



**Building A 3-1-1  
System For Police  
Non-Emergency Calls**

**A Process and Impact  
Evaluation**

AUSTIN POLICE DEPARTMENT  
**AUSTIN'S ANSWERS  
FOR POLICE NON-EMERGENCIES**  
GREATER AUSTIN CRIME COMMISSION

Prepared by





# Acknowledgements

## & Disclaimers

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Any errors of fact, omission or interpretation are those of the authors and are not the responsibility of the Austin Police Department or the COPS Office.

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### Introduction

Since 1967, 9-1-1 has been used to bring lifesaving emergency services to the scenes of innumerable crimes, fires, accidents, and medical crises. By the mid-1980s, 9-1-1 was being dialed increasingly by citizens who did not know whom to call for less urgent help, as well. This began to overburden the 9-1-1 system, interfering with the handling of genuine emergencies.

By the summer of 1996, non-emergency use of 9-1-1 had reached a magnitude that required national attention. The White House and the Office of Community Oriented Policing Services (COPS Office), U.S. Department of Justice, announced their intention to take corrective action. The COPS Office first requested the Federal Communications Commission (FCC) to set aside 3-1-1 for use as a national help number for non-emergencies. In 1997, the FCC agreed, reserving 3-1-1 nationwide for use as a voluntary, non-toll, non-emergency telephone number. COPS budgeted funds for system implementation, and by FY 2003, thirteen jurisdictions had received financial assistance.<sup>1</sup>

The subject of this report, the Austin Police Department (APD), was among those jurisdictions selected to receive federal assistance. In an earlier report, we described the necessary elements for APD's 3-1-1 system, including each step in the selection of hardware and software, procurement issues, training needs, system maintenance, and lessons learned.<sup>2</sup> In this report we evaluate the implementation process. We ask: How well does the system work? What were the obstacles and challenges faced by APD staff? Second, we describe the impact of the 3-1-1 system on police department operations and regional 9-1-1 call loads. We also discuss the perceptions of the project held by Department staff and the local community.

Our research methods included interviews with key stakeholders throughout the process; observations of weekly implementation meetings (June-September 2001); and observations of daily work meetings, especially during the critical implementation months of July and August 2001. The 3-1-1 stakeholders we interviewed included emergency operations executives and managers, Information Technology Department staff, technology vendor staff, Capital Area Planning Council (CAPCO) executives, Greater Austin Crime Commission (GACC) executives, call takers and dispatchers, Research and Planning staff, and APD police officers (although contact with the latter was limited). We participated in four training sessions, including vendor trainings on the telephony equipment and the customer relations software.

We observed Teleserve, 9-1-1, 3-1-1, and dispatch workers on the job before, immediately after, and 6 months following 3-1-1 system implementation. We monitored actual calls and observed operations during complete shifts across each of the three shift periods. We also conducted two surveys of call takers and dispatchers; the first survey immediately followed the 3-1-1 kick-off, and the second occurred six months after implementation.

### **Findings: Implementation Elements**

We found that APD had implemented 3-1-1 without delays and within budget. APD staff partnered effectively with experts in key city agencies, community organizations, and vendor organizations to build the system. Although they faced obstacles, none prevented the launch of the system and its use for its primary purpose – to reduce 9-1-1 call loads. The Austin 3-1-1 team leveraged their strengths and partnerships to design and select 3-1-1 system components in a timely and effective manner.

We found one drawback. While all involved reported that they “nailed the implementation timeline,” on-time delivery of the front-end system may have come at the cost of essential back-end tools. These tools were important to the long-term management of 3-1-1 call loads. Considering the ultimate outcome -- diverting calls from the 9-1-1 call load as quickly as possible - APD benefited from expedited procurement options; however, having skipped the crucial, in-depth software evaluation steps required by the standard RFP process may have allowed them to overlook complications that the off-the-shelf software would later pose for their small staff.

In this process evaluation, we detailed implementation problems as well as successes in order to help APD and other jurisdictions recognize potential potholes along the road to 3-1-1 implementation or expansion. We commend the Austin team for its determination and ability to work through these issues during the design phase, as well as to avoid the many other problems frequently encountered with complex technology projects.

APD successfully implemented a 3-1-1 solution. Their enthusiasm, focus, skill, and dedication across the board allowed them to create a system that provides a viable option to citizens for non-emergency police calls. This system relies heavily on human elements rather than



technological advances. First, the public education and marketing campaign won acceptance and wide usage of the system by Austin citizens. In-depth staff training and understanding of call resolution policies, procedures, and expectations ensured citizen satisfaction with this non-emergency alternative to 9-1-1.

We encourage APD to bring the technological components of the 3-1-1 system up to par with the human elements. By doing so, they will begin to reap the operational, management, and problem-solving benefits that this type of technology can provide. Specifically, we recommend that APD consider renewing the partnership and collaboration with ISD with the objectives of fully accessing data captured by the call tracking software, fully populating the CRM system, and resolving outstanding GIS issues. Once the system is completely operational, we encourage APD to maintain system support staffing to manage the complex technology on a daily basis, including making system adjustments, creating management and operational reports, and partnering with the Research and Planning unit to analyze the data created by 3-1-1 call tracking, so that it can be used to troubleshoot, manage, and improve the operation.

## **Impact Evaluation**

How effective is the 3-1-1 system in reducing 9-1-1 calls for service? Did the new operation improve the management of all citizen calls to police (both emergency and non-emergency)? Did response times for high priority calls improve? Did citizen satisfaction with the police handling of calls for service change? Was patrol officer time freed to provide more opportunities for problem-oriented and community policing activities? These are among the questions we asked in determining the impact of 3-1-1 on police services.

To answer these questions, we relied upon official data from within APD and conducted surveys of police officers, call takers, and those citizens who called 3-1-1.

## **Findings**

Our analysis of the impacts of 3-1-1 in Austin reveals six principal findings:

**1. Implementation of the 3-1-1 call system resulted in a reduction of 9-1-1 calls.** During the first 12 months that 3-1-1 was in operation, 9-1-1 calls were reduced by 20 percent, a remarkable reduction considering the public safety environment following 9/11. From September 2002 through July 2003, 9-1-1 calls were reduced by 72,000; once data are available for the entire year, we may find that 9-1-1 calls were reduced by more than 25 percent in the second full year of 3-1-1's existence. (We do note that data from different source documents conflict with respect to actual 9-1-1 call loads; different reporting periods and reporting methods resulted in different results.)

Bringing the 9-1-1 call load back down to 1994 levels has allowed APD to maintain service standards during peak call loads. As the APD Emergency Communications manager states, 3-1-1 has been a "godsend to Austin" in this era of heightened public safety requirements. It is allowing true emergency calls to be received by 9-1-1 call takers within the 10-second period required by their performance goals.

**2. The 3-1-1 system contributed to a significant increase in total calls for service.** During the first full calendar year that 3-1-1 was in operation, calls for service to APD grew by 70 percent, from 854,136 to 1,445,271 calls. More than 700,000 calls were received by the new 3-1-1 center alone. Fifty percent of them were from citizens dialing 3-1-1, while the other 50 percent were redirected from other phone lines to the 3-1-1 switch. This explosion of calls for service far exceeds the rate of increase in any of the prior 10 years, and is evidence of the success of APD's public education and marketing campaign. Some of the increase probably is due to heightened public concern and interest in public safety issues following 9/11. Citizens have accepted the 3-1-1 system, and consider it a viable non-emergency reporting alternative to 9-1-1.

**3. Dispatchable calls for service increased.** Despite the reduction in 9-1-1 calls, APD tracked 23,000 more dispatchable calls than in the prior year. Priority One and Three calls decreased, but Priority Two and Four calls for service increased. Our analysis was unable to uncover the source of the increases or to determine whether they were associated with the introduction of 3-1-1. We infer (but cannot prove) that the increase in Priority Four calls is related to the overall increase in calls attributable to 3-1-1. The CAD system does not support analysis of the sources of CAD entries – that is, whether they originate with 9-1-1 or 3-1-1 callers. Call takers on the 3-1-1 system have the discretion to dispatch

an officer on any call. Since we do not know the nature of 3-1-1 calls, however, we cannot assess whether 3-1-1 call takers are simply receiving more dispatchable calls than expected or may be opting, on occasion, to dispatch as a way of meeting time-per-call performance goals.

**4. Time available for community policing has not increased following the introduction of 3-1-1.** Officer surveys showed that after 3-1-1 was introduced, officers reported working about the same amount of time on problem solving. They also reported answering roughly the same number of calls for service per shift. Added public safety responsibilities associated with homeland security appeared to absorb time that otherwise might have been available for increasing community policing efforts.<sup>3</sup>

**5. Citizens report satisfaction with emergency communication services in general, and with 3-1-1 services in particular.** Surveys conducted by the City and as part of our research show that 94 percent of Austin’s citizens are pleased with the 9-1-1 system, and 75 percent believe that 3-1-1 has contributed to improvements in service.

**6. Communication between police officers and citizens, and between police officers and city agencies, does not appear to have changed due to the 3-1-1 system.** Although 3-1-1 provides citizens with a viable way to report non-emergency concerns to police, it has not yet allowed them to become “another set of eyes and ears” for the police, as the APD Chief had hoped. This is probably due in large part to the way citizen information is handled. APD is not yet collecting, tracking, analyzing, and managing information about 3-1-1 calls, so opportunities to move in this direction are likely being missed. New incoming information is not systematically being disseminated to police officers or District Representatives. Likewise, APD is not systematically communicating citizen-reported public safety and quality of life issues to other city service agencies. According to discussions with the Emergency Communications Director, however, plans are underway to begin limited tracking of calls using the CRM system. The City Manager is expecting to expand 3-1-1 city-wide in the near future.

