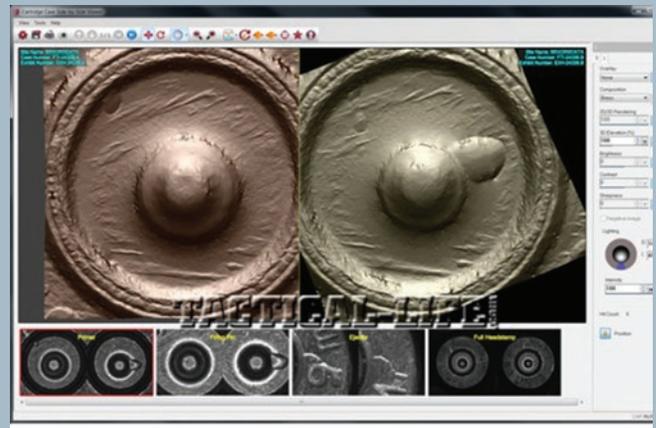




# The “Crime Gun Intelligence Center” Model:

*Case Studies of the Denver, Milwaukee, and Chicago Approaches to Investigating Gun Crime*



POLICE EXECUTIVE  
RESEARCH FORUM



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May 2017



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# Foreword

By Chuck Wexler

## **The last two years have seen dramatic spikes in homicides and other violent**

crimes in many U.S. cities. Among the more than five dozen large jurisdictions surveyed by the Major Cities Chiefs Association (MCCA), homicides rose 15.6% in 2015 and another 9.8% in 2016.<sup>1</sup> And while much of the overall increase can be attributed to a few cities, the fact remains that homicides rose in nearly two-thirds of the jurisdictions the MCCA surveyed over the last two years.

There is one common element in almost all of these cities: much of the recent increase in violent crime is being driven by *increases in gun crime*. As this report documents, not only did the total number of homicides in the U.S. rise between 2010 and 2015; the *percentage of homicides committed with a firearm* also went up, from 68% in 2010 to 71% in 2015. A similar trend occurred with aggravated assaults: more reported crimes and a higher percentage of them committed with a gun.

Even as gun crime has risen in recent years, attempts to stem the flow of firearms or restrict criminals' access to weapons through legislative approaches such as universal background checks have had mixed results. In some states, in fact, lawmakers have made it easier for more people to buy, own and conceal-carry firearms. This political reality has left police executives in the challenging position of trying to reduce gun violence largely through their own enforcement and prevention efforts—all at a time when the number of firearms in their communities continues to grow. A variety of strategies have been undertaken over the years, but success has been uneven.

One recent development in the battle against gun violence has shown promise, however. That involves the use of technology to streamline and support police enforcement and investigatory efforts against criminals who carry guns. This report examines one of these promising technology-based applications: the Crime Gun Intelligence Center (CGIC) model.

CGICs are an interagency collaboration among local police departments, the U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), and other partners such as state and local prosecutors, to identify perpetrators of gun crime for immediate investigation, apprehension, and prosecution. CGICs combine state-of-the-art analytical technology, data processing systems, and good old-fashioned detective work to help police agencies more quickly analyze ballistic evidence, establish connections among seemingly unrelated crimes, and build criminal cases targeting both gun traffickers and trigger-pullers.

Specifically, CGICs rely on the swift processing of data from ATF's National Integrated Ballistic Information Network (NIBIN), which allows law enforcement to link ballistic evidence to multiple incidents in which the same firearm was used, and eTrace, which allows for the tracing of recovered firearms back to their original manufacturer

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1. Violent Crime Survey Totals, Major Cities Chiefs Association: [https://www.majorcitieschiefs.com/pdf/news/violent\\_crime\\_data\\_20162015\\_year\\_end\\_report.pdf](https://www.majorcitieschiefs.com/pdf/news/violent_crime_data_20162015_year_end_report.pdf) and [https://www.majorcitieschiefs.com/pdf/news/vc\\_data\\_20152014.pdf](https://www.majorcitieschiefs.com/pdf/news/vc_data_20152014.pdf).

and purchaser. These technologies allow law enforcement agencies to generate investigative leads and apprehend “active shooters” in the community.

This report profiles CGIC programs in three cities: Denver, Milwaukee, and Chicago. While these cities follow the same basic approach, each jurisdiction has put its own variations on the model. These are designed to maximize effectiveness and meet the unique needs of each community.

For example, given the robust capabilities of its crime lab, Denver police can process ballistic entries, review NIBIN correlations, and even confirm evidence “hits,” all in-house. This has drastically reduced investigatory turnaround times in many instances.

To best utilize resources, the Milwaukee Police Department has devised a comprehensive system of prioritizing NIBIN cases for follow up and delegating them to appropriate investigative units. This ensures leads are pursued by relevant investigators to achieve the best investigative outcomes.

Chicago, on the other hand, has adopted a more de-centralized and collaborative approach, in which different partners are responsible for various aspects of the process. This approach is helping the police department keep up with processing ballistic evidence from the large number of firearms it recovers each year. (Chicago police seized more than 8,000 firearms in 2016, more than the number in New York City and Los Angeles combined.) To support the analysis of inoperable guns it recovers, Chicago police also maintain a parts lab that allows for these weapons to be reconstructed, test-fired and then entered into NIBIN and eTrace for matching and tracing.

CGICs are not a panacea, and the three cities we examined continue to face serious challenges with gun violence. However, our work revealed that CGICs are an innovative and promising approach for enhancing the investigation of gun crimes and identifying offenders. Our examination found that turnaround times for evidence analysis have been reduced, and agencies’ capabilities for connecting guns to crimes that may appear unrelated at first have improved. Much work remains to refine and expand the CGIC model, but the experiences in Denver, Milwaukee, and Chicago provide a solid foundation from which to build.

PERF sincerely thanks the Joyce Foundation for its support of this project and its unflinching determination to help create safer communities. The Joyce Foundation has been confronting the problem of gun violence for years, and PERF is proud to continue this partnership. We also thank the members of the ATF who are steadfast in their commitment to reducing gun violence in general and to supporting the CGIC concept specifically.

Finally, we acknowledge the hard work and dedication of the police leaders who have supported the development of these new programs, and the police officers, detectives, lab technicians and other personnel in the three departments profiled in this report. These individuals and their partners face the daunting realities of gun violence on a daily basis. We greatly appreciate their cooperation and willingness to let us inside of their crime fighting efforts. Like their colleagues in agencies across the country, these men and women are proud public servants who are focused on improving the safety of their communities. Their efforts are helping to save lives and bring gun criminals to justice.

*Chuck Wexler*  
*Executive Director*  
PERF

# Glossary

**Crime Gun Intelligence Center (CGIC)** – An interagency collaboration focused on the immediate collection, management, and analysis of crime gun evidence, such as shell casings, in real-time to identify shooters, disrupt criminal activity, and prevent future violence. The primary goal of these centers is to identify armed violent offenders and suspects for investigation and prosecution. Other outcomes include: the identification of crime gun sources, efficient resource allocation, providing decision-makers with the most accurate crime data available, and increasing case closure rates, public safety, and prevention of gun crimes.<sup>2</sup>

**National Integrated Ballistic Information Network (NIBIN)** – A national network of ballistic imaging systems used to acquire, transmit, store, and compare digital images of ballistic evidence (spent bullets or cartridge casings), for the purpose of identifying evidence fired from the same firearm. This database is managed by the ATF.<sup>3</sup>

**Integrated Ballistics Identification System (IBIS)** – Software that allows for the automated acquisition and analysis of ballistic images. The system digitally maps the surface of the bullet or casing and “correlates” the image against other images previously uploaded to the NIBIN database. Technicians review and compare the top correlation results to identify casings that may have been fired from the same firearm.<sup>4</sup>

**Potential Candidate for Comparison (PCC)** – After ballistic evidence is entered into NIBIN, the system performs a search to identify potential matches to previously entered evidence. The system identifies images with similar markings to those on the entered casing or bullet, and produces a ranked list of images based on their correlation scores. Once these “potential candidates for comparison” (or PCCs) are identified, the top ranked results must be reviewed and compared by a technician to determine whether they are a likely match to the entered casing or bullet.<sup>5, 6</sup>

**High-probability hit** – Technicians review the top-ranked PCCs generated by NIBIN and compare the markings in the images to identify similarities. If a high-probability hit is identified, it indicates that the two casings were likely fired from the same

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2. <https://www.bja.gov/funding/NationalCrimeGun16.pdf>

3. <https://www.ncjrs.gov/pdffiles1/nij/grants/243875.pdf>

4. <https://www.atf.gov/firearms/automated-firearms-ballistics-technology>

5. <https://oig.justice.gov/reports/ATF/a0530/app8.htm>

6. There are several different terms for this stage of the process. For example, some departments refer to the list of NIBIN generated results as “High Confidence Candidates,” or HCCs.

firearm. While not sufficient to prove a link in court, “high-probability hits” represent a reasonable indication that the casings were fired from the same weapon. This information can be used during investigations to link suspects to multiple crime scenes or associates, thus providing new information for law enforcement officers to solve crimes. For this reason, “high probability hits” are also referred to as “NIBIN leads.”

**Confirmed hit** – A verified match between two or more shell casings or bullets. In order to confirm a hit, a firearms examiner must obtain the physical evidence (shell casings or bullets) and visually compare it under a microscope to verify the markings are consistent.<sup>7</sup> Confirmation is required for purposes of court proceedings, for example, to seek charges for a suspect connected to multiple shootings.

**eTrace** – An online firearms tracing system that allows participating law enforcement agencies to submit, retrieve, store, and query all firearms trace-related information relative to the requestor’s agency. Firearms traces are submitted to the ATF National Tracing Center (NTC).<sup>8</sup>

**Firearms Tracing** – The systematic tracking of the movement of a firearm recovered by law enforcement from its manufacturer or importer to its first retail purchaser.<sup>9</sup>

**Gunshot detection system** – A system that detects and conveys the location of gunfire using acoustic sensors. This allows officers to quickly respond to the scene and collect ballistic evidence. ShotSpotter™ is an example of a gunshot detection system.<sup>10</sup>

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7. <https://oig.justice.gov/reports/ATF/a0530/app8.htm>

8. <https://www.atf.gov/firearms/national-tracing-center>

9. <https://www.atf.gov/firearms/national-tracing-center>

10. <http://www.shotspotter.com/law-enforcement>

# Chapter 1: Introduction

## National Crime and Violence Issues

Gun violence is an ongoing problem in the United States, resulting in more than 100,000 injuries and 10,000 homicides annually. Federal, state, and local law enforcement have employed numerous strategies to try to reduce gun crime, including increasing penalties for repeat violent offenders, conducting hot-spot enforcement activities, establishing multi-agency and federal task forces, creating gang enforcement and other specialized units, and community policing initiatives, to name a few. Despite these efforts, gun violence has continued to be a challenge for law enforcement and has persisted in the United States for decades, although homicide rates have declined significantly over the past 20 years.

Uniform Crime Reports (UCR) data compiled by the Federal Bureau of Investigation (FBI) show that nationally from 2010 to 2014, the total number of homicides and robberies, for the most part, declined slightly. The percentage of these crimes in which a firearm was used mostly remained the same. While the total number of aggravated assaults fluctuated slightly during this period, the number of aggravated assaults in which a firearm was used was on the rise. In 2015, homicides, robberies, and aggravated assaults increased compared to previous years, as well as the proportion of these crimes committed with a firearm (see table 1).<sup>11</sup>

**Table 1: UCR Reports on Violent Crimes Committed with a Firearm**

	Total # of Homicides	Homicides committed with a firearm	Total # of Robberies	Robberies committed with a firearm	Total # of Aggravated Assaults	Aggravated Assaults committed with a firearm
2015	13,455	9,616 (71%)	294,578	120,120 (41%)	692,315	167,323 (24%)
2014	11,961	8,124 (68%)	293,206	118,092 (40%)	660,852	148,531 (22%)
2013	12,253	8,454 (69%)	312,461	124,885 (40%)	659,363	142,324 (22%)
2012	12,765	8,855 (69%)	298,211	122,174 (41%)	657,545	143,119 (22%)
2011	12,664	8,583 (68%)	302,019	124,606 (41%)	652,169	138,336 (21%)
2010	12,996	8,775 (68%)	308,309	127,521 (41%)	670,443	137,857 (21%)

Note: Because reporting of data to UCR is voluntary, UCR consistently shows lower estimates for firearm homicides than are reported to the Centers for Disease Control and Prevention. CDC reported 11,008 firearm homicides in 2014. See “National Vital Statistics Reports, Vol. 65, No. 4.” [https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65\\_04.pdf](https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf), Table 10, p. 44. For comparison of UCR and CDC data on homicides, see “The Nation’s Two Measures of Homicide,” Bureau of Justice Statistics, July 2014. <https://www.bjs.gov/content/pub/pdf/ntmh.pdf>.

11. Data compiled from 2010, 2011, 2012, 2013, 2014, and 2015 UCR Crime Reports, FBI. Tables referenced: “Murder,” Table 20; “Robbery,” Table 21; “Aggravated Assault,” Table 22. <https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s>

The National Gun Violence Research Center (NGVRC), operated by the Police Executive Research Forum (PERF) with support from the Joyce Foundation, is dedicated to providing information regarding gun crime and promising practices to reduce gun violence. Based in Washington, D.C., the Center conducts and disseminates practical research designed to educate police, policymakers, and the public. This research includes collecting data from law enforcement agencies about the extent and nature of gun crime, as well as documenting innovative strategies to reduce gun violence implemented by police and criminal justice agencies across the country.

**The purpose of this report is to explore Crime Gun Intelligence Centers (CGICs), one of the field's latest efforts to improve local gun crime investigations through strategic use of available tools and technology, and partnerships between federal and local law enforcement.**

## Crime Gun Intelligence Centers (CGICs)

Crime Gun Intelligence Centers (CGICs), operated jointly by local police departments and the U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), are innovative programs for targeting gun crime. The CGIC model varies by location but typically merges the use of several crime gun technologies, and focuses on expediting the submission and use of data from the ATF's National Integrated Ballistic Information Network (NIBIN). NIBIN data is combined with information from other sources, including case files and data from various technologies and other databases, including the ATF's eTrace system, to develop comprehensive crime gun intelligence.<sup>12</sup>

In the CGIC model, these information systems and technologies are used collectively to generate investigative leads, enabling investigators to quickly connect seemingly unrelated offenses to a single firearm, a suspected "active shooter" in the community, or a common firearms trafficker.

Linking these incidents quickly helps the police to identify and target the most violent offenders and the illegal source of their crime guns for local or federal prosecution.

This report documents the efforts of three local agencies—the Denver, Milwaukee, and Chicago police departments—to establish CGICs, and how they are working with the ATF through this process to reduce firearm violence in their cities.

PERF conducted site visits to each of these departments and collected information on how the CGIC model and the use of NIBIN, eTrace, and other crime gun technologies can enhance investigations and target dangerous gun crime offenders.

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12. NIBIN and eTrace systems will be discussed in more depth in Chapter 2.

# Chapter 2: Preventing Gun-Related Crime and Violence

## Local Investigative Approaches

Local police departments have employed a variety of strategies to prevent firearms violence and solve gun crimes in their jurisdictions. Technology such as gunshot detection systems and crime cameras, for example, has been very useful for targeting gun crime. In a 2015 PERF report, Milwaukee Police Chief Ed Flynn was cited as saying that when Milwaukee installed Shotspotter™, a gunshot detection system, it revealed that 86% of gunfire incidents were never reported to the police. In one instance, the gunshot detection system allowed the Milwaukee Police Department to pinpoint a location where illegal guns were being housed and sold because buyers were test firing the weapons outside.<sup>13</sup> Former Minneapolis Police Chief Tim Dolan noted that the Minneapolis Police Department was able to synchronize their crime cameras to their gunshot detection system. Using this strategy, the police were able to reduce bank and street robberies in their downtown areas.<sup>14</sup>

In 2009, PERF surveyed 164 local law enforcement agencies on their gun violence prevention strategies.<sup>15</sup> These agencies reported using numerous approaches to target gun offenders and reduce gun violence. Seventy-three percent of responding agencies reported using specialized units to detect guns in hot spots. Almost all departments also reported targeting high-risk groups by focusing on gangs (94%). Many departments (84%) reported participating in multi-agency and community partnerships to address enforcement, prosecution, and prevention, in a collective approach to reducing gun violence.<sup>16</sup>

Participating in cross-jurisdictional and information sharing efforts was reported to be a valuable tool for reducing gun crime. Police officials reported that submitting information to the U.S. Attorney's Office (USAO) on known gun offenders was a highly effective strategy for reducing gun violence, especially in jurisdictions with weak state gun laws. Partnering with the ATF to trace guns and using ballistic matching

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13. Police Executive Research Forum. "Gun Violence: Regional Problems, Partnerships, and Solutions" (2015) <http://www.policeforum.org/assets/gunpolicyreport2015.pdf>

14. Ibid

15. The survey was specifically targeted toward larger agencies serving populations of 100,000 or more people, so results may not be reflective of the average U.S. police agency.

16. Police Executive Research Forum. "Gun Enforcement and Gun Violence Prevention Practices among Local Law Enforcement Agencies," (2011). [http://www.policeforum.org/assets/docs/Free\\_Online\\_Documents/Gun\\_Violence\\_Reduction/gun%20enforcement%20and%20gun%20violence%20prevention%20practices%20among%20local%20law%20enforcement%20agencies%202010.pdf](http://www.policeforum.org/assets/docs/Free_Online_Documents/Gun_Violence_Reduction/gun%20enforcement%20and%20gun%20violence%20prevention%20practices%20among%20local%20law%20enforcement%20agencies%202010.pdf)

technologies (such as ATF's NIBIN) were also reported to be effective in targeting gun offenders and traffickers.<sup>17</sup>

## **The Role of ATF in Working with Local and State Law Enforcement Agencies**

The ATF is a valuable partner to many local police agencies in efforts to reduce gun crime and target firearms offenders. ATF's Frontline business model is a collaborative and intelligence-driven approach to share information and resources with state and local law enforcement agencies. Through Frontline, the ATF has leveraged its resources to create a variety of tools, including NIBIN and eTrace, and partnerships, such as its Violent Crime Reduction Partnerships (VCRP), to work collaboratively with local police departments to combat firearms trafficking and illegal firearm usage. Through this initiative, the ATF shares resources, crime gun intelligence, and firearms violence reduction strategies with state and local partners. ATF can provide NIBIN technology, crime gun tracing and information sharing capacities, training, technical assistance, and investigative support to local agencies.<sup>18</sup>

## **Overview of ATF's Key Information-Sharing Tools for Investigating Gun Crime**

### **eTrace**

ATF's eTrace is an internet based system that facilitates firearms tracing and assists in submitting, retrieving, storing, and querying all firearms trace related information.

eTrace allows for the systematic tracking of a recovered firearm from its manufacturer or importer to its first retail purchaser.<sup>19</sup>

Law enforcement agencies can conduct such traces on suspected crime guns, such as when a firearm is recovered from a crime scene, or is seized from a criminal suspect or a person who is legally prohibited from possessing a firearm because of a prior felony conviction or other disqualifying factor.

Information regarding the firearm's origin can be used to develop investigative leads, link a suspect to a firearm, or identify potential traffickers and straw purchasers.

The ATF is working with local law enforcement to encourage agencies to trace all of their suspected crime guns. Comprehensive tracing of firearms and following up on eTrace leads is considered a best practice for local law enforcement agencies in combating firearms trafficking.

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17. Police Executive Research Forum. "Gun Enforcement and Gun Violence Prevention Practices among Local Law Enforcement Agencies," (2011). [http://www.policeforum.org/assets/docs/Free\\_Online\\_Documents/Gun\\_Violence\\_Reduction/gun%20enforcement%20and%20gun%20violence%20prevention%20practices%20among%20local%20law%20enforcement%20agencies%202010.pdf](http://www.policeforum.org/assets/docs/Free_Online_Documents/Gun_Violence_Reduction/gun%20enforcement%20and%20gun%20violence%20prevention%20practices%20among%20local%20law%20enforcement%20agencies%202010.pdf)

18. ATF Frontline, <https://www.atf.gov/file/10941/download>

19. National Tracing Center, <https://www.atf.gov/firearms/national-tracing-center>

However, a department's participation, especially in following up on trace reports, is often contingent on available resources and the priority of the case, if applicable. According to a 2013 PERF survey on agency utilization of federal resources, 80% of respondent agencies indicated that they use eTrace to trace firearms. However, 21% of agencies reported challenges with using eTrace. These challenges most often stem from a lack of resources and personnel devoted to using the program, affecting the timeliness with which information can be entered into the system.<sup>20</sup>

## NIBIN

The National Integrated Ballistic Information Network (NIBIN) is a network of automated ballistic imaging systems that allows for the comparison and analysis of recovered ballistic evidence (bullets and shell casings) across jurisdictions. The ATF has a number of integrated ballistic identification system (IBIS) machines on loan to local and state police agencies around the nation. IBIS machines, like other ATF resources, are allocated to locations based on need, and some departments have even acquired their own IBIS machines so that they may utilize the ATF network (NIBIN).

Trained NIBIN technicians enter spent shell casings recovered from crime scenes or from test fires of recovered crime guns into IBIS, which creates digital images of the casings and uploads them to the national database. Once an image is uploaded from IBIS into NIBIN, the system compares the image against others previously submitted by agencies in the region and generates a list of "potential candidates for comparison" (PCCs) based on the degree to which the images are correlated. Technicians visually examine the top ranked PCCs to verify whether the markings indicate a potential match, or "high-probability hit," indicating the casings were likely fired from the same firearm.<sup>21</sup> In order to "confirm" a hit, the physical evidence must be compared under a microscope for verification by trained firearms examiners.<sup>22, 23</sup>

*As with firearm tracing, ATF recommends that local agencies take a comprehensive approach to using NIBIN. ATF recommends that agencies enter all recovered shell casings into IBIS and upload all of the images to NIBIN, regardless of whether they are linked to a known crime or not.*

Linking shell casings from crime guns or different crime scenes can help provide additional leads to solve crime. Once NIBIN hits are identified, technicians can provide information on the linked shooting incidents to investigators, giving them additional information for investigations.

NIBIN gives law enforcement agencies the ability to quickly connect multiple crimes together that previously may not have been linked through traditional

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20. Police Executive Research Forum. "Research and Policy Initiatives to Help Police Leaders Speak Out on Gun Violence." (Police Executive Research Forum, Washington D.C., 2013).

