ASSESSING THE EFFECTIVENESS OF THE MODEL ALARM ORDINANCE: A CASE STUDY OF FOUR LAW ENFORCEMENT AGENCIES

Research report submitted to the Security Industry Alarm Coalition (SIAC)

April 2022

Joe Kuhns, Ph.D.
President - K4 Associates, Inc.
Professor, UNC-Charlotte, Criminal Justice & Criminology

K4 Associates, Inc., 1290 Braeburn RD NW, Concord, NC 28027
980-622-4414, joe.kuhns@gmail.com

ASSESSING THE EFFECTIVENESS OF THE MODEL ALARM ORDINANCE: A CASE STUDY OF FOUR LAW ENFORCEMENT AGENCIES

EXECUTIVE SUMMARY

Project Overview

- A small percentage of alarm users contribute to an excessive misuse of patrol resources.
- Recent data analysis suggests agencies with well-managed alarm management programs maintain a high number of permitted alarm systems, but the majority of alarm owners (often more than 90%) do not require a law enforcement response annually.
- Data is available to determine whether law enforcement service demand reductions are evident and sustained over time, and to consider the manpower and cost savings within agencies that implement and enforce model alarm ordinance protocols.

Study Goals and Methodology

- Determine whether long-term ongoing alarm dispatch reduction programs, particularly those relying on the model ordinance program, are sustainable and cost-effective; and
- Determine whether the SIAC national model alarm ordinance is reducing dispatches in cites/counties where protocols are effectively implemented and strictly enforced.
- A case study approach was used to examine the effectiveness of the model ordinance in two large cities, one small city, and one large county.

Important Study Findings and Conclusions

1. Across four agencies, population increases tended to drive corresponding increases in alarm permit. Increases in alarm permits seem to be effectively managed over time, perhaps suggesting that agencies also grow and learn over time.
2. Agencies that have had the model ordinance in place for longer periods of time tend to demonstrate better outcomes.
3. Most alarm users do not consume significant law enforcement resources.
4. A small proportion were high rate users. However, the proportion of high rate users is lower within agencies with more experience with the model ordinance, and the proportion is dropping over time among agencies with less time and experience.
5. A small proportion were high rate users. However, the proportion of high rate users is lower within agencies with more experience with the model ordinance, and the proportion is dropping over time among agencies with less time and experience.

ASSESSING THE EFFECTIVENESS OF THE MODEL ALARM ORDINANCE: A CASE STUDY OF FOUR LAW ENFORCEMENT AGENCIES

INTRODUCTION

Residential and commercial alarm system responses can be costly to law enforcement agencies, particularly with respect to officer time required for responding to false alarms. Although the majority of residential and commercial burglar alarm systems are not fully reliant on law enforcement resources, a small percentage of alarm users often contribute to an excessive misuse of patrol resources.

Limited research studies, and anecdotal evidence, suggest that some large and medium-sized law enforcement agencies with well-managed alarm ordinance programs routinely maintain a high number of permitted alarm systems, but the vast majority (often over 90%) do not require a law enforcement response in any given year. In some of these cities, data is now available to determine whether law enforcement service demand reductions are evident and sustained over time, and to consider the manpower and cost savings within agencies that implement model alarm ordinance protocols.[1]

Given this context, the goals of this case study report are to assess:

1) whether long-term ongoing alarm dispatch reduction programs, particularly those relying on the model alarm ordinance program, are sustainable and cost-effective; and

2) whether the SIAC national model alarm ordinance is reducing alarm dispatches in cites/counties where the protocols are effectively implemented and routinely enforced.

For purposes of this project, four law enforcement agencies of various sizes, with sustained alarm management programs, were invited and agreed to serve as case study sites. These four participating agencies:

---

[1] See https://www.theiacp.org/resources/resolution/support-for-2020-model-ordinance-for-alarm-management-and-false-alarm; a generic copy of the model alarm ordinance is included in **Appendix A.** To clarify, the model ordinance is a collaborative effort and a jointly-produced, and evolving document written by the law enforcement and alarm industry communities over the last twenty years. The current version contains the best practices that the two groups have studied and approved over time. Both the International Association of Chiefs of Police and the National Sheriff's Association have also passed membership resolutions endorsing the model ordinance. Links to these resolutions and various versions of the ordinance and resolutions are also included at the end of **Appendix A**.

1) use the national model alarm ordinance, or implemented most of its best practices;
2) demonstrated a pattern of consistent and strict enforcement practices;
3) utilized reliable and accurate data collection systems;
4) relied on data definitions that were reasonably comparable; and
5) included two large and one small city and a county agency.

Case Study Methodology and Data Request Process

As an initial starting point, statistical alarm activity data from the Charlotte-Mecklenburg Police Department, and from the Montgomery County Police Department (which publishes an annual report), was collected and examined. These data sources were used as a foundation for requesting comparable alarm program data from the other participating agencies. We also included these two agencies in this report.

A broader set of agencies was initially invited to participate. These agencies were hand-selected based on anecdotal evidence of their promising alarm management practices, and based on their engagement with, and past participation in, prior SIAC projects. Unfortunately, some of the cities were unable to provide their alarm data for various reasons including staffing limitations, leadership transitions and public data request restrictions. As such, our report will focus on examining the impact of the model ordinance on alarm activity from three city police departments – two fairly large cities (Atlanta, GA and Charlotte, NC) and a small city (Marietta, GA) - and one county law enforcement agency (Montgomery County, MD).

The initial goal was to gather a range of burglar alarm data that could be analyzed, compared, and presented, both as year-to-year comparisons, prior to and following adoption of the model alarm ordinance, and to a lesser degree as cross-site comparisons. The initial data request for alarm activity outcomes, which could vary from one department to another, included the following:

Agency Response Activity Levels

- Total calls for service and total security (burglar) alarm events (excluding fire, hold-up & panic-manually activated alarms)
- Total alarm calls that were canceled
- Total alarm calls (generated from Incident Reports)

Alarm Adoption and Activity

- Total number of registered alarm permit holders (collected annually)
- Number of alarm permit holders with zero, one, two or three or more false alarms

Financial Impact

- Percentage of alarm permit users having zero chargeable false alarms annually
- Total amount billed annually for false alarm calls
- Total amount collected annually as fines for false alarms

Policies and Practices

- Number of charge-free responses the agency allows before fines are assessed
- Description of whether the agency suspends law enforcement response and under what conditions (failure to pays fines in a timely manner or excessive responses to false alarms)

Each agency was emailed a written letter from the author formally inviting them to participate, and describing the data we were interested in collecting over a 10-year timeframe. Ideally, we would collect and examine the alarm data five years before and five years following model alarm ordinance adoption. As it turned out, there were fairly substantial differences in data storage and access across study locations. Further, we were unable to capture alarm data prior to model ordinance adoption for a variety of reasons. In fact, we were unable to gather all of the data elements we requested in all four agencies. The following were some of challenges/limitations that were encountered in the data request process:

1) Some departments manage dynamic alarm activity databases (or a private company did so), which meant that alarm data was constantly changing over time, alarm owners came and went, addresses were changed, alarms were turned on and off, etc. Dynamic databases limited the possibility of accurately examining changes in alarm activities over time. In one city, the database management process was completely changed after model ordinance adoption, and historical data were not carried over to the new system.

2) Some departments were unable to respond to the data request unless a public records request was submitted to the city/county. This was the case in one invited city, where a public records request was formally submitted but then ultimately denied. As a result, that agency was unable to participate. The data request in Charlotte also required a public records submission, but that request was approved and the data were delivered.

3) Most departments had active contractual arrangements with private companies, which managed the alarm call data and provided some response and customer services. In some cases, the private companies were unwilling to submit complete data for this report, particularly the requested financial data. As a result, an assessment of the financial impact of model ordinance adoption was not possible here.

4) There were differences across departments, as expected, in how alarm calls were received, routed, responded to, canceled, recorded, etc. There were also differences in response protocols regarding false alarms. As such, some of the data that were gathered across study sites were inconsistent, were available in some locations but not in others, or were not comparable for purposes of our analyses and report.

Despite these challenges, the participating agencies emailed the requested alarm data (in either a Word or an Excel document) directly to the researcher (or the data were extracted from publicly available reports for Montgomery County PD). The researcher cleaned and organized the data (if necessary), merged the data sets together, conducted all analyses, and wrote the report. As such, the alarm data were handled independently by the researcher, and SIAC did not have any role in the data handling and analysis process. SIAC did help to select the four case study sites, and facilitated communication between the researcher and the agencies.

The case study report will examine the data and consider the impact of the model alarm adoption process in each of the four case study sites. Some cross-site comparisons will also be considered and explored, while recognizing the limitations of those comparisons. The implications of the study findings, and some recommendations for other agencies/sites interested in adopting and implementing the model alarm ordinance will be discussed.