**Summary.** The use of 3-1-1 reduced 9-1-1 calls by 20 percent, achieving one of APD’s major goals for the system. Overall, total call load to APD, including 3-1-1 and 9-1-1, increased by over 70 percent during the first year of operations. In addition, dispatchable calls increased, especially in the Priority Four calls. Time available for community policing by patrol

officers did not increase as a result of the implementation of 3-1-1. Seventy-five percent of citizens surveyed believe that 3-1-1 improved emergency communications in Austin. APD is not systematically tracking or analyzing the information from 3-1-1 calls.

## **Recommendations**

The above findings suggest that APD has successfully addressed its most critical issue – migrating non-emergency calls away from the 9-1-1 system has reduced the overall 9-1-1 call load and secured it for true emergencies. This accomplishment is especially remarkable post-9/11, when call loads were reported to have surged nationwide. As we said in the process evaluation, APD is to be commended for its focus on achieving its primary goal in a timely, cost-effective, and customer-oriented manner.

At the same time, although APD has achieved success with this highly visible outcome, it has yet to use the full capabilities of the call-tracking and analysis software to achieve long-term management and customer service benefits. The following recommendations are intended to suggest how APD might expand 3-1-1's external success to include internal management and problem-solving gains.

Based on the above findings, we make the following recommendations:

- 1. Before expanding the system city-wide, APD and City executives should confer to consider the budget, staffing, and other consequences of 3-1-1's success for APD, and project the implications for the City of potential future call loads.**

Strategic decisions about the next goals of the 3-1-1 system need to be carefully evaluated. As the Baltimore study<sup>4</sup> suggests, police departments and cities need to think carefully about whether they want to increase or reduce calls for service.

APD's Chief sought through 3-1-1 to involve the community in gathering relevant, useful information to use in making policing decisions. Some argue that greater citizen involvement provides police with "better information about the spatial distribution of crime and quality of life problems and thus a more accurate picture of the locations of ongoing problems."<sup>5</sup> Conversely, others argue that public education campaigns should dissuade citizens from calling police about

low-level neighborhood problems, in order to reserve police resources for the most serious law enforcement matters.

We assert that cities can and should do both – encourage citizen interaction with the department, while disseminating information that citizens can use independently to improve their quality of life and mitigate area problems. As chronic problems are addressed, call loads should theoretically decrease. Regardless of which objective is right for a given city, however, making a conscious decision about the objectives for a 3-1-1 system is critical not only to guide its actions, but to prevent unintended consequences. Without clearly defining its intentions, Austin could inadvertently create a new workload and another call center overload in the future.

- 2. Establish a systematic process for reporting the number of 9-1-1 and 3-1-1 calls received.** For operational purposes, APD Emergency Communications Managers meticulously tracked the number of calls coming into both call for service systems. APD Research and Planning Division staff needed the tracking system for analysis and reporting requirements. Statistics generated within and across these two divisions varied, due to differences in reporting periods and data extraction techniques. Nevertheless, both sets of numbers were publicly available. As with many statistics, the specifics of how particular figures were generated are often lost as the number is used. Understandably, APD’s statistics are generated and used for differing purposes, but we suggest that APD document the differences between how the various statistics for call loads are generated in order to maintain credibility and to ensure that those who generate and use call load statistics fully understand the differences and the reasons for them.
- 3. Use the full capacity of Customer Relations Management (CRM) software systematically to track the nature of 3-1-1 calls.** With deployment of the upgraded CAD and record management systems, we anticipate that APD will have a much better system for tracking the nature of 9-1-1 calls. This information will be critical if APD wants to continue to analyze and manage information about calls for service by priority classification. For example, with more information about the nature of Priority Four calls, APD might be able to manage or reduce the number of dispatched “report only” calls, freeing more officer time for problem solving and other needs.

Tracking the nature of 3-1-1 calls with the CRM system was an early goal set for the 3-1-1 system. In order for APD to make full use of information provided by citizens, that information must be recorded. Once recorded, it can be used for a variety of purposes, such as reducing calls through public education or solving quality of life problems with the help of police officers and District Representatives.

Understanding the nature of 9-1-1 and 3-1-1 calls is essential to managing them effectively and to allocating APD resources. One reason APD pursued 3-1-1 was to avoid adding more telephone switches and call takers to handle growing call loads. Without tracking and managing the issues that underlie the call load, history may repeat itself – the same problems that plagued the 9-1-1 system may soon plague 3-1-1. Without more complete data, APD also runs the risk of limiting its ability to make well-grounded policy decisions about how to use their resources.

- 4. Finally, renew and redirect the public education campaign.** APD has demonstrated how human element rather than technological wizardry are at the heart of improving the public safety environment for citizens. The department reduced 9-1-1 call loads essentially by asking citizens to be more conscientious in their use of 9-1-1, and then giving them the means to comply. We encourage APD to build on this success and to continue to inform constituents about 3-1-1 as the non-emergency call alternative. Using data collected with the CRM system, for example, APD might target neighborhoods that under-use the system.

The 3-1-1 non-emergency call system allows citizens to become part of the solution for the problem of managing demand for police resources. It gives them some discretion about whether they need a patrol car dispatched, with 3-1-1 call takers having seamless access to the dispatch system.

To reduce the need for dispatching officers, a targeted public education campaign could address recurring crime and quality of life issues, identified by using CRM software to monitor 3-1-1 call loads. We encourage the Department to use the information created from collective citizen input to educate the community about their problems and to involve them in the response.

### **End Notes**

<sup>1</sup> Baltimore Police Department was the first to receive 3-1-1 funding. The subject of this report, the Austin Police Department, also received funding. The other 11 recipients were Birmingham (AL), Charlotte-Mecklenburg (NC), Columbus (OH), Dukes County (MA), Framingham (MA), Houston (TX), Los Angeles (CA), Miami (FL), Minneapolis (MN), Orange County (FL), and Rochester (NY). For information on the program history, see the COPS 3-1-1 Fact Sheet and other related publications at [www.cops.usdoj.gov](http://www.cops.usdoj.gov).

<sup>2</sup> Shellie E. Solomon and Craig D. Uchida, "Building a 3-1-1 System for Police Non-Emergency Calls: A Case Study of the City of Austin Police Department," Final Report submitted to the Austin Police Department and the Office of Community Oriented Policing Services, September, 2003.

<sup>3</sup> The relationship between 3-1-1 and time available for community policing is unclear. We could not verify time-related data using the CAD system data because the system does not track time information in a consistent and accessible manner.

<sup>4</sup> Lorraine Mazerolle, Dennis Rogan, James Frank, Christine Famega, and John E. Eck, "Managing Citizen Calls to the Police: The Impact of Baltimore's 3-1-1 Call System," *Criminology & Public Policy*, Vol. 2, No. 1, Nov. 2002, at page 119.

<sup>5</sup> Ibid.





## Background

### Chapter I

On February 16, 1968, in Haleyville, Alabama, State Speaker of the House Rankin Fite placed the very first 9-1-1 universal emergency number call in America; the groundbreaking demonstration call was answered by Congressman Tom Beville. It had taken Congress and the President's Commission on Law Enforcement and Administration of Justice nearly 10 years, from 1958 to 1967, to reach this moment. In November 1967, the U.S. Senate, with the House of Representatives concurring, issued a resolution stating:

Resolved... That it is the sense of the Congress that the United States should have one uniform nationwide fire reporting telephone number and one uniform nationwide police reporting telephone number.

The Nation recognized a good thing when it saw it. A mere 30 years later, across the country, 9-1-1 was being used to bring lifesaving emergency services to the scenes of innumerable crimes, fires, accidents, and medical crises. By the mid-1980s, however, 9-1-1 was being dialed increasingly by citizens who did not know whom to call for less urgent help, as well. This began to overburden the 9-1-1 system, interfering with the handling of genuine emergencies.

By the summer of 1996, non-emergency use of 9-1-1 had reached a magnitude that required national attention. The White House and the Office of Community Oriented Policing Services (COPS), U.S. Department of Justice, announced their intention to take corrective action. COPS first requested the Federal Communications Commission (FCC) to set aside 3-1-1 for use as a national help number for non-emergencies. In 1997, the FCC agreed, reserving 3-1-1 nationwide for use as a voluntary, non-toll, non-emergency telephone number. COPS budgeted funds for system implementation, and by FY 2003, thirteen jurisdictions had received financial assistance.<sup>1</sup>

The subject of this report, the Austin Police Department (APD), was among those jurisdictions selected to receive federal assistance. In an earlier report, we described the necessary elements for APD's 3-1-1 system, including each step in the selection of hardware and software,

procurement issues, training needs, system maintenance, and lessons learned.<sup>2</sup> In this report we evaluate the implementation process. We ask: How well does the system work? What were the obstacles and challenges faced by APD staff? Second, we describe the impact of the 3-1-1 system on Police Department operations and regional 9-1-1 call loads. We also discuss the perceptions of the project held by Department staff and the local community.

## Austin's Need for 3-1-1

Although initiating a 3-1-1 system requires sophisticated planning, technology, and training, the greatest challenge lies in altering public behavior. Almost every American man, woman, and child knows to dial 9-1-1 in a police, fire, or medical emergency. But increasing numbers of citizens are in the habit of dialing the emergency number for almost any public service need. Callers using the number for non-emergency purposes can and do cause delays in emergency personnel's response to true emergencies. APD Chief Stan Knee realized that in order to protect the integrity and effectiveness of Austin's 9-1-1 system, he would have to give his constituents a viable alternative for non-emergency situations.

APD executives were already concerned that the 9-1-1 system was being stressed beyond its limits. During regional crises, such as weather emergencies, officials suspected that 9-1-1 lines were being overwhelmed – and that some callers were being placed on hold, or worse, were getting busy signals or no answer at all. However, they also suspected that as many as 40 to 50 percent of the incoming 9-1-1 calls were non-emergencies, situations that should be handled by someone other than police, fire, or rescue operations.

