Part 1 Crime Hotpot Profiles for the McElderry Park Community
Byrne Criminal Justice Innovation Grant (BCJI)

PREPARED BY:

THE BALTIMORE NEIGHBORHOOD INDICATORS ALLIANCE – JACOB FRANCE INSTITUTE

Methodology

Locations of Part 1 crimes in McElderry Park were mapped based on the recorded X,Y coordinates provided to BNIA-JFI by the Baltimore City Police Department. Once plotted, the crimes were presented as points on a map. Violent crimes (homicide, rape, aggravated assault, and robbery) were separated from property crimes (burglary, larceny, and auto theft) to ensure that similar types of Part 1 crimes were analyzed.

To determine hotspots of crime, a kernel density analysis was performed. This analysis visualized the concentrations of points on a gradient- darker colors were indicative of high concentrations of crime incidents whereas lighter colors were indicative of lower spatial concentrations. To identify the absolute highest concentrations for the creation of the hotspot profiles , the number of display colors on the neighborhood map was reduced to two- a dark color for the highest concentrations within the McElderry Park neighborhood, and null value for all other density values.

A manual inspection of the data revealed that the hotspots, for all years, contained at least 4 distinct incidents of crime during the given year, at the same property address or at an adjacent property (neighboring or directly across the street).

Thirteen years of crime data (2000 to 2013) were analyzed using the kernel density analysis. The highest concentrations of crime were color-coded by year to indicate the age of the violent and property crime hotspots. A total of 18 locations that contained four or more overlapping hotspots were identified and these locations became the basis for the hotspot profile. Contextual data on the physical and social conditions of the locations were collected and identified. The following indicators were analyzed:

1. Vacant properties (2001-2012)
2. CitiStat 311 calls for dirty streets/alleys (2002-2012)
3. Commercial/residential land use (2011)
4. Owner/renter-occupancy of residential properties (2011)
5. 911 calls for service for shootings (2000-2011)
6. 911 calls for service for narcotics (2000-2011)
7. Juvenile arrests (2000-2009, 2011)
   a. All juvenile arrests
   b. Juvenile arrests for drug-related offenses (possession, distribution, and manufacture of controlled substances)

Additional physical environment context was incorporated into the hotspots as well:

1. Types of commercial businesses present
2. Presence of MTA Maryland bus stops/routes
3. Presence of BCPD "blue light" cameras
4. Descriptions of streets and alleyways
5. Street lighting

6. Proximity to neighborhood gathering places such as open space, schools, churches, libraries, and playgrounds

In addition to those measures, an analysis of the types of Part 1 crimes was performed to identify what crimes were predominant in the area. Any homicides that occurred in the hotspot areas were identified in the profiles.

Applying these indicators to the eighteen hotspots revealed some similarities between the crimes committed in the hotspots and to the physical neighborhood conditions. Four loosely defined types of hotspots emerged: hotspots centered on commercial businesses, hotspots adjacent to blighted blocks, hotspots near public spaces, and lastly hotspots contained along Milton Avenue.

	Hotspots	Primary Types of Crimes
Commercial Business Adjacent	1, 2, 3, 4, 13	Robbery, larceny
Residential Property Adjacent	7, 8, 10, 11, 12, 15, 16	Burglary, aggravated assault
Public Places of Opportunity	5, 17, 18	Mix of violent and property crimes
Milton Avenue Corridor	6, 9, 14	Mix of violent and property crimes

Hotspot Profiles

Commercial Business-Adjacent Hotspots

A total of four crime hotspots were identified along Monument Street: at Patterson Park Avenue, at Bradford Street, at the unnamed Milton/Rose Alley, and at Rose Street. These four hotspots are all contained along the busy commercial corridor of the East Monument Main Street. Because of the high concentration of commercial businesses, this street contains both heavy foot and vehicular traffic and serves as the eastbound route for the 35 MTA bus.

The East Monument Main Street corridor is populated with a variety of businesses- food stores and delis, small retail shops, liquor stores, beauty salons and barber shops, and pawn shops. McElderry Park's other commercial counterpart to the south, Orleans Street, is populated with convenience stores, food shops, and a health care center, all concentrated along the southwestern edge of the neighborhood. Like Monument Street, Orleans Street serves as a transit corridor for MTA busses and is a heavily-trafficked east and westbound street. Opportunities for property-based crimes such as robbery and larceny-shoplifting are problematic in some of stores. Aggravated assaults are also commonplace and the distribution of assault cases may just correlate to areas of high population density.

An analysis of data reveals that from 2000 to 2004, Monument Street at Rose Street was the site of many 911 calls for service for narcotics and from 2000 through 2011, all four of the hotspots along Monument Street experienced notable numbers of juvenile arrests. Unlike Monument Street however, the crime hotspot at Orleans between Patterson Park Avenue and Bradford Streets has not been subject to any significant known juvenile criminal activity. While 2000 saw a spike of 23 calls for service for narcotics, it pales in comparison to the hundreds of calls placed regarding Monument Street.

The overall characteristics of the commercial-adjacent hotspots- high population density and high density of commercial businesses- are likely the cause for the high rates of crime. Any solutions for addressing crime on Monument Street or on Orleans Street must consider the businesses that may contribute to the overall crime rate or those that be victimized by robberies and larceny-shoplifting.

Vacant Property-Adjacent Hotspots

Five of the eighteen identified hotspots are located in residential areas in the northeastern portion of the McElderry Park neighborhood. Considerable similarities exist between these five hotspots- they are located on residential blocks that have approximately a 50/50 mix of renters and homeowners and are physically located on a corner next to narrow alleyways that lead to heavily blighted blocks on Belnord Avenue and the unnamed alley between Kenwood Avenue and Streeper Street. The hotspot on the 500 block of North Glover Street is the exception- the street where the hotspot is located is blighted. It is, however, located at the entryway to a small alley.