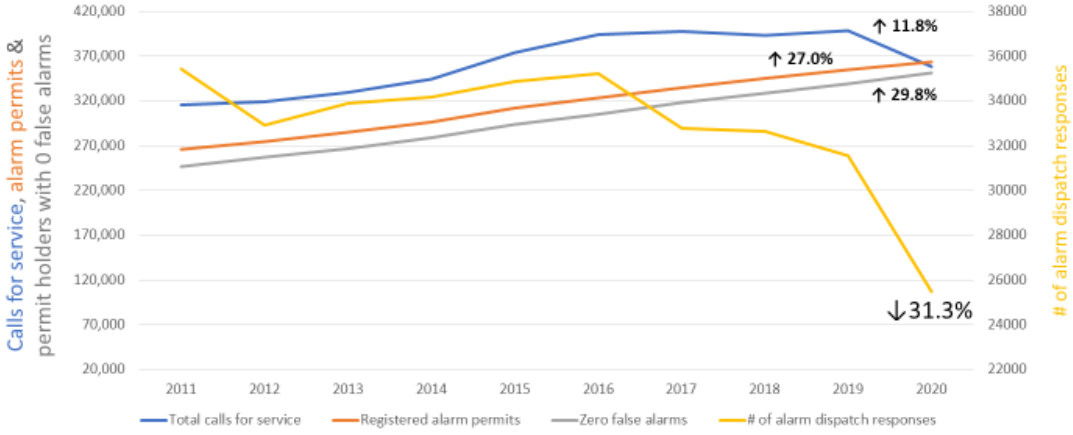
Charlotte Mecklenburg Police Department - Charlotte, North Carolina

Given the growing problems and costs associated with false alarms, the Charlotte Mecklenburg Police Department (CMPD) implemented their alarm ordinance in 1996. The CMPD model alarm ordinance policy states that fines for the first two false alarm responses in a given year are waived, but additional responses result in charges that increase with further violations. CMPD also has a "no response" policy to general burglar alarms for users that have fines which are not paid within 30 days of invoice. Following alarm ordinance adoption, the department experienced steady success and progress in reducing the costly impact of false alarms.

The CMPD jurisdiction in 2011 served over 765,000 residents, but population growth continued to accelerate in the Charlotte-Mecklenburg area. By 2020, in excess of 950,000 citizens lived within the CMPD law enforcement jurisdiction. The growth in population correlated with a steady increase in both residential alarm permits (from 224,511 in 2011 to 311,054 in 2020) and commercial alarm permits (from 40,086 in 2011 to 52,586 in 2020).

Despite the continual increases in population and issued alarm permits, several metrics suggest that the enactment of the alarm ordinance at CMPD continues to generate organizational efficiencies. **Figure 1** provides some of this evidence. **Figure 1** illustrates 10-year trendlines for annual calls for service, annual registered alarm permits, the number of permit holders with zero false alarms each year, and the number of alarm dispatches annually. As the trendlines suggest, despite rises in calls for service and alarm permits issued, the number of permit holders not generating any false alarms in a year continues to keep pace with the growth, while the number of alarm dispatches drops considerably.

Figure 1 - Charlotte Mecklenburg Police Department
Annual calls for service compared with issued alarm permits, permit holders with zero false alarms, and alarm dispatch responses



Model ordinance adopted in 2011

Figure 2 considers some of the data a bit differently, illustrating the percentage of alarm owners with zero false alarms in any given year. The trendline again indicates that most alarm owners in Charlotte are not generating any false alarms, growing from 92.9% in 2011 to 96.6% in 2020. Therefore, most Charlotte alarm owners do not unnecessarily consume any law enforcement resources for false alarm response.

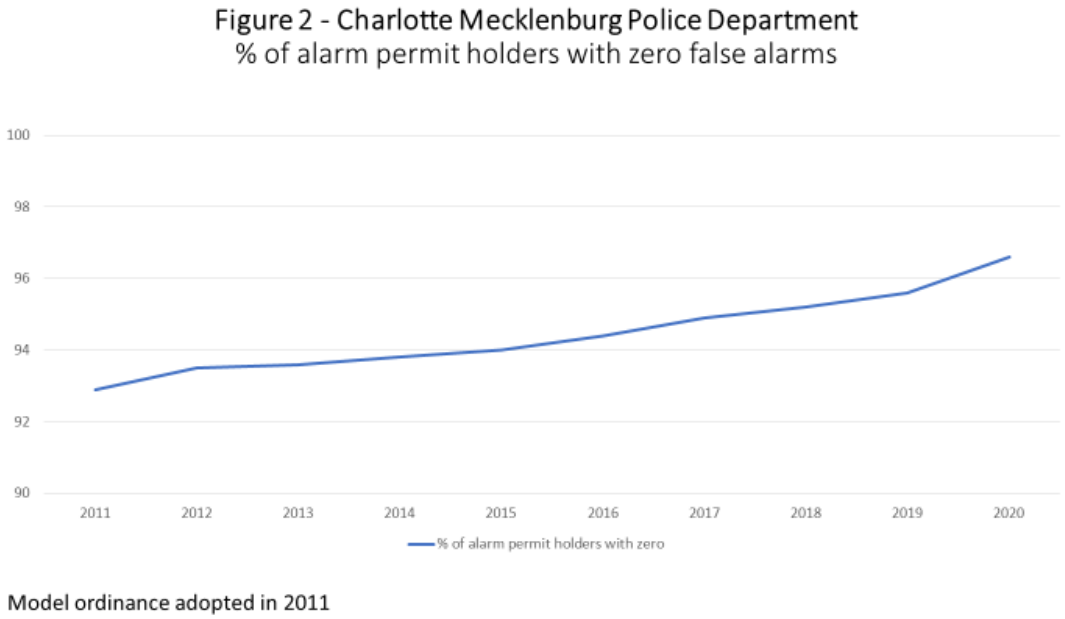
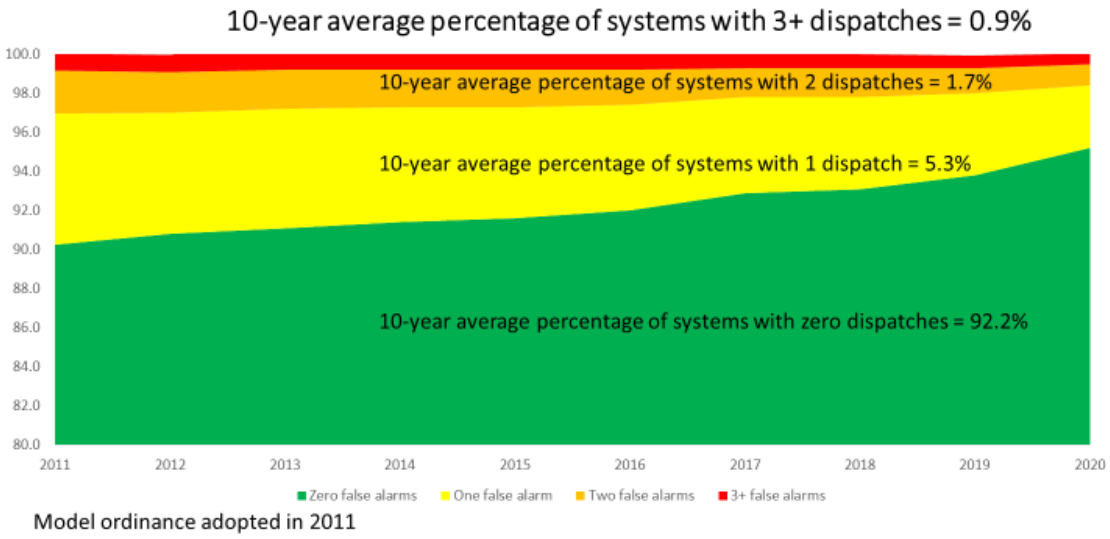


Figure 3 more closely examines the proportion of alarm systems that generated zero, one, two, or three or more dispatches annually. The data clearly suggest that, on average over the 10-year timeframe examined, less that 1% of system owners generated three or more dispatches annually, and over 92% generated zero dispatches.

Figure 3 - Charlotte Mecklenburg Police Department
Proportion of ~363,631 (annual average) permit holders with zero false alarms, one false alarm, two false alarms, and 3+ false alarms from 2011-2020



Considered collectively, it appears that the newly-enacted alarm ordinance in Charlotte continues to pay substantial dividends over time, in both officer time savings and cost savings. Specific cost savings were not estimated by CMPD for this report, and financial data were not provided. But clearly the reductions in alarm dispatches, and the high and increasing proportion of alarm owners reporting zero false alarms, will save CMPD substantial officer time each year.