Apart from the stress on the system caused by civil emergencies, 9-1-1 call volumes appeared to be growing at a faster rate than Austin's population. At the beginning of its COPS grant period, APD was on track to receive more than a million 9-1-1 calls for the year. The city's existing technology and staff could not support the demands of this growing call load. At the same time, it would be neither logical

nor viable public policy simply to increase staffing to handle call volumes that were predicted to grow indefinitely. In addition, the existing 9-1-1 technology could not be upgraded to use more efficient and advanced software due to interagency compatibility issues and state regulations.

Bringing a new 3-1-1 non-emergency call system to Austin offered a potential solution to all of these problems and more, if it could be implemented and marketed effectively.

## NEED for 3-1-1

APD was on track to receive more than a million 9-1-1 calls for the year.

## Austin: The Research Site

Austin is diverse, with a growing population. The city is the 16<sup>th</sup> largest in the country, with a population of 656,562; the metropolitan area<sup>3</sup> is home to over 1.2 million people. Austin covers 232 square miles, served by four major highways. Since 1990, the Hispanic and Asian populations have grown exponentially; the Hispanic population has increased by 88 percent, while the Asian population has more than doubled. Fifty-three percent of the population is White, 31 percent is Hispanic, 10 percent is Black, and 5 percent is Asian. Austin's citizens are well educated. High technology industries provide almost 15 percent of total non-agricultural employment.

Austin ranks as the third safest major city in the U.S. with regard to violent crime, and the 35<sup>th</sup> safest with regard to property crime, according to Uniform Crime Reporting (UCR) 2000 data. When walking alone in their neighborhoods, 94 percent of residents reported feeling safe during the day and 70 percent reported feeling safe at night.<sup>4</sup> Citizens are active in numerous neighborhood associations. More than

23,000 volunteer hours were logged in FY 2001 by the police department alone. Austin's tradition of citizen involvement served as a key factor in setting the goals for APD's 3-1-1 system.

The Austin Police Department serves the community with a sworn force of more than 1,270 officers and 600 civilians. Since 1998, APD has implemented Neighborhood-Based Policing, a philosophy that incorporates tenets of community policing. The last decade has seen an increase in police partnerships and collaboration with the community, major departmental organizational changes, and support for problem solving in facilitated settings on the part of police. APD's Chief articulates two primary responsibilities for his patrol officers: respond to calls for service and engage in problem-solving activities.

In a prior assessment of community policing in Austin,<sup>5</sup> we reported that the practice of neighborhood-based policing permeated the Department. Everyone we interviewed and observed - executives, patrol officers, and civilian staff - was aware of the concept and of some ways in which it had been implemented. The majority were supportive of the approach, and had dedicated themselves to practicing neighborhood-based policing. The Department had made a number of organizational changes in support of its neighborhood-based approach. Among them were decentralization, permanent shift scheduling, installation in each command of District Representatives (DR) and Street Response Units (SRU), and civilianization, along with issuance of new general orders, policies and procedures, and accountability mechanisms.

Austin's Chief considered the 3-1-1 non-emergency call system as a logical extension of neighborhood-based policing. If they could more easily reach the Police Department in non-emergency situations, the Chief believed, Austin's citizens would become "another set of eyes and ears for the Department." In addition, APD managers believed that from 240,000 to 360,000 of all annual calls for service could be handled effectively by well-trained call takers instead of by police officers.

By the mid-1990s, non-emergency calls had also become a dilemma for 9-1-1 call takers, who had no place to route them. Call takers' options were to attempt to respond to the diverse questions, or to dismiss callers tactfully, but without resolution. In 1996, APD obtained a COPS MORE grant<sup>6</sup> to create a Teleserve unit staffed by 10 full-time operators. By July 2000, Teleserve was operating 7 days a week, around the clock. When 9-1-1 call takers received non-emergency police reports, they could redirect callers to Teleserve operators. Teleserve could be reached by dialing a direct seven-digit number listed in the blue pages of the telephone directory, by transfers from 9-1-1 operators, or by leaving voice mail messages that would be returned by Teleserve operators. The majority of Teleserve calls involved property crimes, such as vehicle and residential burglaries where the suspect had already left the scene. Teleserve eventually had 28 operators fielding an average of 5,000 calls per month; meanwhile, the number of calls handled by 9-1-1 operators had decreased by almost 50 percent. Teleserve had succeeded in relieving the immediate pressure on 9-1-1, but the Chief did not regard it as the ultimate solution. In 1999, the Chief directed his staff to find a way to build a 3-1-1 system.

## End Notes

<sup>1</sup> Baltimore Police Department was the first to receive 3-1-1 funding. The subject of this report, the Austin Police Department, also received funding. The other 11 recipients were Birmingham (AL), Charlotte-Mecklenburg (NC), Columbus (OH), Dukes County (MA), Framingham (MA), Houston (TX), Los Angeles (CA), Miami (FL), Minneapolis (MN), Orange County (FL), and Rochester (NY). For information on the program history, see the COPS 3-1-1 Fact Sheet and other related publications at [www.cops.usdoj.gov](http://www.cops.usdoj.gov).

<sup>2</sup> Shellie E. Solomon and Craig D. Uchida, "Building a 3-1-1 System for Police Non-Emergency Calls: Technical Assistance Guide," Final Report submitted to the Austin Police Department and the Office of Community Oriented Policing Services, March, 2002.

<sup>3</sup> Austin-San Marcos, TX Metropolitan Statistical Area as defined by the Census Bureau includes Bastrop County, Caldwell County, Hays County, Travis County, and Williamson County.

<sup>4</sup> Source: FY 2001-2002 City of Austin Budget, Police Department Section

<sup>5</sup> Uchida, Craig D., Shellie Solomon and Edward R. Maguire, "Neighborhood-Based Policing, Austin Style, An Assessment." Washington, D.C.: 21<sup>st</sup> Century Solutions, Inc., September 2000.

<sup>6</sup> The COPS Making Officer Redeployment Effective (MORE) program seeks to increase the amount of time existing law enforcement officers can spend on community policing, by funding technology, equipment, and support staff, including civilian personnel.

# Implementation Elements

## Chapter II

This section of the evaluation asks the following questions about 3-1-1 in Austin:

- How did APD choose its call routing and call-management systems?
- Who was involved and how did critical partnerships shape 3-1-1?
- How successful was APD in developing call-tracking systems and related databases?
- How well did APD integrate customer relations management (CRM) software into the system?
- How effective was the staffing and training for 3-1-1?
- How did APD change public behavior through education and marketing?

We discuss the steps that the Department took – what worked well, how APD addressed obstacles, and the lessons learned during implementation. Our research methods included interviews with key stakeholders throughout the process; observations of weekly implementation meetings (June-September 2001); and observations of daily work meetings, especially during the critical implementation months of July and August 2001. The 3-1-1 stakeholders we interviewed included emergency operations executives and managers, Information Technology Department staff, technology vendor staff, Capital Area Planning Council (CAPCO) executives, Greater Austin Crime Commission (GACC) executives, call takers and dispatchers, Research and Planning staff, and APD police officers (although contact with the latter was limited).

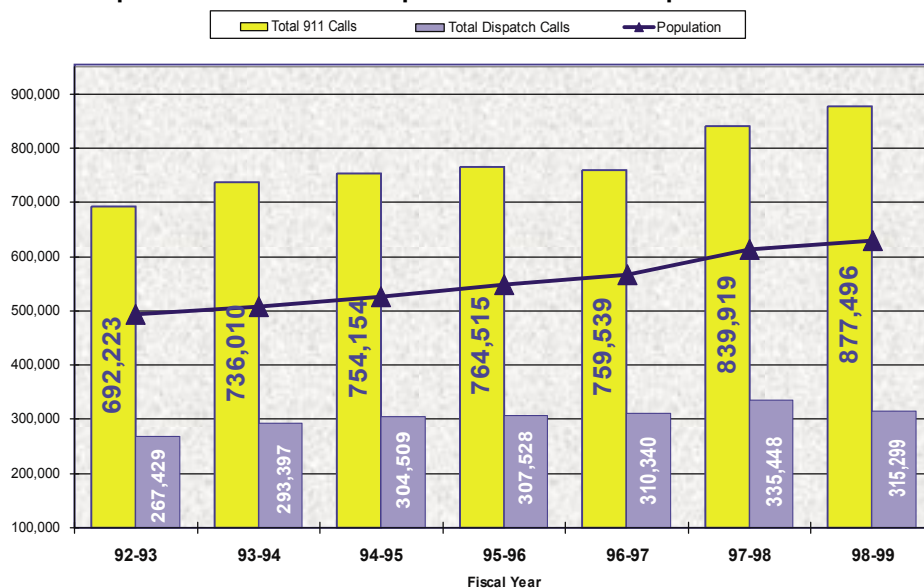
We participated in four training sessions, including vendor trainings on the telephony equipment and the customer relations software. We observed Teleserve, 9-1-1, 3-1-1, and dispatch workers on the job before, immediately after, and 6 months following 3-1-1 system implementation. We monitored actual calls and observed operations during complete shifts across each of the three shift periods. We also conducted two surveys of call takers and dispatchers – the first survey immediately followed the 3-1-1 kick-off, and the second occurred six months after implementation.