21. Since each firearm leaves unique markings on fired ammunition components, comparing these markings can indicate whether two casings were fired from the same firearm.

22. ATF NIBIN Program Audit Report. "Process for Collecting and Entering Evidence into NIBIN, Comparing the Evidence to Identify Potential Matches, and Examining Potential Matches to Confirm Hits" (2005) <https://oig.justice.gov/reports/ATF/a0530/app8.htm>

23. Note: Agencies often use different terminology when describing "hits", "PCCs", and other stages of the NIBIN process. For the purposes of this report, we will use "PCC" to refer to system-generated correlation results; "high-probability hit" or "NIBIN lead" to refer to images that have been visually identified as a match; and "confirmed hit" to refer to those that have been physically examined and verified by a firearms examiner. Please consult the Glossary for further information.

investigative leads. Once law enforcement arrests a suspect linked to multiple shootings through matches using NIBIN data, prosecutors can use that data as evidence to strengthen prosecution strategy and trial presentation, and to increase charges and sentences sought for defendants by providing additional evidence regarding the offender's likely involvement in other shootings.<sup>24</sup>

### *Challenges and Strategies*

Despite the apparent utility of NIBIN, a 2013 NIJ-funded examination of its usage across the country determined that the program has significant “untapped potential” to solve crimes involving firearms. The study discovered that the implementation of NIBIN across different departments varies greatly with respect to staffing, data input, and hits generated. Often there is little feedback from investigators back to the crime laboratories identifying the hits, which limits the strategic use of hits to assist in the investigation of criminal groups.

The timeliness of processing evidence and identifying hits also varies greatly across jurisdictions. The researchers noted that “delays in processing ballistic evidence are the single greatest threat to the utility of NIBIN as an investigative tool.”<sup>25</sup>

If investigators are not notified quickly about potential hits, they will likely move on to investigating other cases, as the ability to solve cases often drops significantly after a few days.

Prior to 2013, the NIBIN program was handled by the ATF's Office of Science and Technology Branch. Under that branch, NIBIN was largely seen as a forensic tool for use by the laboratory to identify links to evidence recovered in other shootings, and was mainly used on the prosecution side of cases. Because of this, NIBIN data was not emphasized during the investigation process, which created lag times in generating and confirming links of ballistic evidence.<sup>26</sup>

In 2013, the NIBIN program was placed under the ATF's Firearms Operations Division within the Office of Field Operations in an effort to expand the use of NIBIN to be both a forensic tool and a real-time gun violence investigative tool that generated actionable intelligence.<sup>27</sup> IBIS machines were able to be taken out of forensic labs and placed into police departments and CGICs. Under this model, ballistic evidence from time sensitive investigations is analyzed quickly to develop investigative leads, rather than being considered forensic evidence to be used solely during prosecution.

Currently, local agencies enter evidence into IBIS, examine potential matches, and identify hits in-house, or they receive assistance from state law enforcement agencies or crime labs in this process. In February 2016, President Barack Obama released a “New Executive Actions to Reduce Gun Violence and Make Our Communities Safer” statement, which described a multifaceted gun violence reduction plan. In this plan, President Obama highlighted that the ATF is launching the National NIBIN Correlation and Training Center, which will be responsible for conducting correlation services

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24. Police Executive Research Forum. “Gun Violence: Regional Problems, Partnerships, and Solutions” (2015) <http://www.policeforum.org/assets/gunpolicyreport2015.pdf>

25. King, W, Wells, W, Katz, C, Maguire, E, and Frank, J. (2013). *Opening the Black Box of NIBIN: A Descriptive Process and Outcome Evaluation for the Use of NIBIN and Its Effects on Criminal Investigations*.

26. Interviews with ATF officials

27. Interviews with ATF officials

at one national location. This will relieve local police departments of the burden of recruiting and training NIBIN technicians as well as free up manpower and resources to contribute to other areas of firearms investigations.<sup>28</sup>

### *“Real-Time” NIBIN*

When NIBIN data is turned around quickly, it gives law enforcement officials the ability to quickly connect multiple crimes together that previously may not have been linked through traditional investigative leads.

**For example, witnesses may have helped investigators to identify a suspect in one case, but not in another, and the NIBIN link places the firearm possessed by the individual at both crime locations.**

**NIBIN also allows for intelligence and data sharing across jurisdictional boundaries. Gun offenders may be committing crimes in more than one jurisdiction, and linking the information on those cases can be critical to stopping the violence.**

## The CGIC Model

In 2013, the ATF partnered with the Denver Police Department to create the first “Crime Gun Intelligence Center,” or “CGIC.”<sup>29</sup> The purpose of the CGIC model is to “produce actionable crime gun intelligence in a timely manner,”<sup>30</sup> using ballistic intelligence to quickly target the small percentage of shooters in the community who are actively committing gun violence, and identify the source of their crime guns. The CGIC concept employs a holistic approach to gun crime investigation, using NIBIN as the cornerstone technology. **The key phases of this approach are: comprehensive collection of evidence, timeliness, investigative follow-up, and implementing a feedback loop.**<sup>31</sup>

### *Phases to Using NIBIN Effectively in the CGIC Model*<sup>32</sup>

The **comprehensive collection of evidence** involves collecting all available ballistic evidence from all crime scenes and crime guns. This includes guns, bullets, or shell casings recovered at scenes involving everything from celebratory gun fire to a homicide. Ideally, ballistic evidence recovered at violent crime scenes should not take precedence over casings recovered from non-violent crime scenes, as these incidents linked together may yield important details on the identity of the shooter. (Of course, departments will have varying abilities to do this, depending on resources and staffing available).

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28. “Fact Sheet: New Executive Actions to Reduce Gun Violence and Make Our Communities Safer,” Accessed: February 23, 2016. <https://www.whitehouse.gov/the-press-office/2016/01/04/fact-sheet-new-executive-actions-reduce-gun-violence-and-make-our>

29. The Trace. “The New Policing Initiative Connecting the Dots Between Small Gun Crimes-in Order to Prevent Big Ones,” (2015). <http://www.thetrace.org/2015/09/crime-gun-intelligence-center-the-fix/>

30. Police Executive Research Forum. “Gun Violence: Regional Problems, Partnerships, and Solutions” (2015) <http://www.policeforum.org/assets/gunpolicyreport2015.pdf>

31. Ibid

32. Ibid

The second phase is **timeliness**. The first hours after a violent crime are critical for law enforcement. Rapid turnaround time is essential to solving cases. The quicker the data can be evaluated, the quicker law enforcement can identify leads that result in arrests. By immediately entering the information and acting quickly on high-probability hits, additional investigative leads are provided in real-time. According to ATF officials, 48 hours or less is the ideal turnaround time for ballistic evidence analysis in NIBIN.<sup>33</sup>

The third phase is **follow-up**. Analysts should provide this timely intelligence to investigators for immediate follow-up. Investigators should follow up on the NIBIN leads to identify links and shooters before the intelligence is outdated.

The fourth phase is implementing a **feedback loop**. Everyone involved, from the officer who collected the shell casings to the NIBIN analysts and investigators, should know that they contributed to a successful investigation, arrest, and/or case prosecution.

Based on the implementation of this effort in Denver and initial reports of success, the CGIC model, with real-time NIBIN data being used as the center of its intelligence, is being employed in other major urban areas. This report will present the CGIC concept as it has been implemented in Denver, CO; Milwaukee, WI; and Chicago, IL. The characteristics of each CGIC are explored in detail in the following case studies to assist other law enforcement officials who are interested in implementing or refining this approach in their agencies.

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33. Ritter, Nancy, "Study Identifies Ways to Improve ATF Ballistic Evidence Program," NIJ Journal 274 (2014): 12-18, available at <http://nij.gov/journals/274/Pages/ways-to-improve-nibin.aspx>.

## **Case Studies of the CGIC Model's Implementation in Three Cities:**

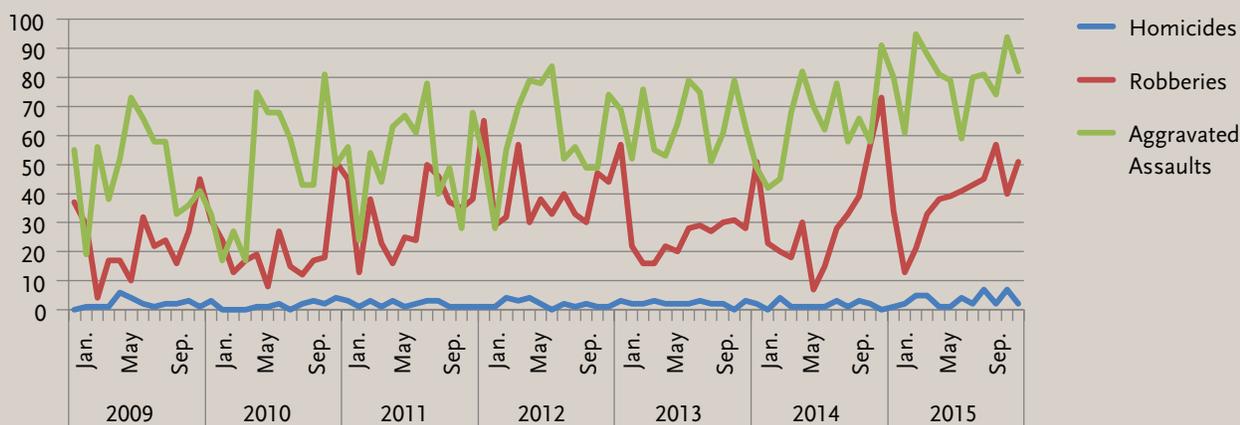
- **Denver, CO**
- **Milwaukee, WI**
- **Chicago, IL**

# Chapter 3: Denver (CO) Crime Gun Intelligence Center

## Introduction

As of 2015, the city of Denver, Colorado had a population of approximately 682,545, with 81% White, and 10% Black residents. With regard to ethnicity, 32% identified as Hispanic or Latino.<sup>34</sup> In the past decade, the city has experienced fluctuations in crime, with rates of violent crime generally declining between 2005 and 2010 and increasing from 2010 to 2014. In 2015, homicides increased by 71% from the previous year,<sup>35</sup> with firearm-related homicides increasing by over 100%.<sup>36</sup> According to Denver Police Chief R.C. White, these increases in violent crime can be attributed to a surge in gang activity. Gang-related violence is a major contributor to the gun violence issues in Denver, with several high profile gangs having a significant presence in the city.<sup>37</sup> Figure 1 displays incidents of gun crime in Denver from January 2009 to December 2015.

Figure 1: Monthly Data, Denver Gun Crime 2009–2015



Note: Homicides continued to increase in 2016, up an additional 12% from 2015. In 2016, there were 56 homicides in Denver; and 41 (73%) were firearm-related. These increases in homicide were attributed to spikes in domestic violence. The Denver Police Department reported that gang-related killings dropped significantly in 2016.

34. U.S. Census Bureau, 2015. <http://www.census.gov/quickfacts/table/PST045214/08031/embed/accessible#headnote-a>

35. Crime in Colorado 2015. <http://crimeinco.cbi.state.co.us/cic2k15/agencydetails.php?id=66>

36. Data provided by Denver Police Department

37. PERF interview with Chief White (October 1, 2015)

## Crime Gun Intelligence Center

ATF began its Crime Gun Intelligence Center (CGIC) pilot program in Denver in January 2013. The program was one of the first of its kind in the nation, with the goal of integrating the “use of NIBIN, crime gun tracing, personnel, partnerships, and other technologies to identify serial shooters and their sources of crime guns for immediate disruption, investigation, and prosecution.”<sup>38</sup> The concept involves quickly obtaining data linking gun crimes together, so that investigators may immediately act upon the information to prevent future shootings. The program began with two ATF personnel identifying NIBIN hits and providing them to detectives in DPD’s Intelligence Unit for follow-up. This initiative eventually developed into the CGIC, which as of October 2016, has four ATF agents, six task force officers, three intelligence research specialists, two Industry Operations Investigators, and two civilian contractors. The program centers around the use of NIBIN to generate real-time investigative leads and arrest and prosecute active shooters in a timely manner.

The Denver crime lab was already generating NIBIN hits prior to the establishment of the CGIC, but detectives were unable to follow up on many cases due to high caseloads. Because there was not a unit dedicated to following up on NIBIN hits, DPD was not taking full advantage of NIBIN as an investigative tool. ATF and DPD decided to prioritize the use of NIBIN due to its ability to reveal crime patterns and link crimes to repeat violent offenders. To assist with the timeliness of NIBIN results and comprehensive gun tracing, the ATF assigned personnel to DPD’s crime lab full time to assist with test firing crime guns and ensuring NIBIN searches were expedited. Detectives from DPD’s Gang Bureau and ATF agents were also assigned to the CGIC specifically to follow up on investigative leads from NIBIN hits. These new protocols greatly improved investigations and reduced the turnaround time for NIBIN data. Prior to the establishment of the CGIC, NIBIN results would take a few weeks to a month to reach detectives from the time the evidence was collected. With the current CGIC process, NIBIN results get back to detectives within days, or even hours, providing them with timely intelligence to respond to gun crime.

Speaking of the CGIC initiative at PERF’s October 2016 Town Hall meeting in San Diego, Chief White noted, “The key is being able to respond immediately to the shooting scenes and connect the dots. When ShotSpotter<sup>39</sup> detects and locates shots being fired, we’re able to go to that scene and collect the shell casings. We run the casings through NIBIN and follow up on the NIBIN data within 24 hours.”

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38. CGIC presentation from Denver ATF (March 1, 2016)

39. ShotSpotter is a gunshot detection system that notifies officers of the location of gunshot incidents and the number of shots fired. See <http://www.shotspotter.com/law-enforcement> for more information.

## CGIC Partners

*“We have been very successful in identifying shooters, predominantly because of our quick follow up and our relationships with the ATF and the local departments within our region.”*

– Chief Robert C. White, PERF’s 2016 Town Hall meeting in San Diego, CA

The CGIC also partners with other local agencies, such as state parole, state and local prosecutors, and local gang reduction initiatives in a collaborative effort to prevent gun violence. Before the establishment of the CGIC, the Denver crime lab was only submitting ballistic evidence to NIBIN that was collected by DPD. Other departments in the state were submitting their evidence to the Colorado Bureau of Investigations (CBI), but the CBI crime lab had a sizeable backlog and often would not be able to submit evidence to NIBIN in a timely manner. Because of this, Denver’s CGIC was unable to identify links to evidence from neighboring jurisdictions. The CGIC eventually established MOUs with Aurora and Lakewood Police Departments, in which those departments bring their evidence to the Denver crime lab once a week to be entered into NIBIN. If a NIBIN hit links incidents from Denver and Aurora or Lakewood, the detectives from these departments work together on the case.

Parole is another beneficial partner to the CGIC, because if parolees have previously been linked to incidents through NIBIN, it can help detectives to connect potential gang members and associates. Parolees also have GPS monitors that can be used to link them to crime scenes, and parole officers have access to their names and addresses so they can interview them to gain leads.

When CGIC investigators apprehend a suspect, they work with the District Attorney and U.S. Attorney’s Offices to present cases for state or federal prosecution. If the CGIC is able to gather enough intelligence through NIBIN to demonstrate a likely pattern of violent behavior, it is more compelling for the attorney to accept the case and improves the case’s trial presentation. This information can also better inform sentencing decisions for repeat gun offenders.

In addition to law enforcement partners, DPD recognized the importance of partnering with the community in its enhanced efforts to reduce gun and gang violence (See sidebar below). Initiatives involving community organizations include direct outreach to gang members through programs like the Gang Reduction Initiative of Denver (GRID), and outreach to the community and at-risk youth through partnerships with the Mayor’s Office, Children’s Affairs, Parks and Recreation, Denver Public Library, Public Works, and faith-based entities. Through these initiatives, DPD is able to reach out to partners in the community to provide job and housing outreach to individuals and families at risk. These partnerships link gun-related information to gang intelligence to help stop gun violence while also offering other immediate solutions to support the community.

## CGIC Is Part of Denver’s Overall Response to Gang and Gun Violence

The CGIC is only part of the City of Denver’s overall response to reducing gun violence. Understanding that there are many complex issues that must be addressed to reduce gun violence, Denver Mayor Michael Hancock teamed with Chief White and other local and federal officials and community representatives to formally announce a comprehensive “Gang Violence Intervention” initiative in April 2015. This approach involves the use of an “Impact Team” comprised of city, federal, and local partners, to provide resources to specifically target gang activity. This initiative also involves strong local police-community partnerships; community messaging; collaboration with prosecutors, corrections, and the ATF; and the use of multiple technologies (NIBIN, cameras, crime analysis, etc.) through the CGIC.

Community outreach and involvement is critical to all aspects of the initiative and to reducing gun violence. As Chief White noted at the City’s announcement of the program in April 2015, “Despite all the resources that we’re pulling towards this, it is absolutely critical that we have the eyes and ears of the citizens in this community. Very few crimes occur where somebody doesn’t know.”

For more information, see the Denver Police Department’s description of the Gang Violence Intervention—Impact Team (See Appendix A).

## The NIBIN Process

DPD officers collect ballistic evidence either from crime scenes or from test fires of recovered crime guns. Officers are often made aware of shooting incidents via ShotSpotter. Casings and firearms are recovered and taken to DPD’s property bureau for safekeeping.

ATF intelligence specialists assigned to the crime lab will generate a list each morning of shell casings and firearms that were recovered the previous day. They then retrieve the evidence from property, test fire any firearms, and enter shell casings into NIBIN for correlation. The database generates a respondent list of images (PCCs) ranked by their correlation scores. Firearms examiners will review the top 200 results, comparing the images side by side, to determine whether there is a high probability hit. If a high probability hit is identified, the examiners compare the physical evidence under a microscope to confirm the casings were fired from the same firearm. Once a hit is confirmed, a hit notification listing the linked shooting incidents is sent to all CGIC partners and involved detectives and sergeants, and these linked incidents constitute a “NIBIN case.”

Denver’s CGIC coordinator, a retired ATF agent, reviews the crime reports associated with each linked incident to determine whether any follow up can be done. If the hit is linked to multiple shootings or firearms, associated with known suspects (e.g., gang members), or if the crime reports have similarities, such as similar suspect descriptions, that may be actionable, he compiles a referral and sends it to CGIC investigators for follow up. If there is no obvious follow up that can be done (i.e., no identified suspects or connections), he writes up a summary of the linked incidents and sends it to investigators for informational purposes. A summary of every NIBIN hit is provided to all officers who are involved in the cases for further investigation. Additionally, if a NIBIN hit links evidence recovered by DPD and another jurisdiction, the CGIC coordinator will ensure that detectives from both agencies are notified.

## Investigation Process

Due to limited personnel power, only about 20% of Denver's NIBIN cases are currently referred to the CGIC for follow up. When a case is referred to CGIC investigators, they don't necessarily take over the case from the original detectives, they just offer assistance as needed. Since the CGIC has specialized knowledge of many of the cases, they may decide to refer a case to another unit if that unit has information that may help with the investigation. For example, gang-related cases may be referred to the Gang Bureau or homicides may be referred to the Homicide Unit. Under a grant through Project Safe Neighborhoods, DPD also has 13 detectives responsible for investigating NIBIN hits that are not referred to the CGIC. These cases usually have less immediate follow up that can be done, but they are still important to investigate.

## Linkage with other technologies

*“We use NIBIN and ShotSpotter data at our CompStat meetings. We can see where the shots are being fired and look at the shell casings associated with those shots to see if there are any correlations among the crimes that are occurring within that area.”*

– Chief Robert C. White, PERF's 2016 Town Hall meeting in San Diego, CA

To pinpoint the times and locations of multiple shootings committed with the same gun, the Denver CGIC draws upon other data and technology to identify potential suspects, such as footage taken by street surveillance cameras and automatic license plate readers. CGIC investigators use this information to look for common individuals and vehicles between two linked shooting incidents. When officers are able to recover the gun used in a shooting, ATF personnel use the eTrace system to efficiently submit and receive information needed to trace the gun to its first retail seller and purchaser, which may provide a roadmap for how the gun made its way into the hands of the suspect. For example, retail purchasers might be somehow connected to the crime, the suspect, or to criminal enterprises. Or, they may inform ATF of what they did with the gun, providing another lead for investigators to follow. Knowing the identities of the original seller and purchaser allows detectives to see if they are linked to other guns logged in the eTrace system or implicated in other crimes. It also allows ATF to identify potential straw purchasers or gun traffickers.

Using NIBIN and eTrace together also allows law enforcement to establish a more accurate “time to crime” or TTC. TTC is traditionally thought of as the number of days between the initial retail purchase of a firearm and its subsequent recovery by police. However, tracing a gun and submitting ballistic evidence to NIBIN can allow law enforcement to determine the number of days between when a gun is purchased and when it was first known to have been used in a shooting. Since the *true* TTC is often substantially shorter than the time to recovery, it is more likely to generate a usable lead to solve that shooting. That is, interviewing the purchaser is more likely to lead investigators to the shooter.

