest number of arrests per year, whereas dark gray neighborhoods recorded the highest number.

With respect to Part I arrests, the Central Business District (CBD) saw the greatest number of arrests — 544 per year. This is probably not surprising as downtown streets of many cities across the country face similarly high levels of crime. The second-highest number of annual Part I arrests,

96, occurred in East Liberty. Next in the ranking were Lincoln-Lemington-Belmar, Southside Flats, Carrick and East Allegheny, each with 51 to 80 Part I arrests per year. The top three arrest offenses in all these neighborhoods were, in order, theft, aggravated assault and robbery.

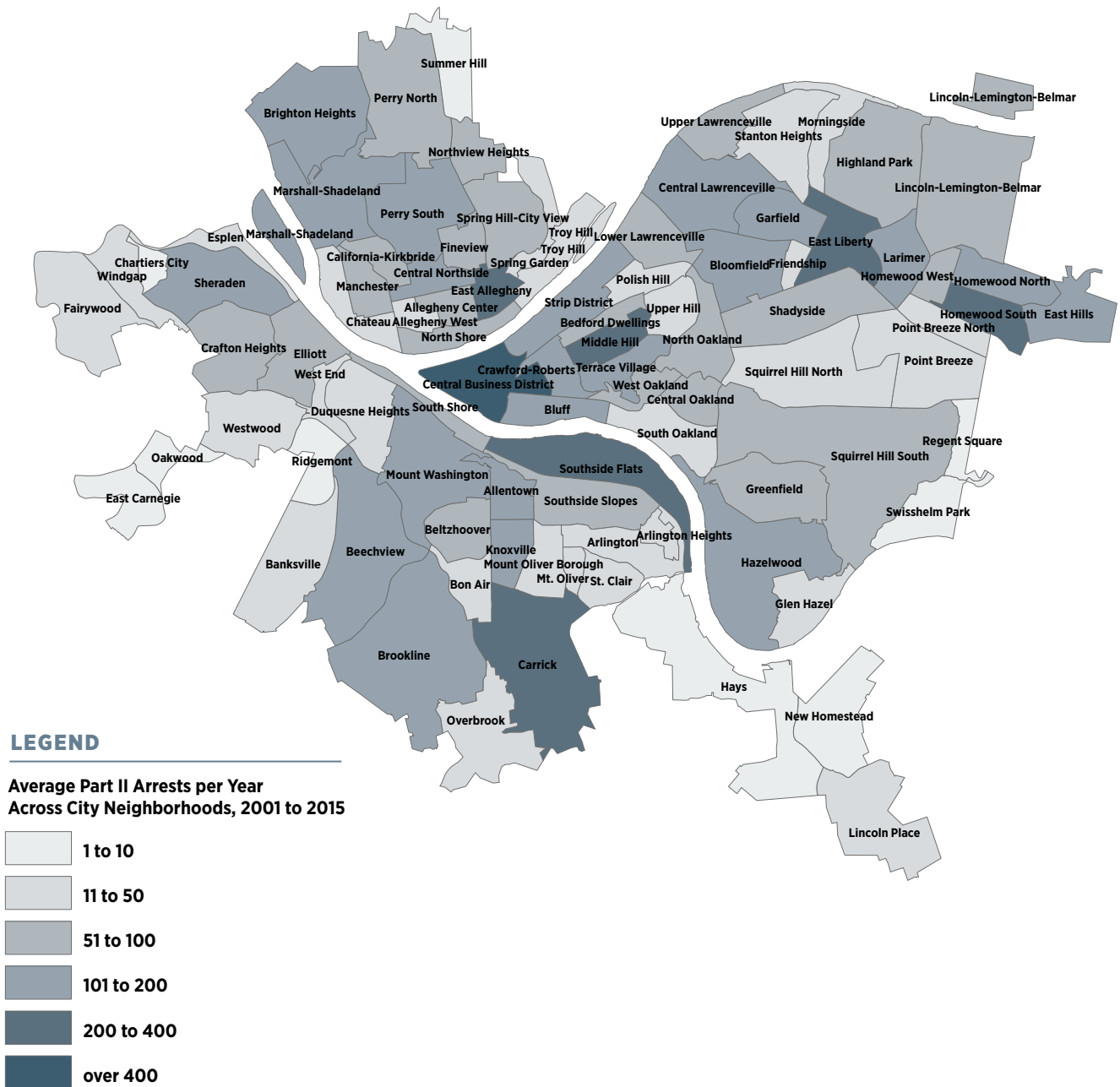
FIGURE 19: Average Part I Arrests per Year across City Neighborhoods, 2001 to 2015



Note: The ranges in the legend represent the number of Part I arrests per year in each neighborhood.

As for Part II arrests, the Central Business District (CBD) again ranked first in number of arrests per year, with more than 1,000. The top three Part II arrest categories for this neighborhood were, in order, simple assault, drug offenses and other offenses. East Liberty, Homewood South, Middle Hill, Southside Flats, Carrick and East Allegheny followed the CBD in the ranking, with each of these neighborhoods experiencing 200 to 400 Part II arrests per year. The top three offenses for these neighborhoods were drug offenses, simple assaults and driving under the influence.