Finally, we reviewed documents generated during planning and implementation, including:

- APD policies and procedures for taking and dispatching calls
- APD COPS grant application
- Capital Area Planning Council (9-1-1 oversight organization) rules and regulations
- Research materials concerning 3-1-1 operations in other locations
- 3-1-1 technology implementation project plan, including timeline
- Vendor publicity materials for call management and telephony systems
- System design models
- Procurement evaluation documents
- Software and hardware contracts with selected vendors
- Telephony equipment specifications
- Staffing charts for the emergency communications division
- Vendors and APD training documentation
- Physical space blueprints
- Vendor maintenance and support plans and agreements
- Information Technology Department, City of Austin, maintenance and support plans and agreements
- Public education and marketing research materials
- Public education and marketing implementation plan
- Press releases and press release support materials
- Media coverage
- Daily call statistics
- Internal and external operations briefing materials

## Exhibit 1: Call Loads - FY 1993 to FY 1999

### Population Increases Compared to 9-1-1 and Dispatch Call Loads



### Choosing a System

APD executives started the project by conducting a thorough assessment of Austin's need for a non-emergency system. Based on the assessment, they were able to develop and communicate a clear, complete vision of their goals for the new system.

The assessment sought to determine how citizens currently placed calls for service to the Police Department. Initially, they found that people could call 9-1-1, or they could call personnel within the Department using a non-emergency telephone number (974-5000) that forwarded to a private business exchange (PBX), with two civilian operators answering calls between 8 a.m. and 5 p.m. Then in 1996, APD implemented the Teleserve system to reduce some of the burden on 9-1-1 call takers; operators now could accept non-emergency police reports over the phone at any time. Teleserve was well accepted by the public as a viable alternative to a dispatched officer, and its call load steadily grew. Teleserve quickly helped to reduce the average number of calls handled by 9-1-1 operators by almost 50 percent, but the absolute number of 9-1-1 calls continued to grow faster than the population in Austin. Exhibit 1 shows that 9-1-1 call volume increased by an average of 2.4 percent in the first 5 years represented; in FY 1998, call volume increased 10.6 percent. In subsequent years, 9-

1-1 call volume steadily increased at the rate of 4.4 percent annually - about 2 percent faster than population growth was forecast for the city. In FY 2001, Austin 9-1-1 was on track to receive more than one million calls, 13 percent more than in FY 1999. The increase was partially attributed to population growth and partially to an explosion in cell phone use. Each call taker was fielding an average increase in calls of 10 percent per year. The added load threatened their ability to continue meeting their organizational service goals: to answer 90 percent of 9-1-1 calls within 10 seconds.

APD managers began measuring the impact of the heavy 9-1-1 call load on dispatch times. The Assistant Chief for Operations Support was concerned about the length of time it was taking officers to respond to emergencies and the amount of time that was elapsing from when a caller placed a 9-1-1 call to when an officer arrived on the scene. System congestion due to non-emergency calls was a critical factor affecting this performance measure.

Meanwhile, the Manager of the Emergency Communications Division had another set of concerns for the near future. Population growth and peak call loads related to community crisis points (e.g., severe weather) could be predicted to overwhelm the existing 9-1-1 system's capacity before long. Analysis of daily statistics showed that peak call loads were occurring on Fridays and Saturdays. Call volume started from a low around 5 a.m. and steadily increased throughout the rest of the day, peaking around rush hour (5-6 p.m.), and then steadily decreasing through the evening. Weekend (noon on Friday through 11:59 a.m. on Sunday) call loads peaked between 11 p.m. and 3 a.m., and were about 56 percent higher than for the same period during the week. Managers were accumulating anecdotal evidence that during extreme peak times, 9-1-1 callers were already being placed on hold and receiving busy signals, at the same time that non-emergency calls were being answered.

The managers recognized that trying to address these problems within the existing 9-1-1 system framework would be challenging, at best. The Texas State Commission on State Emergency Communication provides funding, guidelines, and

regulations for the state's 9-1-1 systems, and the Capital Area Planning Council (CAPCO) serves as a regional coordinator, monitoring the APD 9-1-1 system. CAPCO knew that Austin had an escalating problem, but interoperability issues between emergency agencies in the Austin metropolitan area prevented CAPCO from allowing APD to alter its system hardware or software. As a result, several potential solutions, such as different call interface systems, call-routing mechanisms, and call-tracking databases, were struck from APD's list of possibilities.

APD could, however, develop a completely new 3-1-1 non-emergency call system, designing it to be compatible with the area wide 9-1-1 upgrade that was already underway. In 1998, Austin voters had approved a bond issue to pay for a Combined Emergency Communication Center. The Center would include a new 9-1-1 call handling system, a new 800-MHz trunked voice radio system, computer-aided dispatch (CAD), mobile data terminals, automatic vehicle location, and transportation and transit services; it was opened in Winter of 2003-04. Once it adopted the strategy of moving forward with a new non-emergency call system, APD began creating the vision for 3-1-1. APD sought to:

- Provide citizens with a viable non-emergency reporting alternative
- Maintain service standards as the population grew
- Maintain service standards during peak call loads
- Maintain appropriate staffing levels
- Transfer non-emergency public safety calls to the correct city service agency

APD needed to select a model for 3-1-1 that would wean the public from using 9-1-1 to report non-emergency concerns, but still encourage citizens to assist the Department with problem-solving, continuing to provide what the Chief called "another set of eyes and ears." The Department decided early that it could not afford to assume lead responsibility for all of the City's non-emergency public service calls; accordingly, they set conservative goals as they considered the staffing and budget requirements for the various 3-1-1 models. Eventually, APD



selected the most basic “police-only” option. Once this decision was made and funding was assured by the COPS Office, APD executives began to establish critical partnerships that would help them implement the project.

## Establishing Critical Partnerships

The project team included APD and City of Austin stakeholders, representing the various kinds of expertise necessary to make decisions and move the project forward. In addition, several external partners worked with APD to implement the call-routing and call-management systems. APD’s Emergency Communication Division was the system’s leading champion and end-user. The City’s Information System Department (ISD) and the Purchasing Department were also critical partners, as were system vendors Motorola, AVAYA, and Dell Computers.

ISD’s project manager was responsible for designing the system and for all related system research, procurement, installation, and debugging. The ISD team included a telephony system expert and a hardware and network system expert. ISD’s project manager also assumed the lead in designing the customer relations management (CRM) software.

The initial team met almost weekly for approximately one year, following standard information technology development procedures. The sequence of project management steps included project definition, analysis, design, procurement, construction, and implementation. The ISD project manager first developed a detailed project plan, including a timeline that listed each task, the staff responsible for completing it, start and end dates, and related tasks. At weekly meetings, the core team compared notes on the progress of each task,

reviewed upcoming tasks, problem-solved for any delinquent tasks, and added new tasks, as needed. The communication and collaboration that took place in these meetings was critical for maintaining focus and momentum.

## APD’s 3-1-1 Goals

With 3-1-1, APD sought to:

- Provide citizens with a viable non-emergency reporting alternative.
- Maintain service standards as the population grew
- Maintain service standards during peak call loads
- Maintain appropriate staffing levels.
- Transfer non-emergency public safety calls to the correct city service agency.

Once the system was designed, the Purchasing Department became a crucial partner. Governments establish protective policies and procedures for obtaining goods and services with public funds. As a result, procurement is a perplexing maze to most of those trying to implement a concept. However, within each government are individuals tasked with understanding and enforcing procurement policies and procedures. Recognizing the complexities likely to be involved in procuring 3-1-1 system components, APD and the ISD staff sought help from the Purchasing Office prior to initiating the procurement process. With its expert advice, APD was able to use special public safety and other purchasing regulations to expedite their process. They were able to leverage existing contracts, which gave them access to bulk discounts on a relatively small IT purchase, and they avoided common pitfalls such as costs overruns and timeline slippage. In the state of Texas, agencies may use direct procurement (also known as “sole source” procurement) in place of the standard request for proposal (RFP) process for items that will improve the safety of citizens. The collegial partnership with Purchasing saved the team from three to nine months by introducing them to this alternative.



Having expert partners allowed the Department to expand and leverage much-needed expertise in order to deliver the 3-1-1 project on budget and on time. At the same time, the partnerships generated another set of challenges:

- Role-related conflicts over control of the project
- Problems integrating with other larger systems under development
- Lack of timely involvement by GIS experts
- Potential conflicts of interest among partners, e.g., the Local Exchange Carrier (LEC)

From early in the project, boundaries of authority between the APD Emergency Communication Manager and the ISD Project Manager were not always clearly articulated, and occasionally, rational decisions made by one inadvertently created problems for the other. As project champion and end user of the 3-1-1 system, the APD Emergency Communication Manager naturally assumed the lead in defining performance priorities and requirements for equipment and software. He also directed his staff's involvement in the planning phases; these staff were adding 3-1-1 to an already existing workload that would continue.

The ISD Project Manager also assumed leadership in determining equipment and software requirements, especially where dictated by the need for future integration with other developing emergency communication system upgrades. Trained as a project manager, she systematically established detailed timelines and responsibilities for all who were involved in the 3-1-1 process, including APD's emergency communication staff.

The 3-1-1 project was a relatively small sideline system, being implemented on a much faster timeline than the overall emergency communication upgrade. Tensions surrounding the conflicting decision making roles, as well the scope of 3-1-1 within the larger upgrade, surfaced quickly. The ISD Project Manager recognized the potential for problems and requested a meeting with APD to clarify roles and expectations. The meeting was attended by the ISD Project Manager, the APD Emergency Communication Director, and the ISD Director (the City of Austin

Chief Information Officer). Together, they agreed upon the need to build the 3-1-1 system with the potential for integration with other emergency communication system upgrades, but decided they could wait to specify exactly how that integration would occur. The other systems were complex and not yet clearly defined; trying to define integration requirements for 3-1-1 at this stage would have resulted in needless, costly delays for the smaller project.