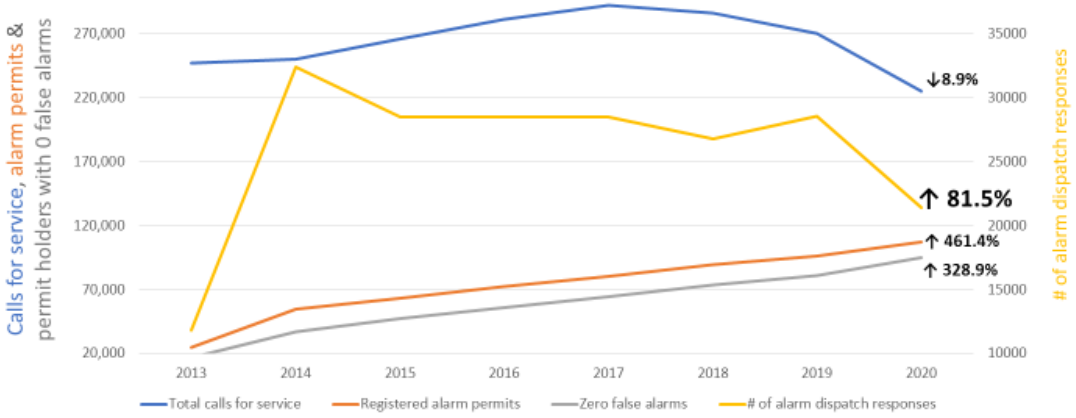
Atlanta Police Department - Atlanta, Georgia

The Atlanta Police Department (APD) implemented their model alarm ordinance in 2013. The APD policy states that a fine for the first false alarm response in a given year is waived, a second false alarm results in a formal warning, but additional false alarms would result in charges that increase with additional violations. However, a third false alarm fine can be waived if the user attends an alarm user awareness class. Similar to CMPD, following model ordinance adoption, the department has experienced steady success and progress in reducing the impact of false alarms.

The APD jurisdiction is somewhat smaller than the CMPD jurisdiction, with the department serving about 420,000 residents in 2010. By 2020, an estimated 498,715 citizens lived in areas that received law enforcement services from APD. Alarm ownership, based on issued alarm permits, is lower in the Atlanta area. But again, the growth in population over time correlated with a steady increase in alarm permits issued, from 24,914 in 2013 to 106,848 in 2020. APD did not differentiate residential versus commercial permits for purposes of this report.

In Atlanta, the metrics suggest that the adoption of the model ordinance continues to generate some organizational efficiencies. **Figures 4**, **5** and **6** illustrate the evidence. **Figure 4** provides the 8-year trendlines for the number of permit holders with zero false alarms each year, again compared to the trendline for total calls for service, the number of registered alarm permits, and the number of alarm dispatch requests annually. As the trendlines suggests, despite fairly stable growth in calls for service, the number of permit holders not generating any false alarms each year continues to grow correspondingly with the overall alarm adoption numbers. The number of alarm dispatches also grew, but the growth was far lower, on a percentage basis, that the growth of alarm permits.

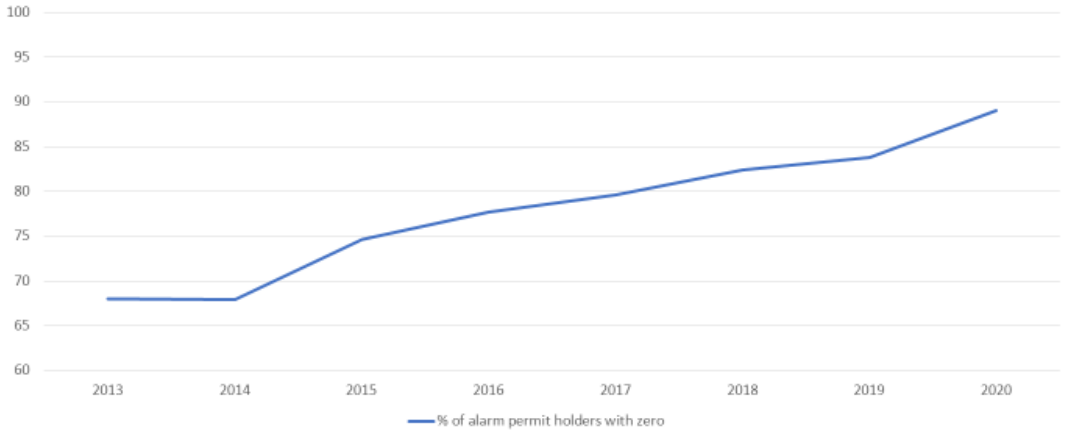
Figure 4 - Atlanta Police Department
Annual calls for service compared with issued alarm permits,
permit holders with zero false alarms, and alarm dispatch responses



Model ordinance adopted in 2013

Again, **Figure 5** considers the false alarm data a bit differently, illustrating the percentage of alarm owners with zero false alarms in any given year. The trendline suggests that most alarm owners in Atlanta are not generating any false alarms over the eight years, and the trend is moving in a positive direction, growing from 68% in 2013 to 89% in 2020. Therefore, most alarm owners are not unnecessarily consuming law enforcement resources in Atlanta.

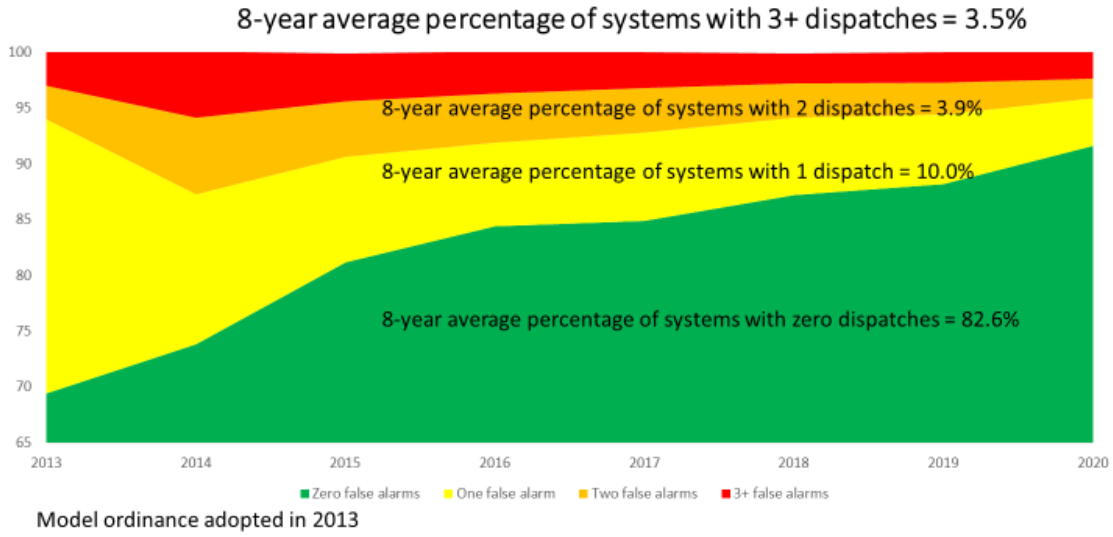
Figure 5 - Atlanta Police Department
% of alarm permit holders with zero false alarms



Model ordinance adopted in 2013

Finally, **Figure 6** more closely examines the proportion of alarm systems that generated zero, one, two, or three or more dispatches annually. The data again suggest that, on average over the 8-year timeframe, only 3.5% of system owners generated three or more dispatches annually, and over 82% generated zero dispatches.

Figure 6 - Atlanta Police Department
Proportion of ~73,469 (annual average) permit holders with zero false alarms, one false alarm, two false alarms, and 3+ false alarms from 2013-2020



Considered collectively, it appears that the model ordinance adoption in Atlanta also continues to pay substantial dividends over time, in both officer time savings and cost savings. Again, specific cost savings were not estimated by APD for this report and financial data were not provided. But clearly the reductions in alarm dispatches, and the high and increasing proportion of alarm owners reporting zero false alarms, will save APD substantial officer time each year.