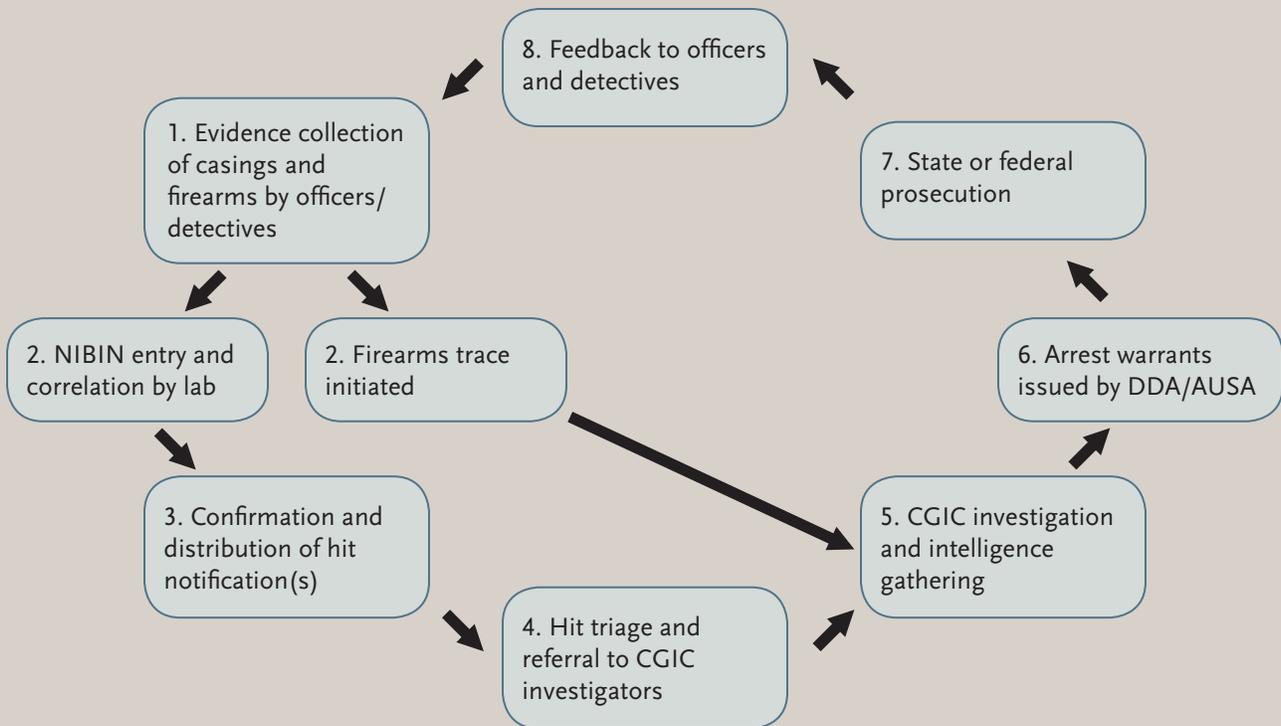
Because the CGIC investigators have a great deal of experience and knowledge of crime patterns in Denver, an estimated 95% of cases referred to the CGIC result in

either solving the case or identifying suspects.<sup>40</sup> If the CGIC identifies a viable suspect but is unable to build a case for prosecution in Federal or State Court, they generate an intelligence bulletin for distribution to the department describing information about the suspect(s) and who to contact if they are encountered. These bulletins are an additional way to gather intelligence about offenders who are likely on the street, and likely to have firearms. The CGIC also holds weekly NIBIN lead meetings at the Gang Bureau where investigators and other CGIC partners can share intelligence on investigations. The meetings are open to anyone with information that may be beneficial to solving a case.

The CGIC coordinator follows up with investigators on the outcome of the NIBIN cases and whether an arrest was made. The coordinator then creates a “success story” explaining the outcome and distributes it so that all involved parties know they contributed to a successful investigation. The feedback loop is an important aspect of this process, so that individuals who may otherwise not be notified of the case result, such as patrol officers or crime lab personnel, can see the positive impacts of their work. This ongoing feedback ensures everyone involved in the process is encouraged to continue following the CGIC model. Figure 2 below displays a model of the Denver CGIC process. Also see Appendix B for diagrams of the CGIC investigative work flow resulting from a recovered crime gun vs. shell casings.

**Figure 2: Model of CGIC Process**

Figure 2 depicts the Denver CGIC process from evidence collection to providing feedback to all personnel on case outcomes.



40. Meaning 95% of the approximately 20% of NIBIN cases that are referred to the CGIC.

## Measuring CGIC Success

As mentioned previously, the CGIC currently only has the personnel power to follow up on about 20% of NIBIN hits. Therefore, cases that are likely to benefit from further investigation are prioritized. For example, if NIBIN links two instances of shots fired and neither incident has any witnesses, the case would likely not be referred to the CGIC. **However, the CGIC’s ability to swiftly analyze the data relevant to investigating these gun-related crimes, even if only a small percent of the total number of cases, is likely to lead to reductions in gun violence if they are able to get active shooters off the street more quickly and build cases that yield more successful prosecutions for violent gun offenses.**

As of September 2016, CGIC investigations have led to the arrests of 65 defendants on state charges since the CGIC was established in 2013. These defendants are suspected of committing over 170 shootings. In addition, 24 individuals have been prosecuted federally for “felon in possession of a firearm” and straw purchasing.

DPD provided more detailed data on CGIC defendants prosecuted during 2013 and 2014. In 2013 and 2014, 27 offenders were prosecuted based on investigative follow-ups due to NIBIN hits and other firearm intelligence compiled by the CGIC.

In order to understand the types of offenses being investigated by the CGIC and the individuals arrested, we explored the criminal histories of the defendants. Out of 27 individuals who were prosecuted in 2013 and 2014 (the initial years of the CGIC’s operation), nearly half committed an aggravated assault that led to the investigation and their subsequent arrest. More than three-quarters of the individuals arrested had some prior criminal history, and 74% were affiliated with a gang. Of those with a criminal history, 83% were felons and 52% had juvenile convictions (see Table 2). The fact that many of these defendants were repeat offenders suggests that removing them from the street could prevent further gun violence.

Tracking the CGIC’s success can be difficult because there are no obvious metrics with which to measure success. For example, not every NIBIN hit warrants an investigation, and not every investigation leads to an arrest. Additionally, it can be difficult to clear a NIBIN case, since there can be multiple suspects linked to a single firearm. Even if one suspect is arrested, the case will not be closed until the firearm itself is recovered. Despite these limitations, anecdotal evidence suggests that the CGIC is indeed preventing gun crime by generating arrests and prosecutions for violent gun offenders. The following case

**Table 2: Descriptive Statistics for Offenses and Criminal Histories of 27 CGIC defendants**

Offense	Number (%)
Aggravated Assault	12 (44)
Shots Fired into Occupied Building	5 (18)
Weapons Offense	2 (7)
Attempted Homicide	2 (7)
Criminal Mischief: Motor Vehicle	1 (4)
Drug Possession	1 (4)
Homicide	1 (4)
Outside Agency Warrant Request	1 (4)
Reckless Endangerment	1 (4)
Robbery	1 (4)
Criminal Involvement	Number (%)
Gang Affiliation	20 (74)
Criminal History	23 (85)
<i>Felon</i>	19 (83)
<i>Juvenile Conviction(s)</i>	12 (52)
<i>Parole</i>	7 (30)

\*due to overlapping categories, counts do not total to 100%

examples demonstrate how NIBIN and other crime gun intelligence are used to apprehend dangerous offenders in Denver.

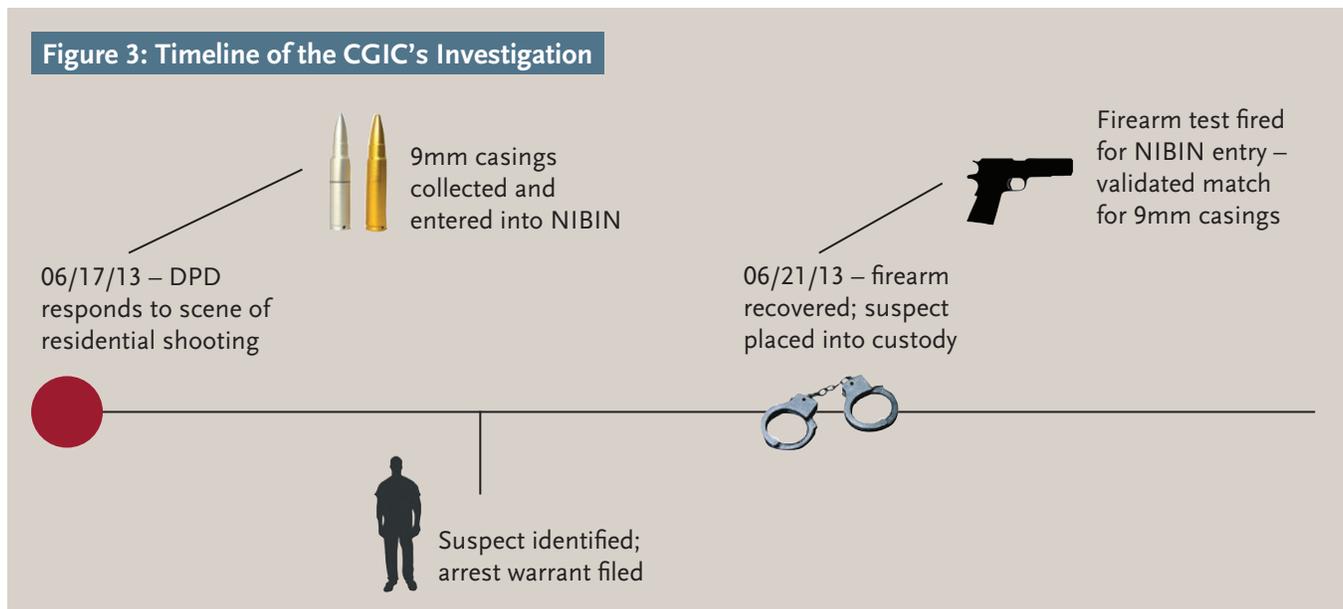
## CGIC Success Stories in Denver

### Case Example #1

In March 2013, an undercover DPD officer witnessed an armed robbery taking place in a public park. Other officers arrived at the scene and chased the suspect, who removed a handgun from his waistband as he was tackled to the ground. DPD crime lab personnel test fired the recovered handgun and entered a shell casing into NIBIN for correlation. Results showed that the same firearm was used six days prior in an attempted carjacking at an ATM. A search warrant was used to obtain video surveillance of the ATM, which showed the suspect pointing a handgun toward the victim's car. Due to the violent nature of the crime and the suspect's linkage to two gun-related incidents using NIBIN, he was arrested and prosecuted for attempted murder. The suspect was sentenced to 12 years in prison.

### Case Example #2

In June 2013, DPD officers responded to the scene of a residential shooting. Witness statements revealed that an unknown male approached the residence trying to locate the victim's sister. With no immediate results, the suspect became angry and brandished a firearm, left for a short period of time, and returned with a second suspect. The second suspect claimed gang affiliation with the "Westside Bloods". Still unable to locate the victim's sister, both of the suspects shot at the victim and left the scene. Officers collected casings for entry into NIBIN.



DPD Gang Detectives conducted numerous follow-up interviews, identifying one of the suspects as a twice-convicted felon for burglary and armed robbery who was currently on parole. Because of his gang affiliation and the violent nature of the crime, the District Attorney's Office issued an arrest warrant for attempted murder. A few days later, DPD conducted a joint search of the suspect's residence with parole officials. The suspect was present during the search and was immediately arrested on the attempted murder charge. Officers searched the residence and discovered two handguns in the suspect's bedroom. CGIC personnel test fired both firearms and entered shell casings into NIBIN. A match was confirmed between a casing from one of the recovered firearms and the casing found at the scene of the residential shooting. The suspect was sentenced to three years in prison. See Figure 3 for a timeline of events leading to the suspect's apprehension.

### Case Example #3

In February 2014, an individual was shot in the back during an altercation in Denver, and two additional witnesses were shot at while in their vehicle. Surveillance video showed the suspect vehicle to be a black Cadillac Escalade. DPD officers recovered a .45 caliber cartridge from the scene, which was entered into NIBIN for analysis.

Over a year later, in August 2015, Colorado Springs Police Department (CSPD) officers responded to a "shots fired" call, in which witnesses reported seeing a black Cadillac Escalade. In November of the same year, CSPD responded to another shots fired incident, and again, witnesses reported seeing a dark-colored Cadillac SUV. Officers recovered .45 caliber cartridge cases from both incidents, and submitted them to the Colorado Bureau of Investigations (CBI) for NIBIN analysis. The same day, CSPD officers responded to a felony menacing complaint. Victims reported the suspect vehicle as a black Cadillac Escalade and provided a partial license plate number. Based on that information, investigators developed a suspect, and executed search and arrest warrants for the felony menacing incident. Inside the suspect's black Cadillac Escalade, investigators recovered a Smith & Wesson .45 caliber pistol. The pistol was test-fired, and NIBIN linked the pistol to the 2014 shooting incident in Denver, as well as the two incidents in Colorado Springs. This allowed DPD to charge the suspect with criminal attempt 2<sup>nd</sup> degree murder for the shooting incident in Denver. The defendant recently pled guilty in Denver and is expected to be sentenced to five to ten years in prison for the attempted murder charge and one year for the felony menacing incident in Colorado Springs.

This investigation marked the first time that a cross-jurisdictional NIBIN hit led to a significant arrest, which was an important achievement for the Denver CGIC. By working with Colorado Springs Police Department, DPD was able to identify the suspect and link him to the attempted murder incident, which would not have been possible otherwise.

### Case Example #4

In March 2013, a pizza delivery driver was shot to death in Denver. DPD officers collected shell casings from the scene and submitted them to NIBIN for analysis. Surveillance cameras at the scene showed the suspect using a pay phone nearby, and

DNA and fingerprints were collected from the pay phone receiver. Forensic analysis provided a hit to a known Colorado offender, identifying him as a suspect for the homicide. Two days later, Tom Clements, the Director of the Colorado Department of Corrections was murdered at his home in Monument, CO. El Paso County (CO) officers collected shell casings from the scene, and NIBIN linked the shooting to the previous homicide of the pizza delivery driver in Denver.

A few days later, a Sheriff Deputy in Texas stopped an individual for a traffic violation. As the Deputy approached the car, the driver shot at the Deputy and fled the scene. Texas law enforcement officers engaged in a high-speed chase with the individual, who was eventually killed in a shootout with officers. Following the incident, officers recovered the firearm from the suspect's car, as well as a pizza delivery uniform. The firearm was test fired for NIBIN analysis, and results linked it to the two homicides in Colorado. A trace of the firearm revealed that the girlfriend of the suspect had straw purchased the firearm 11 days before the first homicide. The purchaser of the firearm was charged federally with transferring a firearm to a convicted felon, and was sentenced to 27 months in prison.

## Conclusion

Because the Denver CGIC has only been in operation for a few years, it is too early to attempt to measure quantitative outcomes such as the impact of the program on gun crime. However, anecdotal evidence from the case examples above illustrate that the Denver CGIC is succeeding in identifying, arresting, and prosecuting some of the city's most dangerous firearm offenders. The descriptive data indicate that at least some, if not most, of the individuals arrested due to CGIC investigations in 2013 and 2014 were key drivers of crime in Denver based on their criminal histories. These findings are encouraging. This new policing strategy has only been in place for a few years, yet these findings suggest some important benefits. As the Denver CGIC program continues to build its evidence database, refine its approach and document its successes and outcomes, future research could better assess its impacts quantitatively, potentially examining impacts on case clearance rates or rates of gun violence.

The next two case studies highlight the experiences of the Milwaukee Police Department and the Chicago Police Department, which subsequently established CGIC initiatives like the Denver program. Much can be gleaned from the lessons learned in setting up these programs, and the anecdotal evidence and successful case examples cited by officials who participate in these efforts demonstrate similarly promising results.

# Chapter 4: Milwaukee (WI) Crime Gun Intelligence Center

## Introduction

The city of Milwaukee, Wisconsin has a population of approximately 600,000 residents. As of 2010, 45% of the city's residents were white and 40% were black. With regard to ethnicity, 17% of residents identified as Hispanic or Latino.<sup>41</sup> In the past decade, the city has experienced fluctuations in crime, with homicides generally declining between 2007 and 2009 and increasing between 2010 and 2014. In 2015, homicides increased by 69% from the previous year, with non-fatal shootings increasing by 9%.<sup>42</sup> This upward trend reversed course in the first half of 2016, with homicides decreasing by 28% from January to June 2016 compared to the same timeframe in 2015.<sup>43</sup> According to Milwaukee Police Chief Ed Flynn, these homicides are most often the result of petty disputes that escalate to lethal violence between individuals who know one another. The vast majority of homicides in Milwaukee are committed with a firearm, and firearm homicides increased by 59% between 2014 and 2015.<sup>44, 45</sup> In Wisconsin, illegal possession of a firearm is a misdemeanor, regardless of how many prior offenses an individual has. Chief Flynn suggests that as a result, individuals “do the math” about carrying a gun in public, and decide that the risk of not carrying a gun and getting shot is greater than the risk of carrying a gun and getting caught by the police.<sup>46</sup>

Further, individuals involved in Milwaukee's gun-related homicides are often repeat criminal offenders. From 2010 to 2015, an overwhelming majority of victims and suspects of homicides had previous encounters with the criminal justice system. In 2015, 83% of homicide victims and almost 100% of homicide suspects had a criminal history.<sup>47</sup>

Figure 4 displays incidents of gun-related homicide, robbery and aggravated assault in Milwaukee from January 2010 to December 2015.

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41. U.S. Census Bureau “QuickFacts.” <http://www.census.gov/quickfacts/table/PST045215/5553000,00>

42. Milwaukee Homicide Review Commission. “Annual Report 2015 Homicides and Non-Fatal Shootings.” <http://city.milwaukee.gov/ImageLibrary/Groups/cityHRC/reports/2015AnnualReportFINAL.pdf>

43. “2016 Milwaukee Homicide Review Commission Mid-Year Report.” <http://city.milwaukee.gov/ImageLibrary/Groups/cityHRC/reports/2016Mid-Year.FINAL.pdf>

44. Milwaukee Homicide Review Commission. “Annual Report 2015 Homicides and Non-Fatal Shootings.” <http://city.milwaukee.gov/ImageLibrary/Groups/cityHRC/reports/2015AnnualReportFINAL.pdf>

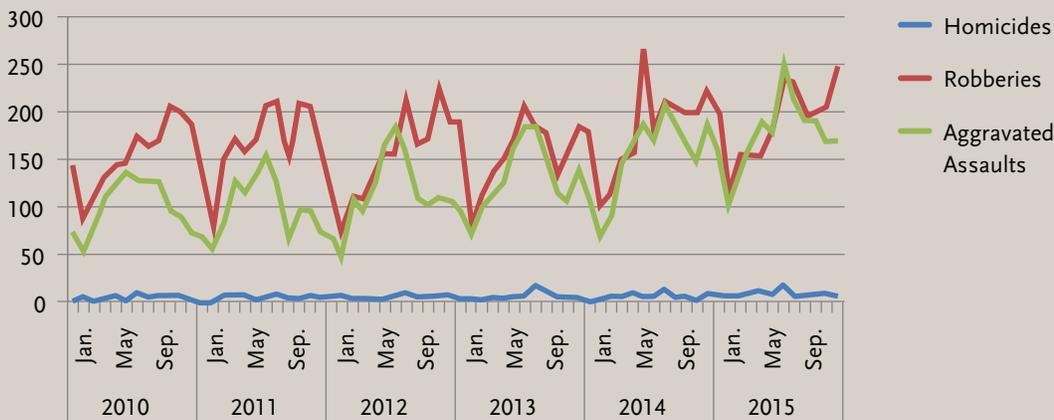
45. As noted, firearm homicides decreased by 25% from January to June 2016, compared to January to June 2015; however this report uses full year data and 2015 is the latest full year data available.

46. PERF personal interview with Chief Edward Flynn (September 29, 2015).

47. Milwaukee Homicide Review Commission. “Annual Report 2015 Homicides and Non-Fatal Shootings.” <http://city.milwaukee.gov/ImageLibrary/Groups/cityHRC/reports/2015AnnualReportFINAL.pdf>

**Figure 4: Monthly Data, Milwaukee Gun Crime 2010–2015**

Figure 4: Monthly gun-related homicides, robberies, and aggravated assaults reported to MPD, 2010-2015. Data provided by MPD.



## Crime Gun Intelligence Center

The Milwaukee Police Department (MPD) implemented the concept for its Crime Gun Intelligence Center (CGIC) in September 2014, and officially kicked off its formal CGIC process in March 2015. The Milwaukee CGIC’s mission is to “disrupt gun violence through the consistent production of timely, precise, and actionable intelligence.”<sup>48</sup> The CGIC is located within MPD’s Intelligence Fusion Center (IFC) under the Intelligence and Investigations Bureau. The IFC is responsible for the support of the department’s operations and identification of existing and evolving crime patterns.

MPD started its original NIBIN program in November 2013. Prior to 2013, the only NIBIN equipment available to MPD was located in the Wisconsin State Crime Lab (WSCL) in Milwaukee. In order to obtain data from NIBIN, MPD had to send its evidence to the WSCL for entry and correlation, and the WSCL firearms examiners would send back confirmed hits—a process that could take up to several months. MPD was only sending a small fraction of its evidence to the WSCL for analysis, and the NIBIN data returned were primarily used by prosecutors during trial to support evidence linking suspects to crimes—not as a means of generating investigative leads.

Milwaukee officials wanted to leverage NIBIN technology at the local level to provide real-time intelligence during active investigations. With ATF’s assistance, MPD acquired its own NIBIN equipment and placed it in the MPD Intelligence Fusion Center in November 2013. This allowed MPD to enter ballistic evidence and perform correlations in-house, which dramatically decreased the turnaround time for receiving results back from NIBIN. Using Denver’s approach as a model, the Milwaukee CGIC was officially established in March 2015. With its own NIBIN equipment and trained technicians, MPD could now use NIBIN to generate real-time investigative leads.

48. MPD Memorandum: *Crime Gun Intelligence Center – NIBIN Processing, Notifications, and Analytical Support* (August 12, 2015)

Speaking of the CGIC initiative at PERF's October 2016 Town Hall meeting in San Diego, Chief Flynn noted "Our partnership with the ATF is a cornerstone of our anti-violence campaign. Because of this partnership, the ATF assigned a NIBIN machine to us. NIBIN has been a fantastic addition to our toolbox. We have also been able to use eTrace as well. By marrying these two technologies with ShotSpotter, this gives us an opportunity to not only get to scenes more quickly, but to identify useful evidence that helps us put together patterns of firearms use."

Chief Flynn also attributed a recent increase in MPD's homicide clearance rate to the use of these crime gun technologies.

Like Denver's program, the Milwaukee CGIC is a collaborative effort between MPD and the ATF that combines several sources of crime gun intelligence into a single location. The CGIC uses a combination of technologies, crime analysis, and field intelligence to identify hot spots for gun violence and chronic gun offenders. This information is very useful for developing strategies to prevent and respond to gun-related violence.

The CGIC is staffed by:

- ATF and MPD supervisors who oversee the program,
- NIBIN technicians,
- MPD detectives, district representatives, and ATF agents and task force officers who investigate NIBIN cases,
- crime analysts,
- an eTrace officer,
- ATF firearm tracking detectives, and
- a ShotSpotter coordinator.