During the meeting, both parties came to an understanding of one another's visions, expectations, and operational requirements and limitations. The APD Emergency Communications Director retained authority over the system's functional requirements, and the ISD project manager retained responsibility for deciding how to meet those requirements. They agreed to meet frequently to review the project timeline and discuss APD's workload issues. From this point, both sides reported that planning and implementation proceeded smoothly, and that the partnership between the two city organizations had been crucial to managing cost and timeline constraints successfully.

Another problem arose due to a costly oversight in forming the project team. All too frequently in such projects, geographic information system (GIS) expertise is overlooked - something the Austin project team learned too late. The intricacies of GIS considerations and technologies would prove far more complicated and mission critical than the rest of the stakeholders recognized. Austin's 3-1-1 system was designed to rely on address information to filter incoming calls, to track calls for immediate response and future analytical purposes, and to transfer calls to computer aided dispatch (CAD) systems. Address validation was critical for these functions.

However, the address fields and geographic planes in each of the systems differed, creating serious interoperability conflicts. By the time Austin's team recognized the problem, they could only develop alternative means of accomplishing the tasks that involved a series of complicated steps and data manipulations, referred to as workarounds. APD agreed to accept the CRM system missing one of its "must-have" functions. Consequently, lack of

GIS interoperability precluded the use of valuable functions of CRM. If Austin had included a GIS expert on its original planning team, it is likely that the person would have foreseen and addressed this during the project's design phase.

Finally, APD had difficulty with its LEC partner. Among other things, the LEC decided to charge a 5-cent tariff for each 3-1-1 call it handled; that created significant additional work for APD during the solution development phase, not to mention the tariff's impact on the City's budget. (In other jurisdictions, LECs have not charged for 3-1-1 routing.) APD faced a series of challenges working with this LEC. The carrier continually switched its liaisons with APD throughout the installation, resulting in confusion and frequent renegotiation of the service agreement. Contacting other agencies, we learned that LEC issues can be the Achilles heel of 3-1-1 systems. The apparent unwillingness of these private corporations to work cooperatively with various law enforcement agencies has stifled the introduction of 3-1-1 in some locations.<sup>1</sup> To Austin's credit, they did endure and survive these problems, eventually negotiating tolerable, if not favorable, tariff agreements. However, the project time and effort expended working around and resolving these issues were considerable.

We address these issues within the evaluation to help other jurisdictions recognize potential obstacles to 3-1-1 implementation. We commend the Austin team for its determination and ability to work through these issues during the design phase, as well as to avoid many of the other problems frequently encountered in similar technology projects. The Austin 3-1-1 team leveraged their strengths and partnerships to design and select 3-1-1 systems in a timely and effective manner.

## **Developing Call-Tracking Systems and Related Databases**

Project definition took approximately four months, during which the team reviewed the scope of the project and the resources available. During the visioning process, APD had selected the most basic police-only 3-1-1 system model for Austin, and that determined the parameters of the hardware and

software components. The Department wanted the system to support 24-hour/7-day operation. Call volumes were projected to reach 50,000 to 100,000 calls per month. Eleven operators or concurrent users and two managers needed to be connected at any one time. This service level translated into 11 new workstations and a dedicated server, with appropriate wiring between the server and workstations. The budget had to cover an array of computer equipment including soft phones with observing capabilities, as well as the LEC's unexpected 5-cent per call tariff. APD estimated that they spent \$260,000 to implement 3-1-1, and budgeted \$44,000 annually in recurring equipment and service costs.

APD purchased call management software that added capabilities to existing call center software on the PBX switch. The new software would give APD supervisors the ability to track key statistics for monitoring 3-1-1 usage, call taker job performance, and overall system performance. Installing and customizing the call-tracking and customer relations management software was a major undertaking.<sup>2</sup>

Calls to the 3-1-1 service can be generated from several sources:

- Users dialing 3-1-1 from a residential or business phone (land line phone)
- Users dialing 3-1-1 from a cell or pay phone through a competing local exchange provider
- Users dialing the seven-digit APD main number (formerly, the PBX number), typically requesting information or specific APD staff
- Users dialing the seven-digit Teleserve number
- Wrecker and impound services calling APD about vehicles towed and impounded, as required by city ordinance

Call-tracking software collects certain call data as calls are being handled by the phone switch. This allows managers to view the number of calls waiting, the origination points of calls, the length of time that the longest caller has been waiting, how many call takers are immediately available for incoming calls, and other information about each call taker station. The latter information includes the status of

the call taker's current call and the amount of time the call taker has been on that call. The software also provides access to a series of standardized report forms, with historical data recorded call-by-call or in aggregate forms, by date, point of origin, and call taker.

## Customer Relationship Management (CRM) Software Challenges

The back-end requirements of the “off the shelf” CRM software proved challenging.

The vendor installed the call-tracking software as an upgrade to the existing phone switch, working with the telephony expert, and provided training for managers and supervisors. In general, afterward, we observed supervisors using only the most basic functions of the software – monitoring the number of calls holding and the time spent by subordinates in various call statuses (i.e., available for a call, in report mode, and so forth.)

Two APD managers attempted to use the software for complex reporting and management. Unfortunately, they were frustrated in their attempts to obtain key data from the system and to extract it systematically.<sup>3</sup> The data were being captured by the application, which apparently was capable of being programmed to extract and report it, but programming required more expertise than these users had. The software training had been limited in scope, and the managers responsible for generating management reports from the system had been unable to attend.

The partnership with ISD appears to have effectively ended once the 3-1-1 system was transferred to APD. APD managers requested support to resolve the reporting problems, but neither ISD nor the vendor

appeared to have been able or willing to invest this effort. Although not quite a failure, implementation was diminished by the gap between the software's capabilities and the users' ability to take advantage of it, seriously limiting the productivity of the call-tracking software for problem analysis and management purposes.<sup>4</sup>

## Integrating Customer Relations Management Software (CRM)

APD executives recognized that achieving success with 3-1-1 would require a shift in public attitudes toward 9-1-1. They also knew that 3-1-1 call takers would require advanced technological tools in order to resolve caller issues effectively and efficiently. Most 3-1-1 callers would not need an officer to be dispatched, and their calls would not be entered into the Computer Aided Dispatch (CAD) system. Customer relations management (CRM) software was procured to help call takers manage and track these calls.

APD relied on ISD to research and select the CRM software within the project management process. ISD approached the task by conducting internet searches and requesting product demonstrations, hoping to identify an off-the-shelf solution that would allow them to meet the original project schedule, although remaining within their own staffing limitations. Technically, they succeeded; the CRM software selected was installed and functioning on time, but the installation suffered from problems caused by the rush. Because APD used the direct procurement process (described on page 8) and did not conduct a fuller review of the CRM software, they did not realize the complexities of the product. Ultimately, these problems coupled with a lack of user training contributed to an implementation failure.

Attempts have since been made to resolve these problems, but at present, APD 3-1-1 call takers cannot use the software to capture, track, resolve, and analyze 3-1-1 calls that are not recorded in CAD. As a result, little is known about the content and nature of non-CAD 3-1-1 calls.

We briefly discussed the problem of incompatible GIS components within the CRM system, above. GIS compatibility was a “must have” that should have been considered during software selection, yet the system was accepted in spite of its interoperability deficits. Otherwise, APD call takers could have tracked calls by area, validated that calls were within APD’s jurisdiction, and identified duplicate calls resulting from multiple reports of incidents such as traffic accidents. In addition, GIS compatibility would have supported integration of 3-1-1 call data for analytical and problem-solving purposes. This will be discussed in more detail in the impact evaluation.

Even apart from GIS incompatibilities, the CRM software was difficult to use and user training was inadequate. That generation of CRM systems had been plagued by ease-of-use problems in every industry.<sup>5</sup> APD and ISD managers thought they had found a way around this, since the software they had chosen was designed specifically for non-emergency call systems and it had what seemed like a simple graphic user interface (GUI). In addition, the vendor was already involved in APD’s overall emergency system upgrade and was familiar with 3-1-1 requirements. In spite of all of these advantages, the back-end requirements of the off-the-shelf software proved extremely challenging.

Screens, tables, and relational structures were built and customized by the vendor. APD Emergency Communication staff were then made responsible for populating the tables with APD’s unique call types, questions, and resource materials. This involved entering detailed data into thousands of fields and tables. Populating the tables required only adeptness with the software, and extensive knowledge of APD’s calls and informational needs. The staff working on the project had both the Department expertise and the technological skills, but too few of them were assigned to complete the mammoth task in the short time available. Also, they needed to operate the software with the data in real time to complete and refine its capabilities, and this was not possible.

Implementation problems were made worse by the call takers’ inexperience with graphic user

interfaces (GUI). From our observations during training sessions and the call takers’ initial attempts to use the system, it appeared that the majority of them were not only inexperienced with GUI-based systems, but also with the underlying logic and methods for basic functions such as moving from screen to screen.

A train-the-trainer session was conducted for about a dozen call takers who were viewed as leaders on their shifts. This 12-hour vendor training occurred approximately 2 weeks before deployment of the system. At the time, the software was populated with limited simulation data. The trainer reviewed each function of the CRM software, menu-by-menu, screen-by-screen, and button-by-button. The training was conducted in a computer training room with three monitors at each station. The middle monitor displayed the trainer’s screen, although attendees learned hands-on at the other two terminals. Too much time elapsed between this training and the time when the trainees were to pass on what they had learned to their colleagues. When it came time for the user-trainers to teach other call takers, no one except those who were regularly entering data into the system could recall how the functions worked.

The training manager eventually met one-on-one with other call takers to go over the system. All received an APD customized training manual, and were given a chance to practice with a simulated database, three weeks prior to 3-1-1’s kick-off date. Lack of familiarity with the system, combined with limited training and a shortage of APD-specific data entry screens, made call takers reluctant, at best, to use the software. Supervisors supported staff in this, concerned that the numerous problems they confronted would interfere with their ability to handle calls in accord with time efficiency standards. In the end, it proved to be too challenging for call takers to learn and operate the new technology at the same time that they were expected to begin performing new job functions, assisting 3-1-1 callers.