FIGURE 20: Average Part II Arrests per Year across City Neighborhoods, 2001 to 2015



Note: The ranges in the legend represent the number of Part II arrests per year in each neighborhood.

Arrest rates vary considerably over time across Pittsburgh’s neighborhoods. **Tables 5 and 6** below provide the top 20 neighborhoods in Part I and Part II arrest rates (per 100,000 people) for 2001, 2008 and 2015. On top of the lists are smaller neighborhoods such as Chateau, South Shore, North Shore and the Strip District, where often the number of arrests exceeds the number of residents because many people are arrested while visiting these neighborhoods (Pittsburgh’s football and baseball stadiums are located on the North Shore, for example). The Central Business District (CBD) is similar in that many individuals who do not live there are arrested there. The remaining part of the list is made up of neighborhoods such as East Liberty, Crawford-Roberts, Homewood South, East Allegheny, Middle Hill and Fineview.

Arrest rates also reflect the fact that neighborhoods shed population as more arrests occur; as population declines, arrest rates further increase.

TABLE 5: Top 20 Neighborhoods in Part I Arrest Rates (per 100,000 people)

2001		2008		2015	
CBD	19,588	South Shore	105,263*	Chateau	36,364*
South Shore	17,857*	Chateau	72,727*	CBD	13,833
Chateau	15,385*	CBD	16,258	West End	6,693*
Strip District	15,038*	West End	7,087*	California-Kirkbride	2,497
California-Kirkbride	3,803	Strip District	5,844	East Allegheny	1,919
North Shore	2,963*	North Shore	5,281*	Strip District	1,786
Middle Hill	2,333	St. Clair	4,306*	Crawford-Roberts	1,640
Ridgemont	2,075	Middle Hill	3,339	Fineview	1,556
East Allegheny	2,011	California-Kirkbride	3,285	East Liberty	1,533
Arlington Heights	1,681*	East Allegheny	3,230	St. Clair	1,435*
Terrace Village	1,634	Homewood South	2,474	Larimer	1,331
Allegheny Center	1,580	Crawford-Roberts	2,216	Esplen	1,329*
Larimer	1,422	Esplen	1,993*	North Shore	1,320*
Mount Oliver	1,370	Ridgemont	1,863*	Linc.-Lem.-Belmar	1,229
East Liberty	1,368	Allegheny Center	1,822	Allegheny Center	1,179
Homewood South	1,289	Homewood West	1,589	Northview Heights	1,071
Upper Lawrenceville	1,276	East Liberty	1,533	Southside Flats	1,000
Homewood West	1,257	Linc.-Lem.-Belmar	1,434	Homewood South	939
Southside Flats	1,205	Garfield	1,415	Middle Hill	937
Allegheny West	1,181	Friendship	1,401	Allentown	920

**These neighborhoods have populations under 500. Note that neighborhoods with small populations can have arrest rates over 100,000 when the police arrest more people there than the total number of residents. It is because non-residents could be involved in criminal activity in those neighborhoods. For instance, only 19 people lived in the South Shore neighborhood in 2008, but 20 people were arrested for Part I crimes in the neighborhood that year.*