The CGIC also partners with the Wisconsin State Crime Lab, the Department of Corrections, federal, state and local prosecutors, and other local agencies to identify, investigate, arrest, and prosecute violent firearm offenders.

## Information Technology Components of Milwaukee's CGIC Program

NIBIN is the cornerstone technology of Milwaukee's CGIC program. NIBIN technicians submit ballistic evidence, including shell casings recovered from crime scenes and test fires of recovered crime guns, into NIBIN for correlation. The results help to inform the overall picture of gun violence in Milwaukee by establishing a link between shooting incidents using the same firearm.

MPD also uses gunshot detection technology to identify shooting incidents in high-crime areas. MPD's ShotSpotter coordinator verifies and downloads ShotSpotter alerts, audio recordings, and reports to ensure that MPD identifies all instances of "shots-fired" in the city, not just those that are reported to the police. This enables officers and IFC Explosive Detection K9s to canvass those locations for shell casings and other forensic evidence that might otherwise not be found. Geographic and temporal analysis of this information enables MPD crime analysts to provide timely information to commanders and frontline officers, giving them opportunities to interdict gun crime and remove illegal firearms from the streets.

MPD also participates in the ATF's eTrace program. MPD has a dedicated eTrace officer who submits information from all crime guns recovered by MPD to the eTrace system. Tracing identifies the first retail purchaser of a firearm, the date of the purchase, and the federally licensed dealer who sold the firearm, as well as any firearms previously recovered and traced by law enforcement that are associated with that purchaser. MPD's firearms trafficking unit, comprised of ATF agents and MPD detectives, then uses this information to help identify straw purchasers and potential firearm traffickers.

## CGIC Partners

The CGIC also partners with other local law enforcement agencies, the Wisconsin Department of Corrections, and District Attorneys and U.S. Attorneys to identify and prosecute violent offenders. The CGIC may receive requests from neighboring jurisdictions to enter ballistic evidence recovered by their police departments into NIBIN, if there is justification that the case connects to a Milwaukee incident. When evidence recovered in another jurisdiction is linked to an incident in Milwaukee, MPD collaborates with that department on the investigation. Examples of agencies that MPD has worked with in the past include the City of West Allis, the Milwaukee County Sheriff's Office, Brown Deer Police Department, Menomonee Falls Police Department, and West Milwaukee Police Department.

The CGIC also collaborates with the Wisconsin Department of Corrections to identify high-risk offenders under court-ordered supervision who can be "called in" to be confronted about their potential involvement in criminal activity. If these individuals have been linked to shooting incidents or crime guns, MPD can conduct follow-up interviews to gain additional intelligence. Depending on the evidence identified, the suspect's probation or parole may be revoked, which can prevent further violence.

MPD also works with state, federal, and local prosecutors to build cases that enable enhanced sentencing for dangerous gun offenders. The CGIC prioritizes case acceptance for "serial shooters" and works to present cases to the District and U.S. Attorney's Office for the prosecution of convicted felons possessing crime guns that have been linked to shooting incidents through NIBIN.

## The NIBIN Process

MPD officers collect ballistic evidence from crime scenes or from test fires of recovered crime guns. The evidence is placed in inventory, and recovered firearms are transported to MPD's Property Control Section (PCS) to be test fired for NIBIN entry. Recovered guns are also checked by the eTrace officer to ensure they are properly identified on department evidence forms, and the information is submitted to eTrace.

ATF-certified NIBIN technicians pick up the evidence from PCS and bring it to the NIBIN lab, where they enter shell casings into NIBIN for correlation. The system correlates ballistic images against others submitted in the region, and generates a list of possible matches, or "potential candidates for comparison" (PCCs). The technicians then examine the PCCs visually to verify whether the markings are a likely match to

those on the entered casing. If a “high-probability hit”<sup>49</sup> is identified, the technician assigns a case number to the linked incidents, creating a NIBIN case.

An ATF-contracted investigator triages the NIBIN cases and prioritizes them, based on factors such as links to certain types of crimes or offenders. The investigator then notifies the MPD officers who originally investigated the incidents, their commanding officers, and the relevant investigators, who all work together to assess the information and develop leads.

## Hit Notifications and Triage Protocols for Follow-up Investigations

NIBIN hit notifications are classified as either “situational awareness level, “district level,” “investigations level,” or “CGIC priority level.”

Situational awareness level notifications (e.g., “shots fired” incidents with no suspect, victim, or witnesses) are not assigned to any unit for follow-up, but are used for informing the department’s patrol division on deployment strategies based on the geographic location of the incidents.

District level notifications are provided to the district police officers who originally responded to and investigated the incidents. These incidents are usually less serious in nature (e.g., shots fired).

Investigations level notifications are provided to detectives in the Investigations and Intelligence Bureau in response to the more serious incidents (e.g., armed robbery with shots fired) that are investigated by these individuals. For both district and investigations level notifications, the MPD personnel originally responsible for investigating each of the linked incidents are required to review the NIBIN case to determine what additional investigative steps are warranted. For example, investigators may review the NIBIN case to determine if there are any additional witnesses who should be interviewed to inform the investigation.

CGIC priority-level notifications are provided to all CGIC personnel for immediate awareness and assigned to CGIC investigators for follow-up. CGIC investigators work with the case officers who were involved in investigating the original incidents to develop a collaborative investigative strategy for these cases. CGIC priority level NIBIN cases are those that are linked to one or more of the following types of crime or scenarios:

- homicide,
- officer-involved shooting,
- armed robbery involving gangs, businesses, or crews,
- three or more gun-related crimes,

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49. These “high probability hits” (or “leads” as Milwaukee refers to them) are not yet confirmed. As mentioned previously, in order to confirm a hit, the physical evidence must be examined under a microscope to verify that the casings were fired from the same firearm. Since MPD does not have its own crime lab and trained firearms examiners, it must rely on the Wisconsin State Crime Lab to confirm NIBIN hits. This involves sending the physical evidence to the WSCL for confirmation, and it can take several months to obtain results. MPD is able to achieve a much faster turnaround time by using these preliminary “high-probability hits” as investigative leads, so investigators can act on the information immediately. It is important to note that these “NIBIN leads” are not sufficient for probable cause. In order for NIBIN evidence to be used in court, a higher level of confidence in the match is required, which involves having the hit confirmed by the WSCL.

- a recovered crime gun,
- firearms trafficking, or
- a repeat firearm offender.

It is important to note that as new evidence is entered into NIBIN and more high-probability hits are identified, a prior, lower-level notification can be elevated to CGIC priority level (e.g., if a lower-level incident, such as shots fired, is linked to a homicide). Sample NIBIN hit notifications are provided in Appendix C.

Unlike in Denver, the majority of Milwaukee's NIBIN cases are assigned to either the CGIC or other units for follow-up. The triage process is conducted to determine which cases will be assigned to which investigators, based on the four classification levels described above (with the exception of "situational awareness" cases). The Milwaukee CGIC's process for assigning NIBIN cases has gone through several different iterations since the start of the program. As of October 2016, approximately 30% of NIBIN cases have been assigned to CGIC investigators for follow-up, with 28% assigned to investigations and district personnel, respectively. In early iterations of the process, the CGIC team realized that they could not investigate every NIBIN case, and the "four-level" triage approach has helped to distribute the cases to the appropriate units for follow up.

## **Weekly CGIC Partner Meetings to Share Intelligence and Act on NIBIN Leads**

Like Denver, the CGIC holds weekly NIBIN lead meetings in which CGIC investigators and other involved units discuss open NIBIN cases and any relevant investigative work to be done. This is an opportunity for investigators to share intelligence gained as the result of NIBIN leads generated and subsequent follow-up work. It also provides an opportunity for officers and investigators to request additional analytical or operational support for investigations.

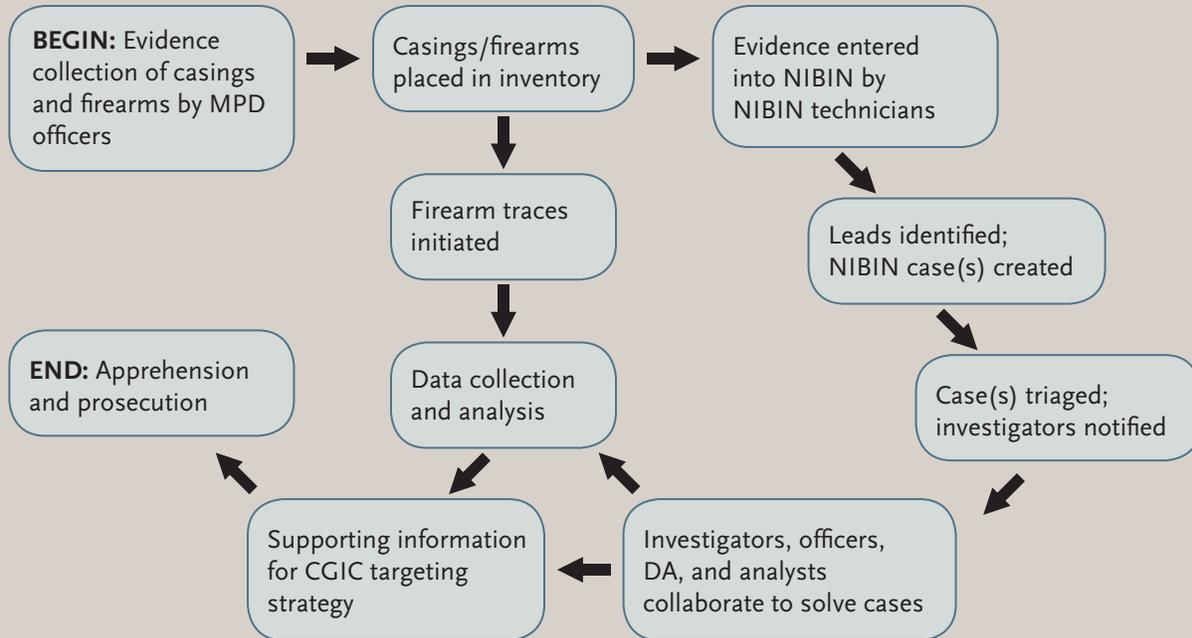
CGIC partners such as probation and parole, state attorneys, federal prosecutors, and surrounding jurisdictions may also attend the meetings, depending on the details of the cases that are up for discussion. These meetings often center on intelligence gathering and sharing, and operational strategies for preventing further violence by focusing on chronic offenders.

If investigators are able to build a case against a suspect based on a NIBIN lead, and charges are brought against the suspect, the lead (or high-probability hit) will need to be confirmed in order to be used in court. MPD has an agreement with the WSCL in which MPD submits high-probability NIBIN hits associated with charged cases to the crime lab for confirmation. These submissions are verified by a firearms examiner, and a report of lab findings is issued to MPD. This information can then be used to support prosecution strategy at trial. Figure 5 displays a model of the CGIC investigative process.

**Figure 5: Model of CGIC Process**

Figure 5: Model of MPD's CGIC investigative process from the point at which a firearm or ballistic evidence is collected to apprehension and prosecution of the offender.

The CGIC process begins as either gunshot detection technology or 911 calls for service notify MPD to dispatch officers to the scene of shots fired.



## MPD Efforts Seem to Yield Positive Results

Milwaukee's CGIC program was only formally established in March 2015; however, there have already been several indications of its success. **Between November 2013 (when MPD first acquired NIBIN equipment) and May 2016, MPD's Intelligence Fusion Center (IFC) has created 970 NIBIN cases (a "case" refers to two or more incidents that are linked to the same gun). This is more than triple the number of cases that the Wisconsin State Crime Lab (WSCL) created in the previous 10 years (298).**<sup>50</sup>

In addition, MPD has made substantially more arrests of suspects linked to NIBIN incidents since acquiring its own NIBIN equipment. Between January 2010 and December 2015, the WSCL generated 179 NIBIN cases and (beginning in November 2013) MPD's IFC generated 734 NIBIN cases. MPD has made 311 arrests of suspects linked to those NIBIN cases generated by the WSCL, as compared to 535 arrests linked to NIBIN cases generated by the IFC.<sup>51</sup> This reflects MPD's ability to generate more investigative leads due to having in-house equipment and dedicated and trained personnel who are able to focus on the rapid processing of ballistic evidence and NIBIN data specifically for the city of Milwaukee. In addition, MPD has been able to achieve a much faster turnaround time for NIBIN results by focusing on preliminary high-probability hits (or "leads"), as opposed to waiting for hits to be confirmed by the crime lab.

50. The WSCL processed MPD's NIBIN data from 2003 to 2013, before MPD acquired its own NIBIN equipment in November 2013.

51. These arrests are defined as any arrest for an incident associated with a NIBIN case.

## What the Data Say About the Criminal Histories of Milwaukee's Gun Violence Offenders

From November 2013 to mid-September 2015, 2,124 people have been arrested in possession of a firearm in Milwaukee.

- Of these people, 1,279 (60%) have been arrested in possession of a firearm more than once in the past 5 years.
- As of mid-September 2015, these 2,124 people were arrested a total of 4,608 times by MPD over the past 5 years.
- Arrest charges include homicide, armed robbery, aggravated assault, and various other weapons offenses.

Similar to the findings from other criminal history reviews of violent firearms offenders, these data suggest that many of these individuals are repeat violent offenders who may be responsible for a substantial proportion of the gun crime in Milwaukee.

From November 2013 through December 2015, MPD conducted a total of 6,248 NIBIN entries<sup>52</sup>, and identified a total of 2,607 high-probability hits, creating a total of 734 NIBIN cases to be used for investigative leads. Entries represent the number of shell casings entered into NIBIN for analysis, while high-probability hits represent the number of times evidence is linked to existing evidence in the NIBIN system. Each time a high-probability hit is identified, a case is created which represents all the linked incidents. Figure 6 displays the number of NIBIN entries, high-probability hits identified, and cases created from 2014 to 2015 (MPD only started entering evidence into NIBIN in November 2013, so 2013 numbers are not included because they are not comparable to other years).

Since 2009, MPD has submitted 12,570 crime guns to eTrace. Figure 7 displays the number of crime guns submitted to eTrace each year from 2009 to 2015.

As discussed in the previous chapter, it can be difficult to quantify CGIC successes. Milwaukee's CGIC is relatively new, and is still refining many of its processes. Due to technology limitations, the CGIC is not currently tracking outcomes such as the number of prosecutions stemming directly from NIBIN investigations. However, the data they are

Figure 6: Number of NIBIN entries, high-probability hits identified, and cases created by MPD's CGIC in 2014 and 2015

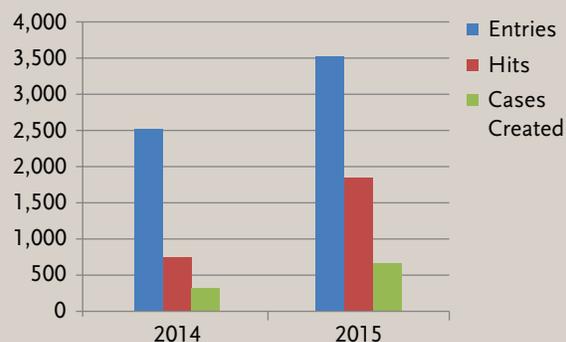
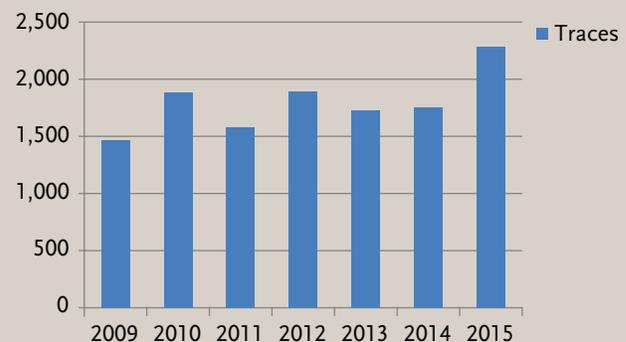


Figure 7: eTrace Submissions 2009–2015



52. Including recovered shell casings and test fired evidence.

collecting on their processes indicates that they are taking steps to implement the CGIC model effectively with regard to comprehensive evidence collection, timeliness, and follow-up. In addition, success stories from the CGIC are anecdotal evidence that they are, in fact, succeeding in apprehending dangerous offenders. The following case examples demonstrate how the CGIC team works together to prevent gun crime.

## CGIC Success Stories in Milwaukee

### Case Example #1

Between November 29, 2013 and February 10, 2014, there were 96 crime incidents within a 1 mile radius in Milwaukee, with 208 total Part I and Part II offenses (Figure 8 displays a map of the locations of these 96 incidents, indicated by green dots). A total of 175 (84%) of the 208 offenses were firearm offenses. Of the 175 firearm offenses, NIBIN technicians found a link between nine incidents involving the same firearm, three of which were armed robberies (in Figure 9, the red dots indicate the nine incidents linked through NIBIN). Using data from both ShotSpotter and the linked NIBIN incidents, the CGIC developed a geographical profile suggesting an area of potential future incidents (indicated by the red circle). Mapping out the incidents in which the same firearm was used allowed MPD to more efficiently target the area where the armed robbery crew was operating.

Figure 8

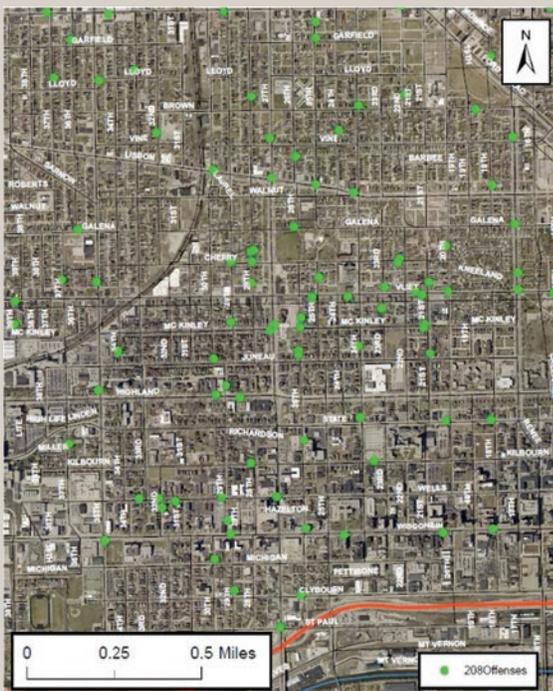
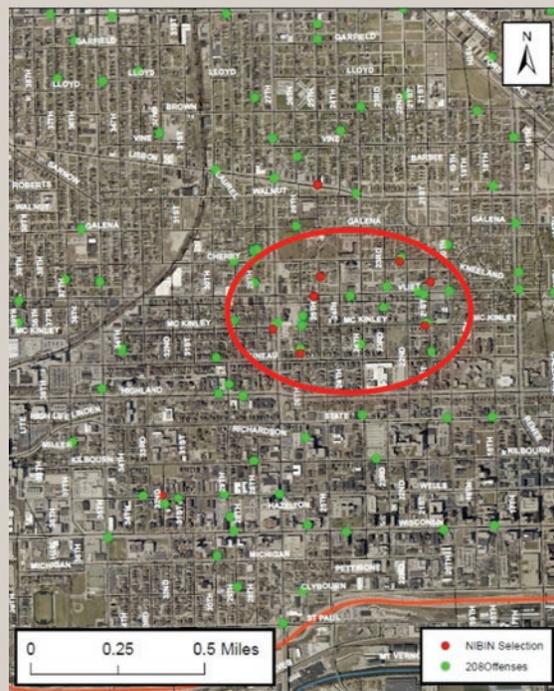


Figure 9



ATF task force officers and detectives deployed surveillance and patrol efforts in the area of the linked offenses. As a result, plainclothes detectives and patrol officers were in the area when a fourth robbery was committed. Three suspects were observed fleeing the scene and were arrested. The suspects included two juveniles and one adult who was on probation for armed robbery. Upon arrest, one of the suspects was in possession of a .40 caliber semi-automatic pistol. The gun was subsequently test fired for NIBIN entry, and the casings were found to be linked to the previous nine incidents.

The juveniles were both adjudged delinquent for armed robbery and possession of a dangerous weapon by a child. The adult suspect, charged with being a felon in possession of a firearm, entered a guilty plea in Milwaukee County Circuit Court. The suspect was sentenced to three years in prison and three years of supervised release.

## Case Example #2

In January 2015, a CGIC Crime Analyst and an MPD Detective attended a multi-jurisdictional armed robbery briefing. Members of MPD, ATF, and several jurisdictions determined that a series of five armed robberies that had occurred in four neighboring cities were likely committed by the same individuals. Two incidents occurred in West Allis, and the others occurred in Brookfield, Milwaukee, and Waukesha. The incident in Waukesha included a homicide of a gas station owner. The suspects were described as wearing similar, distinctive clothing and masks. Shots were fired in three of the five incidents, and casings from each of these incidents were collected for NIBIN analysis.

As part of a follow-up on a separate armed robbery, a detective assigned to the Milwaukee Robbery Task Force, along with officers from the West Allis Police Department, executed a search warrant at a residence. During the search, a suspect was taken into custody and a Hi Point 9MM Model CP Semi-Automatic Pistol, two masks, and clothing similar to that described in the Waukesha robbery/homicide were located inside the residence.

The CGIC conducted NIBIN entries of the casings recovered from the Waukesha, Brookfield, and West Allis armed robberies, and the casings were determined to be fired from the same weapon. The pistol recovered during the search was test fired, and the casings also matched those from the three armed robberies. Detectives interviewed the suspects, and when confronted with the evidence, the suspects confessed to the series of armed robberies. Multijurisdictional partnerships coupled with the CGIC's investigative capabilities proved essential to solving this case. In all, eight shooting incidents were matched to the Hi Point 9MM Pistol. As of October 2016, two suspects were pending trial for first-degree homicide, armed robbery, being a felon in possession of a firearm, and first-degree recklessly endangering safety.

## Case Example #3

In April 2014, MPD's NIBIN technicians found a correlation between shell casings from a "shots fired" incident and a commercial armed robbery involving a non-fatal shooting. CGIC investigators, working in conjunction with the lead MPD detective on the case, developed additional leads to approximately 10 commercial armed robberies occurring over three months in five districts in Milwaukee.