Recognizing this, those responsible for populating the software with data quickly developed acceptable workarounds. For example, to replace the operator resource material in the software, they created a

simple on-line resource document for call takers, with internet links to city phone books and important resource web sites. They established a set of working policies and procedures for handling the different types of information calls, including tips on how to give callers realistic expectations about the potential for resolutions to situations that were outside the scope of the Police Department.

Without functional CRM software and links to other agencies, APD was left without a way to track calls or to assure that they were resolved, but fortunately, the workarounds have sufficed, and in some cases, have worked quite well. Although short of information for analysis and management purposes, so far APD has not especially missed functionalities that they never really had. CRM software applications have vast promise, but if they remain so difficult to install, customize, and use, their benefits may not be realized.

### **Staffing and Training for 3-1-1**

Regardless of the technology used, the success of 3-1-1 would be determined by the quality of the interactions between the citizens who used it and the call takers responding to their calls. APD implemented 3-1-1 by reassigning existing staff from the Teleserve unit and the PBX operation. In total, 33 full-time equivalent staff were assigned to 3-1-1, which was designed to operate 24 hours a day, 7 days a week. Shifts were 8 hours in length. 3-1-1 did not lower the 9-1-1 staffing level, which remained at 72 call takers.

Using existing staff to fill 3-1-1 call taker positions saved on training, but it also created some challenges that required management skills in organizational change. Call takers had to adjust to differences in their job descriptions, skill requirements, and performance objectives. For example, on average, each Teleserve call taker handled between 40 and 70 calls per shift, and in a few cases, the duration of a single call could approach 20 minutes. Teleserve call takers were expert in gathering detailed information for detectives, asking a range of questions. When they started taking 3-1-1 calls, however, they had to complete calls much more quickly. The primary goal of 3-1-1 was to protect 9-1-1 from callers

with non-emergencies. If callers were unable to reach a 3-1-1 operator because the lines were busy, they would be likely to resort again to calling 9-1-1.

Managers also worked with detectives, who were accustomed to more comprehensive support from Teleserve, to explain that 3-1-1 call takers would support them, but would not assume their responsibilities. 3-1-1 call takers gather essential information on Teleserve type 3-1-1 calls about incidents such as thefts, burglaries, and forgery calls. With the implementation of 3-1-1, call takers had to handle an average of 80 calls per shift, averaging less than 2 minutes each. During peak periods, when the line was busy, 3-1-1 callers could choose to leave a message on an answering machine or wait for an operator. Leads and supervisors returned voice mail calls within an hour. The duration of some Teleserve type calls was longer than the average 3-1-1 call. However, with training, call takers also took less time to fill out the Teleserve questionnaire.

APD Emergency Communications personnel were cross-trained to work in three major units: 9-1-1, teletype, and 3-1-1. Every 6 months, call takers rotated between divisions, allowing for shift changes. Rotations built the skill levels of everyone in the division, promoted understanding and cooperation between the units, and improved staffing options for peak times and overtime requirements. Most important, 3-1-1 call takers were also certified 9-1-1 emergency call takers. If a 3-1-1 call escalated to a 9-1-1 emergency, the call takers were trained to handle the call appropriately and to forward it to dispatch. Providing this level of service was critical to APD's vision of 3-1-1. It ensured that if callers dialed 3-1-1 by mistake in an emergency situation, highly trained call takers would be handling their call.

With the introduction of 3-1-1, Teleserve call takers were wary of their changing roles. They enjoyed the depth of their Teleserve jobs, as fact finders who completed police reports. They were less interested in taking general purpose calls, like those made to the phone company's 4-1-1 service. To mitigate their concerns, the managers took a number of steps. First, they involved call takers in



the procurement process for the CRM software. Call takers questioned vendors during the demonstration about how the system would handle different day-to-day situations. The changes would be significant, but 3-1-1 managers were able to reassure call takers about their new jobs, build excitement about the changes, and address negative rumors quickly. They also set new standards for performance and aligned the 3-1-1 call taker position with department priorities.

## Changing Public Behavior through Education and Marketing

From the conceptual phase of the 3-1-1 project, APD understood that changing citizen perceptions about 9-1-1 was at the crux of the effort. In the original concept paper presented to the APD Chief, the Emergency Communications Division Manager said, “Success or failure of this program will heavily depend on the public embracing and using 3-1-1 for legitimate non-emergencies.” He believed that \$375,000 for education and marketing would be needed to succeed. Yet APD’s public education and marketing campaign secured the success of 3-1-1, despite the technology challenges discussed above, with only \$45,000 for publicity.

The first step in marketing 3-1-1 involved leveraging the support of community leaders. APD approached the Greater Austin Crime Commission (GACC)<sup>6</sup> about becoming APD’s marketing partner. Enlisting the assistance of these well-known community leaders opened doors to the print and television media. The Commission was able to reach corporate funding decision makers and to garner support from area marketing experts. The marketing team consisted of APD staff from the public information office, the community outreach office, and the emergency communications staff. Representatives from CAPCO and the City of Austin public information office were also involved.

The team leader conducted a two-phased research effort to draft a marketing plan outline, reviewing 3-1-1 materials from other jurisdictions. The marketing team began meeting 4 months prior to the planned 3-1-1 start date. Team members reviewed the marketing plan and samples of

marketing materials from other 3-1-1 sites. The plan documented the following:

- Target launch date
- Objectives for the marketing effort
- Control points for decision-making and financial oversight
- Key milestones and dates
- Budget estimate for the effort by media category
- Evaluation measurement tools
- Special media news events
- Orientation materials to be developed
- Potential community partners

By the end of the first month, Austin’s 3-1-1 initiative had a logo and slogan, *Austin’s Answers*. They also had draft brochure materials. By the middle of the second month, production of all kinds of printed materials had begun - a tri-fold brochure, wallet cards, bookmark cards with guidelines for calling 3-1-1 versus 9-1-1 and, on the reverse side, a quiz (with answers) that tested the ability to distinguish between appropriate 9-1-1 and 3-1-1 calls, pencils, bumper stickers, logo T-shirts, and logo balloons. Designed in English and Spanish, the brochure provided a description of 3-1-1 as “a toll-free telephone number that allows people within the city limits to request police services in non-emergency situations.” From donations, \$45,000 was raised for these items. APD did not run paid radio, television, or print advertisements. They did obtain significant free television and print coverage for 3-1-1. Television coverage of APD’s plans for 3-1-1 began on July 31, 2001. The GACC President held a media briefing. The media advisory stated:

The 3-1-1 launch is the city’s largest public safety initiative in recent memory. The Austin Police Department and the Greater Austin Crime Commission need your help to educate the public concerning the importance of this new system.

GACC’s President invited 86 editors and station managers to the 11 a.m. briefing, but entire crews arrived with them, bringing cameras and reporters. Despite GACC’s best efforts, the briefing evolved

into a press release for 3-1-1 rather than a discussion about how to garner future media coverage. During the 6 o'clock news that evening (July 31), 3-1-1 was announced to the public. Fortunately, the Emergency Communication Manager anticipated this possibility; the 3-1-1 number had been connected. On August 1, 3-1-1 calls began trickling into the Teleserve system.

Following this announcement, APD received editorial reviews in print media. In addition, APD executives received numerous requests for interviews. Over the next month, members of the marketing team began handing out the printed brochures and attending community meetings to announce 3-1-1. The school district provided every student with printed brochures about the system, integrating the new information into educational efforts related to 9-1-1.

**Terrorism Strikes.** On the morning of September 11, 2001, APD Emergency Communication staff were preparing to participate in a media event highlighting 9-1-1 Day at the Texas State Capitol. According to the plan, at the end of this event, CAPCO staff were to foreshadow the announcement of 3-1-1 as an alternative to 9-1-1. Then the terrorist attacks in New York City and Washington, D.C. took place. Along with every other police department in every community and city in the U.S., APD quickly refocused its activities. Calls into 9-1-1 and Teleserve surged. The entire 3-1-1 team realized that it was even more imperative now that public announcements about 3-1-1 occur the following week.

On September 17, the Mayor, Chief, and other city and APD executives gathered to officially announce the 3-1-1 service during a media briefing. APD seized the opportunity to remind everyone that “public safety is a community concern” and that “9-1-1 was endangered” by the growing number of non-emergency calls. All of the major media carriers attended the briefing. The three leading networks carried the 3-1-1 announcement, spending from 45 seconds to 3 minutes on the story.

This was a remarkable level of coverage, especially given the amount of time needed for extensive coverage of national events.

The wide television coverage had a positive impact on the launch of 3-1-1. Following the official kick-off announcement, 3-1-1 continued receiving scattered coverage over the next 2 months. For example, 3-1-1 was featured in a story about a rash of flag thefts. APD’s public education campaign was innovative. They leveraged their contacts. They were prepared and poised to make the connection with 3-1-1 and 9-1-1 when the unforeseeable September 11 tragedies created media interest in public safety reporting. The success of the campaign was evident in the significant 3-1-1 call load immediately after kick-off. We confirmed its reach through targeted questions in our surveys. In our initial patrol officer survey, we verified the impact of widespread media coverage: 51 percent of APD’s own officers first heard about 3-1-1 through the media.

In the citizen survey, we learned that half of the respondents had heard about 3-1-1 from media reports. Nineteen respondents had learned about 3-1-1 from a friend or by word of mouth, and an additional 10 reported having learned about it from police department employees. Fourteen had heard about 3-1-1 during a call to 9-1-1. Eight reported having seen 3-1-1 advertised, most of these reporting that they had seen the number printed on police cars. Five individuals had learned about 3-1-1 at a community meeting, including two at commander forums.