TABLE 6: Top 20 Neighborhoods in Part II Arrest Rates

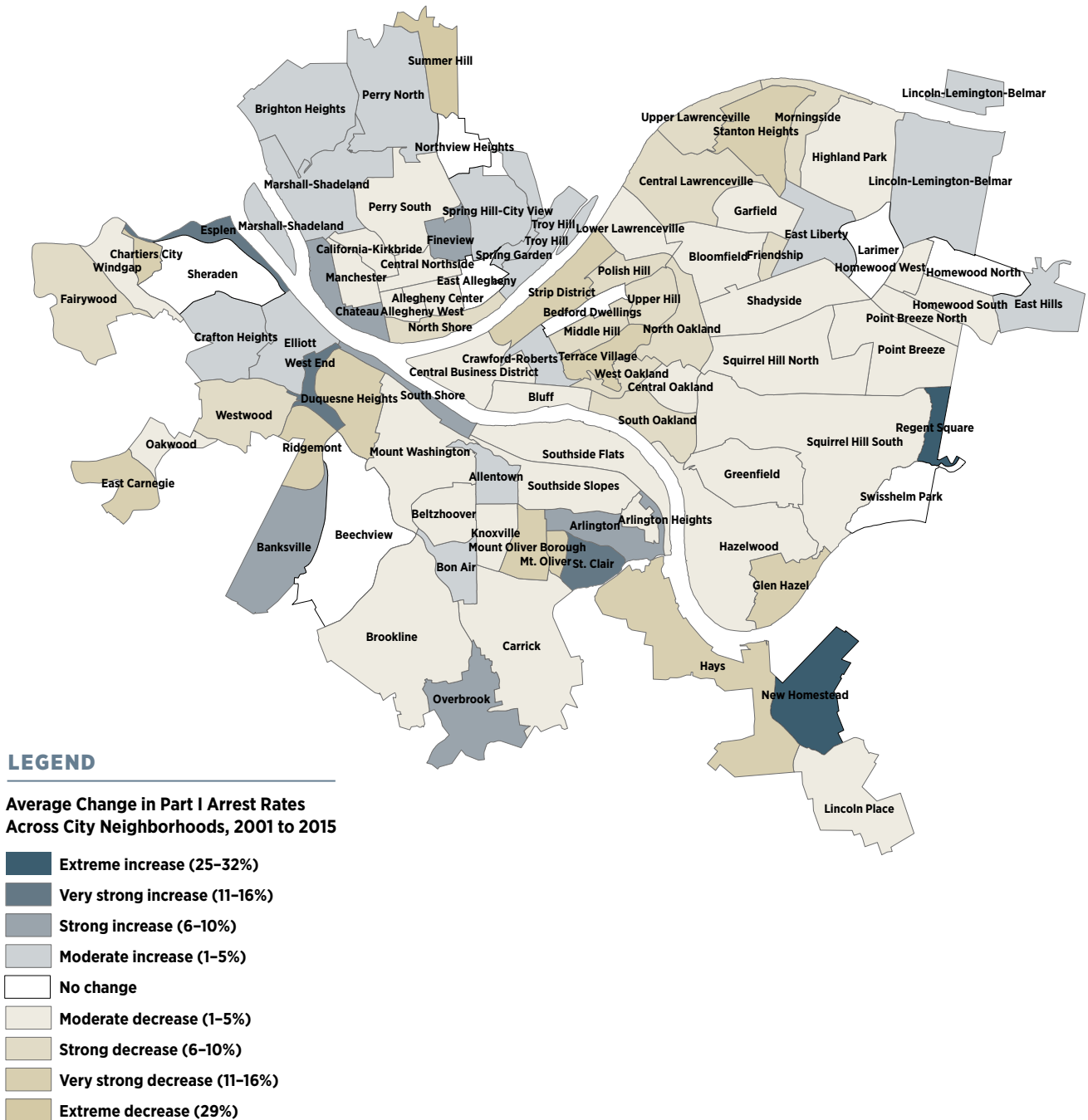
2001		2008		2015	
Chateau	141,026*	South Shore	668,421*	Chateau	436,364*
Strip District	121,805*	Chateau	400,000*	South Shore	94,737*
South Shore	55,357*	Strip District	62,175	CBD	36,870
CBD	32,157	North Shore	37,294*	North Shore	29,703*
Middle Hill	14,839	CBD	37,228	West End	21,260*
California-Kirkbride	14,491	West End	33,071*	East Allegheny	10,721
East Allegheny	10,171	St. Clair	27,273*	Allegheny Center	9,861
Homewood South	7,787	Esplen	25,249*	Strip District	8,929
North Shore	7,778*	Middle Hill	18,512	Homewood South	6,655
Allegheny West	7,480	California-Kirkbride	13,798	Fineview	6,304
Fairywood	6,642	Homewood South	13,097	California-Kirkbride	6,045
Central Northside	6,563	East Allegheny	12,921	Larimer	5,961
Bedford Dwellings	6,449	Arlington Heights	10,656*	Southside Flats	5,851
Allegheny Center	6,321	Crawford-Roberts	10,594	Homewood West	5,746
Larimer	5,957	Allegheny Center	10,182	Arlington Heights	5,328*
Homewood West	5,835	Terrace Village	9,325	Esplen	4,651*
Garfield	5,761	Homewood West	9,169	Middle Hill	4,628
Arlington Heights	5,462*	Fineview	8,405	Allentown	4,480
Manchester	5,227	Bedford Dwellings	8,403	Central Northside	4,447
Crawford-Roberts	5,176	Southside Flats	6,927	Knoxville	4,083

*These neighborhoods have populations under 500. Note that neighborhoods with small populations can have arrest rates over 100,000 when the police arrest more people there than the total number of residents. It is because non-residents could be involved in criminal activity in those neighborhoods. For instance, only 19 people lived in the South Shore neighborhood in 2008, but 127 people were arrested for Part II crimes in the neighborhood that year.

Figures 21 and 22 below illustrate the average annual change from 2001 through 2015 for Part I and Part II arrest rates (per 100,000 people) across Pittsburgh neighborhoods. The maps show three kinds of neighborhoods coded with colors. Those in white had approximately the same arrest rate across the years; those in shades of gray had increasing average arrest rates from 2001 to 2015; and those in shades of tan saw average annual arrest rates decline from 2001 through 2015.

For Part I arrest rates, Regent Square, New Homestead, West End, St. Clair and Esplen had the greatest increase over the years. Conversely, Summer Hill, Stanton Heights, Terrace Village, Glen Hazel, Duquesne Heights and the Strip District saw arrest rates decline the most.