The CGIC team worked with investigators to identify the robbery suspects, and while tracking their activities, noticed that one of the suspects placed an ad to sell a firearm on the Internet. An undercover ATF agent followed up on the online ad and purchased the firearm from the suspect. Additional investigative work identified more information and suspects, and allowed investigators to identify the potential “hub” location of suspected criminal activity. The firearm purchased from the suspect gave investigators probable cause to monitor this location. Within a five-day period, four additional commercial robberies were committed in the vicinity.

CGIC investigators and MPD district personnel continued to monitor the hub location and other potential targets. During the surveillance, a vehicle identified in one of the robbery incidents was found at the suspect’s home, along with additional suspects involved in the armed robbery crew. Within a week, two suspects were taken into custody following the robbery of an auto parts store. Two additional suspects were arrested for their participation in the initial robberies, as well as several additional business armed robberies. In all, the robbery crew was responsible for 25 commercial armed robberies. All four suspects have been charged federally with violation of the Hobbs Act, which prohibits robbery affecting interstate or foreign commerce, and using a firearm in connection with a violent crime. If convicted, potential penalties range as high as 20 years.

## Conclusion

The data and case examples discussed above suggest that Milwaukee’s CGIC program is contributing to the arrests of violent firearm offenders. Based on the use of NIBIN, eTrace, ShotSpotter, and other technologies and information-sharing partnerships, MPD has been able to identify and link shooting incidents around the city and apprehend perpetrators of gun crimes who might otherwise not be caught. Because NIBIN cases are assigned to many different units within MPD, it has been difficult for the CGIC to track outcomes in terms of the number of suspects arrested or prosecuted based on a NIBIN investigation. However, it appears that MPD is successfully implementing aspects of the CGIC process, such as comprehensive evidence collection and submission to NIBIN, and the timeliness of analyzing NIBIN data.

The CGIC continues to improve and refine its processes. As it does, the CGIC should work to track its results, and develop data protocols to demonstrate how the program is working. For example, MPD should work to monitor the clearance status and outcomes of NIBIN investigations, integrating NIBIN data with other department databases to track these results. In order to properly assess the impact of the CGIC program, it is crucial to establish clear performance measures, such as the number of cases solved due to NIBIN-related leads. Since the writing of this report, MPD has already begun to improve its case management and data collection procedures for NIBIN cases (these developments will be discussed in more detail in Chapter 6). Future evaluations of the Milwaukee CGIC could potentially explore the impact of these outcomes on crime rates in the city.

Those working on the Milwaukee CGIC initiative are confident that NIBIN technology provides the tactical and strategic opportunities to reduce gun crime, and that it is having a dramatic impact on violence in the community. Based on our observations and accounts by the CGIC staff, the initiative appears promising, and MPD should continue its efforts to track the CGIC’s success.

# Chapter 5: Chicago (IL) Crime Gun Intelligence Center

## Introduction

Chicago is the third largest city in the nation,<sup>53</sup> with a population of more than 2.7 million residents.<sup>54</sup> As of 2010, approximately 45% of residents were white, 32.9% were African American, and 5.5 percent were Asian. With regard to ethnicity, 28.9% identified as Hispanic or Latino.<sup>55</sup>

Chicago is considered one of the most dangerous cities in America for gun violence. Although it does not have the highest number of shootings per capita,<sup>56</sup> the sheer number of shootings and gun-related homicides that occur in the city far surpass the numbers of those in other comparable U.S. cities.<sup>57</sup> Figure 10 illustrates the total number of homicides, robberies, and aggravated assaults committed with a firearm in Chicago per month from January 2009 through December 2015.<sup>58</sup> Firearm-related homicides rose until 2012, with 504 total reported homicides, 436 (86%) of which were committed with a firearm.<sup>59</sup> That year, Chicago had more homicides than any other city in the nation. Since 2012, homicides declined to 419 in 2013 and 407 in 2014.<sup>60</sup> However, in 2015 homicides increased again to near-2012 levels, with 489 total homicides, 419 (85%) of which were firearm-related.<sup>61</sup> Homicides have continued to rise, with a total of 764 homicides recorded by CPD in 2016, 90% of which involved a firearm.<sup>62</sup> Police Superintendent Eddie Johnson attributes lax gun laws and weak penalties for gun offenders as the drivers of gun crime in the city.<sup>63</sup> The magnitude of gun violence in Chicago has pushed collaborative partnerships and enhanced gun violence investigations to the forefront of strategies in place to reduce homicides and shootings.

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53. "The largest US cities: Cities ranked 1 to 100," City Mayors. [http://www.citymayors.com/gratis/uscities\\_100.html](http://www.citymayors.com/gratis/uscities_100.html)

54. U.S. Census Bureau, 2015. <https://www.census.gov/quickfacts/table/PST045214/1714000/accessible>

55. U.S. Census Bureau, 2015. <https://www.census.gov/quickfacts/table/PST045214/1714000/accessible>

56. Francesca Mirabile, "Chicago Isn't Even Close to Being the Gun Violence Capital of the United States," *The Trace*, October 21, 2016. <https://www.thetrace.org/2016/10/chicago-gun-violence-per-capita-rate/>

57. <http://urbanlabs.uchicago.edu/attachments/store/2435a5d4658e2ca19f4f225b810ce0bdb9231cbdb8d702e784087469ee3/UChicagoCrimeLab+Gun+Violence+in+Chicago+2016.pdf>

58. Gun Crime Statistics provided by the Chicago Police Department Research and Development Division

59. Jeremy Goner, "Chicago homicides, shootings up in 2015," *Chicago Tribune*, March 31, 2015 <http://www.chicagotribune.com/news/local/breaking/ct-chicago-violence-met-20150331-story.html>

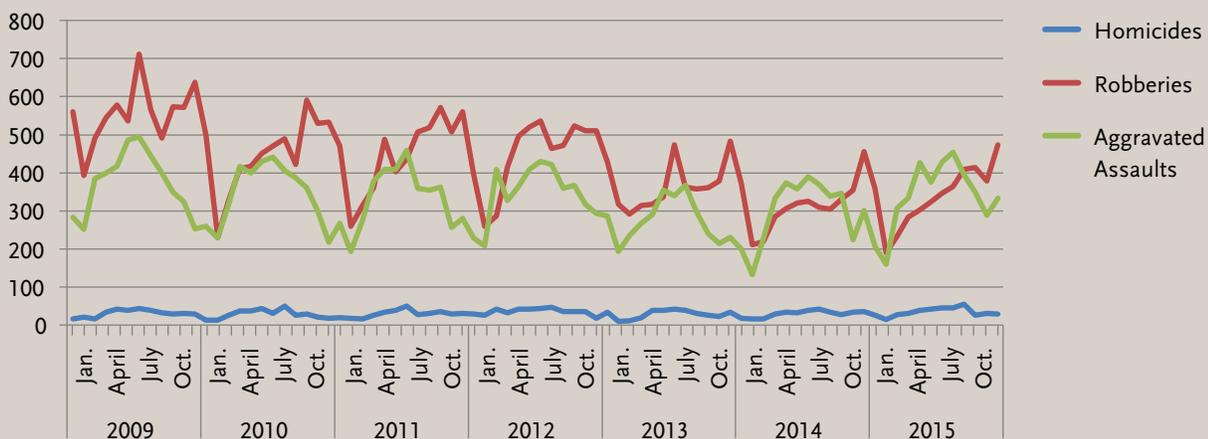
60. Chicago Police Department, "Statistical Reports- Year End, 2014."

61. Gun crime statistics provided by the Chicago Police Department Research and Development Division.

62. <http://urbanlabs.uchicago.edu/attachments/store/2435a5d4658e2ca19f4f225b810ce0bdb9231cbdb8d702e784087469ee3/UChicagoCrimeLab+Gun+Violence+in+Chicago+2016.pdf>

63. Brandis Friedman, "Frustrated top cop calls for tougher gun laws," *Chicago Tonight*, August 1, 2016 <http://chicagotonight.wttw.com/2016/08/01/frustrated-top-cop-calls-tougher-gun-laws>

Figure 10: Monthly Data, Chicago Gun Crime 2009–2015



## Crime Gun Intelligence Center

The Chicago Crime Gun Intelligence Center (CGIC) began operations in June 2014.<sup>64</sup> The CGIC is embedded within the ATF’s Chicago Field Division and it is managed primarily by ATF personnel on a day-to-day basis. Chicago CGIC personnel include intelligence research specialists, ATF NIBIN analysts, Illinois National Guard analysts, and an ATF intelligence officer.

The CGIC’s goal is to help identify, investigate, and prosecute individuals who are referred to as active “trigger pullers” in Chicago. As in Denver and Milwaukee, the Chicago ATF and CPD were using NIBIN prior to the establishment of the Chicago CGIC. However, the CGIC process allows the ATF and CPD to collaborate systematically to link incidents of gun violence to the same firearm more quickly than in the past, develop investigative leads that would have previously been impossible, and use this information to strategically investigate gun crime and to help stop chronic firearms offenders.<sup>65</sup>

## Components of Chicago’s CGIC Program: Overview

When considering the four critical “real-time NIBIN” phases in the CGIC model (comprehensive evidence collection, timeliness, investigative follow-up, and the feedback loop),<sup>66</sup> several different entities in Chicago are responsible for different stages in the CGIC process. Compared to the Denver and Milwaukee CGIC models, which are more centralized, Chicago’s CGIC process incorporates multiple agencies that operate in different locations. The CPD Firearms Laboratory, the Illinois State Police (ISP) laboratory, ATF investigators and CGIC staff located at ATF Chicago Field Division

64. Mitch Smith, “Law enforcement touts Crime Gun Intelligence Center in Chicago,” *Chicago Tribune*, June 4, 2014. <http://www.chicagotribune.com/news/local/breaking/chi-law-enforcement-touts-crime-gun-intelligence-center-in-chicago-20140605-story.html>

65. Ibid.

66. See “Phases to Implementing NIBIN Effectively in the CGIC Model,” in Chapter 2

headquarters, and CPD detectives, all play important roles during a crime gun investigation. Below is an overview of these components. A detailed description of the NIBIN process will follow.

## **CPD Firearms Laboratory**

The CPD firearms laboratory is located under CPD's Forensic Services Division (FSD). Firearms laboratory personnel organize and prioritize all ballistic evidence and test fire recovered firearms for entry into NIBIN. The firearms lab is able to preserve all test-fired bullets and spent shell casings for analysis. The lab has three NIBIN machines, enabling firearms technicians to submit ballistic evidence to NIBIN on-site.

## **Illinois State Police Forensic Science Center**

The Illinois State Police (ISP) lab is responsible for examining all of CPD's submitted ballistic evidence in NIBIN. The ISP lab has more than 20 forensic scientists who conduct NIBIN correlations and review the results to determine if there are any high-probability hits. In addition to reviewing NIBIN correlations for CPD, the ISP lab is mandated by state law to provide forensic services to all law enforcement agencies in Illinois, which may include submitting and reviewing their evidence in NIBIN.

## **CGIC Personnel**

Chicago's CGIC personnel are responsible for analyzing NIBIN results to see what investigative follow up can be done. Depending on their findings, the cases may be referred to investigators at the ATF Field Division, or to relevant CPD detectives for follow-up. CGIC personnel also use eTrace to identify the initial point of retail sale for recovered crime guns, which is useful for identifying potential witnesses, straw purchasers and gun traffickers.

## **CPD Detectives and ATF Investigators**

If CGIC analysts develop a case referral<sup>67</sup> for further investigation, they notify the involved ATF investigators and CPD detectives of any new details about the investigative lead. Investigators and detectives use this information to follow up on the leads and apprehend gun offenders before they can commit additional acts of violence.

## **Other CGIC Partners**

Additional CGIC partners include the Illinois National Guard, the Chicago High Intensity Drug Trafficking Area (HIDTA) Program, the FBI, other local and state law enforcement agencies, and state and federal prosecutors. The Illinois National Guard has assigned two analysts to assist CGIC personnel with crime gun investigations. The Chicago HIDTA program and the FBI are also CGIC partners that may become involved

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67. Case referrals are discussed in further detail in the "NIBIN Process" section below.

with investigations if gun offenders are implicated in other crimes that fall under these agencies' purview.

The Chicago CGIC also shares information with local and state law enforcement agencies in suburban Illinois and northern Indiana. The CGIC partners with law enforcement entities in Indiana due to the prevalence of Chicago crime guns originating from Indiana. The U.S. Attorney's Offices for the Northern District of Illinois and the Northern District of Indiana are also important partners to the Chicago CGIC. Federal prosecutors use NIBIN data generated by the CGIC as a consideration when determining which cases to prosecute federally, and to seek stronger penalties for convicted gun offenders by using NIBIN to link crimes and demonstrate a pattern of repeat offending.

## **NIBIN Process**

The crime gun investigation process typically starts with the Chicago Police Department. Crime scene investigators from CPD's Forensic Services Division (FSD) collect shell casings and other evidence from crime scenes and submit the evidence to inventory. District couriers transport all inventoried ballistic evidence recovered from the previous night's crime scenes to the FSD Firearms Laboratory each morning. If officers recover or seize a firearm, it is inventoried and taken to the lab to be test-fired for entry into NIBIN.

Importantly, CPD submits all ballistic evidence to NIBIN. But, to do this, firearms technicians have to prioritize when evidence is reviewed and submitted. Prioritizing evidence is not ideal in the CGIC model; it is preferable to enter *all* ballistic evidence promptly. However, CPD believes it is necessary to focus resources on the most serious crimes due to the high volume of gun violence and forensic evidence recovered from shootings in Chicago. Guns and shell casings involved in a homicide receive the highest priority, followed by evidence related to:

- shootings that CPD thinks are retaliatory or that may result in retaliation,
- incidents that are in locations which suggest they may be connected to previous gun crimes,
- other violent crime incidents including aggravated assaults and robberies,
- incidents that have generated significant media attention, and
- incidents that cause major concern for residents.

Because of the volume of ballistic evidence, the process of submitting evidence to NIBIN can range from a day to a week or more. For example, evidence from a homicide that occurred overnight will be entered the following day. However, shootings that result in no reported injuries or those resulting only in property damage take a lower priority. Shell casings from those crimes will still be collected, but they may not be entered into NIBIN immediately. Those casings will eventually be entered in the order they were recovered, using the "FIFO" (first in, first out) method. CPD is usually able to catch up on NIBIN entries during the winter months as gun-related violence tends to slow down, and there are fewer shell casings being submitted to the lab.

Prior to submitting evidence to NIBIN, firearms lab personnel conduct an initial review of the recovered shell casings in order to determine whether multiple firearms

were used. For example, if 9 mm, .22, and .40 caliber shell casings are recovered from a crime scene, it is apparent that multiple firearms were used. Other times, officers may only recover multiple 9 mm shell casings from a crime scene. An initial look at the casings under a microscope by trained laboratory technicians can sometimes identify clear differences in the markings, which suggest that multiple firearms or shooters may be involved. Lab technicians visually compare the shell casings using a microscope to determine which casings have the clearest markings. The casing with the clearest or most defined markings will be entered into NIBIN for analysis. The other casings are retained as evidence, in case there is a need to re-examine them at some point in the future.

Unlike the Denver and Milwaukee CGICs, which conduct NIBIN correlations in-house, the Illinois State Police (ISP) lab conducts NIBIN correlations and analyzes the results for the Chicago CGIC. After CPD's gun lab technicians enter shell casings into NIBIN, the ISP forensic lab reviews the correlation results for possible hits to evidence from other jurisdictions in Illinois, Milwaukee, and Lake County, Indiana. If ISP forensic scientists identify a high-probability hit, they notify the CPD firearms lab, giving CPD an investigative lead.<sup>68</sup> According to ISP lab officials, it takes approximately one to two days to get these hit notifications back to CPD.

After receiving a hit notification from the ISP lab, the CPD firearms lab generates a Ballistics Information Alert (BIA) report. A BIA report lists all of the ballistic evidence linked to a single firearm and highlights case details for each linked incident (a sample BIA report can be found in Appendix D). The firearms lab then forwards the BIA report to multiple parties, including CPD's Chief of Detectives, the detectives who are investigating the NIBIN-linked gun crimes, relevant Area Commanders, and CGIC personnel located at the ATF field office. The BIA serves to notify all involved parties of the NIBIN findings.

CGIC analysts receive the BIA reports from the CPD firearms lab and review the cases associated with the linked NIBIN incidents. From the information retrieved from the BIA reports, the analysts look at the incident reports connected to the crime gun. They examine the timelines, locations, and narratives to identify patterns or commonalities, such as similar suspect descriptions, potential links to gang-related activity, and similar times or locations of shootings to determine whether the lead is "actionable". If the CGIC discovers that a crime gun is associated with numerous incidents or violent crimes, or if there are common characteristics in the incident reports associated with the crime gun, the CGIC groups those incidents together and may designate that gun case for referral to CPD or ATF investigators.

When developing a referral, the CGIC personnel emphasize the commonalities in the incident reports, any witness statements, and other investigative suggestions based on those leads. Once the analysts develop a case referral, the ATF intelligence officer is responsible for assigning the referred case to the appropriate ATF group or CPD detectives.

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68. Similar to in Milwaukee's CGIC program, the Illinois State Police lab only identifies preliminary "high probability hits" unless specifically requested to do a confirmation by CPD (usually if required for trial). Confirming a hit is much more time-consuming because it requires CPD to send the physical evidence to the ISP lab so it can be examined under a microscope. The ISP lab is able to get results back to CPD more quickly by simply identifying high-probability hits based on the images, so CPD can act on these leads immediately.

CGIC referrals may be assigned to a specific ATF group based on the geographical locations of the shootings, or if the shootings are related to an ATF group's investigative mission. For example, if the shooting involves a firearm that is suspected to be trafficked, the case may be referred to a firearms trafficking group. Other ATF groups include gang-crime investigative groups, a Project Safe Neighborhoods group, and a group that investigates shootings in CPD's Area North. Alternatively, if a case involves a homicide that a CPD detective is already assigned to, the case would be referred to that detective.

By developing these case referrals, the CGIC analysts have a bird's-eye view of the gun crime occurring in the city. Because of this, the CGIC is able to follow up with investigators on their cases that are connected to other shootings, and highlight potential new areas for investigation. This is useful because in many cases, investigators do not have time to analyze the linkages themselves, and may be unaware that one shooting incident is related to multiple other shootings, especially if those shootings have happened in different areas of the city, or in a different jurisdiction. It is important that CGIC analysts get this information to investigators quickly, because if they don't receive these investigatory leads within a couple of days, they will have already shifted their attention to more recent shootings.

## Investigation Process

According to ATF officials, the average time from when evidence is recovered and submitted to NIBIN to when the CGIC refers a case to investigators is two to three weeks. For high-priority cases such as homicides, evidence submission is prioritized and submitted the day it is received, and the turnaround time can be closer to a few days. Given the level of gun violence in Chicago and the investigative caseloads, by the time CPD detectives receive a BIA report, they will often be addressing more recent shootings and may not have time to revisit prior investigations. The caseload volume in Chicago highlights the need for additional technicians who can enter evidence into NIBIN, as well as additional personnel who can be solely dedicated to investigative follow-up.

If CPD detectives are unable to pursue a case, ATF agents and CPD task force officers assigned to specific investigative groups may provide additional follow-up that would not be possible otherwise. ATF agents and task force officers usually do not take over a crime gun investigation unless CPD detectives specifically request the ATF's help. The ATF coordinates with CPD to determine where assistance is needed, and to ensure investigative efforts are not duplicated. See Figure 11 for a model of Chicago's CGIC process.

## Gun Tracing and Serial Number Restoration at CPD

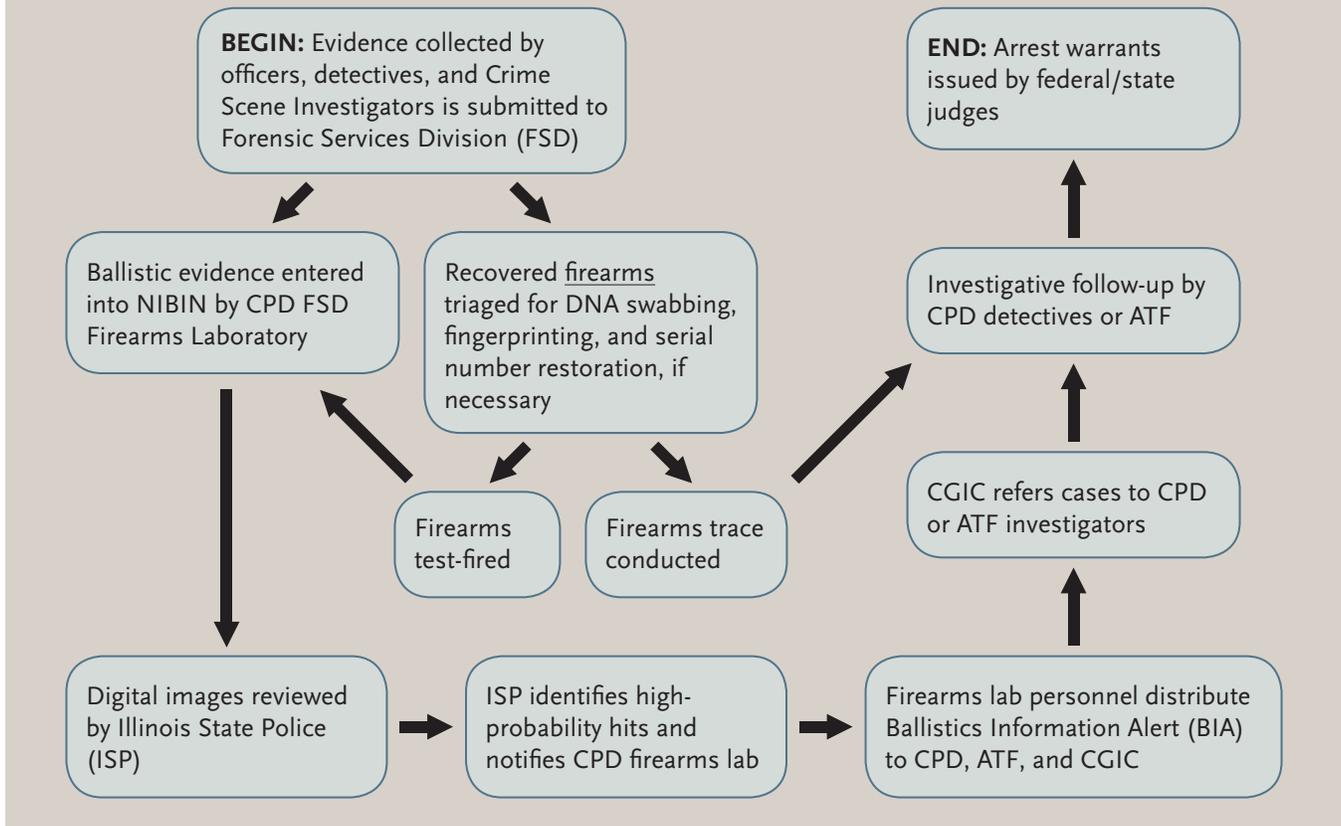
One of the most common reasons a firearm cannot be traced is if the serial number is not correctly identified, and identifying the serial number is especially challenging if it has been obliterated.<sup>69</sup> Unlike many departments that need the ATF's National Tracing

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69. U.S. Department of Justice, Bureau of Alcohol, Tobacco, Firearms, and Explosives, 2011. "Firearms Tracing Guide—Tracing Firearms to Reduce Violent Crime." <https://www.atf.gov/file/58631/download>

**Figure 11: Model of Chicago's CGIC Process**

Figure 11: A visual overview of the Chicago CGIC process.