## Implementation Outcome

**APD implemented 3-1-1 without delays and within budget.**

## Findings and Recommendations: Implementation Elements

APD implemented 3-1-1 without delays and within budget. APD staff partnered effectively with experts in key city agencies, community organizations and vendor organizations to build the system. Although they faced obstacles, none prevented the launch of the system and its use for its primary purpose – to reduce 9-1-1 call loads. The Austin 3-1-1 team leveraged their strengths

and partnerships to design and select 3-1-1 system components in a timely and effective manner.

Although all involved reported that they “nailed the implementation timeline,” on-time delivery of the front-end system may have come at the cost of essential back-end tools. These tools were important to the long-term management of 3-1-1 call loads. Considering the ultimate outcome - diverting calls from the 9-1-1 call load as quickly as possible - APD benefited from expedited procurement options; however, skipping the crucial in-depth software evaluation steps required by the standard RFP process may have allowed them to overlook complications that the off-the-shelf software would later pose for their small staff.

In this process evaluation, we detailed implementation problems as well as successes in order to help APD and other jurisdictions recognize potential potholes along the road to 3-1-1 implementation or expansion. We commend the Austin team for its determination and ability to work through these issues during the design phase, as well as to avoid the many other problems frequently encountered with complex technology projects.

APD successfully implemented a 3-1-1 solution. Their enthusiasm, focus, skill, and dedication across the board allowed them to create a system that provides a viable option to citizens for non-emergency policy calls. This system relies heavily on human elements rather than technological advances. First, the public education and marketing campaign won acceptance and wide usage of the system by Austin citizens. In-depth staff training and understanding of call resolution policies, procedures, and expectations ensured citizen satisfaction with this non-emergency alternative to 9-1-1.

We encourage APD to bring the technological components of the 3-1-1 system up to par with the human elements. By doing so, they will begin to reap the operational, management, and problem-solving benefits that this type of technology can provide. Specifically, we recommend that APD consider renewing the partnership and collaboration with ISD with the objectives of fully accessing data captured by the call tracking software, fully populating the CRM system, and

resolving outstanding GIS issues. Once the system is completely operational, we encourage APD to maintain system support staffing to manage the complex technology on a daily basis, including making system adjustments, creating management and operational reports, and partnering with the Research and Planning unit to analyze the data created by 3-1-1 call tracking, so that it can be used to troubleshoot, manage, and improve the operation.



## End Notes

<sup>1</sup> During our interviews, agencies in Florida reported the inability to reach agreements between law enforcement agencies and the LEC as the most significant barrier to 3-1-1 implementation.

<sup>2</sup> Other back-end software needed for server management was also installed. This included server disaster recovery software, server defragmenter software, and Client PC emulation software.

<sup>3</sup> Built-in reports can be saved as delimited text files that can be imported into spreadsheet programs, but these are quite limited. For example, the software will not create one report listing the number of calls taken by every call taker during a given shift. Instead, a built-in report for each call taker must be saved, one by one, to a spreadsheet in order to create an aggregate report.

<sup>4</sup> As researchers, we took extensive time – time not available to APD Emergency Communications managers - to extract and convert the data manually for a one-year period. As the impact evaluation outlines, some of this data could be very useful for analyzing the new expanding 3-1-1 call load.

<sup>5</sup> Gallagher, Sean, “The End of the Big Bang,” *Baseline*, June, 2003, p. 30.

<sup>6</sup> GACC was formed in October 1997, to support law enforcement, raise public awareness about crime prevention programs, and promote a cooperative and coordinated anti-crime effort in the community. Its 32 members are recognized business and community leaders.

# Impact Evaluation

## Chapter III

How effective is the 3-1-1 system in reducing 9-1-1 calls for service? Did the new operation improve the management of all citizen calls to police (both emergency and non emergency)? Did response times for high priority calls improve? Did citizen satisfaction with the police handling of calls for service change? Was patrol officer time freed to provide more opportunities for problem-oriented and community policing activities? These are among the questions we asked in determining the impact of 3-1-1 on police services.

To answer these questions, we relied upon official data from APD and conducted surveys of police officers, call takers, and those citizens who called 3-1-1.

## Did 3-1-1 Change 9-1-1?

We examined calls for service data for both 3-1-1 and 9-1-1 systems in order to analyze the impact of the 3-1-1 system on the 9-1-1 call load. To obtain a complete picture of the respective call loads and their interactions, we attempted to triangulate data collected from four sources:

- Official City of Austin Police Department budget documentation
- data presented and reported by the Emergency Communications Division<sup>1</sup>
- CAD data on computer printouts provided by the Emergency Communications Division
- CAD data prepared by the Research and Planning unit

Unfortunately, each available internal data source was organized using a different time period (i.e., fiscal vs. calendar years), differing variables, and unique field definitions. We made several attempts to disaggregate data and match time periods, but we were unable to reconcile these differences. On a more positive note, although totals varied from source to source, the trends depicted by each data set were consistent. In the sections that follow, we present overall totals from each data source for purposes of comparison. We then discuss call loads in more detail, based on the source containing the most appropriate level of data.

## Total Number of 9-1-1 Calls

The most useful data on 9-1-1 calls for service came from official city budget documents and from information that appeared in presentations made by the Emergency Communications Division. Exhibit 2 depicts these data. In FY 1993, APD received more than 692,000 9-1-1 calls. The number then steadily increased, until in FY 2000, the annual call volume had grown to 915,462. The 3-1-1 system was introduced in September, the final month of FY 2001. No 9-1-1 call total is reported for FY 2001,<sup>2</sup> but FY 2002 shows a significant decline in 9-1-1 calls during the previous 2 years, down to FY 1994

**Exhibit 2: 9-1-1 Calls Reported by APD Emergency Communications**

Year	9-1-1 Calls	% Change
92-93	692,223	
93-94	736,010	6
94-95	754,154	2
95-96	764,515	1
96-97	759,539	-1
97-98	839,919	11
98-99	877,496	4
99-2000	915,462	4
2000-01	Not Reported	
2001-02	736,726	-

Introduction of 3-1-1 in Sept. 2001 →

levels. From FY 2000 to FY 2002, APD appears to have experienced a 20 percent drop in the number of 9-1-1 calls, a decrease that was realized in spite of heightened public concerns about safety, fostered by the terrorist attacks on September 11, 2001.

We drew 9-1-1 call totals from City of Austin budget documents beginning with FY 1999, continuing through FY 2003.<sup>3</sup> These totals differed significantly from the Emergency Communication Division numbers cited above, by more than 100,000 calls. The downward trend in the total number of 9-1-1 calls is consistent, however, as it appears in both sources.

Exhibit 3 is a comparison of numbers taken from the two data sources, for FY 1999 through FY 2003. The numbers reflect APD's anticipation of a further decline in the number of 9-1-1 calls for FY 2003.

Exhibit 4 shows 9-1-1 call numbers by month, relying on APD Emergency Communication Division data. Comparing FY 2002 to FY 2003, it appears that APD will realize a reduction in the 9-1-1 call load. Although it is unlikely to reach 17 percent, as projected, if the trend does continue it will represent a 10 percent reduction. In real numbers, the load on the 9-1-1 system will have been reduced by more than 72,000 calls during FY 2003. If call numbers remain at FY 2002 levels in August and September of FY 2003, the 9-1-1 call load will have declined by more than 25 percent

### Exhibit 3: Comparison of 9-1-1 Calls Reported

Introduction of 3-1-1 in Sept. 2001

Year	9-1-1 Calls Reported by Emergency Communications	% Change	9-1-1 Calls Reported in the City of Austin Budget	% Change	Difference
98-99	877,496	4%	775,269		102,227
99-2000	915,462	4%	797,275	2.8%	118,187
2000-01*	Not Reported		800,288	0.4%	
2001-02	736,726	-	734,341	-8.2%	2,385
2002-03**			612,450	-17%	

\* A calculated figured based on supporting budget documentation (Budget Presentation) stated that 854,136 9-1-1 and 3-1-1 calls were received by the Communication Center. 3-1-1 was officials operating on September 17, 2001, and 53,850 3-1-1 calls were received during September.

\*\* Estimated

since FY 2000. This finding is consistent with the decline in 9-1-1 calls for police services documented in the study of Baltimore's 3-1-1 system.<sup>4</sup>

### Did Call Management Change?

The second 3-1-1 goal was to improve management of all citizen calls to the police, both emergency and non-emergency. According to data from the City's budget documents from FY 1999 to FY 2002, the number of 9-1-1 calls that resulted in an officer being dispatched increased by 10 percent, while

the absolute number of calls to 9-1-1 decreased; therefore, a higher *percentage* of all 9-1-1 calls were dispatched. Of 800,286 incoming 9-1-1 calls reported in FY 2001, 42.5 percent (340,485) were reported as dispatched in budget documents. In FY 2001, the percentage of calls reported as dispatched (360,025) rose to 49 percent of all 9-1-1 calls received (734,341). (See exhibit 5.)

Computer Aided Dispatch (CAD) data from Research and Planning and the Emergency Communications Divisions were used to further

analyze dispatch trends, by priority level and by area. Once again, we found differences between the numbers from the two divisions. An in-depth analysis of those data would have required a degree of knowledge about call types that is beyond the scope of this study.<sup>5</sup> However, we were able to provide limited analysis of CAD data to highlight trends in dispatched calls. This analysis provides insight into the types of calls received by APD and the activities of APD officers.