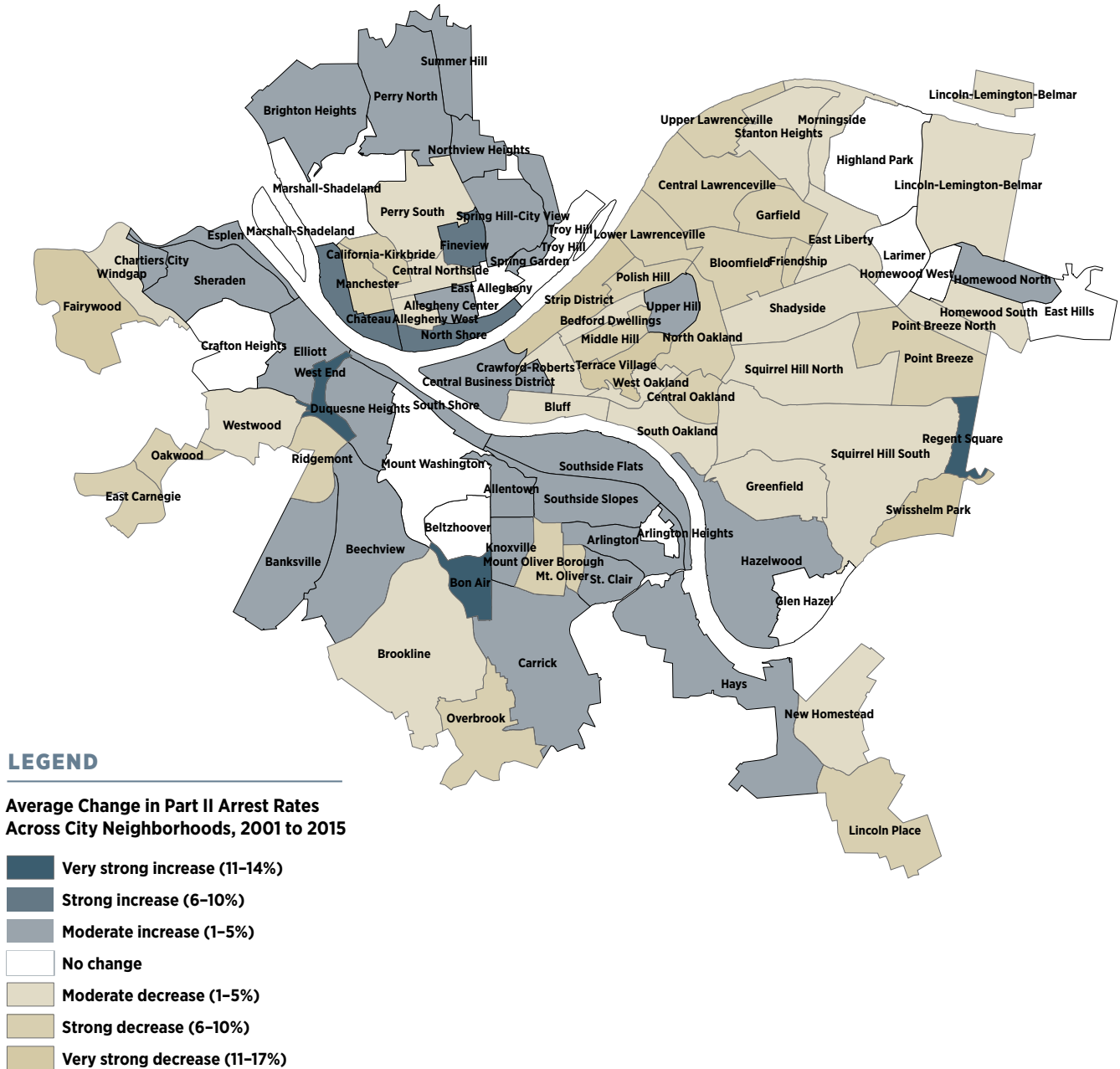
FIGURE 21: Average Change in Part I Arrest Rates across City Neighborhoods, 2001 to 2015



Note: The percentage ranges in the legend represent the average annual increase or decrease in Part I arrest rates per 100,000 people in the corresponding neighborhood from 2001 to 2015.

As for Part II arrest rates, Regent Square, Bon Air, West End, Fineview, North Shore and Chateau saw the greatest average increase in arrest rates from 2001 to 2015. Conversely, the Strip District, Terrace Village, Swisshelm Park and Fairywood experienced some of the greatest drops.

FIGURE 22: Average Change in Part II Arrest Rates across City Neighborhoods, 2001 to 2015



Note: The percentage ranges in the legend represent the average annual increase or decrease in Part II arrest rates per 100,000 people in the corresponding neighborhood from 2001 to 2015.