Center to help them identify firearms with obliterated serial numbers, CPD's firearms lab personnel are experts at using specialized tools to restore obliterated serial numbers.

The CPD firearms lab began restoring serial numbers in 2014, and is able to restore approximately 87% of the obliterated serial numbers on guns it receives. Since 2014, the lab has been able to successfully process 2,002 firearms with obliterated serial numbers.<sup>70</sup> This is important because the ATF views obliterating a serial number as a key indicator of firearms trafficking, as it is an attempt to prevent law enforcement from discovering the origin of the gun. Once the firearm's information is restored, the crime gun can be traced through eTrace.

## CPD's Gun Parts Laboratory

Another unique feature of the CPD's FSD firearms lab is the gun "parts laboratory." The FSD lab has a workstation and a collection of reference firearms and spare parts that can be used to restore inoperable recovered guns. If a damaged gun is submitted, lab gunsmiths are usually able to make any necessary repairs to make it capable of being

70. CPD Forensic Services Division presentation at the 2015 IACP Conference in Chicago, IL

## Partial Firearm Reconstructed Connects to Chicago Homicide

During a site visit to the Chicago Police Department's Forensic Services Division, lab personnel cited an incident in which an individual found and turned in a handgun slide to CPD. The recovered handgun slide was subsequently submitted to the lab for processing. There were no other components of the gun or ballistic evidence recovered. A lab gunsmith was able to process the handgun slide despite the lack of other parts of the firearm or evidence. While the slide is only one part of a functional handgun, it is the key component for creating ballistic markings on shell casings. The gunsmiths were able to reconstruct the firearm from the spare parts laboratory to make the handgun operable for test fire.

Firearms lab personnel then successfully test fired the reconstructed firearm and submitted the casing to NIBIN. Because the firing pin, extractor, and the breach face were all housed in the original slide, lab technicians were able to analyze the most important markings on the shell casing for identification. Despite not having other parts of the firearm, lab technicians were able to link the recovered slide to a shell casing found at the scene of a homicide in the city, based on the unique markings on the test fired shell casing. Because this is an on-going investigation, CPD was not able to comment on additional case details. Figure 12 displays a picture of the recovered slide.

Figure 12



test-fired. All test-fired shell casings from a repaired gun are submitted to NIBIN for analysis. Any markings on those shell casings that have been made by the new parts are excluded from any comparison analysis. If this is the case, a firearms examiner prompts the software to ignore those markings.

## Measuring Success in a New Process

CPD began submitting some of its firearm evidence to NIBIN in April 2013. At that time, when the program was just getting under way, CPD was only submitting test-fired evidence from recovered crime guns (instead of all evidence, including recovered shell casings). As an initial performance indicator, the department documented the number of test fires it was able to submit. From April through December 2013, CPD's firearms lab technicians entered 3,890 test-fired shell casings into NIBIN. From this evidence, the lab was able to generate 96 BIA reports providing potential leads to investigators.

## Increasing Ballistic Evidence Entries

In 2014, CPD technicians were able to begin submitting both test-fired shell casings and shell casings recovered from crime scenes to NIBIN. That year, CPD firearms lab personnel submitted 5,509 shell casings to NIBIN, resulting in 295 BIA reports. In 2015,

the technicians submitted 8,098 total shell casings, generating 824 BIA reports. From January 2016 through October 31, 2016, the firearms laboratory technicians submitted 8,432 total shell casings. **The firearms laboratory was able to generate 950 BIA reports<sup>71</sup> in the first 10 months of 2016, a significant increase over the previous three years.<sup>72</sup>** Since 2015, the CPD firearms lab has led the nation as the lab with the most NIBIN entries. Figure 13 shows the increase in NIBIN entries and BIA reports generated from January 2013 through October 2016.

**Figure 13: Total Shell Casings Entered into NIBIN and BIA Reports Generated by CPD\***



\*Data provided by CPD Forensic Services Division

## Reducing turnaround time on NIBIN leads from ISP

As another initial indicator of success, Chicago has dramatically reduced the amount of time it takes to receive NIBIN results from ISP. Prior to the establishment of the CPD firearms laboratory in 2013, CPD had to send its evidence to the ISP lab to be entered into NIBIN and would wait, sometimes as long as a year, to get a confirmed hit back. The ability of CPD to conduct its own NIBIN entries, and to receive preliminary (unconfirmed) hits back from ISP in a short timeframe, has allowed for a much faster turnaround time for getting NIBIN results back to investigators. Now, according to ISP lab officials, it only takes one or two days to get preliminary hit notifications back to CPD.

## NIBIN Success Stories

### NIBIN provides investigatory lead in a homicide and 2 other shootings

ATF officials cited one incident in which a man was shot in his apartment in an apparent homicide attempt. The victim was injured, but survived. One week later, another shooting occurred in the same apartment complex, and the victim was severely injured. Investigators believed that the first shooting had been a case of mistaken identity and that the second victim may have been the shooter's intended target. To confirm this theory, the casings from both crime scenes were collected and submitted to NIBIN for analysis. NIBIN confirmed that the shell casings at both scenes originated from the same crime gun, solidifying the theory. The NIBIN analysis also

71. The number of BIA reports generated is comparable to the number of high-probability hits identified, since a BIA report is generated each time evidence is linked to an existing incident in NIBIN.

72. CPD Forensic Services Division data

connected the shell casings from both shootings to a firearm used during a homicide that occurred in 2013. The suspects in the 2013 homicide, who were a part of a known criminal crew, were also considered suspects in the apartment shootings, prior to the shell casings being connected in NIBIN. The NIBIN connection confirmed this lead.

ATF investigators interviewed the victim of the first apartment shooting. While he was uncooperative with the officers at first, he was later implicated in a drug-related crime and agreed to work with prosecutors to identify his shooter in lieu of facing prosecution. The victim eventually positively identified the getaway driver associated with his shooting. With these leads, investigators were able to pinpoint a shooter who was associated with both the getaway driver in the first apartment shooting and the crew involved in the 2013 shooting. The shooter and the getaway driver were arrested and convicted, receiving sentences of 40 years and 7 years respectively. The ATF investigators attested that without the leads generated by the NIBIN correlation, they would not have been able to prove the link between the three shootings or leverage the victim's cooperation, and that shooter probably would not have been charged.

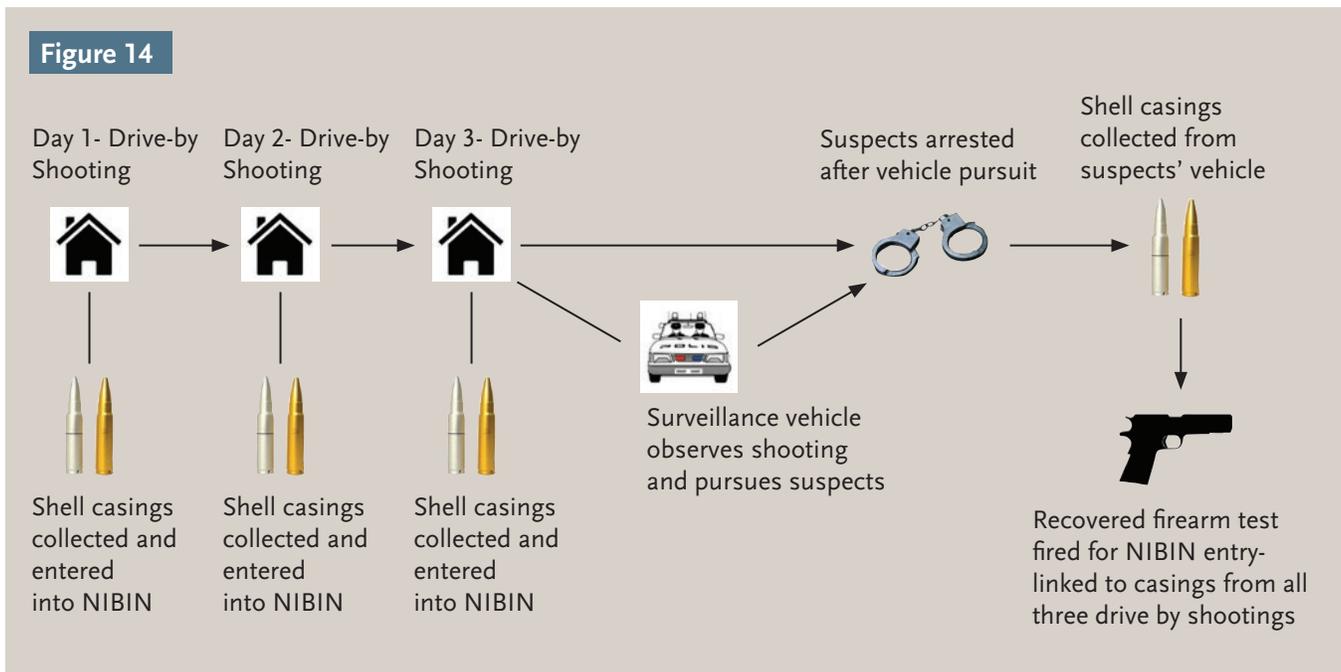
## **NIBIN connects shooting incidents in multiple cities**

Within a six-month period, one gun was used in six shootings that occurred in Chicago and South Bend, Indiana. The first shooting occurred in Chicago, followed by a two separate shootings in South Bend three weeks later. The gun was connected to two more shootings in South Bend the following month, and the final shooting four months later, in Chicago. Shell casings were collected at all six shooting scenes and entered into NIBIN. NIBIN was able to connect these otherwise seemingly unrelated shootings across the region. Since the same gun was used in multiple shootings in two cities that are almost 100 miles apart, NIBIN data provided a new understanding of the dynamics involved in the gun crime occurring in the Midwestern Great Lakes Region. The investigation into these shootings is ongoing.

## **NIBIN hit confirms link to multiple drive-by shootings**

Residents in Chicago's 4<sup>th</sup> Police District reported drive-by shootings at a house on two consecutive days, and gave CPD officers a description of the vehicle used on both days. Each day, officers recovered shell casings from the scene and submitted them for entry into NIBIN. On the third day, ATF agents surveyed the house and monitored vehicles as they passed by. The agents spotted an individual in a vehicle matching the description of the drive-by vehicle shoot at the target house and initiated a pursuit of the vehicle. Upon pursuit, two suspects jumped out of the vehicle, threw away the gun, and found a hiding spot. The agents found the alleged shooters hiding behind a nearby house and arrested them. Agents found fired shell casings in the vehicle upon their arrest and submitted them to the CPD firearms lab for entry into NIBIN. The fired shell casings that were found in the vehicle matched the recovered shell casings collected by agents at the home after the two previous shootings. ATF investigators also monitored the suspects' jail calls and overheard the suspects tell the call recipient where they threw away the crime gun. The agents returned to the scene and recovered the firearm. The gun was subsequently test fired and the shell casings matched the shootings on all three days, providing important evidence supporting charges that the suspects committed multiple shootings. (See Figure 14 for a timeline of events in the investigation.)

Figure 14



## Armed career criminals facing significant prison sentences

Two individuals were arrested by CPD for illegally possessing a firearm. CPD submitted the firearm to the firearms lab for test firing, and the shell casings were entered into NIBIN for analysis. The shell casing generated a “high probability hit” on two previously entered shell casings found at the scene of two separate incidents: an unsolved homicide, and an armed robbery that occurred in another part of the city. While the two suspects were in jail awaiting trial for possessing the firearm, CGIC personnel connected the two shootings and informed the U.S. Attorney’s Office of their findings. Federal prosecutors used the fact that the firearm the suspects possessed had been used in at least two recent shootings, as linked by NIBIN, to determine that their case merited federal prosecution under federal firearms statute 18 U.S.C. § 924(e)<sup>73</sup>, which resulted in a significantly longer prison term to keep the shooters off the streets of Chicago.

## Challenges

Since it was officially established in June 2014, Chicago’s CGIC has experienced administrative and operations personnel changes. As a result, the current CGIC personnel and procedures discussed in this report have only been in place since July 2015 and are still being refined.

According to ATF officials, CPD does a thorough job of comprehensively collecting all ballistic evidence from crime scenes. Although CPD must prioritize when evidence is submitted to NIBIN due to the magnitude of gun violence in Chicago, the firearms

73. The Armed Career Criminal Act of 1984 provides sentence enhancements for felons who commit crimes with firearms if they have three previous convictions for a violent felony or a serious drug offense. For more information, see 18 U.S.C. § 924(e)

laboratory submits more shell casings into NIBIN than any other lab in the nation, according to CPD's FSD investigators. This is one of the most impressive features of Chicago's CGIC process.

The biggest challenge that CPD has continued to face is reducing the turnaround time for submitting and analyzing ballistic evidence. The current average turnaround time of two to three weeks is too long to be effective as a "real-time" tool when investigating gun crime. Ideally, investigators would have information back on all submitted ballistic evidence within 48 hours. The faster that ballistic evidence from all gun crime incidents is processed, the sooner investigators will have actionable crime gun intelligence to inform their investigations.

Prioritizing evidence submission is in conflict with the ideal CGIC model, but it is currently a necessity in Chicago. On a night with several shootings, including one or two homicides, casings from those homicides take priority over the non-fatal shootings and shootings that caused only property damages, such as a drive-by porch shooting or a the vandalism shooting of a stop sign. Unfortunately, as we have learned from the experiences of other cities, these relatively minor property damage cases could be the precursor to the next homicide or provide the link that enables investigators to solve a gun-related homicide. For example, a witness or a security camera near the scene of a vandalism shooting might provide testimony or photographic evidence about the shooter or the shooter's vehicle.

Following up on NIBIN leads is more challenging when a gun is connected to multiple shootings in different areas of the city. This is when the CGIC model becomes particularly valuable in Chicago. CGIC personnel are able to prioritize these cases and coordinate investigative efforts across multiple agencies. If the detectives have large caseloads and more pressing cases, ATF agents or task force officers may take over investigating these older shootings, multiplying the effectiveness of crime gun investigations and improving the likelihood that arrests will be made.

## Summary and Next Steps

The CGIC model is meant to target firearms offenders, and particularly active trigger-pullers, as well as gangs and hot spots, in order to break the chain of gun violence. This is an intelligence-led policing initiative that provides leads and connects gun crimes that might otherwise seem unrelated.

Despite shortcomings in timeliness, early anecdotal evidence suggests that NIBIN analysis is helpful in identifying active trigger-pullers in Chicago and in establishing links among multiple cases. While not yet to the point where quantitative data can point to a definitive impact, Chicago is successfully developing leads and making connections that are helping to clear cases in city-wide and regional gun violence.

Moving forward, a strategy that could improve CPD's implementation of the CGIC Model and help ensure comprehensive evidence collection for all shooting incidents (even those that are not reported to the police) is the expansion of CPD's existing gunshot detection system. At the time of this study, in 2015, CPD did not have significant ShotSpotter coverage. The system was deployed in parts of the city with the most significant need, which only covered approximately 3 square miles. Since that time, as Chicago faced record numbers of shootings and gun homicides in 2016, the police department announced plans to increase its coverage using gunshot detection

sensors to more than 13½ square miles of the city.<sup>74</sup> CPD officials also noted that their gunshot sensors, on average, alert the department of gunshots five minutes faster than calls to 911.<sup>75</sup> This faster police response can help police identify additional witnesses and suspects, and summon medical care for victims faster, potentially helping to solve more cases and save lives.

CPD should consider training all detectives citywide on the value of the CGIC Model and NIBIN-generated leads. Even though the amount of gun violence in Chicago results in a lengthy turnaround time for processing ballistic evidence and developing investigative leads, the training will improve investigator understanding of the usefulness of NIBIN in combination with other technologies to support ongoing gun violence case investigations. This knowledge will assist detectives in following up on the information received in BIA reports and CGIC referrals, and encourage them to follow up on requests for ballistic evidence analysis throughout the course of their investigations.

## Discussion: The Evolution of Crime Gun Intelligence

**By Mark Kraft**

*Retired Chief, Firearms Trafficking and Interdiction Branch,  
Bureau of Alcohol, Tobacco, Firearms, and Explosives*

The use of crime gun intelligence has both grown and evolved in the past 30 years. When I arrived at ATF in 1987, firearms tracing was primarily used in individual investigations to determine if identifying the original purchaser of a recovered crime gun might aid an investigation by identifying a witness, a suspect, or a co-conspirator, such as the straw purchaser of a firearm. For example, an urgent trace of a firearm recovered at the scene of a police officer's murder identified the purchaser as a local resident. When interviewed by homicide detectives, the purchaser admitted to killing the officer.

Eventually, ATF began looking at the aggregate trace data and using it to identify trafficking patterns, straw purchasers, and gun trafficking rings. For example, ATF learned that multiple guns purchased at the same rural gun shop in New England by a variety of local residents were all recovered in New York City in unrelated crimes very shortly after their purchase. Investigation revealed that a New York drug dealer had recruited a ring of straw purchasers including a corrupt firearms dealer. Without anyone proactively analyzing the trace data, it is unlikely the conspiracy would have been uncovered, and the flow of crime guns would have continued.

Although it seems a fairly obvious lead now, prior to the systematic analysis of crime gun trace data, very few people were looking for those patterns. The realization that trace data could both be used as a potential lead in a single existing investigation and separately as means of initiating and driving trafficking investigations revealed the value of the information that could be gleaned from recovered crime guns—what we now call comprehensive crime gun intelligence.

As this report reflects, NIBIN has undergone a similar evolution. Introduced more than 20 years ago, it was initially seen as a means of connecting otherwise unrelated gun crimes. If a gun was recovered during an arrest, it could possibly connect the defendant to additional prior offenses. If ballistic evidence

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74. "Chicago Police to expand use of ShotSpotter gunshot sensors." Chicago Sun Times, September 7, 2016. <http://chicago.suntimes.com/news/chicago-police-to-expand-use-of-shotspotter-gunshot-sensors/>

75. Ibid.

connected two cases and no gun had been recovered, the link might aid in developing leads in either or both cases. If one investigation has a prime suspect but no witnesses, why not show a photo array of that suspect to witnesses in the other related case?

Like gun trace data, NIBIN is now being seen as part of a much larger mosaic. Not only can it be used to develop leads to solve individual cases or link individual suspects to particular shootings, it can be used to identify the most prolific and currently active trigger-pullers. We might not know who they are or the make and model of gun they are using, but linking shell casings from five different and otherwise seemingly unrelated shootings tells us an individual or individuals are criminally active and repeatedly using the same firearm.

We know these perceived trigger-pullers exist, and we know the crimes they have committed. Now instead of trying to solve five individual shootings, we are looking for the trigger-puller who we know exists, and who is responsible for three aggravated assaults and two homicides. If we focus law enforcement resources on identifying, investigating, arresting, and prosecuting the active trigger-pullers associated with the largest number of shootings, wouldn't that result in reducing violent firearms crimes? In some ways it is the ultimate win/win—preventing the next shooting by solving multiple prior shootings. This is the premise of the CGIC model.

The existence of these active trigger-pullers, and the ability of NIBIN to detect them, can easily be seen in the case examples provided in this report. A suspect in Denver arrested during an armed robbery is linked by a NIBIN lead to an attempted carjacking that occurred just six days earlier.

The massive effect of this subtle shift in thinking cannot be overstated. The decisions investigators make, the sources of information they tap into, and the questions they ask are all dictated by what they are trying to accomplish. For example, I will make a different set of decisions and ask different questions if my goal is to solve a specific crime than I will if I am pursuing a serial shooter. The Milwaukee CGIC Case Example #1 clearly illustrates this point (see pp. 28–29). Once NIBIN provided a lead that nine shooting incidents, including three armed robberies, were linked, analysts used the NIBIN lead and ShotSpotter data to map out the nine shootings, allowing investigators to target the area where the shooter was operating. This resulted in the capture of three suspects fleeing another armed robbery armed with the “perceived gun” that NIBIN had identified. These are not the actions of officers trying to solve a single crime or link a suspect to a crime. These are the actions of law enforcement officers who are aware of active trigger-pullers and are focused on getting them off the street before they can commit another shooting.

The decisions a prosecutor makes might also be affected. As a prosecutor, do I want to prioritize the prosecution of the offender with the longest prior criminal history, or the person arrested in possession of a firearm associated with numerous recent shootings? Which prosecution will have the biggest impact on crime and public safety? The suspect with the longest criminal record will undoubtedly get the most time (the traditional measure of success), but prosecuting the suspect associated with the most shootings is more likely to prevent the next shooting (the real measure of success for the people who live in that neighborhood). And this system of prioritization is totally just and unbiased; it isn't based upon prior criminal record or gang affiliation. It is based solely upon the number of shootings you are associated with.

When analysis of NIBIN leads is combined with trace data and ShotSpotter, as the CGICs in this study are doing, the effect is exponential rather than additive. As Denver's Case Example #4 reflects (see pp. 18–19), a recovered crime gun is associated with multiple shootings through NIBIN, and tracing reveals that it was purchased only eleven days prior to the first shooting, identifying both an additional suspect and identifying an additional crime that was later prosecuted federally.

