
PUBLIC SAFETY



Synopsis

Background research and best practices for public safety, with particular attention to the design of safe communities and metro safety services (Police, Fire/EMS, and Sheriff's office/corrections).

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Role and Purpose of Background Reports



This background report was developed to provide input to the NashvilleNext planning process. It was researched and authored by community members interested, involved, and knowledgeable on the topic. The authors present best practices, an evaluation of the state of the topic in the Nashville community today, and recommendations for consideration during the planning process.

This report provides a *starting point* for broader community discussion and reflection based on the research and recommendations of the authors. Throughout the planning process, NashvilleNext will use this and other background reports, ongoing research, departmental involvement, community input and engagement to discuss, refine and formulate the policies and recommendations for the general plan.

The information and recommendations provided in this background report are solely those of the authors and contributors and are being provided at the beginning of the NashvilleNext process to start community discussion.

The NashvilleNext Steering Committee thanks and extends its sincere appreciation to the authors of and contributors to this background report for the time and effort to provide this report for community consideration and discussion. The Steering Committee looks forward to the ongoing dialogue on the issues and recommendations that the authors provide.

Any final policies and recommendations endorsed by the NashvilleNext Steering Committee for the consideration of the Metropolitan Planning Commission will be the result of the entire planning process and upcoming community engagement and discussion.

Contents

Prepared By.....	1
Introduction.....	4
Safe Places.....	5
Connections to other topics.....	7
Metro Safety Services.....	8
Metropolitan Nashville Police Department.....	9
History.....	9
Current Status for Police.....	9
Best Practices for Police.....	12
Fire & Emergency Medical Services.....	14
History.....	14
Current status for Fire Department.....	15
Best practices for Fire Department.....	18
Correctional Services.....	20
History.....	20
Current status for Sheriff's Office.....	21
Best Practices for Jails.....	21
Conclusion.....	22
Topics and ideas for discussion during the NashvilleNext planning process.....	22

Introduction

The Metropolitan Government of Nashville and Davidson County, Tennessee ranks as the 21st largest city in the United States. The citizens of the City of Nashville and those living in the other portions of Davidson County elected to consolidate public services into one metropolitan government in 1963. This vote had enormous ramifications for the provision of public safety to all citizens, as the area which needed to be patrolled by the police and services by the fire department and Sheriff's Office expanded immensely. For police and fire services, the area of service expanded from 72 square miles to about 530 square miles. From that point in time, public safety has remained high on the list of concerns by the citizenry.

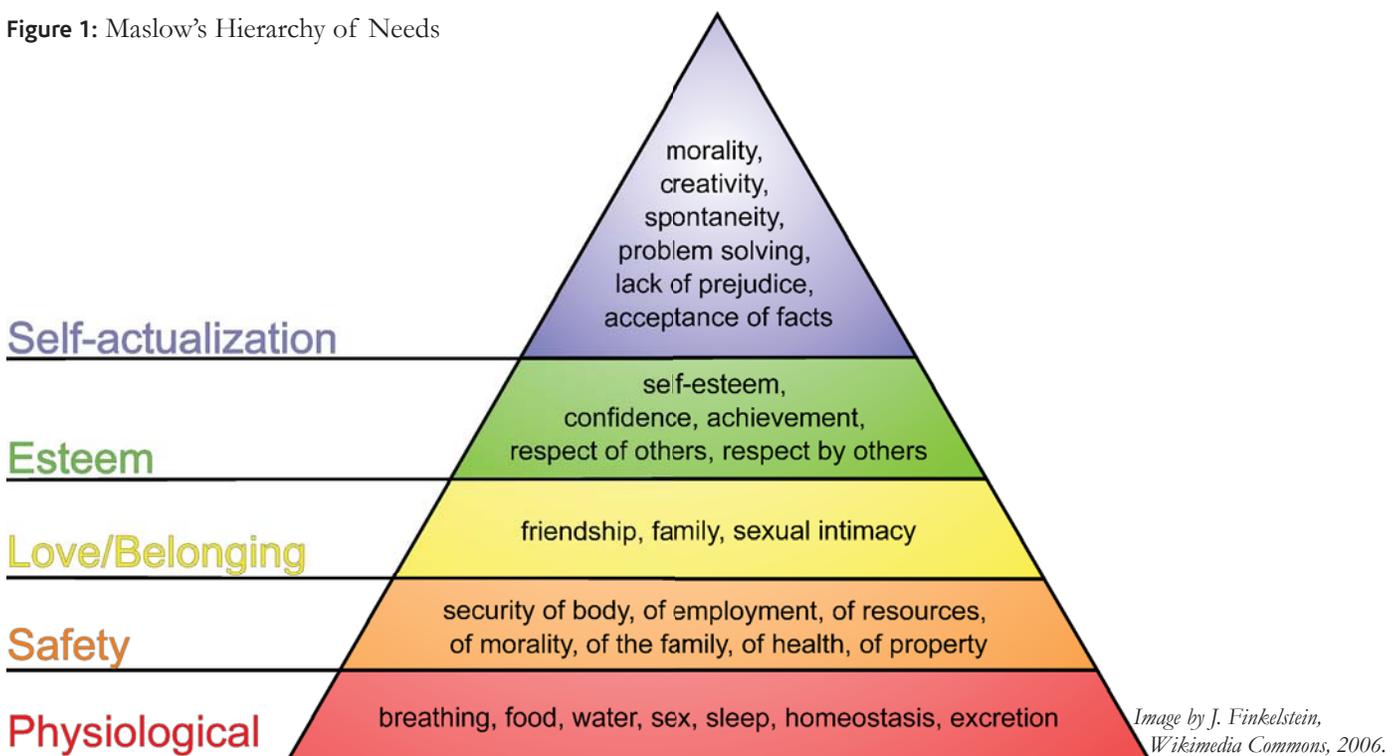
Crime in Nashville and Davidson County has been consistently declining since 1993 (see Figure 3 on page 7). Nevertheless, recent data from the NashvilleNext Issues Survey reveal that public safety rates third highest of twenty possible concerns. This suggests that, while the crime rate nationwide and in Nashville is down, and has been going down for a number of years, safety remains a fundamental concern to Nashville residents.

Maslow's hierarchy of needs (Figure 1) provides insight to why safety remains a concern. There are five universal needs of humans: physiological; safety; love, belonging, and connectedness; esteem and worth; and self-actualization. The largest and most fundamental levels of needs are at the bottom of the pyramid as seen below. This means that physiological needs (such as food and sleep) are predominant for fulfilling before any other and that behaviors and decisions are oriented towards this as a primary need. With physical needs relatively satisfied, the individual's **safety** needs take precedence and dominate behavior.

These needs include personal security, financial security, health and well-being, and having a safety net against accidents/illness and their adverse impacts.

After physiological and safety needs are fulfilled, the third layer of human needs are interpersonal and involve feelings of belonging, which is related to safety or a 'sense' of safety. This is a reason why 'quality of life' is a greater factor in a community's success than most people think.

Figure 1: Maslow's Hierarchy of Needs



According to Merriam-Webster dictionary, safety is defined as *‘the condition of being safe from undergoing or causing hurt, injury, or loss.’* Activities that seek to minimize or to eliminate hazardous conditions that can cause bodily injury keep us safe. Occupational safety is concerned with risks in areas where people work: offices, manufacturing plants, farms, construction sites, and commercial and retail facilities. **Public safety** is *‘concerned with hazards in the home, in travel and recreation, and in other situations that do not fall within the scope of occupational safety.’*

While the definition for ‘public safety’ does not mention hurt, injury, or loss, as the definition of ‘safety’ does, **security** is *‘freedom from danger; freedom from fear or anxiety.’* Freedom from danger and fear is important, because it highlights that safety involves both actual dangers and perceived dangers. Minimizing both is necessary to a sense of safety.

The primary bottom line to safety and security for individuals is: *we want to know that we are not going to be hurt.* Safety and security also involve predictability and order: if I know that the fire truck will get to me in, let’s say, less than five minutes; if I know that I can call 911 and have access to a police officer within seconds to minutes; then this is fulfilling the need in the Maslow’s concept. Creating order makes us feel like we have control.