Figures 23 and 24 show the density of arrests for violent crimes and property crimes, respectively. Darker surfaces of the map denote greater arrest activity. Darker surfaces of the map denote greater arrest activity and colors change for every 1/3 standard deviation. While there were 2.5 times more arrests for property crimes than for violent crimes in this period, comparing the two maps suggests that the former are relatively more concentrated than the latter. Property crimes like burglaries and thefts tend to be more geographically concentrated than violent crimes such as aggravated assault. (Note that only 92 percent of arrests for violent crimes and 94 percent of arrests for property crimes were geocodable.)

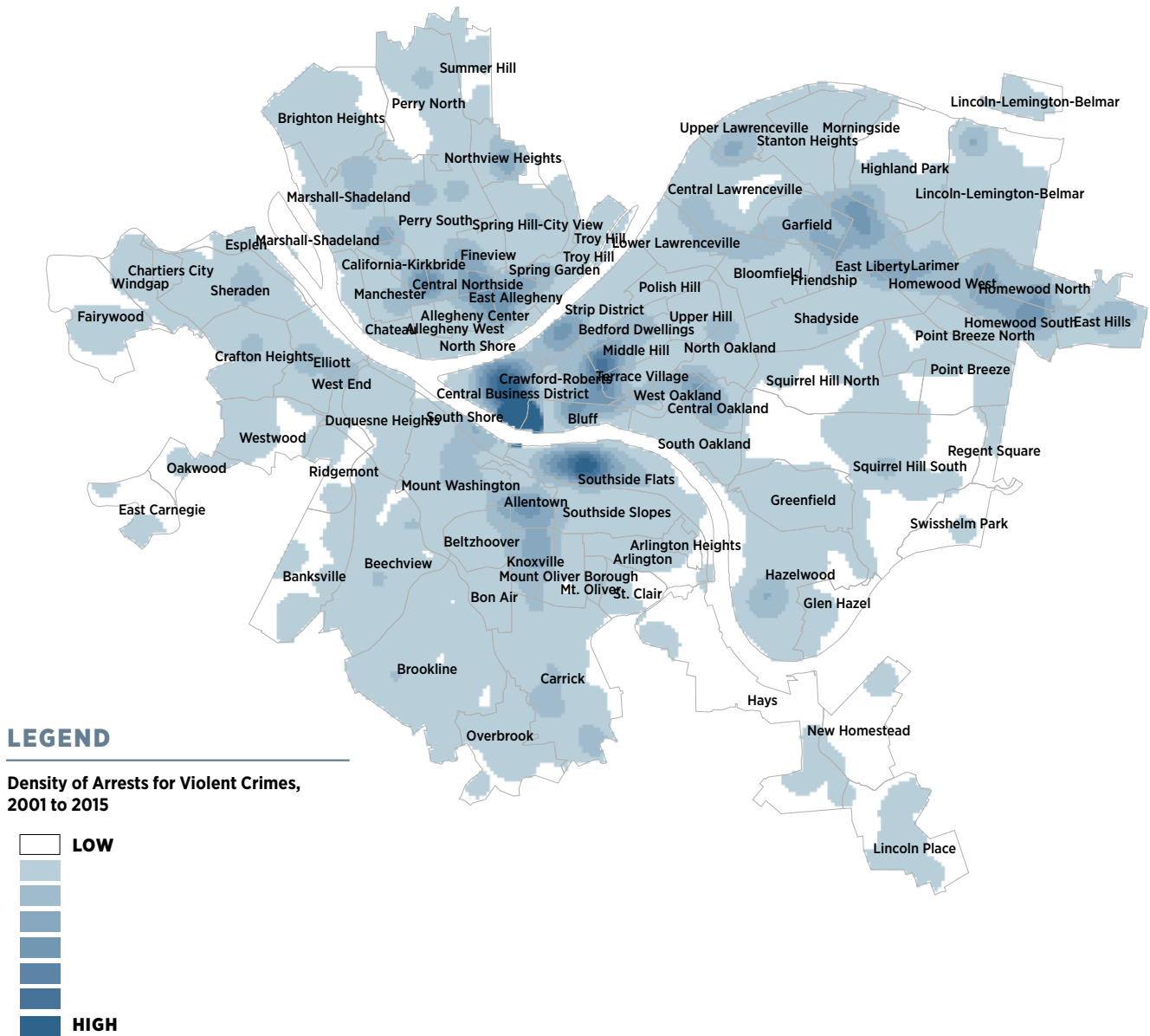
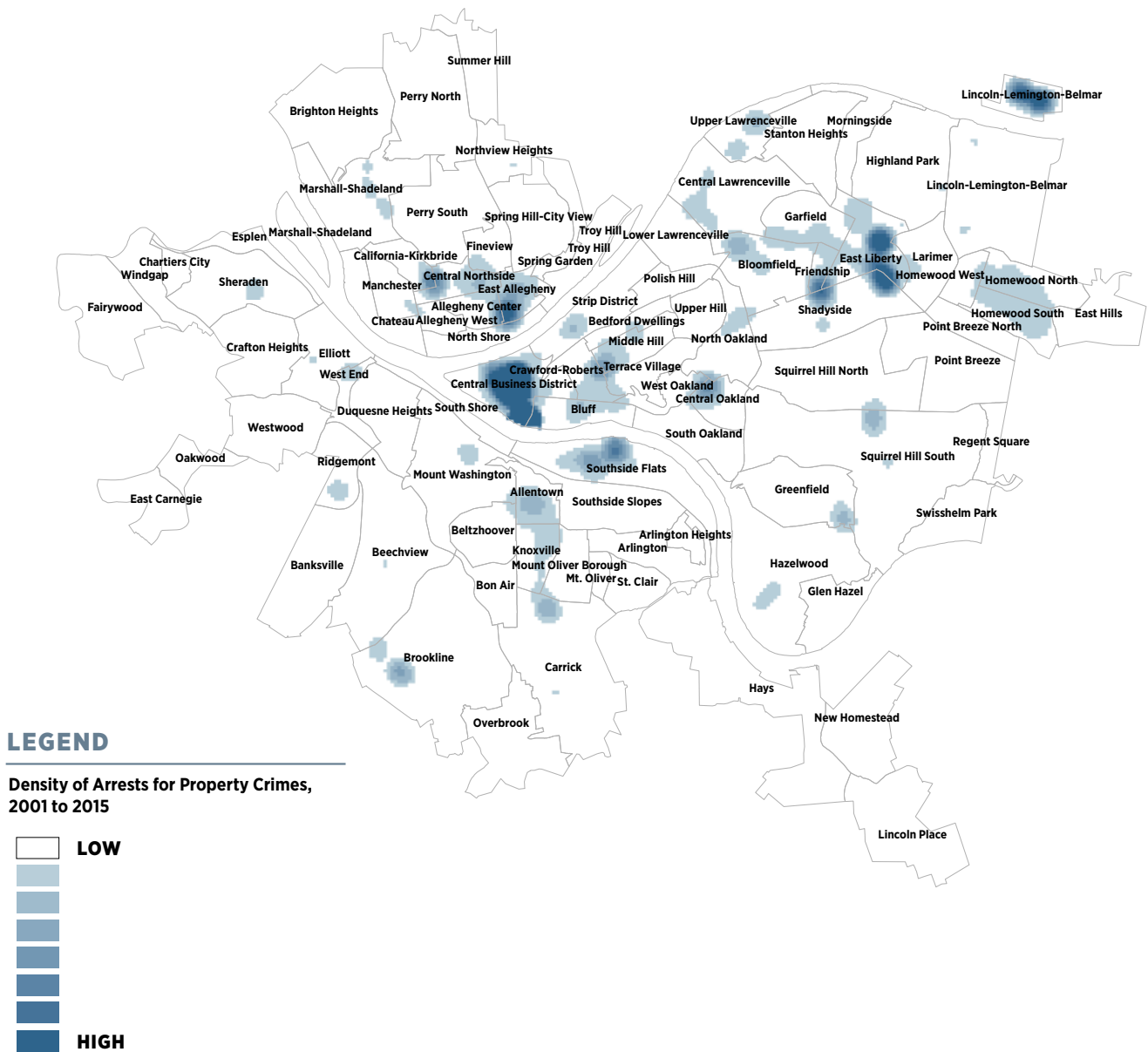