But investing time and money in technology without having a strategy to utilize that technology is somewhat like the old joke that joining a gym doesn't help you get in shape; you actually have to work out. And the people who make the biggest gains don't just go to the gym; they set goals and develop a plan. Adopting a technology won't prevent crime. You actually have to use it, and if you want to really make gains, you need a strategy. The goal is pretty obvious. You want violent gun crime to go down. This means that you need to utilize the technology to initiate different investigations than you have done in the past, and you need to conduct different types of investigations.

For years, many police departments have done a yeoman's job of tracing firearms and recovering ballistic evidence from crime scenes for submission to the NIBIN system, building robust systems of comprehensive crime gun data. The CGIC model discussed in this report represents the development and implementation of a strategy to fully leverage the databases that their departments have built. The success stories highlighted in this report reflect both the traditional use of NIBIN (linking a suspect in one case to an additional unrelated unsolved case), and the more proactive approach of targeting perceived trigger-pullers. The question is whether it achieves the goal of reducing the number of violent firearms crimes.

It seems intuitive that focusing on solving shootings and getting active trigger-pullers off the street would lead to a decrease in gun-related crimes. However, devising a metric that calculates the number of shootings that didn't take place because of law enforcement's efforts is vexing. The statistics provided by the Denver CGIC perhaps give us a place to begin. A spreadsheet-style chart that depicted the number of CGIC targets arrested, the number of NIBIN-linked guns associated with these arrestees, and the total number of shootings linked to each of those guns would be a basic start. By specifically looking at the number of shootings associated with the guns recovered from these defendants, we can make some inferences regarding what might well have happened if that firearm hadn't been removed from the street.

Milwaukee's Case Example #2 (see p. 29) is an excellent example—two defendants associated with one firearm that was linked to eight shooting incidents. Another example is the aforementioned Case Example #1, where the firearm was linked to nine shootings before being recovered from suspects fleeing the scene of another armed robbery. It seems unlikely that the defendants in possession of these firearms were going to suddenly and unilaterally cease their activity.

Likewise, metrics for firearms traffickers and straw purchasers identified through tracing could similarly be developed. A similar chart listing each trafficker, the total number of guns they are suspected of or known to have trafficked, and the number of those firearms that were recovered by police in crimes would be an excellent system of documentation. Perhaps the number of those recovered guns believed to have been used in shootings as a result of NIBIN leads could also be incorporated. Inferences can certainly be drawn regarding the number of firearms that would have been diverted into criminal hands had trafficking operations not been identified and shut down.

It is obvious that the CGIC model wouldn't be needed or cost-effective everywhere. It is also obvious that the model would need to be tweaked to accommodate resources, needs, and/or the types of crime being committed in a given jurisdiction. Developing and adopting a strategy to fully leverage these powerful technologies, and adapting to prioritizing cases through a whole different methodology, requires the will to utilize limited law enforcement resources differently. That requires faith that the promises of these new technologies will produce better results than the techniques we have used in the past. One thing is certain. A sense of urgency is required to address the disproportionate levels of gun violence in too many communities. Nothing erodes the quality of life for the residents of those neighborhoods more severely. People don't lock their doors because they are afraid of drug dealers; they lock their doors because they hear gunfire.

October 12, 2016

*Mark Kraft has more than 30 years of experience in Federal law enforcement, including more than 25 years as special agent at the Bureau of Alcohol, Tobacco, Firearms and Explosives. While at ATF, Kraft conducted criminal investigations focused on firearms trafficking and violent armed offenders in the Baltimore Washington Corridor. He has served on Baltimore Field Division's Special Response Team; designed, developed and delivered training focused on the violent criminal misuse of firearms to law enforcement officers and prosecutors across the United States, Canada and Europe; and was inaugural Deputy Director and Acting Director of the National Gang Targeting Enforcement Coordination Center. Kraft retired from ATF in 2014, but remains active in consulting and providing training on issues related to firearms violence.*

# Chapter 6: Conclusion

## **Gun violence is a significant problem in many cities, and law enforcement**

agencies are constantly looking for effective strategies for investigating gun crimes and preventing future crimes. The Crime Gun Intelligence Center (CGIC) model, as demonstrated in Denver, Milwaukee, and Chicago, appears to be a promising initiative. Using the National Integrated Ballistics Information Network (NIBIN) as a real-time investigative tool, especially when combined with other technology like eTrace and gunshot detection systems, has helped police departments to generate investigative leads that otherwise would remain hidden, and to quickly identify patterns of gun activity that detectives can use to identify suspects.

As can be seen in Denver, Milwaukee, and Chicago, there are numerous benefits to using NIBIN in crime gun investigations. However, it is important for departments to use NIBIN consistently, and to adhere to each phase of the CGIC model (comprehensive evidence collection, timeliness, follow-up, and implementing a feedback loop) in order to realize its full potential. As of 2016, only a few hundred of the nation's 18,000 police departments use NIBIN, and eleven states do not even have access to NIBIN equipment. Of the departments that do use NIBIN, many do not use it consistently.<sup>76</sup> As a result, many departments do not see the full value of NIBIN as an investigative tool, since the amount of evidence entered into NIBIN largely determines its utility (by providing more data to generate potential matches). The CGIC initiatives discussed in this report demonstrate the value of using NIBIN, in conjunction with other technologies, to departments considering implementing similar programs in their jurisdictions.

Each of the sites discussed in this report has implemented the CGIC model slightly differently, and in each site, the program is constantly evolving. Denver, the first city to adopt the CGIC model, has an integrated process that allows DPD not only to submit evidence to NIBIN in-house, but also to review correlations and even confirm hits in their own crime lab. This has allowed DPD to drastically decrease its turnaround time for NIBIN results to the recommended 24-48 hours.

Milwaukee also has been successful in its implementation of the CGIC model. Although the Milwaukee Police Department (MPD) does not have the capacity to confirm hits in-house, it has streamlined its process by quickly pushing out NIBIN “leads” to investigators so they can act on them immediately. Between January 2015 and April 2017, an impressive 44% of NIBIN entries in Milwaukee resulted in a potential lead.<sup>77</sup>

Chicago, with the largest number of gun recoveries and shootings in the country, has been able to improve its process by having the state police lab review NIBIN correlations for the Chicago Police Department (CPD). This has allowed for a faster turnaround time for NIBIN results than was previously possible. Although CPD has

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76. [https://www.washingtonpost.com/investigations/technology-to-fight-gun-crime-hobbled-by-skepticism-and-disuse/2016/10/06/026dac1c-4d29-11e6-a422-83ab49ed5e6a\\_story.html](https://www.washingtonpost.com/investigations/technology-to-fight-gun-crime-hobbled-by-skepticism-and-disuse/2016/10/06/026dac1c-4d29-11e6-a422-83ab49ed5e6a_story.html)

77. Milwaukee Police Department, Intelligence Fusion Center, 04/06/2017.

to prioritize when evidence is entered into NIBIN because of the volume of evidence generated in the city, the department is able to generate leads that would not have been possible otherwise.

As these departments continue to improve their CGIC processes, they will become even more efficient at responding to and preventing gun crime. This progress in using the technology effectively to identify and stop trigger-pullers is important for creating “buy-in” within the departments, which helps to sustain commitment to the initiative.

In order to further demonstrate the utility of NIBIN, it is important that departments establish performance measures to track its success. Currently, the ATF does not track outcomes related to NIBIN on a national level, such as the number of arrests made due to NIBIN investigations or the impact of NIBIN on gun crime. Although department success stories are an early indication of the promise of NIBIN, tracking outcome data quantitatively is important so that future research can effectively measure the impact of NIBIN as an investigative tool. Additionally, although the departments seeing results from NIBIN are convinced of its potential, it is important to demonstrate and document this success so that other departments can accurately assess its value for their jurisdictions.

Some of the sites in this report have begun efforts to track CGIC success. Denver is currently developing a “NIBIN hit tracking database”, which will track all NIBIN cases from hit notification through investigation and adjudication. Eventually, the database will be housed on a FBI-approved server which all partner agencies will be able to access, in order to review and update case information. Similarly, Milwaukee is in the process of creating a database that will provide real-time NIBIN lead alerts and track information on case clearance status, investigators assigned, follow-up needed, cases charged, arrests, and more. These efforts will be invaluable not only in terms of case management for ongoing investigations, but also for documenting NIBIN’s performance and the benefits of CGICs for consideration by other law enforcement agencies.

One of the main challenges to fully implementing the CGIC model, as observed in this report, is a lack of law enforcement personnel to implement the various steps in the process. To assist with this problem, the ATF established the National NIBIN Correlation and Training Center (NNCTC) in Huntsville, Alabama in April 2016, which will centralize the process for reviewing NIBIN correlations in a single location. Similar to Chicago’s model, participating agencies enter their own evidence and upload it to NIBIN locally. Trained technicians at the NNCTC then review the correlation results, and send back NIBIN “leads” (unconfirmed hits) to the local agency. The goal of the center is to streamline the process and decrease the turnaround time for getting NIBIN information back to investigators, so they can act quickly on potential leads. The center will free up time spent on correlations, allowing for personnel at local agencies to focus on other aspects of investigations.

As of March 2017, the NNCTC is working with 25 law enforcement agencies that are currently using NIBIN. The center has 23 NIBIN technicians and one firearms examiner. According to the ATF’s NIBIN Branch Chief Sharon Buchanan, between April 2016 and March 2017, the center has reviewed more than 30,000 correlations and provided more than 7,300 “high probability hits” to the participating law enforcement agencies. In most cases, the center is able to achieve a turnaround time of 24-48 hours. The NNCTC also has a training center, where they provide training to law enforcement officials on how to perform acquisitions and correlations. ATF provides

training at no cost to law enforcement agencies. The NNCTC is hoping to obtain additional funding to expand the center's services to assist more law enforcement agencies in the future.

NIBIN and Crime Gun Intelligence Centers are promising programs that provide an important way to combine information from various technologies and sources to link and solve gun-related crimes that might otherwise go unsolved. The CGIC model stresses the importance of providing feedback to all involved in the process, which is important to its sustainability. CGIC programs further the goal of identifying and targeting the most violent offenders for prosecution and removing them from the streets before they can commit additional acts of violence. PERF's findings indicate promise, especially in cities with significant levels of gun-related crime. PERF expects that research on the CGIC model will continue as more departments continue to adopt NIBIN and gather important and consistent outcome data.

# About PERF

**The Police Executive Research Forum (PERF) is an independent research organization that focuses on critical issues in policing.** Since its founding in 1976, PERF has identified best practices on fundamental issues such as reducing police use of force, developing community policing and problem-oriented policing, using technologies to deliver police services to the community, and evaluating crime reduction strategies.



POLICE EXECUTIVE  
RESEARCH FORUM

PERF strives to advance professionalism in policing and to improve the delivery of police services through the exercise of strong national leadership, public debate of police and criminal justice issues, and research and policy development.

In addition to conducting research and publishing reports on our findings, PERF conducts management studies of individual law enforcement agencies, educates hundreds of police officials each year in a three-week executive development program, and provides executive search services to governments that wish to conduct national searches for their next police chief.

All of PERF's work benefits from PERF's status as a membership organization of police officials, academics, federal government leaders, and others with an interest in policing and criminal justice.

All PERF members must have a four-year college degree and must subscribe to a set of founding principles, emphasizing the importance of research and public debate in policing, adherence to the Constitution and the highest standards of ethics and integrity, and accountability to the communities that police agencies serve.

PERF is governed by a member-elected president and board of directors and a board-appointed executive director. A staff of approximately 30 full-time professionals is based in Washington, D.C.

To learn more, visit PERF online at [www.policeforum.org](http://www.policeforum.org).

# About The Joyce Foundation

**The Joyce Foundation works with grantee partners to** discover, develop, and advance innovative and effective policy solutions for the central challenges of our time. With a focus on the Great Lakes region and also achieving national impact, Joyce strives to improve quality of life, promote community vitality, and achieve a fair society. The Foundation seeks quality education for all children, expansion of economic opportunity, and a truly representative democracy that serves the public interest. Joyce supports strategies to reduce gun violence, clean up and restore our natural environment, and enrich our communities with diverse, thriving arts and culture.

**TheJoyceFoundation**

A growing body of research shows that strong gun laws correspond with lower rates of gun death and injury. The Foundation's Gun Violence Prevention Program supports efforts to build awareness about the problem of gun violence in America, and to educate the public, policy makers and the media about commonsense policies that improve public health and safety.

The Foundation also supports policies and practices that help law enforcement combat gun crime and violence and ensure their safety. Working with grantees like the Police Executive Research Forum, the Foundation is helping to facilitate efforts by the law enforcement community to strengthen the nation's response to gun violence.

Research supported by the Joyce Foundation also helps to understand and explain the link between access to firearms and suicide, the risk firearms pose to children, and the sources of illegal guns. Access to data and sound research on gun violence are critical to the development of effective public policies to reduce firearm injuries and deaths.

# Appendix A: Denver Police Department Gang Violence Intervention— Impact Team



# Denver Police Department

## Gang Violence Intervention—Impact Team

### Gang Impact Team

On April 27, 2015, the **City of Denver** initiated a collaborative campaign targeting an uptick in gang activity within the City. This movement was due to ongoing conflicts between multiple gangs that resulted in several violent crimes occurring, to include multiple gang related homicides. Some of these events were related to conflicts that began through social media disputes.

### Strategy

In support of this initiative, the **City** deployed a multi-faceted response targeting gang violence in the **City**. This impact team is comprised of **Denver Police Department (DPD)** personnel and many local and federal partners. The **City** and the **DPD** embrace 21st Century Policing and the principles of voice, transparency, impartiality and fairness supported through Procedural Justice. The **DPD** is continually focused on strengthening trust and collaboration within the community while increasing and maintaining legitimacy within our community. In line with **DPD**'s mission statement that emphasizes preventing crime in a respectful manner while demonstrating that "Everyone Matters," the **DPD** recognizes that enforcement is only a portion of action to be taken when confronting gang violence in a community.

According to American sociologist and criminologist Marvin Wolfgang, approximately 5% of offenders account for 40% of all crime. Employing a strategic, data driven approach and exercising the principles of Intelligence Led Policing, the **DPD** relies on crime and intelligence analysts to amass and analyze law enforcement records in order to concentrate on the small number of offenders who are responsible for the violent gang crime occurring in the **City**. This allows for accurate deployment of resources and effective results. These operations focus on the chronic offenders responsible for the crime in the areas of concern. **DPD** has found that approximately 80% of those persons of interest have prior convictions for violent crimes or are current or ex Department of Corrections clients. By integrating crime analysis into strategic and tactical briefings, the **DPD** can employ appropriate uses of prevention, disruption and enforcement.

### Community Messaging

The **Mayor** has invested the **City** in cultivating and facilitating meaningful, ongoing partnerships with Denver's non-governmental organizations and faith based communities. The initiative targeting gang violence provided an excellent opportunity for law enforcement to draw on this groundwork by utilizing our partners as a voice in the community. As a result, the gang violence initiative has been very well received by the citizens of Denver, with minimal citizen complaints.

This is believed to be a product of the endless positive contacts the **DPD** has with the individuals in our **City**. In fact, in support of the gang violence initiative, the **Denver Police Foundation** donated \$15,000 in gift cards that **DPD** officers are handing out to youth in the focus areas as they participate in organized events alongside them, only strengthening the relationship between law enforcement and the citizens we serve in Denver. The **DPD** recognizes that the great successes of this project have been dependent on building and maintaining relationships, breaking down silos and focusing on communication, internally and externally.

**Chief Robert C. White**  
1331 Cherokee St  
Denver, CO 80204  
Robert.White@denvergov.org



**Mayor Michael Hancock** announcing the plan to combat gang crime in Denver.



# Gang Violence Intervention

Law Enforcement Partners

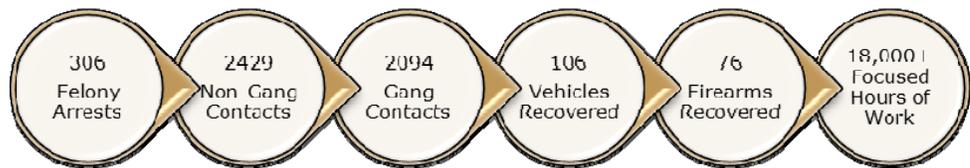
- Adult/Juvenile Probation
- Aurora Gang Unit
- Denver County Sheriff
- Denver Crime Lab
- Denver City Attorney
- Denver District Attorney
- Denver Housing Authority
- Denver Police Foundation
- Department of Justice
- Gang Reduction Initiative of Denver
- Homeland Security
- Metro Gang Task Force
- Office of Children's Affairs
- Public Nuisance Abatement
- State Parole
- U.S. Attorney

Community Partners

- Boys and Girls Club
- Denver Public Library
- Faith Based Initiatives by Mayor Hancock
- Hiawatha Davis Rec Center
- Impact Empowerment Group
- New Hope Baptist Church
- Open Door Youth Gang Alternatives
- St. Charles Rec Center

## Prosecution

When the **City** publicly announced the operation against gang violence, prosecutors from the **District Attorney's** and **U.S. Attorney's Office** were on hand and made notice that all persons charged with firearms crimes related to this crisis would be evaluated to the fullest extent. Due to this resoluteness, the **DPD** has made over 300 felony arrests relating to gang activity in the **City** and approximately 20 individuals are now in custody and being prosecuted for federal weapons charges and face sentences exceeding ten years. Federal and local prosecutors have made themselves available to attend multiple community "call-in" meetings where they have highlighted the facts and outcomes of each of those cases. A review of the overall results of this initiative from April 27 to September 30, 2015 are included below for review.

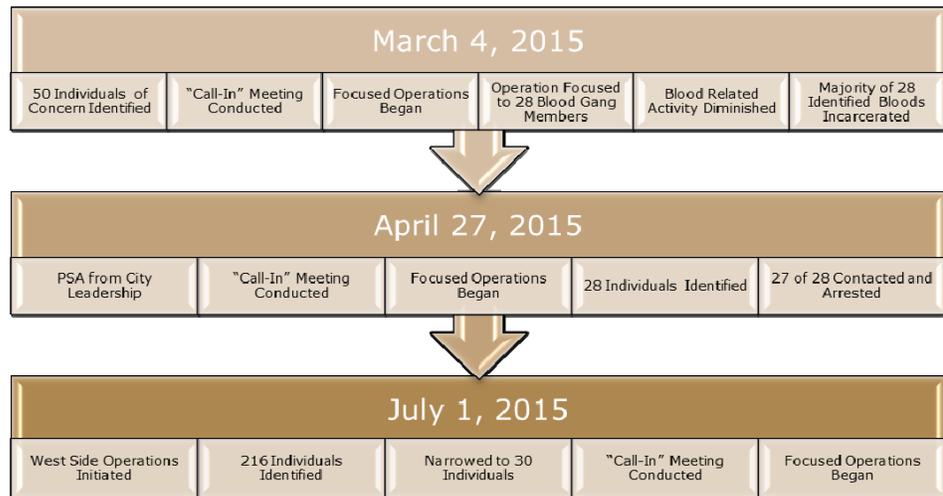


## Law Enforcement Collaboration

The **City** continues to work in coordination with several local and federal partners to combat this issue, to include multiple community, neighborhood and faith based organizations. Of special interest, the **Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)** has continued to provide progressive technology and resources that enhance **DPDs** ability to investigate crimes involving firearms. The many internal and external partners listed in the sidebar have contributed considerably to these directed activities.

## Ceasefire Operations

The **Gang Reduction Initiative of Denver (GRID)** is working in collaboration with the **DPD** to coordinate and support community efforts to reduce gang activity. As the enforcement piece of CeaseFire operations, the **DPD** is also providing analytical resources to the **GRID** in an effort to assist **GRID** in coordinating the faith based, intervention and outreach efforts. A visual outlining the Ceasefire Operations occurring in Denver is included below.





# Collaborative Efforts in Denver

## Resources

- Technology
- ShotSpotter
- DDACTS
- Crime Lab
- Area Restrictions
- Parole
- MGTF/HIDTA
- PNAU
- Graffiti



**DPD District 5 Commander Ron Thomas** presenting gift cards to youth at the new **DPD Cop Shop** in the Northfield shopping center in Northeast Denver.

### Technology

Approximately 29 cameras have been placed in the focus areas by **DPD**, the **ATF** and the **Department of Homeland Security**. These cameras are continuously monitored and have gleaned important intelligence to the agencies involved in these operations. In addition, analysts worked to compile an inclusive list of vehicles associated to our persons of interest list. This information is being used to evaluate the data gathered by the License Plate Readers that are being utilized citywide.

### ShotSpotter

Through the support of the **ATF**, the **DPD** implemented ShotSpotter technology in early January of 2015 to combat gun violence. ShotSpotter, using acoustic sensors, notifies law enforcement and dispatches officers to the exact GPS coordinates of gunfire incidents. This provides the ability to pinpoint the geographic locations of gunfire and allows for swift law enforcement notification of incidents that is not reliant on citizen reporting. In addition, automating this process leads to a greater amount of ballistic evidence being recovered and improved investigative outcomes.

### Data Driven Approach to Traffic/Crime Safety

In light of the agency's ability to pinpoint the locations gang related violent crime regularly occurs in Denver, the **DPD** has elected to devote resources to place and time based policing in those areas through a Data-Driven Approach to Crime and Traffic Safety (DDACTS). This crime prevention method places visible patrols in the traffic corridors of settings where chronic crime occurs. Officers are being sent into these areas to conduct repeated periods of high enforcement in order to have an impact on crime while preserving **DPD** resources.

### Crime Lab

The Crime Lab is working vigorously to ensure that all items submitted in relation to gang conflict are processed immediately. The **ATF** is contributing resources in the form of personnel to ensure these efforts are successful as evidence (in the forms of casings, DNA, firearms, etc.) is recognized as being of the utmost importance in ceasing the violent crime in Denver.

### Area Restrictions

The **DPD** is collaborating with prosecutors in an effort to utilize and enforce area restrictions for known gang members involved in this conflict. Of particular interest are the areas surrounding recreation centers and parks where violent crimes have recently occurred. Gang members are known to frequent these locations and pose a significant risk to the citizens in these areas.

### Parole

Representatives from **DPD** and the **ATF** engaged the **Colorado Department of Corrections/Parole** in a project that overlays the ShotSpotter alerts with GPS coordinates of parolees who are in the area at the time of the incident in an attempt to identify possible suspects, victims, related parties. This information is being communicated daily and coordinated between **Parole**, **ATF** and the **DPD**. In addition, **Parole** is working in conjunction with investigators from **ATF** and **DPD** to conduct regular operations on parolees who are associated with gang violence in Denver. The goal is to ensure compliance with restrictions that parole can enforce upon clients. This type of collaboration highlights the innovative approaches that practitioners are taking with available technology.