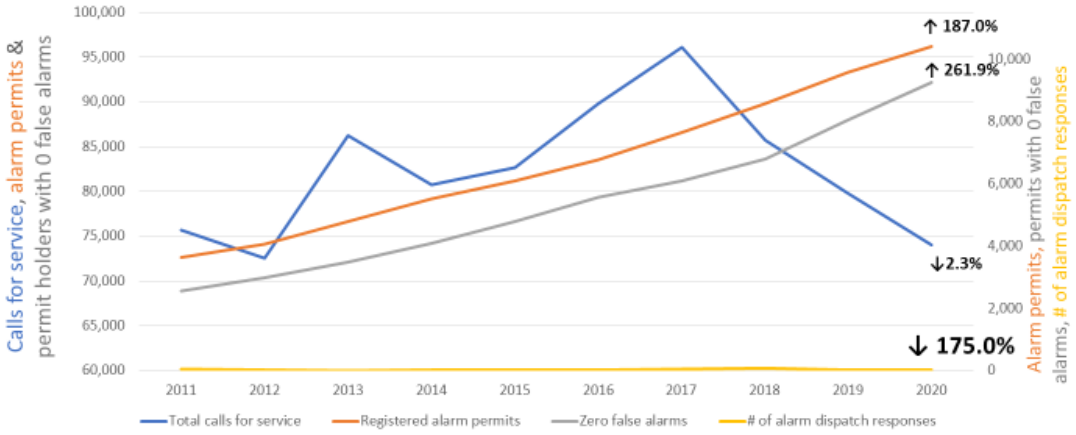
Marietta Police Department - Marietta, Georgia

The Marietta Police Department (MPD) implemented their model alarm ordinance in 2007, although our data analysis focuses on examining their experiences since 2011. The MPD policy states that fines for the first two false alarm responses in a given year are waived, but additional false alarms result in charges that increase with additional violations. Similar to APD, attendance at an alarm awareness training class can mitigate some fines in Marietta. MPD will also suspend responses to those who fail to pay fines for 30 days following invoice, and they maintain discretion regarding whether constant offenders will receive law enforcement responses to false alarms. Again, following model ordinance adoption, the department has experienced some success and progress in reducing the impact of false alarms in Marietta.

The MPD jurisdiction is much smaller than both the CMPD and APD jurisdictions, serving only 56,579 residents according to the 2010 census. By the 2020 census, the city had grown modestly to 60,972 citizens who lived in areas that received law enforcement services from MPD. Alarm ownership, based on issued alarm permits, is a fraction of that in Charlotte and Atlanta, but growth in adoption is still readily apparent. The number of alarm permits issued nearly tripled, from 3,624 in 2011 to 10,402 in 2020. MPD also did not differentiate residential versus commercial permits for purposes of this report.

In Marietta, alarm metrics suggest that the adoption of the model ordinance continues to generate some organizational efficiencies. **Figures 7**, **8** and **9** illustrate the evidence. **Figure 7** provides the 10-year trendline for the number of permit holders with zero false alarms each year, compared to the trendline for total calls for service, registered alarm permits, and number of alarm call dispatches. As the trendlines suggest, while the overall agency workload dropped modestly over the last decade, the number of permit holders not generating any false alarms in a given year continued to grow correspondingly with overall alarm adoption numbers. Further, the numbers of dispatches dropped considerably, although these numbers are quite low overall (averaging about 25 alarm dispatches per year), given that Marietta serves a much smaller population than the prior two cities (Charlotte and Atlanta).

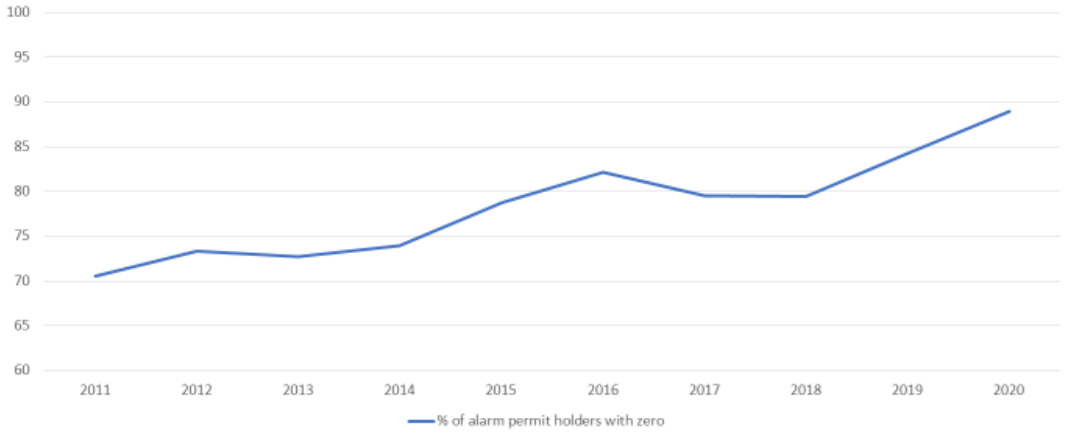
Figure 7 - Marietta Police Department
Annual calls for service compared with issued alarm permits,
permit holders with zero false alarms, and alarm dispatch responses



Model ordinance adopted in 2007

Figure 8 again illustrates the percentage of alarm owners with zero false alarms in any given year in Marietta. The trendline again suggests that most alarm owners are not generating any false alarms, and that the trend is heading in a positive direction, growing from 70.5% in 2011 to 88.9% in 2020. Therefore, the majority of alarm owners in Marietta are not unnecessarily consuming law enforcement resources as a result of false alarms.

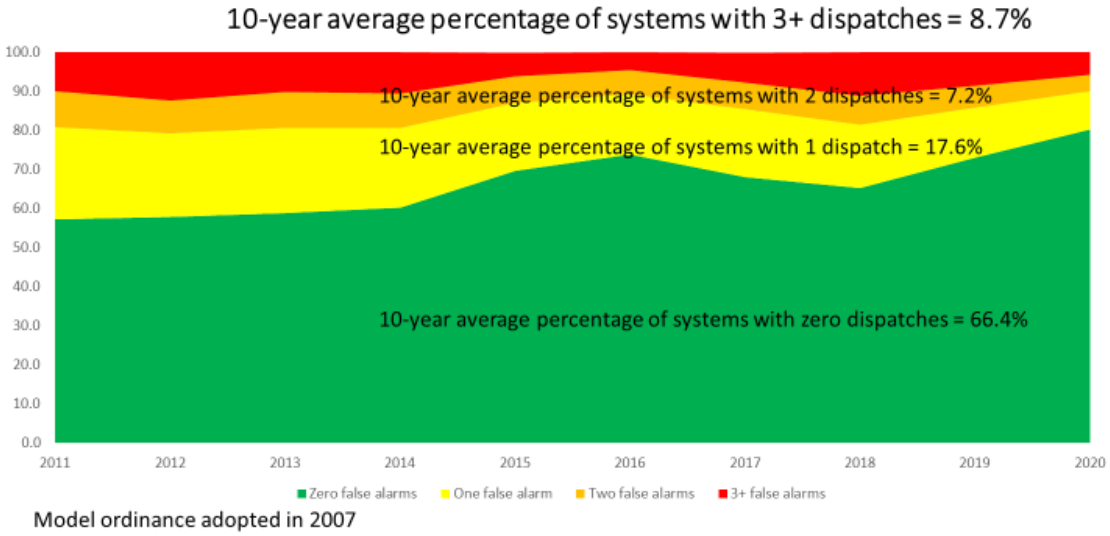
Figure 8 - Marietta Police Department
% of alarm permit holders with zero false alarms



Model ordinance adopted in 2007

Finally, **Figure 9** more closely examines the proportion of alarm systems that generated zero, one, two, or three or more alarm call dispatches annually. The data suggest that, on average over the 10-year timeframe, 8.7% of system owners generated three or more dispatches annually, but over 66% generated zero dispatches.

Figure 9 - Marietta Police Department
Proportion of ~6,698 (annual average) permit holders with zero false alarms, one false alarm, two false alarms, and 3+ false alarms from 2011-2020



Model ordinance adopted in 2007

Montgomery County Police Department - Montgomery County, Maryland

For purposes of this report, the Montgomery County Police Department (MCPD) was not contacted directly or asked to submit alarm data, primarily because the agency publishes an annual report. Most, but not all, of the data were readily accessible, extracted from the annual reports, and analyzed and examined. Similar to the other agencies, not all of the data were available, and some of the reporting changed over time.

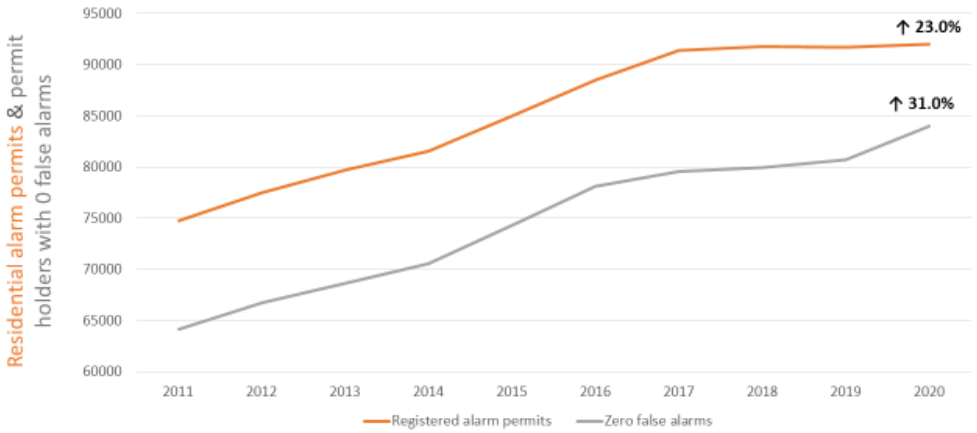
The MCPD implemented their alarm ordinance in 1996, although consistent with most of the other sites, our analysis examines their experiences since 2011. The MCPD model alarm ordinance policy states that a fine for the first false alarm response in a given year is waived, but additional false alarms result in charges that increase with additional violations. MCPD will also suspend responses to alarm owners who fail to pay fines for 30 days following invoice. Again, following model ordinance adoption, the department has experienced some successes and progress in reducing the impact of false alarms in Montgomery County.