Safety is central to why governments of all levels are constituted. The Federalist paper no.3, regarding safety and security, states that among the many objects to which a wise and free people find it necessary to direct their attention, that of providing for their safety seems to be first (Jay, John, Federalist No. 3: “The Same Subject Continued: Concerning Dangers From Foreign Force and Influence.” The Independence Journal). In no.43, Madison speaks to “the great principle of self-preservation; to the transcendent law of nature and of nature’s God, which declares that **the safety and happiness of a society are the objects of at which all political institu-**

tions aim and to which all such institutions must be sacrifice” (Madison, James, Federalist No. 43: “The Same Subject Continued: The Powers Conferred by the Constitution Further Considered.” The Independence Journal). Thus, public safety should be a primary consideration of a community, state and of nation.

Safe Places

The places in which people in Nashville and Davidson County live, work, play, and pray shape the dangers they are exposed to and their sense of safety. The shape of cities has always responded to the level of perceived and/or actual degree of public safety. For example, in medieval times, noblemen’s manors and castles were designed for defense purposes. Comfort was an afterthought. Towns and villages developed around the local castle and were a buffer zone for the defense of the castle. The villagers became the eyes of the community, scrutinizing all newcomers. When attacked, the villagers retreated within the walls of the castle. Lack of population mobility was a factor in public safety. It was more common to be born, live and die in the same community. The individual community members’ welfare was totally dependent on her or his relationship with the other community members. The church, local landowners and nobles also had vested interests in the peace and security of the villages and town folks within their jurisdiction. Great cities grew from this humble beginning.

Urbanization is a growing trend in 2012. Expanding urban populations and sprawling development are consuming towns, villages and growing city suburbs. As communities spread out it becomes harder for the ‘castle keepers’ to defend the community.

During the history of this nation there have been many urban planning concepts proposed with the intention of improving quality of life in the urban context with special emphasis on public safety (see Figure 2: Urban Planning, Design and Public Safety).

Public Safety

Figure 2: Urban Planning, Design, and Public Safety

Urban Planning Concept	Key Design Elements	Public Safety Issue Addressed
Garden City Communities (roughly 1890s to 1930s)	Densely built community (“Superblock” concept) structured around green space with undeveloped greenbelt surrounding the community.	Dense “Superblock” development fostered “eyes on street”. Green space offered safe opportunities for recreation, community bonding.
New Deal Communities (1935)	Modeled after Garden City concept with a strong focus on creating jobs for depression era workers.	See Garden Communities.
Planned Communities (1960s)	Garden City elements focused on mixed use and high density for public safety, also to reduce commuting by creating local employment.	Strong connection to community social and economic context means more residents have greater stake in public safety.
Gated Communities	Designed around the concept of creating strong peripheral defense.	Selective access decreases number of intruders.
Sustainable Communities	Integrated planning for social, economic, and environmental needs. Safety through healthy housing, sustainable management of shared resources, and multi-modal transportation.	Design promotes buy-in to community and interdependency on shared resources fostering increasing public health and safety.
Digital Community (community within a community)	Virtual communities ‘designed’ to offer community member’s unlimited access to others with similar interests in a controlled environment without need for physical contact.	Removal of physical contact provides users a safer “virtual” community, yet still enables participation in community activities. Conversely, individuals are isolated.

The city of the future will be heavily dependent on digital information. Buildings will be smart, achieving a level of self-sufficiency not envisioned today. Using computer technology, buildings will program and monitor their own security systems, adapting the program to changing needs and situations. Mass multimedia communication will also enhance the safety of public places.

Design of the built and natural environment plays a major role in improving public safety in urban areas. The physical planning and design of the urban context can organize and coordinate urban elements to form a safe cohesive system of urban open spaces, parks and plazas, transportation and related circulation, buildings, and other structures. This systematic, designed organization of urban components establishes a safe and pleasant public environment. The

quality of the urban context is created to a large extent through careful planning and design of all related elements.

Current design-related approaches to establishing a safe public environment include:

Natural Surveillance: the placement of physical features, activities, and people in ways that maximize the ability to see what is occurring in a given space. An example of natural surveillance is a parking garage built with large panoramic windows facing a major street. This allows pedestrians and motorists to see into the parking area and detect criminal activity. This strategy works because criminals will not commit crimes in areas where they feel exposed to observers. In the event a crime does occur, there is a greater chance that it will be witnessed and reported to police.

Architectural security: Architectural design addresses three human elements including desire to commit a crime against the public, opportunity to commit the crime, and ability to commit the crime. Architectural design for security relates primarily to buildings and addresses the following elements.

1. Physical surroundings (built environment – the context in which the design will reside)
2. Barriers (fences, walls, changes in elevation, surface materials, bollards)
3. Doors
4. Traffic direction (related primarily to access and egress to and from buildings)
5. Standoff distance (distance of a structure from potential location of an explosive device)

Safety through territorial definition: Simply stated, this means physically defining the space with change in surface paving and color, signage, fences, seating, bollards (painted steel posts) and landscape elements including high crowned trees and compact low shrubs. These features make a space look occupied and used. They make it look cared for and attractive to people.

Visual Access: Public safety relies on strong visual access to outdoor spaces, structures and buildings. A large open pedestrian plaza with a water feature and benches is a benefit to people if the urban open space is visually organized, attractive, and comfortable. Generally the more people in a space, the safer the space. People are drawn to attractive vibrant spaces where they can passively or actively engage with other people, which also reduces criminal activities.

Connections to other topics

As argued above, public safety is part of the foundation in the hierarchy of human needs. In practice, safety and other foundational needs, like access to food and housing, are closely linked. Nashville residents without food or housing are generally exposed to other dangers and may engage in such to fulfill this primary need of human nature.

Topics addressed in other NashvilleNext background reports are also connected to public safety issues, in two forms. The first group includes areas that are degraded. This sense of ‘unwatchfulness’ sets up unsafe conditions for living. Employment and economic

Measures of Responsiveness

In London, a new Police Report Card has been developed and measures four dimensions:

1. local crime and policing,
2. satisfaction and confidence,
3. protection from serious harm, and
4. value for the money.

These dimensions are measured and displayed on a publically accessible website allowing citizens to examine in detail their police (could be fire or corrections) department's performance. Another method of summing up the performance areas of public safety is by the use of Mastrofski's Six Domains of Performance. His domains are related to “people policing”, but they are appropriate for policing, fire protection, and corrections. The Domains are:

Attentiveness: a visible presence in the community

Reliability: a quick, predictable response

Responsiveness: attempts to satisfy people's requests and explain reasons for actions and decisions

Competence: Know how to handle criminals, fires, victims, and the public

Manners: Treat all people with respect

Fairness: Equitable treatment for all – especially racial equality

For more, see “Policing for People,” Stephen D. Mastrofski, March 1999, Police Foundation, *Ideas in American Policing*.

development often suffer in unsafe areas, where residents, landlords, and businesses owners have trouble securing money to invest in their homes, buildings, and businesses. Health usually suffers in unsafe areas and ‘days of mental wellness’ are decreased. Declining housing quality as in degrading older, often historic neighborhoods, creates unsafe living conditions. Schools and children suffer when staying safe crowds out attention to education. Other relevant NashvilleNext background reports include *Economic Development, Housing, and Livability, Health, and the Built Environment*.

On the other hand, the second group includes topics involving unsafe situations. For example, traffic safety and conflicts between automobiles, pedestrians, and cyclists are a major threat to safety. Climate threats, including drought, heat, and flooding pose direct threats to public wellbeing, as is poorly maintained infrastructure. See the background papers on *Transportation* and *Adaptation and Sustainability*.

Metro Safety Services

Police, the Fire Department, and the Sheriff’s Office have a number of goals to accomplish to professionally go about their respective duties to ensure a safe community. These agencies must approach their tasks with policies, procedures and resources often unknown to the general public. However, since each of these entities is a public service and acquire their funding from public resources, they each have an obligation to keep the public informed of their progress in keeping the community safe. Community engagement is a strategic element. Consequently, these agencies are committed to activities, including public information campaigns, to build the public’s trust and confidence.

One method of accomplishing the goal of building public confidence is to engage in practices that work and are seen by the community at large to work. This means that public funds are spent on programs or initiatives that are successful. Since all communities

are facing fiscal challenges and some communities are requiring their public safety agencies to cut back on manpower, programs, and services, it has become critical to offer more initiatives that are evidenced-based. Since the 2008 recession, Metro has focused on maintaining levels of service across all departments, while carefully paring back its budget wherever possible. Public safety has been one of three priority areas to ensure that direct services are not reduced. Metro Police in particular are fully staffed. Federal grants allowed the addition of 50 new police officers, which were later incorporated directly into MNPDP’s budget.