### MGTF/HIDTA

The **Metro Gang Task Force**, in coordination with **HIDTA**, is conducting de-confliction efforts surrounding all of the identified persons of interest. In addition, analysts are coordinating efforts to conduct in-depth background checks on each of these individuals to identify possible links, areas of concern, etc.

### Public Nuisance Abatement

The **Public Nuisance Abatement Unit (PNAU)** of the **DPD** is actively participating in an aligned effort with investigators that focuses on ceasing the ongoing gang activity related to a number of addresses and vehicles. Approximately ten homes and nine vehicles have currently been identified as being related to violent gang crime. In addition to the **PNAU's** efforts, the **DPD** is working with the **Denver Housing Authority** and the **Denver City Attorney** to have the gang related individuals abated from the residences. Thus far, eight homes have been evicted/voluntarily abated and cases on two homes and nine vehicles continue in the official process. Also, the **DPD** has developed an automated web-based mechanism where information relating to crime occurring at locations of public housing is available to the **Denver Housing Authority** and can be generated on a daily basis. All of these efforts support a crime free leasing approach to public housing in Denver.

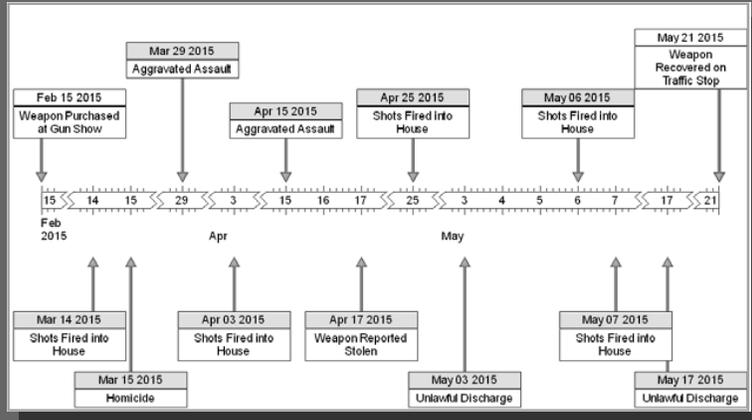
### Graffiti

The **DPD Graffiti Unit** actively monitors focus areas of the gang initiative for any gang related tagging. Oftentimes, an uptick in gang related tagging can indicate a pending increase in violent crime. Because of this, graffiti is being tracked and all occurrences believed to be related to the ongoing gang violence is shared with the investigators involved in this effort immediately.

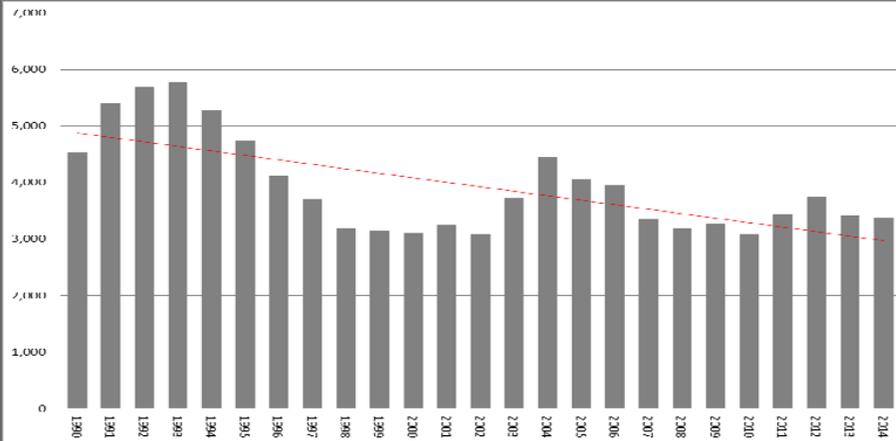
# Gang Violence Intervention—Impact Team

## Crime Gun Intelligence Center

In coordination with the ATF's National Integrated Ballistic Information Network (NIBIN), the DPD is feverishly working to immediately assign and investigate all investigative leads being developed through ballistic imaging technology. This work is being done in the DPD Crime Gun Intelligence Center (CGIC) and the process has linked numerous gang related violent crimes to neighboring jurisdictions and accelerated the agency's ability to effectively investigate and clear cases. In one of the strings revealed by this work, a single firearm was linked to ten incidents, one of which is a homicide. An overview of this NIBIN string is included here.



## Violent Crime in Denver over 25 Years



**Mission Statement**  
*“In partnership with the community, the **Denver Police Department** strives to operate a police agency focused on preventing crime in a respectful manner, demonstrating that **everyone matters.**”*



The **Denver City and County Building** lit in blue during National Police Week.

# Gang Violence Intervention—Impact Team

## Community Resources

In addition to multiple law enforcement partners, the community has come together to partner with enforcement operations as a show of solidarity. Numerous outreach efforts have been conducted in the focus areas that were led by community organizations. Recreation centers have been hosting sports events and the neighborhood leaders have come forward in support of law enforcement. Overall, substantial patronage has been provided via multiple non-governmental organizations in the **City of Denver**. Highlights of some of those efforts are included here for review.



**DPD Officer Lucia Arguello** presenting gift cards to first graders at **Newlon Elementary School** in Denver.

## Direct Outreach to Gang Members

- **Open Door Youth Gang Alternatives** funded a pilot violence interruption program utilizing ex-high ranking members of Denver gangs to intervene in shooting incidents to reduce retaliatory incidents.
- The **City** dedicated \$300,000 of funds to contract with **Impact Empowerment Group** to provide direct gang intervention services.
- **GRID** continues to provide direct gang intervention services to adults and youth.
- An **Outreach Coalition** was created to ensure outreach efforts are complementing one another.
- Violence reduction mediations were conducted with gangs directly involved in on-going violence.

## Direct Outreach to High Risk Youth

- Gang prevention staff placed at parks and recreation facilities and the **Boys and Girls Club**.
- Provided “out of Denver” daily excursions to over 50 youth.
- Facilitated an Achievement program at District 2 of the **DPD**.
- Sustained a two week summer camp to cover lapse in **Boys and Girls Club** availability.
- Partnered with the **Office of Children’s Affairs** and **DPD** to place police officers at summer youth programs in order to provide avenues for positive interactions between law enforcement and youth.

## Faith Based Community Response to “Call to Action”

- Conducted prayer walks every Friday night throughout the summer with over 200 in attendance, including **City** officials.
- Numerous faith based organizations providing direct gang intervention services to gang members.
- **New Hope Baptist Church** hosted the First Annual Youth Violence Prevention Summit with a basketball tournament that over 60 youth participated in.
- Initiated a Safe Haven Crisis Response Model to violence in the community (pending funding).
- Weekly meetings with gang affiliates to identify how they and the faith based community can work together to reduce violence.
- Received initial funding (\$70,000) from the **Department of Justice** to institute a faith-based violence initiative in Denver.

## Parks and Recreation/Library

- **Denver Parks and Recreation** hosting youth league every Saturday.
- **Denver Public Library** provided summer activities and library card sign-ups in target areas.
- “Night Moves” for youth 14-18 held every Friday and Saturday at **Hiawatha** and **St. Charles Rec Centers** with dinner provided to participants.
- Summer extension camp held in August for 4th through 8th grades at four recreation centers.
- Facilitated teen leadership and adventure camps throughout summer.



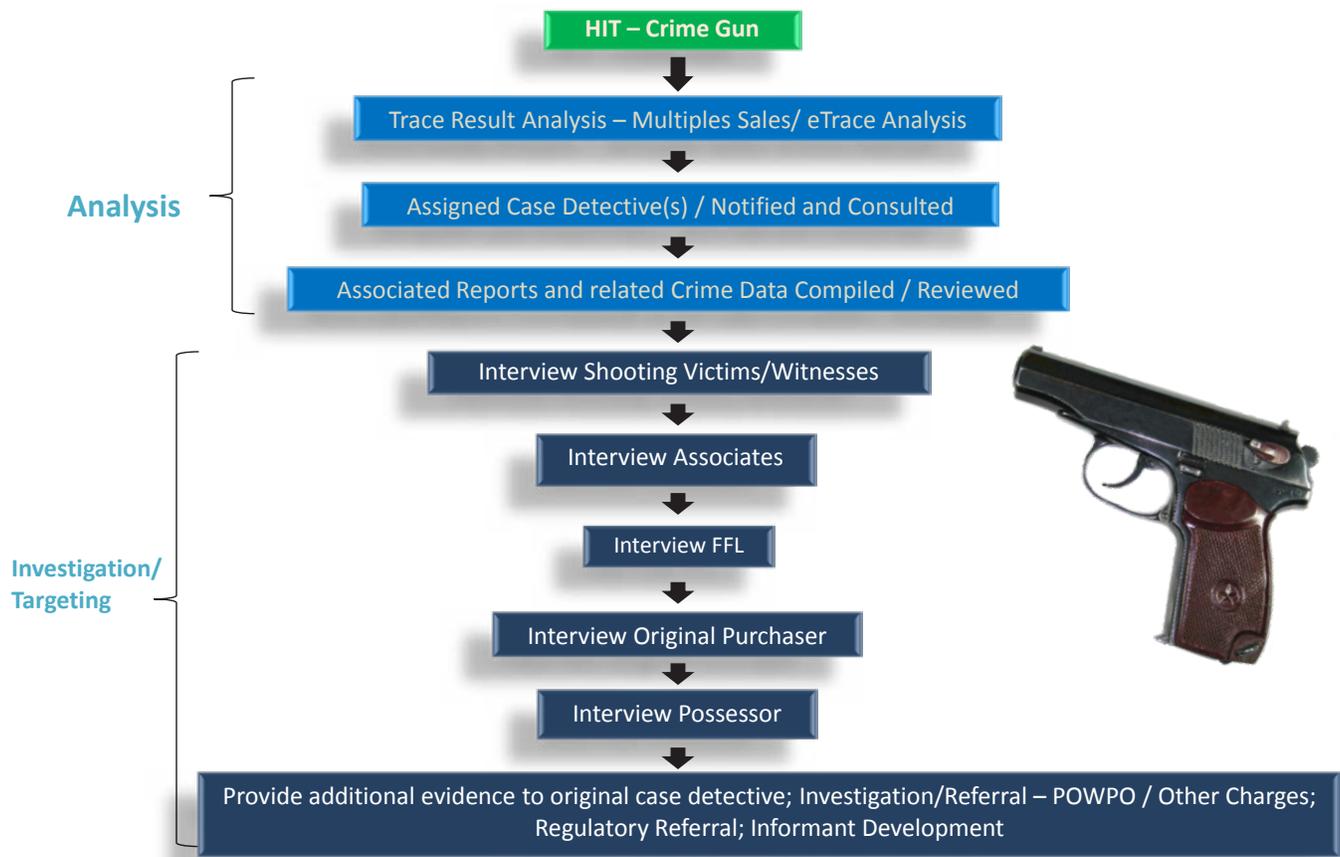
**Denver Police Officers** at attention during **Police Officer’s Memorial** at **DPD Headquarters**.

## Workforce Development

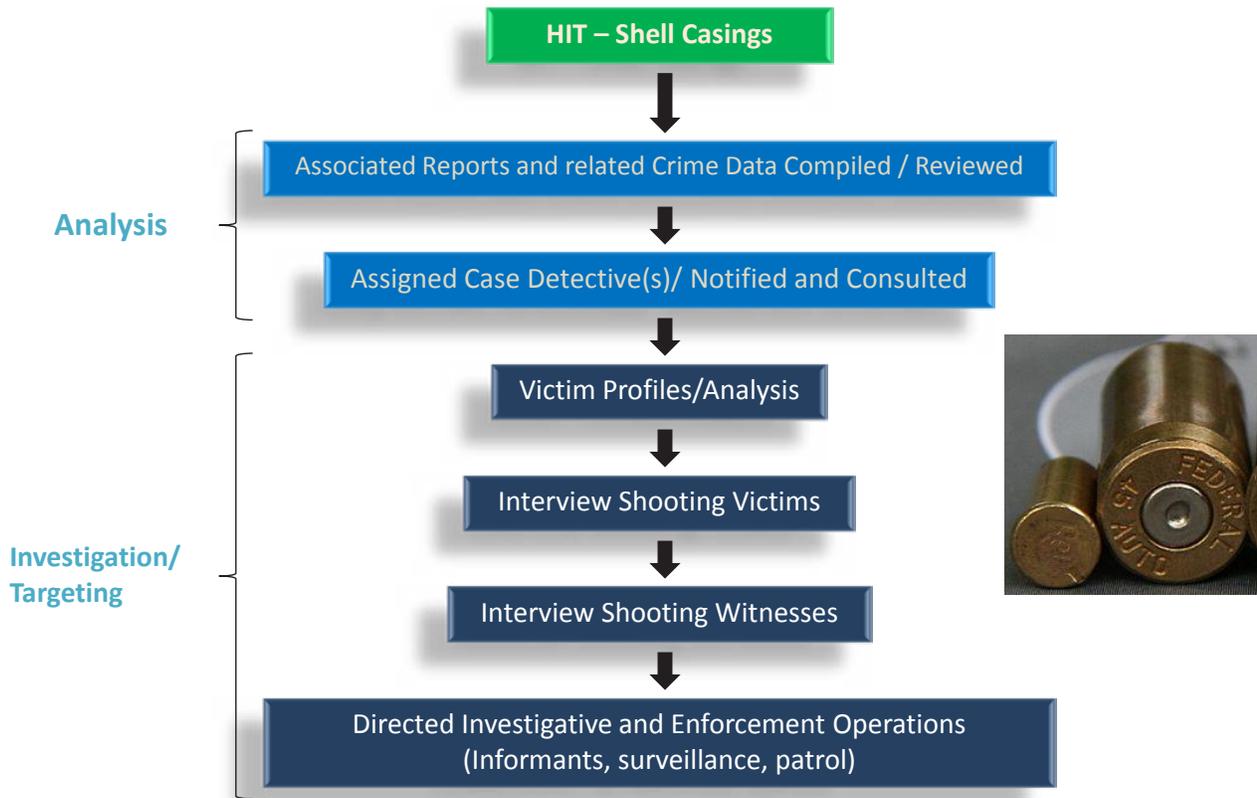
- The **City** provided \$50,000 in wage subsidies to employers hiring high-risk individuals in order to back the employer’s investment, resulting in employment of 25 high-risk offenders.
- Summer youth employment program created 300 jobs in Metro Denver.
- Focused job training and placement conducted in focus area.
- Multiple job fairs held at recreation centers and schools located in the target areas.

# Appendix B: Denver CGIC Investigative Workflow

## CGIC Investigation Work Flow



# CGIC Investigation Work Flow



# Appendix C: Milwaukee CGIC Sample NIBIN Hit Notifications

Examples of the four types of NIBIN hit notifications are as follows:

<b>Milwaukee Police Department          Intelligence Fusion Center          Milwaukee Crime Gun Intelligence Center          NIBIN Hit Notification</b>	 
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Date of Report: 8/13/2015

**THIS IS FOR AN INVESTIGATIVE LEAD. ADDITIONAL FOLLOW-UP MAY BE REQUIRED. IF YOU REQUIRE CASE SUPPORT OR INVESTIGATIVE ASSISTANCE, PLEASE CONTACT THE IFC AT X7741.**

**THIS IS NOT A REPORT. THIS IS A NOTIFICATION OF INVESTIGATIVE LEADS DUE TO NIBIN ENTRY. IF VERIFICATION IS REQUESTED, THE CASE OFFICER/DETECTIVE MUST SUBMIT A LETTER OF TRANSMITTAL TO THE WISCONSIN CRIME LAB. THE WISCONSIN CRIME LAB WILL ONLY RECEIVE EVIDENCE FOR CHARGED CASES AND WITH THE APPROVAL OF THE ASSISTANT DISTRICT ATTORNEY.**

**NIBIN Case # \_\_\_\_\_**

Fired cartridge cases submitted under Incident #----- have been associated with fired cartridge cases submitted under Incident #-----.

<b><u>Incident Details</u></b> Laboratory Number: Incident #: Offense: Evidence Type: Inventory #: Item #: Date: Location: District: Case officer:	
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<b><u>Incident Details</u></b> Laboratory Number: Incident #: Offense: Evidence Type: Inventory #: Item #: Date: Location: District: Case Officer:	
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Notification completed by: \_\_\_\_\_

**Milwaukee Police Department  
 Intelligence Fusion Center  
 Milwaukee Crime Gun Intelligence Center  
 NIBIN Hit Notification**



Date of Report: 8/13/2015

**THIS IS FOR AN INVESTIGATIVE LEAD. ADDITIONAL FOLLOW-UP MAY BE REQUIRED. IF YOU REQUIRE CASE SUPPORT OR INVESTIGATIVE ASSISTANCE, PLEASE CONTACT THE IFC AT X7741.**

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**NIBIN Case # \_\_\_\_\_**

Fired cartridge cases submitted under Incident #----- have been associated with fired cartridge cases submitted under Incident #-----.

<p><b><u>Incident Details</u></b>          Laboratory Number:          Incident #:          Offense:          Evidence Type:          Inventory #:          Item #:          Date:          Location:          District:          Case officer:</p>	
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<p><b><u>Incident Details</u></b>          Laboratory Number:          Incident #:          Offense:          Evidence Type:          Inventory #:          Item #:          Date:          Location:          District:          Case Officer:</p>	
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Notification completed by: \_\_\_\_\_

**Milwaukee Police Department  
 Intelligence Fusion Center  
 Milwaukee Crime Gun Intelligence Center  
 Priority NIBIN Hit Notification**



Date of Report: 8/13/2015

**THIS IS FOR INFORMATIONAL USE. A CGIC INVESTIGATOR WILL FOLLOW-UP WITH THE CASE OFFICERS FOR COORDINATION AND DECONFLICTION ON THIS NIBIN INVESTIGATION. THIS CASE HAS BEEN IDENTIFIED AS A PRIORITY CASE ACCORDING TO CGIC DEPLOYMENT PLAN.**

THIS IS NOT A REPORT. THIS IS A NOTIFICATION OF INVESTIGATIVE LEADS DUE TO NIBIN ENTRY.

IF VERIFICATION IS REQUESTED, THE CASE OFFICER/DETECTIVE MUST SUBMIT A LETTER OF TRANSMITTAL TO THE WISCONSIN CRIME LAB. THE WISCONSIN CRIME LAB WILL ONLY RECEIVE EVIDENCE FOR CHARGED CASES AND WITH THE APPROVAL OF THE ASSISTANT DISTRICT ATTORNEY.

**NIBIN Case #** \_\_\_\_\_

Fired cartridge cases submitted under Incident #----- have been associated with fired cartridge cases submitted under Incident #-----.

<p><b><u>Incident Details</u></b>          Laboratory Number:          Incident #:          Offense:          Evidence Type:          Inventory #:          Item #:          Date:          Location:          District:          Case officer:</p>	
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<p><b><u>Incident Details</u></b>          Laboratory Number:          Incident #:          Offense:          Evidence Type:          Inventory #:          Item #:          Date:          Location:          District:          Case Officer:</p>	
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Notification completed by: \_\_\_\_\_

**Milwaukee Police Department  
Intelligence Fusion Center  
Milwaukee Crime Gun Intelligence Center  
NIBIN Hit Notification**



Date of Report:

**THIS IS FOR SITUATIONAL AWARENESS AND DEPLOYMENT STRATEGIES ONLY!**

THIS IS NOT A REPORT. THIS IS A NOTIFICATION OF INVESTIGATIVE LEADS DUE TO NIBIN ENTRY. IF VERIFICATION IS REQUESTED, THE CASE OFFICER/DETECTIVE MUST SUBMIT A LETTER OF TRANSMITTAL TO THE WISCONSIN CRIME LAB. THE WISCONSIN CRIME LAB WILL ONLY RECEIVE EVIDENCE FOR CHARGED CASES AND WITH THE APPROVAL OF THE ASSISTANT DISTRICT ATTORNEY.

**NIBIN Case #** \_\_\_\_\_

Fired cartridge cases submitted under Incident #----- have been associated with fired cartridge cases submitted under Incident #-----.

<p><b><u>Incident Details</u></b> Laboratory Number: Incident #: Offense: Evidence Type: Inventory #: Item #: Date: Location: District: Case officer:</p>	
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<p><b><u>Incident Details</u></b> Laboratory Number: Incident #: Offense: Evidence Type: Inventory #: Item #: Date: Location: District: Case Officer:</p>	
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Notification completed by: \_\_\_\_\_

# Appendix D: Chicago Sample Ballistic Information Alert (BIA) Report



CHICAGO POLICE DEPARTMENT  
**FIREARMS LABORATORY**  
 3340 West Fillmore Street, 3<sup>rd</sup> Floor, Chicago, IL 60624  
 Office (312) 746-6866 / FAX 1-312-745-2269



**BALLISTIC INFORMATION ALERT**

BIA Report # 2015-733A

RD Number	Date	Crime	Location
	13-Jul-2015	Shooting Case with person shot - Area North	
	15-Jul-2015	Homicide Case - Area North	
	06-Sep-2015	Weapon Recovered/Narcotics - Area North	

**High Confidence Correlation**

In the opinion of the Firearm Technician, a **High Confidence Correlation** exists between the ballistics evidence in the above cited investigations. A review of the firearm evidence indicates a predictive relationship between the above cases. This information is to provide investigative leads through timely actionable intelligence data.

The Detective should request an official "Hit" - which is a one on one comparison - when it is required for prosecution in court.

This High Confidence Correlation is linked to the above cases.

\*Asterisk Denotes Additional New HCC.

**FIREARM RECOVERED**

INVENTORY [REDACTED]  
 Make: KAHR  
 Model: CM 40  
 Serial Number: [REDACTED]  
 Caliber: .40 S&W / 6R

Based on acquisition and correlation review of the above cartridge cases, a Potential Candidate for Comparison (PCC) exists between the two incidents, meaning that there is a possible relationship between the two cases based on the firearm-related evidence. This information is for investigative purposes only and does not represent a confirmed connection between the two cases.

Should further examination and comparative examination of these cases become necessary, such as for court purposes, then a separate request for such work will be necessary.

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Date: 12-October-2015





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