FIGURE 24: Density of Arrests for Property Crimes, 2001 to 2015



Residence of People Arrested

This section presents location information for the home addresses of non-Pittsburgh residents who were arrested. This contextualizes the arrest statistics of the city within a larger metropolitan region. Just as suburban residents conduct business activities in Pittsburgh, it is possible for non-city residents to conduct criminal activities within city limits. Understanding geographic dynamics in offending behavior may help inform cross-jurisdictional collaboration in law enforcement and crime prevention. Most people who were arrested in the City of Pittsburgh

¹⁶Eighty-four percent of arrest records had home addresses in Pennsylvania. About 14 percent had blank or “unusable data,” such as homeless, unknown address, refused to give address or PO Box number, and about two percent had an out-of-state home address — mostly Ohio and West Virginia and fewer people from New York, Florida, Maryland, Virginia, California and Georgia.

lived within the city limits (91%). Of the remaining nine percent of people arrested in the City who resided elsewhere, most were from Allegheny County.¹⁶ **Figure 25** shows the density of residences of non-city arrestees, and **Table 7** lists the top 10 County municipalities where non-city arrestees were residing. While many municipalities of higher density were close to the city borders, many others were not. The most common arrests for non-residents were drug law violations (25%), simple assaults (14%), theft (8%) and driving under the influence (7%). About 53 percent involved black people and 45 percent white people.