The MCPD jurisdiction is a large county, serving 971,777 residents according to the 2010 census. By the 2020 census, the county had grown to 1,062,061 citizens who lived in areas that received law enforcement services from MCPD. Alarm ownership, based on issued alarm permits, has steadily increased over that last decade. The number of residential alarm permits issued grew from 74,755 in 2011 to an estimated 92,000 in 2020. MCPD does not include commercial permits in their annual reports.

In Montgomery County, the alarm metrics suggest that the adoption of the model ordinance continues to generate impressive organizational efficiencies. **Figures 10**, **11** and **12** illustrate the evidence.

Figure 10 provides the trendline for the number of permit holders with zero false alarms each year. The MCPD annual reports do not include calls for service, so that information is not included here. Instead, **Figure 10** chart compares the trendlines for issued permits with those reporting zero false alarms in a given year. As the two trendlines suggest, over the decade, the number of permit holders not generating any false alarms continues to grow correspondingly with overall alarm adoption numbers. Ideally, and using the chart below, the distance between the two lines will diminish further over time, and this is starting to occur in more recent years. This change suggests that MCPD policies and enforcement efforts are increasing the proportion of users who have zero false alarms, even as growth in alarm adoption continues. These trendlines will never fully converge, of course, since some users will always generate false alarms.

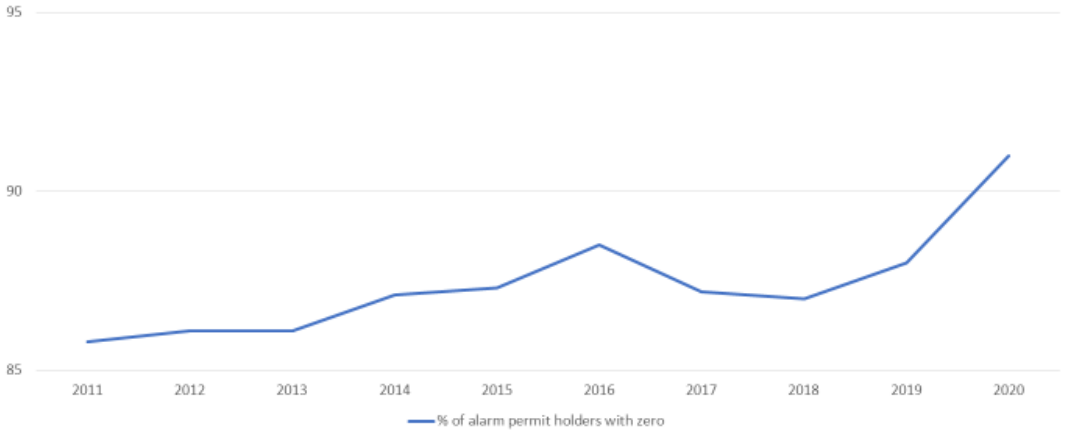
Figure 10 – Montgomery County Police Department
Annual residential alarm permits issued and annual number of permit holders with zero false alarms



Model ordinance adopted in 1996

Figure 11 again considers the same data differently, and illustrates the percentage of alarm owners with zero false alarms in any given year in Montgomery County. The trendline suggests that most alarm owners are not generating any false alarms, and again that the trend is heading in the right direction, growing from 85.8% in 2011 to 91.0% in 2020. Therefore, the majority of alarm owners are not unnecessarily consuming law enforcement resources as a result of false alarms in Montgomery County.

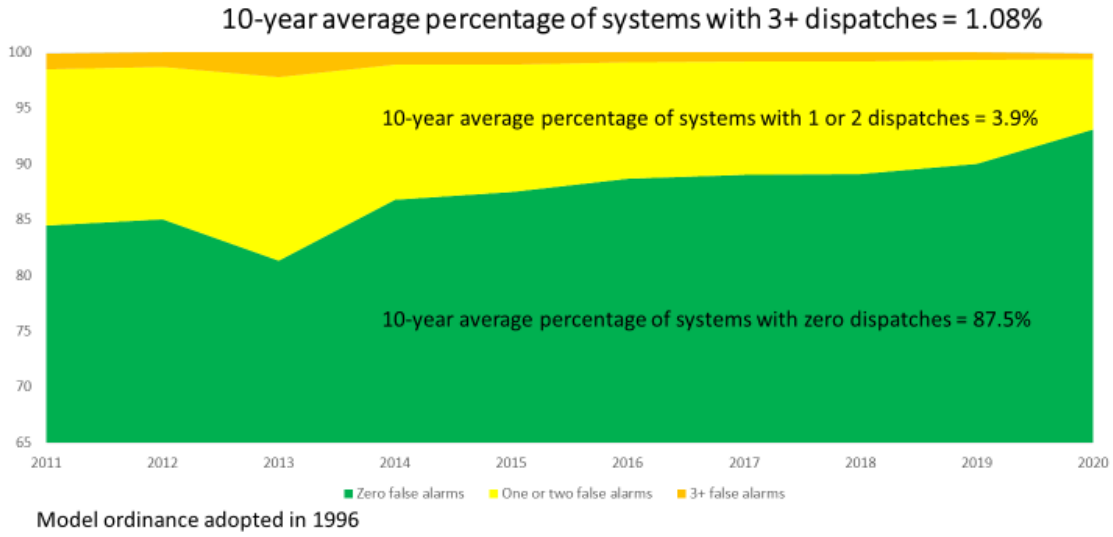
Figure 11 - Montgomery County Police Department
% of alarm permit holders with zero false alarms



Model ordinance adopted in 1996

Figure 12 again more closely examines the proportion of alarm systems that generated zero, one or two, or three or more dispatches annually.[2] The data suggest that, on average over the 10-year timeframe, only 1.1% of system owners generated three or more dispatches annually, but over 87% generated zero false alarm dispatches.

Figure 12 – Montgomery County Police Department
Proportion of ~84,657 (annual average) permit holders with zero false alarms, one or two false alarms, and 3+ false alarms from 2011-2020



[2] The MCPD reports combined one and two false alarm reports together, while the other organizations provided these estimates separately.

Cross-site Comparison of Alarm Ordinance Effectiveness

In the interest of transparency, it should be acknowledged that it is difficult, and in fact potentially problematic, to conduct cross-site comparisons with respect to the adoption and effectiveness of model alarm ordinances. There are multiple reasons why cross-site comparisons can be potentially misleading. Below are a few cautions that should be considered within this context, prior to preliminarily examining some cross-site comparisons among the four case study sites.

1) **Model ordinances vary** - Some ordinances are implemented in stages, all likely evolve over time, and many, while similar in written language, likely have clear differences in actual adoption, implementation, and enforcement.
2) **Model ordinance enforcement varies** - Clearly, some agencies are more effective at enforcing ordinances than others, some will devote more time and resources to the enforcement process, and some enforcement policies are more restrictive and punitive than others. These differences matter when making cross-site comparisons.
3) **Model ordinance active years will vary** - Two agencies in this report passed their model ordinances in 1996, more than 25 years ago. The two other agencies passed their ordinances 15 years ago and about a decade ago. These time differences matter in terms of learning what works, understanding how to implement and enforce the policy, use and continued use of resources, other local financial pressures, etc.
4) **Agency alarm databases and data elements differ** - This data issue was discussed above, but it is important to remind readers that dynamic databases create substantial difficulties when examining changes within an agency, and those difficulties are equally important when making comparisons across agencies.
5) **Management of alarm data differs** - Some agencies manage their own data, while others rely on private contractors. Contractors can change over time, and contractual budgets can also change.
6) **Financial management processes are variable** - Although not measured in this study, the administration of alarm management including the permitting process, fine invoicing, and agency efforts to collect fines, is a necessary and resource-intensive part of enforcement. Some agencies use internal processes, and others rely on third parties (outsourcing) to handle these administrative duties.