Evidence-based public safety is the use of the best available research on measureable outputs and outcomes and is intended to inform decision-makers of the best scientific evidence regarding strategies to realize desired outcomes. This allows these agencies to move beyond a reactive, response-driven approach to a more proactive approach and get smarter about public safety. This kind of approach helps the agencies strengthen their legitimacy with the communities they serve. Public service agencies simply cannot spend money on what does not work. But just doing research is not enough. Proactive efforts are required to push accumulated research into practice through national and community guidelines and actionable strategies. These guidelines can then focus in-house evaluations of what works best across agencies, units, victims, and personnel. Simply, evidence-based policing will use research to guide practice and evaluate public safety personnel and will rely heavily on the evaluation of ongoing operations. It is the link from research-based guidelines to outcomes which will result in a “smart” police agency, a “smart” fire department, a “smart” public safety system continuously improving with ongoing feedback. Evidence-based research includes both basic research on what works best when implemented properly under controlled conditions, and ongoing outcomes research about the results each unit is actually achieving by applying the basic research in practice.

Public safety agencies can increase their institutional knowledge about the science of safety by forming partnerships with local universities and using the services of professors, graduate students, and interns for research. The responsibility for adopting evidence-based practices to public safety is on the agency; the responsibility for disseminating evidence-based safety practices rests with the research community. Both outputs measuring internal performance and outcomes measuring community benefits are useful for research purposes and complete the loop of knowledge to practice.

Metropolitan Nashville Police Department

History

The Metropolitan Nashville Police Department has followed the basic historical police developments of most large, urban city police departments. With the Law Enforcement Assistance Administration's emphasis on college education for police officers in the 1970s, many police officers were able to complete formal education at a growing number of colleges and universities offering Bachelor's and Master's Degrees in Criminal Justice. This led to a progression of professionalism in the area of policing. As crime increased in this time period, the demand to hire more police officers added to the increased need for advanced training of police officers and for them to become more proficient in their duties. Broken Windows Policing — emphasizing an increase of arrests for non-serious crimes so the more serious crimes would not likely increase — became popular and resulted in a decrease in crime in New York City. This model appeared to be successful in some larger communities, but was soon supplanted by a more acute effort to work with the citizens in the communities. In this era, the police recognized that they were unlikely to reduce crime without the cooperation of the community, including the citizens, businesses, non-profit organizations, social services, churches, and civic organizations.

Community policing continues today and now in-

cludes many activities to get the community more involved in working with the police to reduce crime. This has included activities such as bicycle police, visiting schools to talk with the children, walking patrols, Neighborhood Watch programs, and other programs. In 1991, Crime Suppression Units were initiated to address the street level drug sales. This was quickly followed in 1993 with bicycle patrols stationed in the high crime areas to show a high police presence in these neighborhoods. In the early 1990s crack sales fueled street gangs and the attendant violence. In 1995, the federal government funded Enterprise Zones to deal with the escalation of crime through closer work with affected communities, in part by placing officers on foot and bike patrol in high-crime areas. Technology was advancing during this period and the advent of Geographic Information System (GIS) software was used to map crime and uncover hotspots of crime. In the quest to get the community more involved, the police department in 2000 assigned Community Coordinators to better organize the communications and activities between the communities and police department.

Modern policing incorporates a wide array of new technology to meet the demands of crime suppression. Surveillance cameras are used in the downtown area to quickly apprehend perpetrators of crime; license plate reader, facial recognition software, computers installed in police vehicles and a variety of other devices to detect crime are all becoming more commonplace. As criminal tactics evolve, so will the tactics of the police.

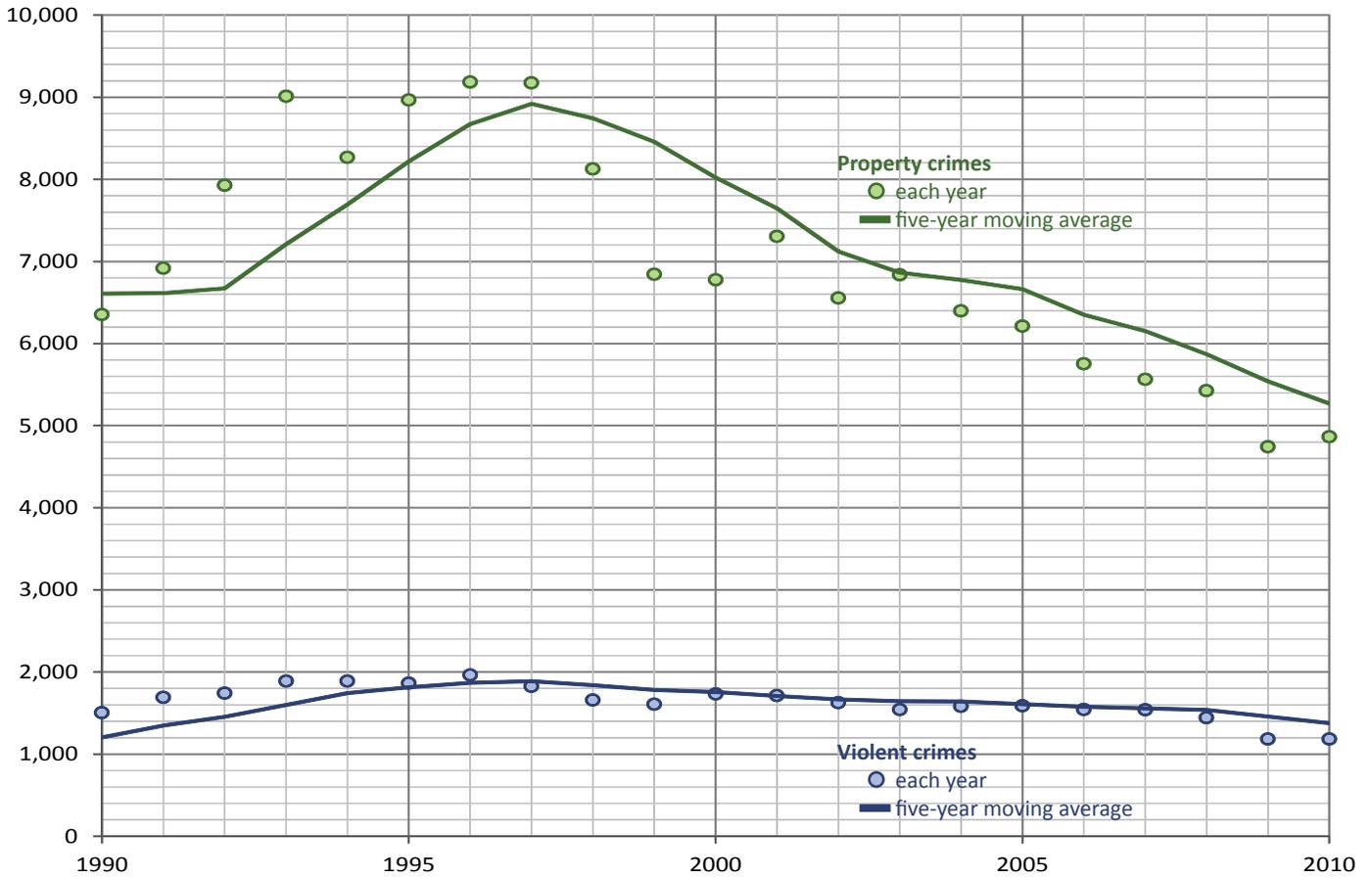
Current Status for Police

Currently, the MPND employs 2.12 police officers per 10,000 Davidson County residents.