FIGURE 25: Density of Addresses of Non-Pittsburgh Allegheny County Residents Who Were Arrested in the City, 2001 to 2015

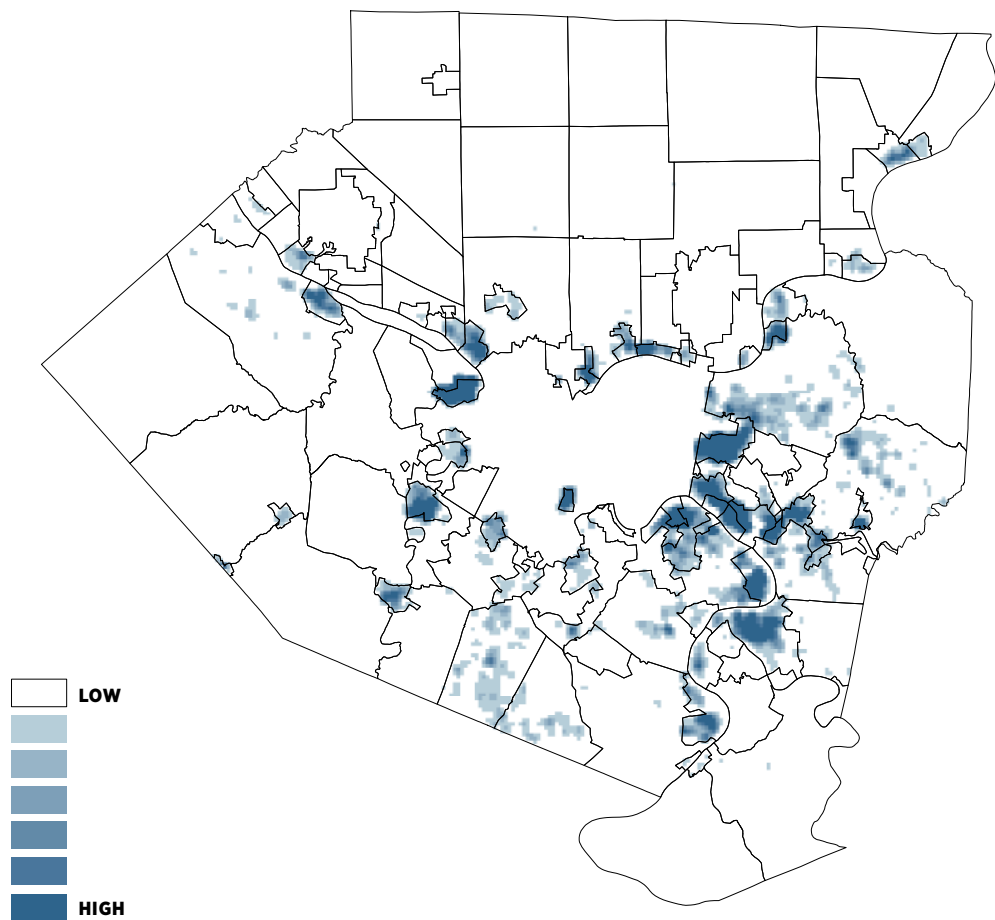


TABLE 7: Top 10 Allegheny County Municipalities Where Non-City Arrestees Lived, 2001 to 2015

MUNICIPALITY NAME	NUMBER OF ARRESTS
Wilksburg Borough	1,179
McKees Rocks Borough	1,126
McKeesport	726
Penn Hills Municipality	699
West Mifflin Borough	489
Carnegie Borough	473
East Pittsburgh Borough	472
Monroeville Municipality	421
North Braddock Borough	418
Duquesne	411

FURTHER CONSIDERATIONS

The data presented in this report have implications for several key issues in criminal justice, law enforcement and social change in the region. Below we list some of these themes and how the data in this report may inform discussions.

- To what extent has decreasing national support for “broken windows” policing (i.e., the theory that policing low level crimes may curb more serious crimes) and the diminished emphasis on policing minor crimes contributed to downward arrest trends in Pittsburgh? The decrease in arrests for minor crimes is especially apparent in drug arrests (**Figures 8 and 9**), even though increases in simple assault arrests and miscellaneous arrests might have slightly dampened these trends (**Figures 11 and 12**). Nonetheless, the arrest trends in Pittsburgh appear to have converged with statewide and national trends (**Figures 6 and 7**).
- Following recent changes in state and local marijuana laws, the City of Pittsburgh adopted a new ordinance in December 2015 that reduced the penalty for possession of a small amount of marijuana from a misdemeanor to a \$25 fine. Interestingly, trends in arrests for marijuana possession have been moving downward in general, including in 2014 and 2015 leading up to the new ordinance (**Figure 9**).
- Although arrest rates for black people fell over the period of study, racial disproportionality continued to persist (**Figure 15**).
- In the past several years, the city has experienced economic development and changing demographic composition of neighborhoods, which leads to the question of how much redevelopment has played a role in changing arrest rates in some neighborhoods (see **Figures 21 and 22** for information regarding positive and negative changes in arrest rates of each city neighborhood).