Recognizing these, and perhaps other, differences, and notwithstanding the cautions noted above, some cross-site comparisons will be useful. **Figure 13** combines all of the data from the four study sites measuring the percentages of alarm users that reported zero false alarms in a given year. A few observations from this chart are worth consideration. First, the two agencies that implemented their model ordinances in 1996 report higher percentages of users with zero false alarms in a given year. These data likely reflect advanced experience and broader

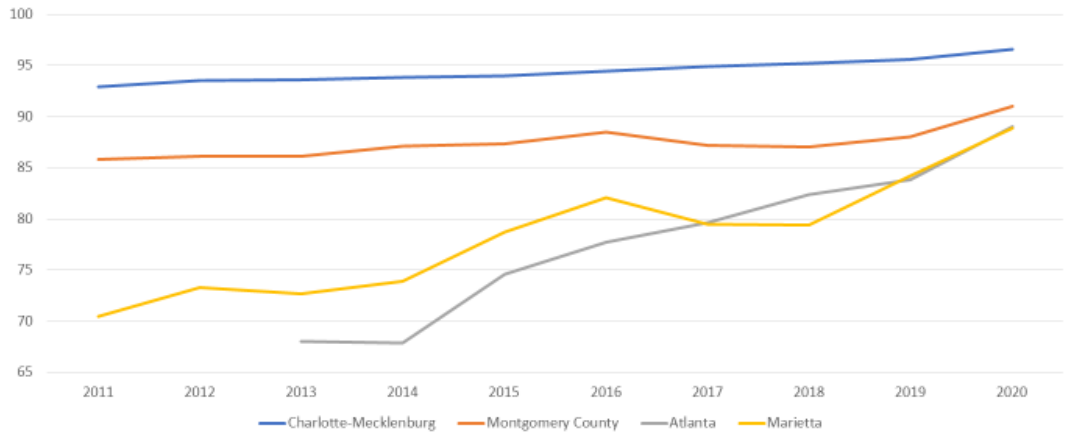
understanding of how to successfully pass, implement and modify the model ordinance policy, and how to enforce it effectively.

Second, all four sites continue to observe additional increases in success using this metric, suggesting that agencies with fewer years of experience with model ordinance adoption may continue to expect additional improvements as time moves forward.

Third, this chart includes three cities of different sizes, and one large county agency, yet all four sites are demonstrating solid results with adoption and implementation of the model ordinance. These observations suggest that model alarm adoption can be potentially successful in a broad range of venues, and across a wide range of law enforcement agencies and settings.

Figure 13 – Comparing Four Agencies

% of alarm permit holders with zero false alarms



Model ordinances adopted in 1996 (Charlotte-Mecklenburg and Montgomery County), 2007 (Marietta) and 2013 (Atlanta)

A second method for considering the effectiveness of the model ordinance across sites is to examine the impact of "high cost" users. All four sites implemented stiffer financial penalties, and perhaps other sanctions, for alarm users with three or more false alarms in a given year. These frequent offenders are obviously costlier in terms of demand on resources, but these users, ideally, should be managed effectively over time if the model ordinance is working.

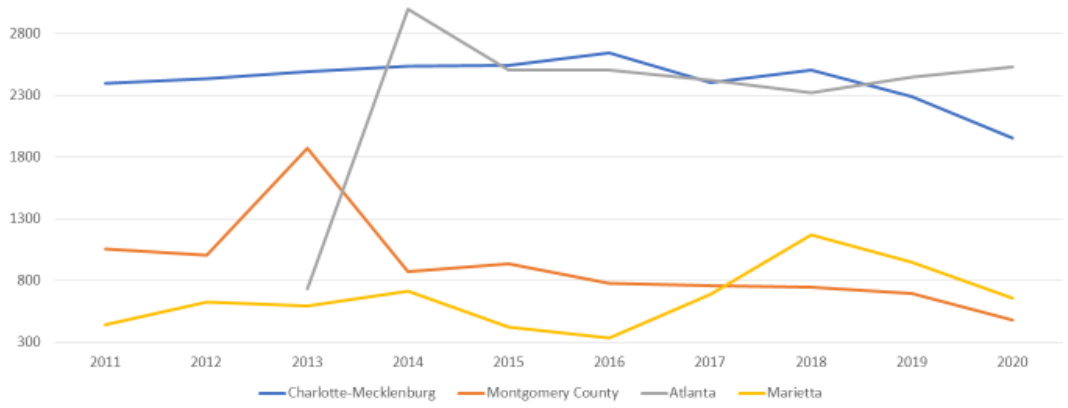
Figure 14 illustrates the raw numbers of high cost users and, perhaps more importantly, the rate of high cost users (**Figure 15)**. Along these lines, MCPD reported a dispatch rate, which represents the rate of false alarm dispatches relative to the total number of alarm users (copies of the reports are here - https://www.montgomerycountymd.gov/pol/data/false-alarm-reduction-report.html). Other organizations in the security industry have referred to this

metric as the "Alarm Factor." [3] For purposes of this comparison, the rate/alarm factor for each site was calculated by dividing the raw number of high cost users annually by the number of active permits in that year and multiplying the result by 100 (i.e., a high cost rate per 100 users).

Again, a few observations are worth considering. First, despite an occasional outlier, the raw numbers of high rate users remained fairly steady over time in each of case study sites (**Figure 14**). This is perhaps remarkable given that all four agencies experienced increases in the numbers of issued permits over time.

Figure 14 – Comparing Four Agencies

# of high cost permit holders with 3 or more false alarms



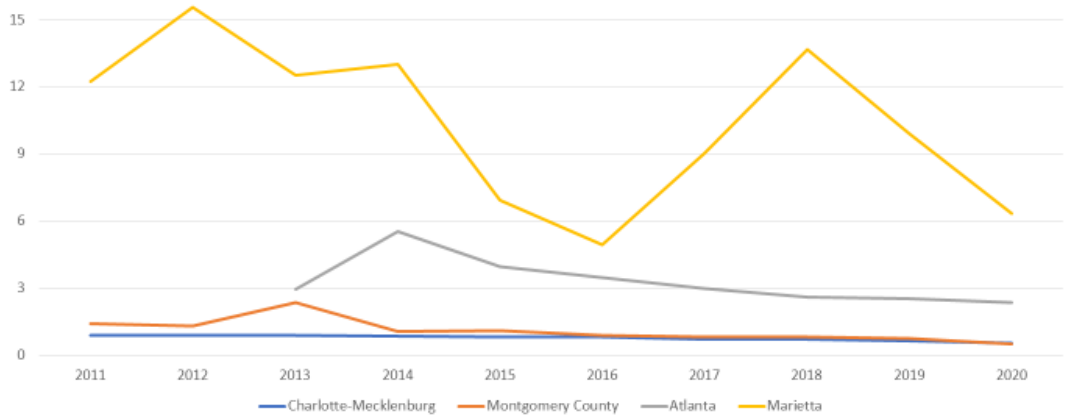
Model ordinances adopted in 1996 (Charlotte-Mecklenburg and Montgomery County), 2007 (Marietta) and 2013 (Atlanta)

Second, the rate of high cost users is either stable or declining over time **(Figure 15**). Further, and similar to prior analyses, the rate of high cost users is also substantially lower in the two agencies (Charlotte and Montgomery County) that have had the model ordinance in place for longer. These findings optimistically suggest that, over time, the policy and the enforcement processes are helping to reduce the burden on the agency among high cost users.

[3] See, for example, Kuhns, J.B., Blevins, K.R. & Clodfelter, T.A. (2009). *An assessment of the calculation process and validity of false alarm estimates*. Report submitted to the Alarm Industry Research and Education Foundation.

Figure 15 – Comparing Four Agencies

Rate of high cost permit holders with 3 or more false alarms
(# of high cost offenders / total permits) * 100



Model ordinances adopted in 1996 (Charlotte-Mecklenburg and Montgomery County), 2007 (Marietta) and 2013 (Atlanta)

Discussion and Conclusions

As a reminder, the four case study sites that participated in this project were not randomly selected. As such, these four sites are not likely to be fully representative of the larger law enforcement environment. These four sites had all adopted the model alarm ordinance, and each site has had the ordinance in place for a number of years. Each agency chose to devote time, effort and resources toward the enforcement of the ordinance. Three of the agencies also agreed to participate in this case study project, and were willing to share their alarm data or, in the case of Montgomery County, the public data was extracted from annual reports.