Nationally, public confidence in the criminal justice system overall includes only 2% who have a great deal of confidence and 42% with some confidence; the public is more confident in police than the system overall (86% “great deal” or “some confidence”). A

Figure 3: Serious crimes (property and violent) per 100,000 residents in Nashville/Davidson County (1990-2010)

Crimes per 100,000 residents



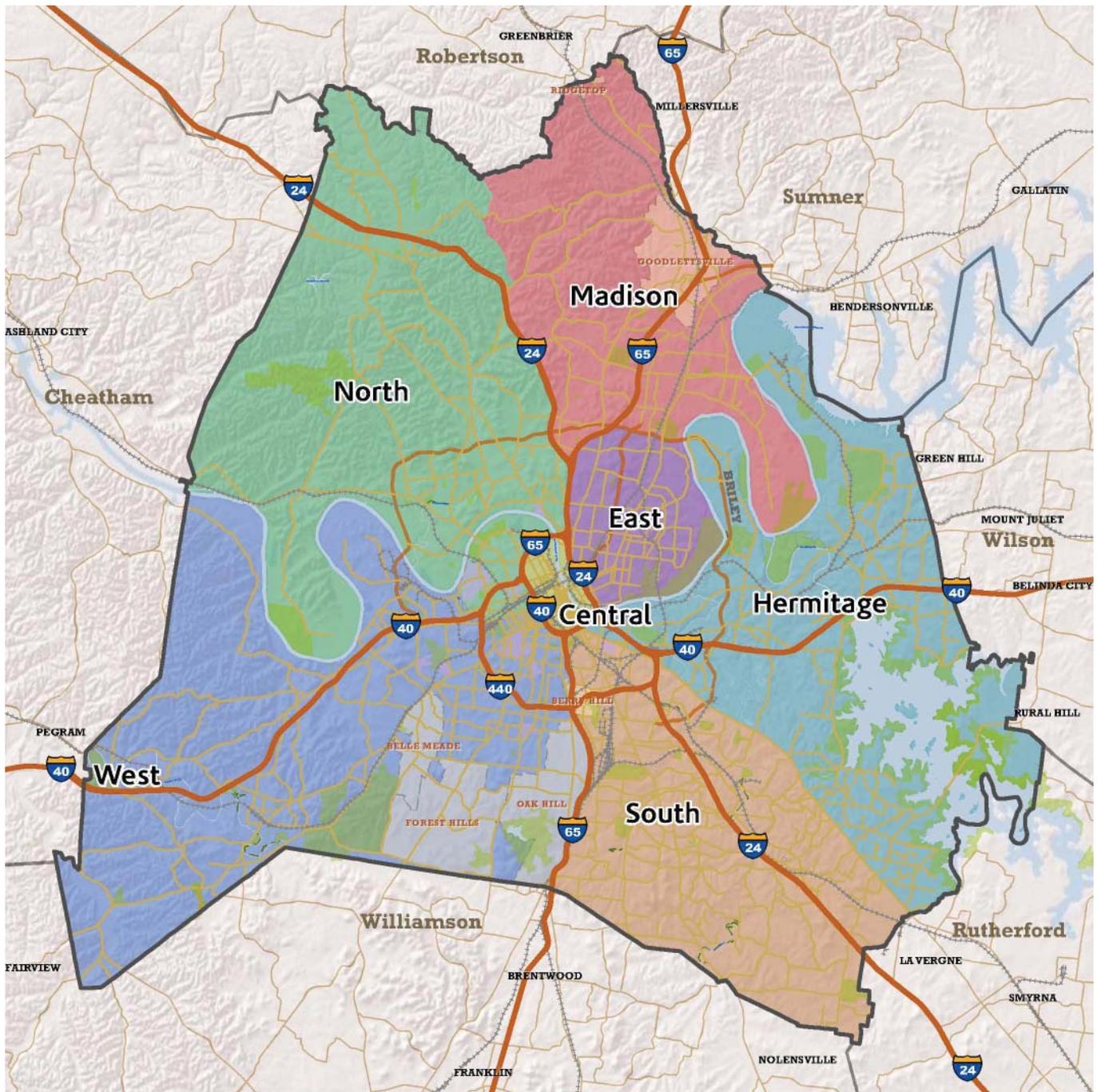
* A five year moving average is the average crime rate of the previous five years.

Figure 4: Number of crimes by type, 2010

Type of crime	Crimes (number)	Crime rate (per 100,000 people)
Violent crimes	6,944	1,184
Murder	60	10
Rape	330	128
Robbery	1,807	288
Aggravated Assault	4,747	758
Property crimes	30,507	4,866
Burglary	7,821	1,248
Larceny	21,053	3,359
Auto Theft	1,633	259

Public Safety

Figure 5: MNPD's seven police precincts (2012)



Police Precincts

- Central
- North
- East
- South
- Hermitage
- West
- Madison



Produced by the Metropolitan Nashville Planning Department
 March 2013
 Datum: NAD 1983 Projection: State Plane, Tenn. Units: Feet



2012 citizen's poll taken by the Metropolitan Nashville Police Department showed similarly high levels of satisfaction with the police: 52% are very satisfied and 36% are somewhat satisfied. Results from 2006 – 2009 tallied across racial/ethnic lines showed only slight variation: white Nashville residents had an 83 percent satisfactory rating with the police department overall, while black residents had a 78 percent and Hispanics, 82 percent satisfactory rating. The difference in the satisfactory ratings among these races was just 5 percent. All adults had a mean satisfactory rating from 2005 through 2009 of 76 percent.

Most recently, the MNPd was selected by the International Association of Chiefs of Police as one of 24 American law enforcement agencies to provide leadership, tactical, and field training to Iraqi police officials.

Best Practices for Police

Best practices from around the country that have been successful in other cities and other states are listed below. While these programs may not work as effectively as in their original communities, they provide a foundation on which more study can be made to determine their efficacy in the Metro Davidson County area.

Problem-oriented policing

Of note is one developing proposition to reduce crime in an indirect manner: the shifting of criminal justice spending. Not all methods of deploying police are equally effective in reducing crime. Just adding police is not predicted to cause less crime or harm. By increasing the visibility of police and employing deterrence-based tactics such as hot spot and problem-oriented policing, officers can deter crime not only at high-risk locations, but also among high-risk individuals. This decrease in criminal opportunities produces a domino effect which can reduce crime and detention rates. Credibly increasing the risk of punishment produces a lower crime rate, which equals lower detention rates and lower jail costs.

Recent literature on deterrence questions the effectiveness as well as the social and economic costs of present day sanction policies of putting too many offenders in jail and prison. This research indicates that the severity (length of sentence) alone does not deter a would-be offender. It is the certainty (the likelihood of apprehension) that matters and creates the sense of health. Support for the deterrent effect of certainty-based sanctions is far stronger than for severity-based sanctions reflected by long sentences. In light of this research, it is proposed for a more effective use of policing, make the risks of crime clearer, and the consequences of crime quicker and more certain. A review of research on imprisonment and re-offending suggests higher recidivism rates were found among those receiving imprisonment sentences than with community sentences.

One suggestion to capture this message of deterrence and crime is to establish a Crime Harm Index using a kind of red, yellow, and green approach to expending criminal justice resources for each part of the criminal justice system including police, prosecutors, pretrial personnel, jails, and probation and parole. The Index would employ a formula which would be weighted according to the seriousness of each crime. By predicting the harm individual offenders are likely to cause instead of counting specific offenses, authorities could identify the “high frequency, high harm” offenders and confine this high risk group. The low frequency – low harm group could be managed with community sanctions. The less serious (low risk) offenders should be provided more crime preventive attention by police, and probation, parole agents and community-based organizations than they currently receive. An added benefit would be giving the community a sense of cost for crime and reason for participating in crime prevention.

Evidence-based policing

The U.S. Department of Justice's Office of Justice Programs operates a website entitled CrimeSolutions.

gov. This website provides a list of police strategies for which research has been conducted. The current listing includes 36 police strategies and the effectiveness in reducing crime for each strategy. Each policing method was rated as Effective, Promising, or Having No Effects. Many of the strategies incorporated in this list extended beyond traditional policing methods and included crime prevention, intervention, response effectiveness, community outreach, efficient resource distribution, crime mapping, crime data collection, and suspect location. We list only those strategies that earned a rating of “Effective” and a brief explanation of the program:

- Hot Spots Policing - A crime-reduction policing strategy which concentrates on improving physical and social order in high crime location in Lowell, MA.
- Minneapolis Preventive Patrol – A program which increased police presence in crime “hot spots” to reduce criminal activity in Minneapolis, MN.
- Operation Ceasefire – A problem solving police strategy which seeks to reduce gang violence, illegal gun possession, and gun violence in communities in Boston, MA.
- Operation Cul-de-Sac – A program which supports the installation of permanent traffic barriers in high-crime neighborhoods to reduce gun drive-by shootings, assaults, and homicides.
- Operation Peacekeeper – A community and problem-oriented policing program based in Stockton, CA, which aims to reduce gang involvement and violence among urban youth aged 10 to 18.
- Philadelphia Foot Patrol – A place-based policing strategy which used walking officer patrol in crime hot spots to reduce violent crime in Philadelphia, PA.
- San Diego Drug Abatement Response Team (DART) – A program designed to reduce drug dealing at residential rental properties by encouraging improved property management practices.
- Specialized Multi-Agency Response Team (SMART) – A drug-control program in Oakland, CA to reduce drug related problems and improve habitation conditions at targeted sites.