CONTENT AND ANALYSIS

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REVIEWERS

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APPENDIX A: FURTHER EXPLANATION OF METHODOLOGY

Methodology

To improve the accuracy of analyses related to multiple or repeat crimes, the Key Collision clustering method of the OpenRefine software was used to identify errors in the spelling of names or addresses that could have resulted in giving more than one arrest ID number to the same person.

Arrest rates are per 100,000 residents and calculated as follows:

$$\text{Arrest Rate} = \frac{\text{Number of Arrests}}{\text{Population}} \times 100,000$$

Crime rates are also per 100,000 residents and calculated using the same formula as arrest rates.

Arrest and crime rates per 100,000 residents were calculated using the U.S. Census and the American Community Survey data, which do not include the moving population of cities on a daily basis. Therefore, arrest and crime rates for the city and its neighborhoods would be overestimated to the extent that non-city residents commit crimes and get arrested in the city.

When comparing arrest rates between two years, the following formula was used to calculate the percent change between the two years:

$$\text{Percent Change} = \frac{\text{Arrest Rate}_{t_1} - \text{Arrest Rate}_{t_2}}{\text{Arrest Rate}_{t_2}} \times 100$$

where t_1 is the comparison year and t_2 is the baseline year.

The same formula was used to calculate percent change for crime rates between two years.

A geometric mean formula was used to calculate the average annual percent change in arrest or crime rates:

$$\text{Average Annual Percent Change} = \sqrt[n]{\frac{\text{Arrest Rate}_{t_1}}{\text{Arrest Rate}_{t_2}}} - 1$$

where n is the number of years between the comparison year t_1 and the baseline year t_2 . It was calculated using Excel’s GEOMEAN function.

The linear trend lines were calculated in Excel, which uses the formula $y = \alpha \cdot x + \beta$.

Maps for changing arrest trends across Pittsburgh neighborhoods were produced using the ArcMap 10.2.1 software. The city neighborhood polygons were colored based on average annual percent change calculated by the formula provided above.

APPENDIX B: DATA SOURCES AND MISSING DATA TABLE

City of Pittsburgh Bureau of Police Arrest Data

The Bureau of Police is the law enforcement unit of the City of Pittsburgh. The arrest data were obtained from the Bureau of Police. At the time of the request, data were available for arrests made from 2000 through 2015. The data for 2000 arrests were dropped due to problems with quality.

The data on reported crimes were also obtained from the Bureau of Police.

City of Pittsburgh Department of City Planning

Population estimates for Pittsburgh's neighborhoods were downloaded from the website of the Department's PGH SNAP program. These estimates are based on the 2000 and 2010 U.S. Census. The datasets are available [here](#).

The shape files for Pittsburgh's neighborhood boundaries were downloaded from the website of the [Department's Geographic Information Systems \(GIS\) Division](#).

Arrest Data Analysis Tool of the U.S. Bureau of Justice Statistics

National estimates of arrest rates were obtained from the Arrest Data Analysis Tool of the U.S. Bureau of Justice Statistics, produced by Snyder N. Howard and Joseph Mulako-Wangota. The tool was last accessed on January 15, 2017, [here](#).

U.S. Federal Bureau of Investigations Uniform Crime Reporting

The Unified Crime Reporting (UCR) Program of the FBI collects data on law enforcement from police departments across the nation. Definitions of crimes and arrests, counting methods for crimes and arrests, and the data for cities (groups I, II and III) in the U.S. were obtained from the website of the FBI's Unified Crime Reporting [here](#).

Pennsylvania Uniform Crime Reports

The arrest data for the Commonwealth of Pennsylvania were downloaded from the website of the Pennsylvania Unified Crime Reports [here](#).

U.S. Census and American Community Surveys

Estimates of Pittsburgh's population were obtained from the U.S. Census and the American Community Surveys. The datasets were downloaded [here](#).

MISSING DATA TABLE

	AGE	RACE	GENDER	NEIGHBORHOOD	ARREST ADDRESS
Overall	4.7%	0.5%	0.1%	9%	11%
2001	2.5%	0.3%	0.2%	20%	20%
2002	2.1%	0.6%	0.2%	14%	14%
2003	2.5%	0.7%	0.1%	13%	13%
2004	2.0%	0.5%	0.1%	9%	9%
2005	2.4%	0.5%	0.1%	10%	10%
2006	4.7%	0.4%	0.0%	8%	8%
2007	7.3%	0.5%	0.0%	1%	6%
2008	6.9%	0.5%	0.0%	0%	5%
2009	5.8%	0.7%	0.0%	0%	5%
2010	5.7%	0.6%	0.0%	0%	4%
2011	6.1%	0.7%	0.0%	0%	4%
2012	6.4%	0.5%	0.1%	0%	4%
2013	6.1%	0.5%	0.1%	0%	3%
2014	6.4%	0.5%	0.2%	0%	3%
2015	7.4%	0.6%	0.1%	0%	3%

Note: The table illustrates variation in missing demographic and geographic data over time. Reader discretion is advised in interpreting results of analysis that use these variables.