Regardless, this case study of four law enforcement agencies provides some promising evidence of success for the model ordinance. Some of the broader conclusions include the following:

1. Across four different agencies (one small and two large cities and one county), population increases tended to drive corresponding increases in alarm permit adoptions.
2. Increases in alarm permit adoption seem to be fairly effectively managed over time, perhaps suggesting that agencies also grow and learn over time, or perhaps decide to devote more resources to model ordinance enforcement over time.
3. Agencies that have had the model ordinance in place for longer periods of time tend to demonstrate better outcomes. However, all four agencies are reporting positive results using various metrics.
4. Most alarm users in any given year do not unnecessarily consume significant law enforcement resources.
5. A small proportion of alarm users were high rate users in each of the four agencies (meaning they generated three or more false alarms annually). However, the proportion of high rate users is much lower within the two agencies with more time and experience with the model ordinance, and the proportion is dropping over time among the two agencies with less time and experience.

Links to Study Site Model Alarm Ordinance Websites

Atlanta Police Department Alarm Ordinance (2022). Accessed at https://www.atlantaga.gov/Home/Components/News/News/2147/

Charlotte Mecklenburg Police Department Alarm Ordinance (2022). Accessed at https://charlottenc.gov/CMPD/Organization/Pages/SupportSvcs/False-Alarms.aspx

Marietta Police Department Alarm Ordinance (2022). Accessed at https://secure.mariettaga.gov/crywolf/pdfViewer.aspx?Prevention/Alarm_Ordinance.pdf

Montgomery County Police Department Alarm Ordinance (2022). Accessed at https://fars.montgomerycountymd.gov/

Appendix A

MODEL ORDINANCE DRAFT

CITY/COUNTY OF _____, STATE

ALARM ORDINANCE

WHEREAS, this ordinance addresses the finding that excessive false alarms unduly burden the _____ Police (Sheriffs') Department's law enforcement resources, and

WHEREAS, the purpose of this ordinance is to establish reasonable standards for users, to ensure that alarm owners are held responsible for the proper operation of their alarm systems, and

WHEREAS, Public Safety agencies recognize the significant burdens placed on state and local law enforcement resources due to responding to false alarm calls, and

WHEREAS, properly installed, monitored and operated alarm systems are effective tools which can identify criminal offenses in progress, and will lead to a reduction in the incidents of false alarms as well as enhance the safety of responding law enforcement officers, and

WHEREAS, governments and private companies wish to make the most effective use of their resources, and

WHEREAS, reduction of false alarms and clearly defined alarm user responsibilities are to the benefit of all parties,

NOW THEREFORE, this ordinance is established to set reasonable standards for users, ensure that alarm owners are held responsible for their use of alarm systems, and to encourage the use of security systems and best practices.

SECTION 1: DEFINITIONS

The following words, terms and phrases, when used in this ordinance, shall have the meanings ascribed to them, except where the context clearly indicates a different meaning:

Alarm Administrator means a person or persons designated by the City or County to administer the provisions of this ordinance.

Alarm company means a person, company, firm, or corporation which has the contractual agreement with the alarm user and is subject to the licensing requirements, and engaged in selling, leasing, installing, servicing or monitoring alarm systems; this entity shall be licensed in compliance with city, county and state laws.

Alarm Event means an alarm system activation, to which law enforcement is requested to respond.

Alarm permit means a permit issued to an alarm user by the City or County allowing the operation of an alarm system within the City or County.

Alarm system means an assembly of equipment installed at a fixed location designed to detect and/or verify an occurrence of an illegal or unauthorized entry or other activity to which law enforcement is requested to respond.

Alarm user means any person, corporation, partnership, proprietorship, governmental or educational entity or any other entity owning, leasing, or operating an alarm system, or on whose premises an alarm system is maintained for the protection of such premises.

Alarm User Awareness Class means a class conducted for the purpose of educating alarm users about the responsible use, operation, maintenance of alarm systems and effective verification and false alarm reduction strategies.

Cancellation means that the alarm company provides notification that response by law enforcement is no longer being requested. If cancellation occurs prior to law enforcement arriving at the scene, this is not a false alarm for the purpose of civil penalty, and no penalty will be assessed.

City or County means the City or County of _____ or its agent.

Enhanced Call Confirmation **(formerly known as ECV - Enhanced Call Verification or "2-call")** means an attempt by the alarm system monitoring company to contact the alarm site and/or alarm user, to determine whether an alarm event is valid before requesting law enforcement response. A second call will be made to contact the alarm user if the first attempt fails. EXCEPT:

a) as defined by ANSI/TMA CS V 01 current version, in case of a fire, panic, robbery-in-progress alarm or verified alarm, or

b) as defined by the local jurisdiction or state law.

False alarm means the activation of an alarm system when, upon observation by Law Enforcement, there is no evidence of unauthorized entry, robbery, or other such crime attempted in or on the premises.

Local alarm means an alarm system that is not monitored by a remote monitoring center.

Permit year means a 12-month period beginning on the day and month on which an alarm permit is issued.

Priority Response means an elevated response as established within each jurisdiction such that response to the protected premise is given a higher response compared to other signals that may not be verified. (See Verified Alarm)

Priority Response to a Verified Alarm means that a law enforcement agency having jurisdiction over a location has the autonomy and authority to increase the priority of Verified alarm calls in order to increase the probability of arresting criminal offenders and in reducing the probability of property loss.

Runaway alarm means an alarm system that produces repeated alarm activations that do not appear to be caused by separate human action. Law Enforcement may in its discretion discontinue police responses to alarm activations from what appears to be a runaway alarm.

Verified Alarm shall be defined as an electronic security system event in which a trained central station operator utilizing a standardized protocol has determined the presence of human(s) and the high probability that a criminal offense is in progress.

SECTION 2: ALARM PERMIT

(a) ***Permit required.*** No person shall use an alarm system without first obtaining a permit for such alarm system from the City or County. A fee may be required for the initial registration and annual renewals. Each alarm permit shall be assigned a unique permit number, and the user shall provide the permit number to the alarm company to facilitate law enforcement dispatch.

(b) ***Application.*** The permit shall be requested on an application form provided by the City or County. An alarm user has the duty to obtain an application from the City or County.

(c) ***Transfer of possession.*** When the possession of the premises at which an alarm system is maintained is transferred, the person (user) obtaining possession of the property shall file an application for an alarm permit within 30 days of obtaining possession of the property. Alarm permits are not transferable.

(d) ***Reporting updated information.*** Whenever the information provided on the alarm permit application changes, the alarm user shall provide correct information to the City or County within 30 days of the change. In addition, each year after the issuance of the permit, permit holders will receive from the City or County a form requesting updated information. The permit holder shall complete and return this form to the City or County whether or not any of the requested information has changed; failure to comply will constitute a violation and may result in a civil penalty.

(e) ***Multiple alarm systems.*** If an alarm user has one or more alarm systems protecting two or more separate structures having different addresses and/or tenants, a separate permit shall be required for each structure and/or tenant.

(f) ***Type of Verified Alarm system***. If an alarm user has an electronic verified alarm system protecting the premise, the alarm user shall provide the type of verification system used (for example, video verification or audio verification.)

(g) ***Installer of the Alarm System***. The name of service provider that installed the system, or if installed by the alarm user DIY ("do it yourself") is indicated.

(h) ***Monitoring Agency***. The name of the monitoring station that is monitoring the alarm system or if it is to be monitored by the alarm user MIY ("monitor it yourself".)

(i) ***Permit fees***: for large commercial >2500 sq.ft. the alarm permit fee is $50, for small commercial property the alarm permit fee is $25, and for residential property the alarm permit fee is $25. A new permit for advising of changes to a system will not require a renewal fee for that year.

(j) ***Annual Renewal Permit***: Police response to a property without a valid annual renewal will be subject to the same fine as failing to register.

SECTION 3: DUTIES OF THE ALARM USER

(a) Maintain the premises and the alarm system in a method that will reduce or eliminate false alarms.
(b) Provide the alarm company the permit number, (the number must be provided to the communications center by the alarm company to facilitate dispatch).
(c) Respond or cause a representative to respond to the alarm system's location within a reasonable amount of time when notified by the _____ Police Department.
(d) Not manually activate an alarm for any reason other than an occurrence of an event that the alarm system was intended to report.

(e) An alarm user must obtain a new permit and pay any associated fees if there is: (i) a change in address or ownership of the location of the alarm-system.
(f) An alarm user must keep current the annual renewal of the alarm permit.

(g) An alarm user that installs the system themselves (Do It Yourself or DIY) or will be monitoring it themselves (Monitor It Yourself or MIY) is subject to the same duties as described in paragraph (a), (b), (d) and (f) of Section 4.

SECTION 4: DUTIES OF THE ALARM COMPANY

(a) Any person engaged in the alarm business in the city/county shall comply with the following:

1) Obtain and maintain the required state, county and/or city license(s).
2) Provide name, address, and telephone numbers of the alarm company license holder or a designee who can be called in an emergency, 24 hours a day; and be able to respond to an alarm call, when notified, within a reasonable amount of time.
3) Be able to provide the most current contact information for the alarm user; and to contact a key holder for a response, if requested.