MNPD currently uses approaches similar to hot-spots with its Flex Units, which rely on crime mapping to increase presence as new high-crime areas emerge. A similar MNPD program focuses on quality of life issues.

Note that the Center of the Study and Prevention of Violence (CSPV) has a listing of many evidence-based practices to prevent and reduce violence and can be examined at <http://www.colorado.edu/cspv>.

Data mining

One area of policing that has gained interest and use by big-city police departments is crime fighting with the mining of data. These programs use what is known as “big data,” which is described as any data that can be accessed legally such as phone records, financial transactions, and crime statistics, closed circuit videos, emails, facial recognition, license plate readers, and still images. In Memphis, Tennessee the program is known as Blue Crush and in New York City it is called the Domain Awareness System (DAS). The DAS is capable of rapidly blending and analyzing real-time data gathered from roughly 3,000 civic closed-circuit cameras, 911 call recordings, license plate readers, dozens of radiation sensors distributed around the city, as well as historical crime data.

Big data mining can be used to predict the location of crime and criminals. Like everyone else, criminals (including terrorists) leave digital traces with much of what they do, whether sending or receiving emails, making and receiving calls on cell phones, or from credit card transactions. The data can be mined. Imagine the ability to instantly take a security camera photograph from a bank robbery and match it using a facial recognition algorithm to a photograph in an out-of-state motor vehicle database, and then to link

that person's name to a mobile phone from a private-sector marketing database. An affidavit for a warrant could then be automatically generated, electronically signed and forwarded to a judge. Once granted, investigators could use a code to enter an encrypted portal to the telephone service provider and get GPS coordinates that lead right to the suspect. This is all currently possible.

The Metro Nashville Police Department (MNPDP) makes use of COMPSTAT, an approach to regularly monitoring, reviewing, and acting on a wide variety of crime and quality of life data. Further, the MNPDP has a special program to deal with habitual misdemeanor offenders who are affecting the quality of life in a community. Once the offender has a number of arrests in a given period, the offender can be sentenced to 30 days in jail, instead of the normal one or two day sentence for a nuisance offense. To specifically target convicted felons who possess guns, the MNPDP has initiated the Crooks with Guns law. These felons will receive an enhanced sentence.

Crisis care

A large percentage of Police time is spent responding to persons with mental illnesses who commit crimes or are crime victims. For example, MNPDP officers spend numerous hours conveying people with mental illnesses to the hospital and seeing them through intake. An alternative to this would be to establish a Crisis Care Center designed for the mentally ill, designed to allow the police to quickly hand these offenders off to behavioral and mental health professionals.

Fire & Emergency Medical Services

History

The Nashville Fire Department was established in 1860, when the city of Nashville had approximately 17,000 people and was contained in about six square miles. Now, Nashville and Davidson County has expanded to over 620,000 citizens within approximately

530 square miles. Nashville's large square mileage of inhabited land area is one of the largest in the United States protected by a single local government fire agency. The Nashville Fire Department provides for numerous public safety services that include fire prevention and fire code enforcement; public safety education; response to medical emergency needs, fires, technical rescues, hazardous materials, terrorist activities; and other traditional fire department services.

In 1999, the Nashville Fire Department made a momentous decision to seek professionalism through accreditation by the Commission of Fire Accreditation International (CFAI). This process required a self-assessment of the department to ultimately develop response standards based on community needs and analysis to meet the standards promulgated by the CFAI. This resulted in the publication of the Standard of Cover (SOC), which basically outlines how fire service coverage will be provided to the metropolitan area. The Department was successful in 1999, achieving accreditation and has now been reaccredited in 2009 with an updated Standard of Cover.

As a result of the self-assessment phase of accreditation, the Nashville Fire Department reported many strengths, some of which include: the first hazmat company formed in 1979, the first paramedic engine company established in 2001, an active fire boat positioned on the Cumberland River, a state-of-the-art command vehicle, an active program to provide free smoke detectors, and an average 'first due arrival time on all calls at 3:43 minutes' at 95 percent of the time. A list of weaknesses also were found and are being addressed.

Figure 6: Fire Department calls by type (2006-2008)

Type of call	Number of calls
Medical emergency	210,000
Fire suppression	90,000
Fire alarm	24,000
Other	10,150

dressed according to strategic plans. In 1963, with the formulation of the metropolitan form of government, it was understood that the magnitude of immediately expanding fire service from the confines of the city limits to the boundary of Davidson County would require a timetable. Consequently, the fire protection of what were the city limits of Nashville was redefined as the Urban Services District and would receive the same level of service as prior to the metropolitan area. Service to the confines of Davidson County outside of the city limits would be referred to as the General Services District and required a tax levy to provide basic service to this area. The two-tiered system still prevails today with some modifications to a more expansive Urban Services District. The city of Goodlettsville remains the only part of Davidson County which provides its own fire protection services.

Current status for Fire Department

As the Urban Services District has expanded, so has the urban-level fire response area. The Nashville Fire Department (NFD) has gradually replaced the volunteer companies outside the Urban Services District with a basic level of fire suppression response by professional firefighters. The Urban Services District currently has 29 fire stations that account for the initial response time which rarely exceeds three minutes for 170 square miles. For the General Service District, the response time is approximately five minutes in which there are seven fire stations to serve approximately 331 square miles.

Figure 7: Fire Department call volume by type and year (2006 – 2008)