In the case of these hotspots, the nearby blight takes the form of vacant and uninhabitable housing and in considerable amounts of trash in the street, sidewalks, and nearby alleyways. Additionally, these blighted blocks have few streetlights and the darkness coupled with the low occupancy rates suggest that the vacant houses may be providing cover for illicit activities. Furthermore, the narrow design of the alleyways to and from these blocks may provide discreet paths of travel.

A sixth hotspot, located on Milton Avenue between Orleans Street and Fayette Street, is located in a different part of the McElderry Park neighborhood; however, it contains similar conditions to the five hotspots in the northeast area. This hotspot is located adjacent to a narrow east/west alleyway that connects to north/south alleys. Furthermore, there is a cluster of chronically vacant residential properties on the 400 block of N. Milton.

The crimes occurring at these hotspot locations are varied- there is a mix of both violent and property crimes, particularly aggravated assaults and burglaries and larcenies. Anecdotal information from community members suggest that the property crimes are related perpetrated by drug users who are seeking goods to sell. The quantitative analysis that was performed only supports this claim through 2007; with the exception of the hotspots at Kenwood Avenue and McElderry Street in 2011 and the 300 block of N. Milton in2001 and 2003, there were few 911 calls for service for narcotics.

Public Places of Opportunity Hotspots

As seen with the number of crime hotspots in and around commercial properties, locations of high population density where people can congregate can be predictive of criminal activity. There are two public schools in McElderry Park- Tench Tilghman Elementary/Middle and William Paca Elementary School. Both of these locations have had a mixture of violent and property crimes since 2000. A third similar location with a high concentration of crime is along Linwood Street outside of the Patterson Park branch of the Enoch Pratt Free Library.

Opportunities for crime exist in these three hotspots not only from the high daytime population density but from the reduced nighttime surveillance of the nearby parking areas, playgrounds, and green space. High concentrations of thefts and personal (non-commercial) robberies are the primary forms of crime occurring in these locations at and adjacent to the schools and library.

From 2000 through 2006, the hotspot associated with Tench Tilghman Elementary/Middle School had many 911 calls for service for narcotics, peaking at 150 in 2002, with a total of 641 calls in the time period from 2000 to 2011. During that same eleven year time period, the hotspot adjacent to William Paca Elementary had only 68 calls, which may suggest that Tench Tilghman's close proximity to the busy corridor of Monument Street may be responsible for the higher rate of calls. An analysis of juvenile arrests shows that there have been a growing number of arrests for drug possession at Tench Tilghman since 2009.

Other Hotspots- Milton Avenue Corridor

Fifteen of the 18 crime hotspots in McElderry Park can be classified into one of the three above described categories, based on the types of crimes and the built physical environment of the hotspots. The three other hotspots, that cannot be easily categorized, all occur along Milton Avenue, at McElderry Street, Jefferson Street, and Orleans Street.

The northernmost of the Milton Avenue hotspots, at McElderry Street, was the site of many 911 calls for service from 2000 through 2006. During the peak year, 2002, 150 calls were placed to 911 with a total of 641 during the eleven year period from 2000 to 2011. Furthermore, there were numerous juvenile arrests for drug offenses at this hotspot, all for drug possession of either heroin or cocaine in 2000 and 2001. According to the data, drug activity at this intersection has declined in recent years and the overall number of Part 1 crimes has declined as well. In the early part of the decade, the majority of the crimes that occurred were violent in nature- aggravated assaults and robberies. The number of property crimes, particularly larcenies and auto thefts, has remained steady during the eleven year span of analysis. This suggests that drugs may have been responsible for some of the violent crimes at this hotspot.

A block south, at Jefferson Street, is another hotspot with a mixture of violent and property crimes that span the full twelve year period from 2000 to 2012. Property crimes (larcenies and burglaries) peaked in 2003 whereas violent crimes, mostly aggravated assaults, peaked in 2008. As with the hotspot at McElderry Street, there was a high concentration of juvenile arrests for drug possession in 2001. Despite that peak in juvenile crime, overall Part 1 crimes in 2001 were low that year. The 500 block of N. Milton has a cluster of chronically vacant properties and high rates of 311 calls for service for trash in 2010, suggesting that along with the high rates of crime, the hotspot is also close to a built environment that is deteriorating.

The hotspot at Milton Avenue and Orleans Street, like the two hotspots to the north, experienced a mixture of violent and property crimes from 2000 to 2012. However, this hotspot is different as it has also been the site of 17 calls for service for shootings over the twelve year period. Additionally, this location experienced a decrease in crime from 2003-2006, completely unlike the other hotspots.

The three hotspots do have some similarities- they are all located near bus stops and all have experienced a mixture of property and violent crimes. The hotspots at McElderry and Jefferson have calls for service for narcotics and juvenile narcotics arrests whereas Milton and Orleans has calls for service for shootings. All three of the hotspots are located near chronically vacant properties on Milton Avenue, on the 300-500 blocks but unlike the other hotspots near vacant properties, these are not adjacent to narrow pedestrian alleyways and at the Orleans Street hotspot, nighttime lighting is not an issue.

For more information about the hotspot methodology, please contact Cheryl Knott, GIS Analyst for The Baltimore Neighborhood Indicators Alliance – Jacob France Institute at cknott@ubalt.edu or (410)837-4377.