(b) Prior to activation of the alarm system, the alarm company must provide instructions explaining the proper operation of the alarm system to the alarm user.

(c) Provide information of how to obtain service from the alarm company for the alarm system.

(d) An alarm company responsible for monitoring services shall:

1) Ensure the monitoring center utilizes the TMA's ANSI standard CS-V-01: Alarm Confirmation, Verification and Notification Procedures, as applicable, , prior to requesting law enforcement response.
2) Provide alarm user registration number to the communications center to facilitate dispatch and/or cancellations.
3) Communicate any available information regarding specifics of the alarm event.
4) Communicate a cancellation to the law enforcement communications center as soon as possible following a determination that response is unnecessary.

SECTION 5: PROHIBITED ACTS

(a) It shall be unlawful to activate an alarm system for the purpose of summoning law enforcement when no burglary, robbery, or other crime dangerous to life or property is being committed or attempted on the premises, or otherwise to cause a false alarm.

(b) It shall be unlawful to install, maintain, or use an audible alarm system which can sound continually for more than 15 minutes.

SECTION 6: ENFORCEMENT OF PROVISIONS

(a) ***Excessive false alarms/Failure to register.*** It is hereby found and determined that three or more false alarms within a permit year is excessive, and shall be unlawful.

Civil penalties and constraints around police response for false alarms within a permit year may be assessed against an alarm user as follows: (Examples)

Second false alarm..... $ 50.00

Third false alarm $100.00

Fourth false alarm..... $150.00

Fifth false alarm $200.00

Sixth false alarm $250.00

Seventh, Eighth, Ninth, false alarms……..$500.00

Tenth False alarm……Police response will be restricted to verified alarms only. Alarm user will install an approved alarm system with video, audio, or other approved verification technology. The alarm system will monitored in accordance with CS-V-01 standards.

Failure to Register……..$100.00

(b) ***Other Civil Penalty(ies).*** Violations will be enforced through the assessment of civil penalty(ies) in the amount of $100.00 per violation.

Note: <u>Below are alternatives/options for (a) and (b) above</u>:

> *<u>(a) **Excessive false alarms/Failure to register**. It is hereby found and determined that three or more false alarms within a permit year is excessive, constitutes a public nuisance, and shall be unlawful. Civil penalties for false alarms within a permit year shall be assessed against an alarm user as per current fee schedule set by city council.</u>*
>
> *<u>(b) **Other Civil Penalty(ies)**. Violations will be enforced through the assessment of civil penalty(ies) set by city council</u>.*

(a) Excessive false alarms/ Failure to register. It is hereby found and determined that three or more false alarms within a permit year is excessive, constitutes a public nuisance, and shall be unlawful. The police department shall dispatch only to a verified burglar alarm at that location.

Failure to Register, or failure to have current renewal……..$100.00

(b) ***Payment of Civil Penalty(ies)****.* Civil penalty(ies) shall be paid within (30) days from the date of the invoice.

(c) ***Discontinuance of law enforcement response****.* The failure of an alarm user to make payment of any civil penalty(ies) assessed under this ordinance within 30 days from the date of the invoice shall result in discontinuance of law enforcement response to alarm signals that may occur at the premises described in the alarm user's permit until payment is received.

(d) ***Civil Non criminal violation.*** A violation of any of the provisions of this ordinance shall be a civil violation and shall not constitute a misdemeanor or infraction.

SECTION 7: ALARM USER AWARENESS CLASS.

(a) ***Alarm User Awareness Class.*** The City or County may establish an Alarm User Awareness Class and may request the assistance of the area alarm companies to assist in developing and conducting the class. The class shall inform alarm users of the problems created by false alarms and instruct alarm users how to help reduce false alarms. The City or County may grant the option of attending a class in lieu of paying one assessed fine, not to exceed $100. As part of this class, information pertaining to security systems that may also provide a verified alarm to the police shall be provided. Alternatively, the class can be delivered to the user as an online training module.

SECTION 8: APPEALS

(a) ***Appeals process****.* Assessments of civil penalty(ies) and other enforcement decisions made under this ordinance may be appealed by filing a written notice of appeal with the _____ Police Department within 30 days after the date of notification of the assessment of civil penalty(ies) or other enforcement decision. The failure to give notice of appeal within this time period shall constitute a waiver of the right to contest the assessment of penalty (ies) or other enforcement decision. Appeals shall be heard through an administrative process established by the City or County. The hearing officer's decision is subject to review in the district court by proceedings in the nature of certiorari. (b) ***Appeal standard****.* The hearing officer shall review an appeal from the assessment of civil penalty(ies) or other enforcement decisions using a preponderance of the evidence standard. Notwithstanding a determination

that the preponderance of the evidence supports the assessment of civil penalty(ies) or other enforcement decision, the hearing officer shall have the discretion to dismiss or reduce civil penalty(ies) or reverse any other enforcement decision where warranted.

SECTION 9: CONFIDENTIALITY

In the interest of public safety, all information contained in and gathered through the alarm registration applications, no response records, applications for appeals and any other alarm records shall be held in confidence by all employees and/or representatives of the City or County.

SECTION 10: GOVERNMENT IMMUNITY

Alarm registration is not intended to, nor will it, create a contract, duty or obligation, either expressed or implied, of response. Any and all liability and consequential damage resulting from the failure to respond to a notification is hereby disclaimed and governmental immunity as provided by law is retained. By applying for an alarm registration, the alarm user acknowledges that the _____ Police Department response may be influenced by factors such as: the availability of police units, priority of calls, weather conditions, traffic conditions, emergency conditions, staffing levels and prior response history.

SECTION 11: SEVERABILITY

The provisions of this ordinance are severable. If a court determines that a word, phrase, clause, sentence, paragraph, subsection, section, or other provision is invalid or that the application of any part of the provision to any person or circumstance is invalid, the remaining provisions and the application of those provisions to other persons or circumstances are not affected by that decision.

This ordinance shall take effect on _____ , 20___

Here are the weblinks to the IACP versions and the NSA Resolution:

https://www.theiacp.org/resources/resolution/support-for-2020-model-ordinance-for-alarm-management-and-false-alarm
and
https://www.theiacp.org/sites/default/files/2020%20Model%20Draft%20Alarm%20Ordinance.docx

The National Sheriff's Association, 2018-04 Resolution:
https://www.sheriffs.org/publications/2018-Complete-Set-of-Resolutions
and https://www.sheriffs.org/publications/2018-Complete-Set-of-Resolutions

About the Author

Dr. Joe Kuhns is President of K4 Associates, Inc., a private consulting company operating since 2005. K4 Associates, Inc. provides research and evaluation services, law enforcement training, and conference planning within the criminal justice system, primarily within law enforcement settings. **Joe** is also a Full Professor at the University of North Carolina at Charlotte (Department of Criminal Justice & Criminology). Prior to his academic appointment in 2003, Joe served as a Senior Policy Analyst at the U.S. Department of Justice (Office of Community Oriented Policing Services).

Since 2008, Dr. Kuhns has orchestrated several research and evaluation projects within the alarm industry that have focused on false alarms, the impact of alarms on burglary offending and victimization adaptation. Examples of these works are below:

Previous Alarm Industry Projects

2015-2016 **Kuhns, Joseph B.**, Blevins, Kristie R. & Turner, Michael. *Exploring Post-Burglary Adaption from the Victim's Perspective*; Alarm Industry Research and Education Foundation

2011-2012 **Kuhns, Joseph B.** & Blevins, Kristie R. *Understanding Decisions to Burglarize from the Offender's Perspective*; Alarm Industry Research and Educational Foundation;

2009 **Kuhns, Joseph B. (PI)** & Blevins, Kristie R. *The Validity of False Burglar Alarm Estimates*; Alarm Industry Research & Education Foundation

2008 **Kuhns, Joseph B. (PI)** & Blevins, Kristie R. *Factors that Influence Offender's Decisions to Burglarize*; Alarm Industry Research & Education Foundation

Peer Reviewed Journal Articles

2017 Sanders, Amber, **Kuhns, Joseph B.**, & Blevins, Kristie R. Exploring and understanding differences between deliberate and impulsive male and female burglars; *Crime and Delinquency*, 63, 1547-1571; Summarized/reprinted at http://blogs.lse.ac.uk/usappblog/2017/03/14/why-crime-prevention-strategies-may-be-effective-against-both-deliberate-and-impulsive-burglars/

2017 **Kuhns, Joseph B.**, Blevins, Kristie R., Miller, Riane M. & Cambareri, Josie F. Drug use and abuse as primary motivators for involvement in burglary: A comparison of self-reported differences among a random sample of male and female burglars; *Journal of Drug Issues*, 47(1): 116-131