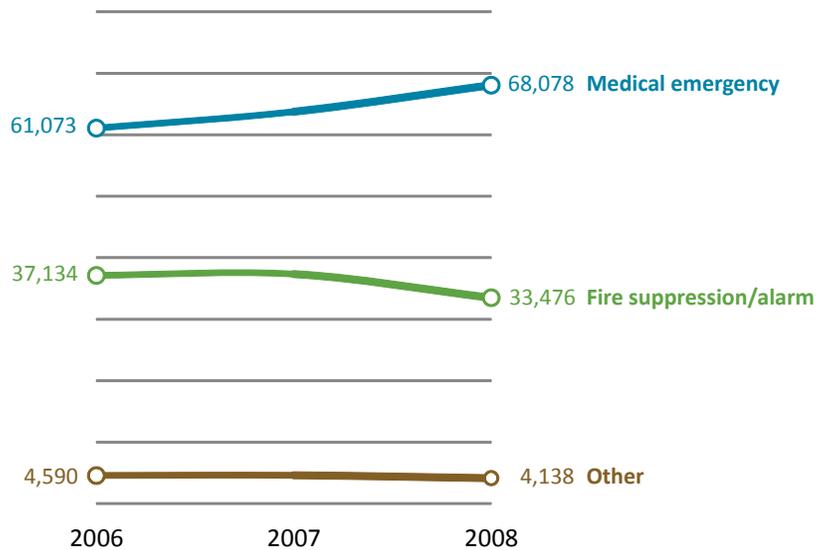
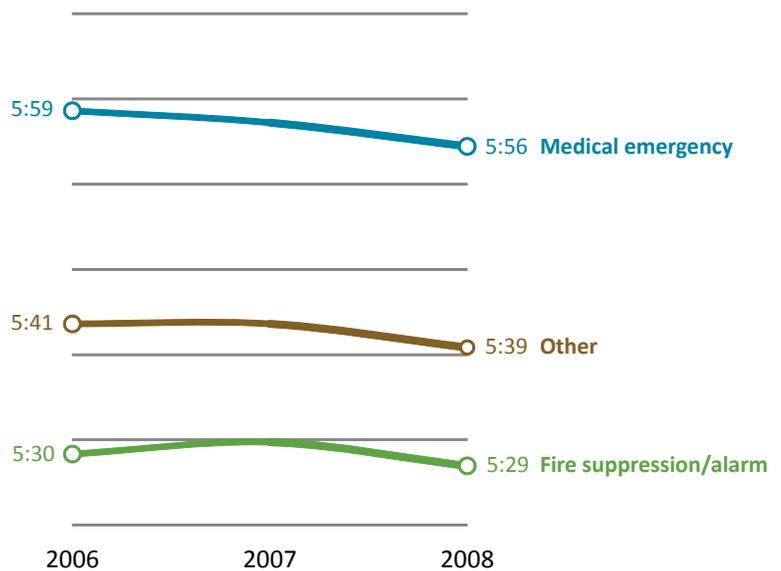
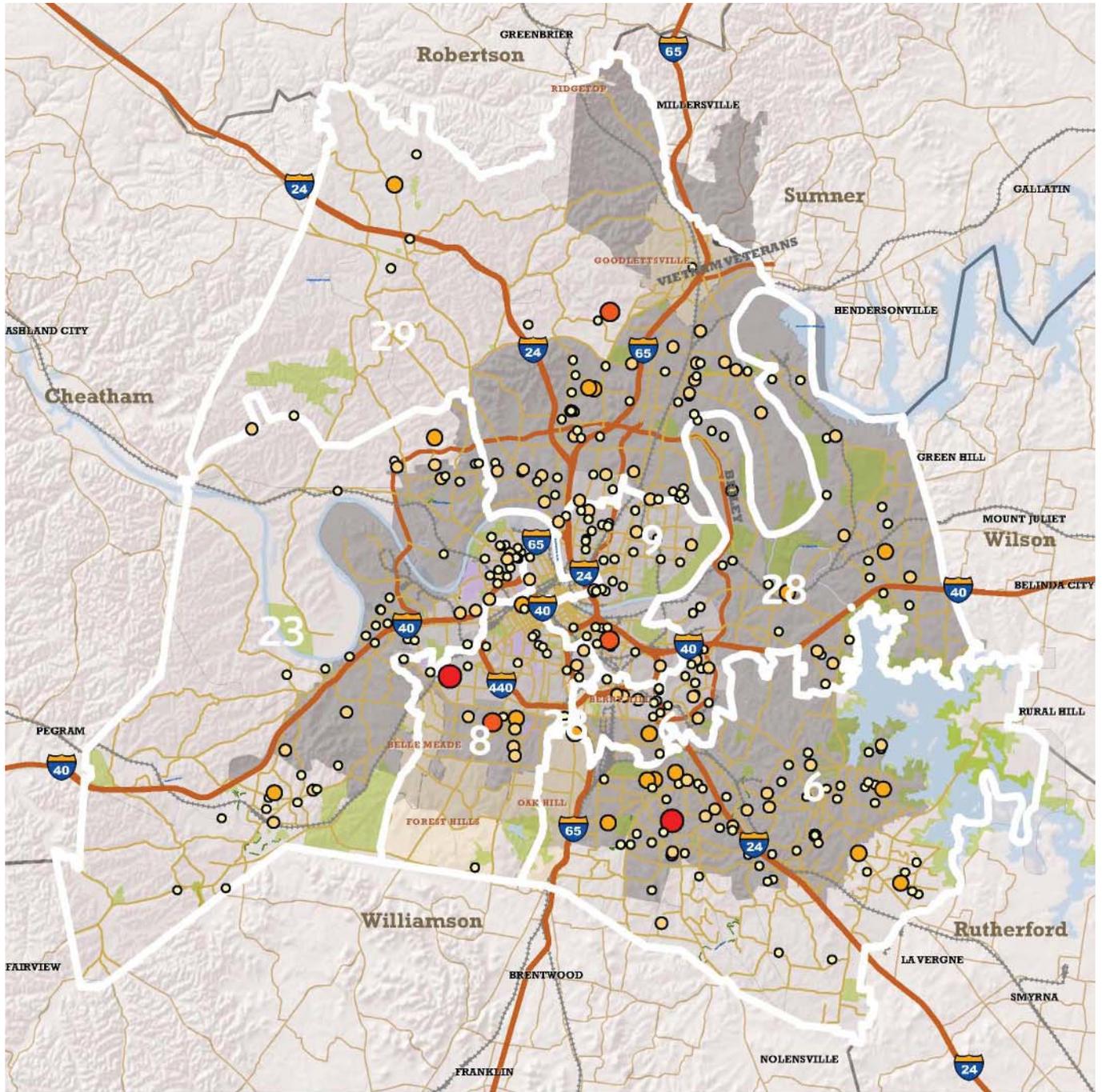


Figure 8: Fire Department response time by type and year (2006 – 2008)



Zone	Area (mi ²)	Population (2008)	Residents per firefighter	EMS calls (%)	Call volume (2006 - 2008)
9	21	54,793	415	64%	64,554
8	38	84,224	554	53%	62,613
6	111	162,742	1,334	62%	49,904
29	151	102,391	731	64%	48,197
28	68	103,547	932	63%	46,553
23	139	111,929	917	63%	42,371

Figure 9: Fire Management Zones and community character



Total loss from fire incidences (2011) Fire Management Zones

- 0 - \$35,000
- \$35,000 - \$110,000
- \$110,000 - \$225,000
- \$225,000 - \$650,000
- \$650,000 - \$1,075,000

District

Community Character

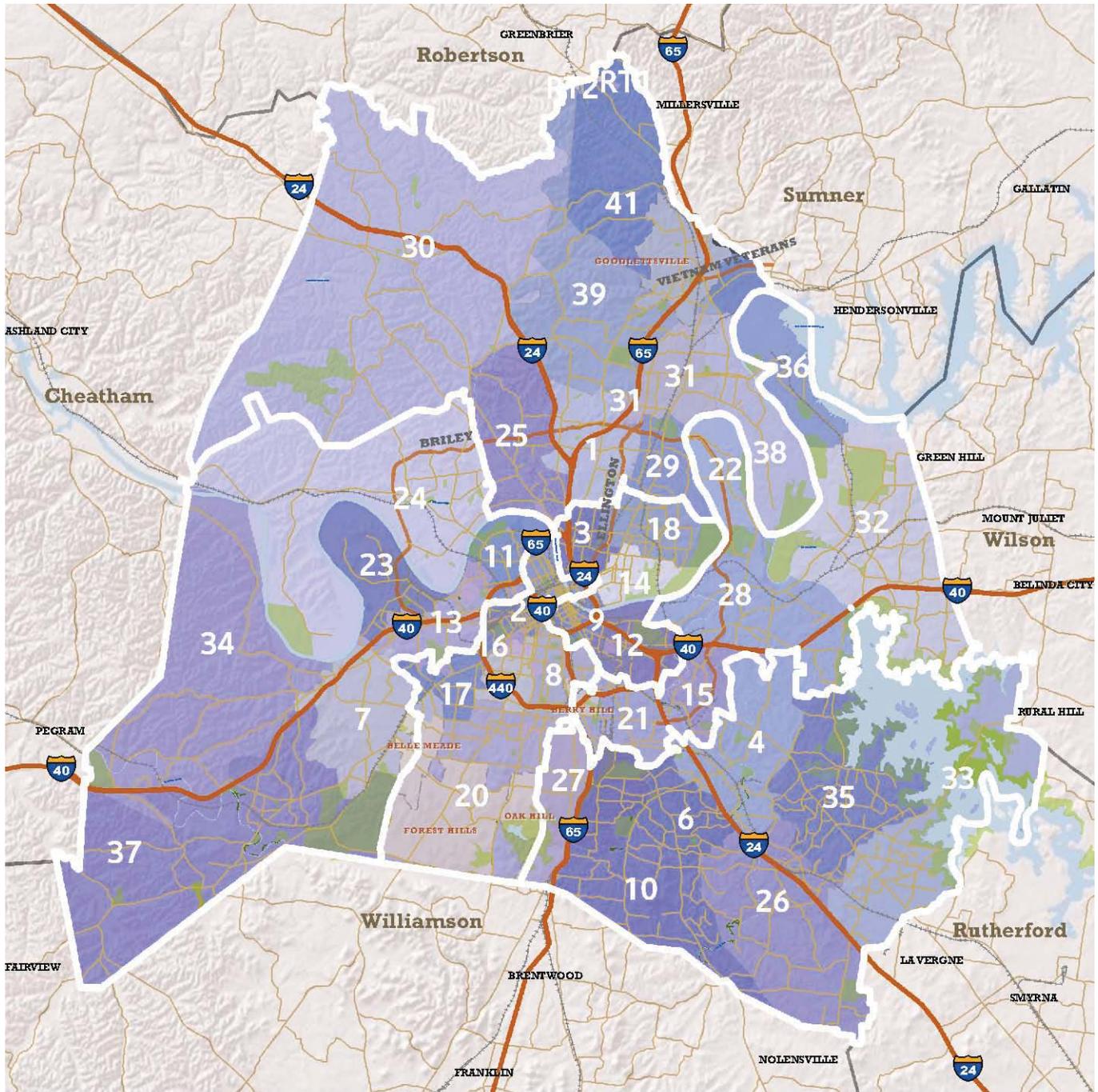
- Rural
- Suburban
- Urban

Miles

0 1.5 3 6

Produced by the Metropolitan Nashville Planning Department
 March 2013
 Datum: NAD 1983 Projection: State Plane, Tenn. Units: Feet

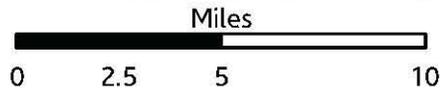
Figure 10: Fire Station location and First Due Response districts



Fire Management Zones

 District

34 Fire station and first-response district



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Fires in 2011 caused 12 civilian fire deaths and \$15 million in property losses.

Today, the department has 39 fire engines and 12 ladder or tower trucks, and special hazardous material equipment housed in 38 of the fire stations. The department is organized into three separate divisions: administration; fire and rescue; and medical services. To provide these services to the public, employees must have multiple skills. All firefighters are licensed as EMTs, so they can respond to any type of emergency. In addition, many fire department employees are also certified or licensed as SCUBA divers, hazardous material specialists, rescue specialists and other specialties. This cross training allows the department a great deal of flexibility to respond to any emergency.

The Emergency Medical Services Division (EMS) is an emergency health care service provided to patients being cared for or transported by Fire personnel. Citizens transported by NFD ambulance to a hospital are charged for the service, including the transport and medical supplies or procedures conducted during the transport. The revenue generated goes back to the city's general fund and is reported by the Fire Department as the only revenue received other than through grants.

EMS is licensed and audited bi-annually by the Tennessee Department of Public Health and Environment. The response time of EMS is critical to their mission and they have worked diligently to decrease the response time over the years. In 1992, the average response time was 6:07 minutes with the response to 77 percent of all calls occurring with eight minutes. By 2008, average response time was down to 5:56 minutes.

Best practices for Fire Department

Effectively managing a fire department requires an understanding of, and ability to, demonstrate how changes to resources will affect community outcomes.

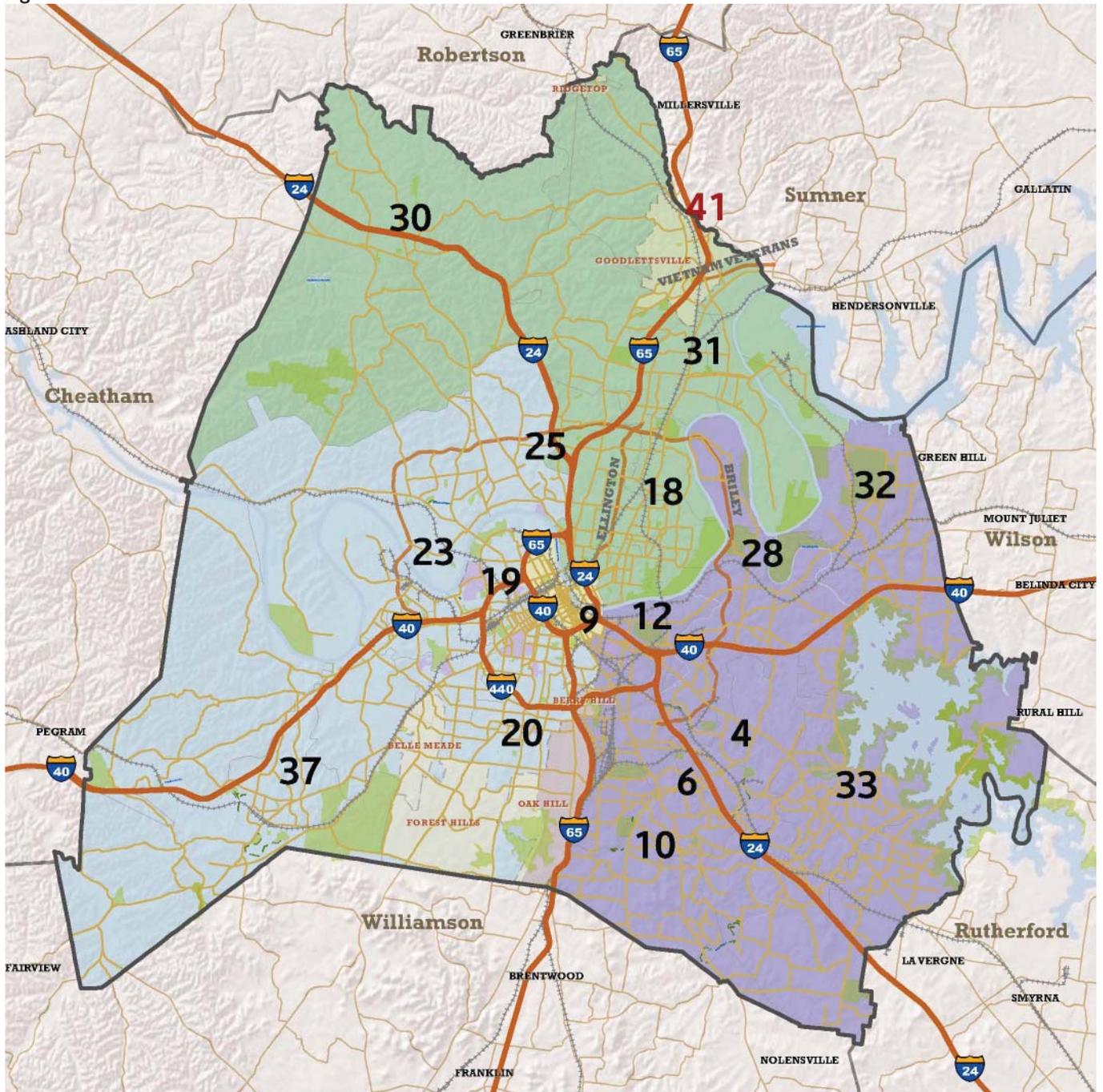
It also requires an understanding of how communities are changing and will change. It is imperative that fire department leaders, as well as political decision makers, know that how the resources of the fire department are deployed in their local community affects outcomes in three important areas: firefighter injury and death; civilian injury and death; and property loss.

If fire department resources are deployed to match the risk levels inherent to hazards in the community, it has been scientifically demonstrated that the community will be far less vulnerable to negative outcomes in all three areas. Following a community hazard risk assessment, fire service leaders prepare a plan for timely and sufficient coverage of all hazards and adverse risk events that may occur. This plan is known as a Standard of Response Coverage or Standard of Cover. This document can be defined as those written policies and procedures that establish the distribution and concentration of fixed and mobile assets of a fire agency. The Metro Fire Department has completed this task, but must constantly be aware of changing circumstances that can affect the plan.

Despite the significance of recent research supporting the ability of local community leaders to make science-based deployment decision, a fire chief must often act in the absence of complete information, which establishes the complex links between resource allocation, and the array of risks found in their communities. Fire service leaders must continue to collect, analyze and use real incident data when working with decision makers to assess the impact that resource deployment decisions have on community risk levels.

One new tool that is currently being unveiled is Smart911, a voluntary, online resource in which residents contribute a Safety Profile that may be critical to fire, police, or emergency medical response to calls they place. This could include medical information, emergency contacts, or directions for accessing their

Figure 11: EMS Medical Unit Locations and districts



34 Stations with EMS units EMS Districts

- 41** Goodlettsville station
- 01
- 15
- 17
- PENDING

Miles

0 2.5 5 10

Produced by the Metropolitan Nashville Planning Department
March 2013
Datum: NAD 1983 Projection: State Plane, Tenn. Units: Feet

home or property. Residents maintain this information on secure website, available only to themselves and to first responders when a call is made.

Every Fire Chief has success stories about specific programs or resource deployments that have proven successful in their community over the years. In the future, consideration for collaboration among departments with enhanced regional cooperation is strong as opposed to staying within jurisdictional boundaries.

The Tennessee Fire Chiefs Association (TFCA), a non-profit organization of fire service leaders across the state, have worked diligently for the last several years to build a mutual aid notification system, known as Mutual Aid Net. This notification system is web-based, and is designed to catalog fire-based resources that each city and county fire service has available. In turn, the system can provide information on any Tennessee fire service resource, such as pumpers, ladders, mobile air trucks, and even teams of personnel that are available to respond to emergencies anywhere in the state on short notice. In the event of an emergency which overwhelms local fire departments, a request can be made through Mutual Aid Net, and assistance can be provided for up to 24 hours deployment, 72 hours of deployment, or longer term if necessary. The Metro Fire Department has deployed resources under this system to counties not only in the state, but has also provided urban search and rescue teams to areas hard hit by natural disasters in Mississippi after Hurricane Katrina and Isaac.

Another trend which will continue is the need for ambulance services. Greater than 80% of the calls for service in Nashville are for emergency medical services, thus the increasing need for the staffing of more ambulances and paramedic-level trained personnel. The city currently deploys 19 ambulances daily – in 2011, these 19 ambulances responded to 84,335 calls for service.

Looking at staffing going forward would assign personnel not to an ambulance or pumper, but wherever in the city the need is at any given moment during the day. This involves tremendous coordination to make sure staffing levels are accomplished without compromising safety of the Firefighters/EMTs by overworking them due to the call volume.

Or, does the future Fire Department move the medical services side of their current responsibility to the private market and concentrate solely on Fire Safety and Prevention and as a compliment to medical services? Is this ‘back to the future’?

Correctional Services

History

The mission of the Davidson County Sheriff’s Office (DCSO) provides a brief explanation of the duties and core values of this agency: “As a law enforcement agency committed to public safety, we strive to be the leader in the field of corrections, service of civil process, and innovative community-based programs, emphasizing: Accountability, Diversity, Integrity, and Professionalism.” The DCSO has a rich history tied to many of the events that have established Nashville as a major cosmopolitan city in the South.

In 1957, Davidson County’s population was estimated at 368,514 with 47 percent living within the Nashville city limits. By 1970, the population increased to 469,400. With a dramatic increase in crime in the late 1980s and early 1990, a federal judge mandated a maximum number of offenders to be housed in the jail system. The old Workhouse was closed in 1993 and was later converted to office space. The Sheriff’s office established several remarkable awards in the area of correctional accreditation by the American Correctional Association. In 1998, the then male Correctional Development Center in 2001, was the first in the nation to be awarded accreditation. This was followed in 2002 with another award for accreditation of the entire jail system, which was the first sheriff’s office in the U.S. to achieve this accomplish-

ment. In 2007, the DSCO became the only agency in Tennessee and only the fourth in the U.S. to participate in the 287(g) jail model that allowed deputies to screen foreign-born arrestees to check their legal status, though it has since withdrawn from the program.

Current status for Sheriff's Office

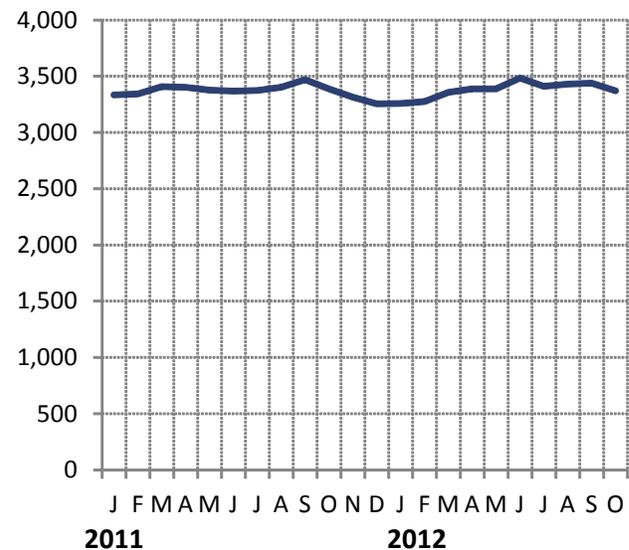
The DCSO remains the only system wide agency fully accredited by the American Correctional Association which includes its four detention centers. The DCSO operates a variety of treatment programs which include:

- Alcohol and Drug Education (PRIME for Life program)
- Intensive Out-Patient Treatment (IOP)
- Anger Management
- Certified Batterers Intervention Program (BIP)
- GED Program
- New Avenues S.A.V.E. Healings Journey
- Day Reporting Center
- DUI School (PRIME for Life program)
- DUI/Weekender Program
- 1st Offender Program
- Multiple Offender Program
- Responsible Behavior Thinking
- Alcohol and Drug Class
- State Citation Class

Best Practices for Jails

The Davidson County Sheriff's Office is a progressive, professionally administrated Sheriff's Office. The Sheriff is the President of the American Correctional Association and has initiated many programs over the years to remain at the forefront of contemporary jail management. For example: the Sheriff not only provides for a jail system that is secure and focuses on the goal of public safety, but also balances this mandate with a clear objective of offering a wide

Figure 12: Total average daily prison population (all classifications, both genders, 2011 – 2012)



variety of rehabilitative programs to the offender population; in addition to an incarceration system to accommodate the sentences of the judges, the office of the Sheriff operates a traffic safety program for persons charged with Driving Under the Influence (DUI); and a Day Reporting Center for sentenced misdemeanants. Also, the Sheriff contracts with a private correctional provider for housing state sentenced offenders, which provides a revenue base offsetting the costs of operating the jail system.

While the Davidson County Sheriff's Office has many commendable programs, other jail systems have programs and services to offer that may be of benefit to Nashville's system. Below is a list of some of the recommendations offered by other jail systems:

- Use pretrial screening of defendants to increase personal bond use.
- Use progressive sanctions instead of revocations for probation technical violations.
- Increase use of early probation release to create incentives for good behavior.
- Drug test defendants who are out on bond.

- Create more public defenders' offices, especially for misdemeanor sentences.
- Make reducing the number of revocations and improving probationers' education outcomes the primary performance measures by which probation officers are evaluated on the job.
- Stop jailing drug abusers for first possession offenses.
- Sentences to menial clean up duties for low-level offenders in lieu of jail sentences should be increased.
- Drug Courts and Mentally Ill Courts should be actively in use. For mentally ill defendants a "Crisis Care Center" should be established in which officers can drop them off for behavioral and medical health care and leave instead of spending wasted time waiting at the hospital.

Recent research indicates that to change criminal behavior, programs need to focus on the current causes of such behavior – anger, anti-social behavior, negative values, negative self-image, and negative attitudes. Cognitive behavior interventions such as modeling and social learning are the evidence-based methods for addressing offender risk factors. Modeling and social learning, which involve providing offenders with positive role models and teaching them how to behave properly, are proving to be the most effective ways to change behavior. They need coaching and must practice how to behave in stressful situations that address risky areas of their lives. When they are released, they must surround themselves with pro-social people, such as family members or a boss.

Conclusion

In our process we were able to observe other areas where the future needs to be affected. The court system is one. The summary of statistical data for case management in the courts reveal that, while defendants disposed in Criminal Court decreased, the average number of days from arrest to disposition in-

creased in all scenarios given us. In General sessions court, there were areas where the number of cases increased but the average time from arrest to disposition decreased. This latter case may point to a best practice. There must be intentional effort to look at data, evaluate and adopt practices that are better as well as stop doing those things that are not.

Topics and ideas for discussion during the NashvilleNext planning process

"The future is here, it's just not evenly distributed yet."
—William Gibson

- What models are available for reducing the burden of responding to persons with mental illnesses who commit crimes or are crime victim, while also connecting them to services?
- How can we continue to identify, incorporate, and tailor problem-oriented, evidence-based, and data-mining policing strategies?
- Are we still using community sirens in 2040?
- Will "big" trucks work in the new environmentally designed and more compact, urban communities?
- What is the "Segway" for Fire?
- What role will the community play in Public Safety?
- What will the future legal environment play on Public Safety?
 - increasing legalization of marijuana
 - gun control
 - increasing surveillance vs. privacy
- How will future of materials for building things affect the 2040 safety?
 - cheaper versus toxic materials
 - unintended consequences of 'recycled' materials
- Will the design of buildings be self-containing as fire depressants?
 - will there be "pre-fire" detections

- increase building management systems with pre-alarm prevention detection
- What will be the consequence of “cloistered” society for disaster management?
- What about the use of kiosks for probation tracking?
- What opportunities and concerns does Smart911 offer for connecting emergency responders to personal information?
- Are there other ways of managing personnel to allow for increased flexibility to respond to fires and emergencies county-wide?
- What would happen if Fire vehicles had digital mobile data terminals?
- Enhancing the coordination between units of government. For example, could police or fire have been consulted more in the design of the Convention center? Another possibility is an “app” for police to assist in Fire’s assessment of a fire alarm or turning several fire stations into basic preventive-care clinics (blood pressure and blood sugar checks), as Colorado Springs is currently doing?
- The best research design to approach causation is the experimental design. In this design, it is critical to have an experimental group and a control group. Therefore, how can Metro government encourage the use of the experimental design by agencies in their research of the effectiveness of policies and programs?
- Since TSU has a vibrant College of Public Service and Urban Affairs with doctoral students seeking research for dissertations — the only PhD in Public Administration program in the state from a public institution — how can Metro government encourage agencies to use the research services of our College?