CAD data provided by the Research and Planning Division show that overall, CAD calls increased by 5 percent between calendar years 2000 and 2002, corresponding with the

### Exhibit 4: Change in 9-1-1 Calls by Month

Month	FY 2002	FY 2003	% Change	Difference in # of Calls
October	66,518	57,004	-14	-9,577
November	60,889	53,893	-11	-6,996
December	59,863	54,810	-8	-5,053
January	57,224	51,555	-10	-5,669
February	54,605	34,691	-36	-19,914
March	63,879	57,272	-10	-6,607
April	63,337	57,057	-10	-6,280
May	68,685	62,423	-9	-6,262
June	62,985	58,200	-8	-4,785
July	61,415	59,837	-3	-1,578
August	62,133	-	-	-
September	55,130	-	-	-
<b>Total</b>	<b>619,463</b>	<b>546,742</b>	<b>-12%</b>	<b>-72,721</b>

### Exhibit 5: Dispatched Calls Reported

Year	Dispatched Calls Reported in the City of Austin Budget	% Change
98-99	325,848	
99-2000	332,427	2%
2000-01	340,485	2.4%
2001-02	736,726	5.7%
2002-03**	346,396	-4%

Introduction of 3-1-1 in Sept. 2001 →

introduction of 3-1-1. (See exhibit 6.) The increase was 8 percent from 2001 to 2002. (Fewer CAD calls were reported in 2001 than in 2000 because of a drop in officer-initiated efforts in 2001.) The increase from 2001 included 18,135 more officer-initiated efforts and 23,996 dispatched calls. This finding of an absolute increase of more than 23,000 dispatchable<sup>6</sup> calls was perplexing, given that total 9-1-1 calls were reduced during 2001 and 2002.

In our next analysis, we use the same data set to examine calls by priority level. Exhibit 7 shows that Priority One and Priority Three calls decreased each year, beginning in 1999. This is a positive outcome, since Priority One calls are the most urgent and complicated ones - resource intensive, requiring officers to interrupt their current activities in order to respond to the emergency without delay.

Analysis was somewhat complicated by the fact that APD apparently modified the types of calls that were assigned to each priority level sometime during this period. We suspect this change may account for at least some of the increases shown in Priority Two call numbers. On the other hand, the 3-1-1 system may have partially contributed to the

decrease in the number of Priority Three calls, as well as for the increase in the number of Priority Four calls during 2002. CAD data by area and priority level (exhibit 8) document a decrease from 2001 to 2002 in Priority Three calls in every policing area. We note, however, that the creation in 2002 of the new “George” and City areas downtown confounds the analysis. This changed the physical boundaries of existing policing areas.

To understand the decrease in Priority One calls, we examined the types of calls represented in Research and Planning CAD data. Priority One calls decreased by more than 24,000 calls from FY 1999 to FY 2002. Exhibit 9 highlights call type variables that show large increases; this degree of change suggests that the calls were reassigned to other priority levels, or they may have been decreasing within the call population more generally. The calls were organized by the following categories: “person down,” assisting EMS (emergency medical services), assisting with collisions involving EMS, responding to suspicious persons, addressing disturbances of a particular type, and “nature unknown.” Inversely, 9-1-1 “hang-up” calls at residences appear to have been reclassified at some point as Priority One calls, where we see an increase of almost 23,000 calls from 1999 to 2002. (These calls were not included in the 1999 Priority One calls.)

It does appear that at least a portion of the disturbance calls and suspicious person calls were simply reclassified as Priority Two calls. The number of Priority Two “disturbance or other

### Exhibit 6: Dispatched Calls: Net of Officer-Initiated Efforts

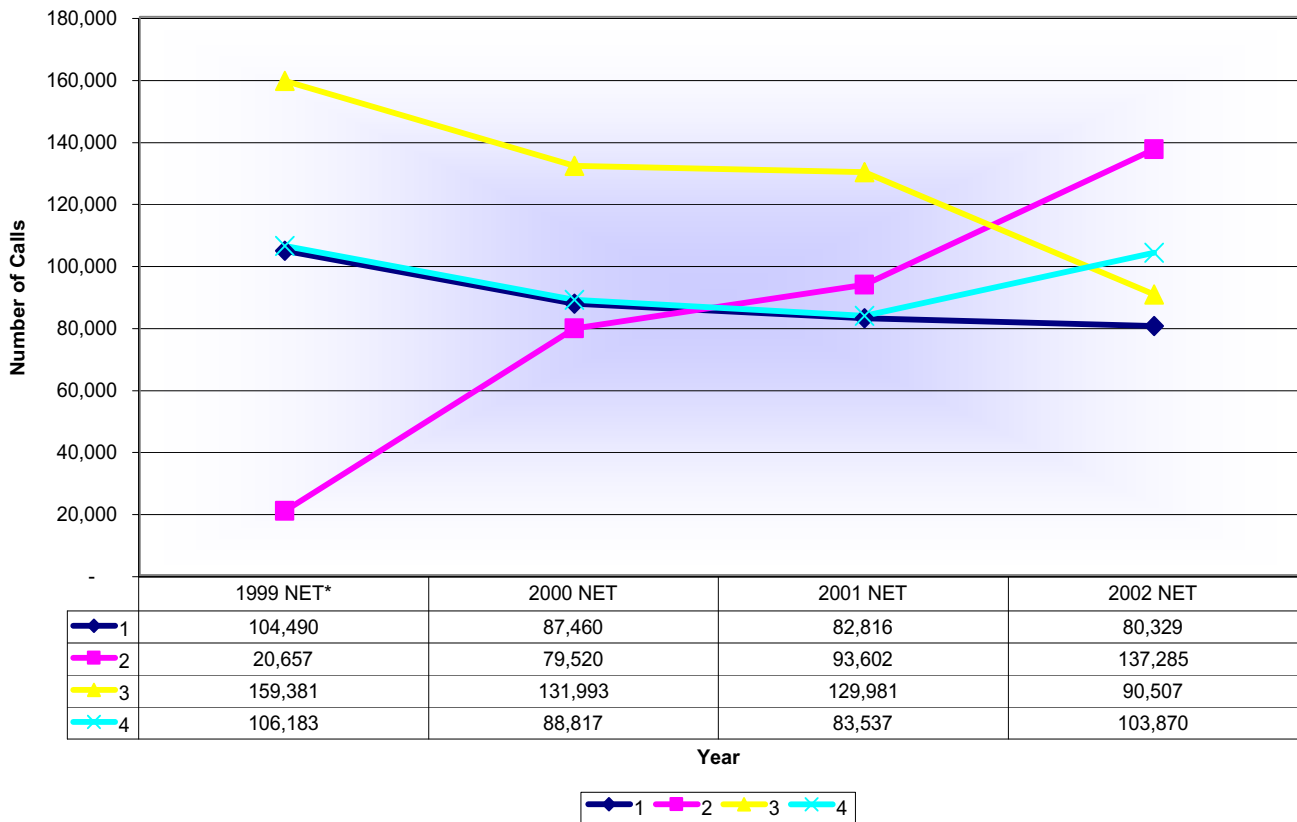
Year	Total CAD Calls	Officer-Initiated Efforts*	Dispatched calls: Net of Officer-Initiated Efforts
1999	546,079	155,344	390,728
2000	332,427	155,054	387,813
2001	340,485	138,762	390,001
2002	736,726	156,897	413,997

Introduction of 3-1-1 in Sept. 2001 →

\*\* Officer-initiated calls include traffic stops (TS), Special Assignments (SA), and Directed Patrols (DP).

## Exhibit 7: CAD Calls by Priority Level and Year

Net CAD Calls by Priority Level and Year



calls” increased from 230 calls in 1999 to 4,126 calls in 2002. It is unclear what happened to the remaining 14,000 “disturbance or other” calls; we suspect that they were reclassified to a new type of call, but it may be that fewer reports were received about this type of disturbance.

Priority Two “suspicious person” calls increased from 302 calls in 1999 to 12,704 calls in 2002. The majority of “nature unknown” calls disappeared; these were most likely to have been reclassified into more specific call types. The increase in Priority Four calls was likely due to the increase in

the total number of calls received by APD; this is discussed below.

**Summary.** Although the number of 9-1-1 calls decreased, the number of dispatched calls increased from 42 percent of calls to 49 percent of calls. Priority One and Priority Three calls decreased, but Priority Two and Priority Four calls increased. Changes in the call assignments may have caused the changes in the first two priority levels. However, we suspect that 3-1-1 impacted the changes in the number of Priority Three and Priority Four calls.

## Exhibit 8: CAD Data by Policing Area

Priority	% Change in # of Dispatched Calls by Priority Level							
	Adam	Bakr	Char	David	Edwd	Frnk	Grge*	City*
1	-10.97	0.40	-10.02	-4.60	-9.94	-0.37	154.26	304.87
2	32.00	57.20	81.79	65.42	65.42	74.25	780.77	9036.54
3	-42.94	-31.29	-34.41	-33.43	-33.43	-32.22	99.34	216.88
4	-5.62	-6.21	-5.99	0.94	-15.11	5.64	173.26	634.20

\*George (Grge) and City are new police areas. Calls were transferred from Baker (Bakr) District to create these downtown areas.

### Exhibit 9: Priority One Call Types

Call Type	1999	2002	Difference in # of Calls (1999-2002)
Person down	1,716	466	-1,250
Assist EMS	3,227	49	-3,178
Collision/EMS	4,761	104	-4,657
Suspicious person	9,472	223	-9,249
Disturbance/ other	19,685	1,242	-18,443
Nature unknown	21,625	2,974	-18,651
<b>Total</b>			<b>-55,428</b>

To understand the impact of 3-1-1 on the Department's total call load, one needs to understand the public safety environment that existed when 3-1-1 was put into operation. The national tragedies of September 11, 2001, stunned the country exactly one week before 3-1-1 opened for business. September 17, 2001, had been the scheduled kick-off date. Law enforcement and 9-1-1 call centers nationwide faced enormous challenges, not the least of which were increased calls for service. Afterward, the public

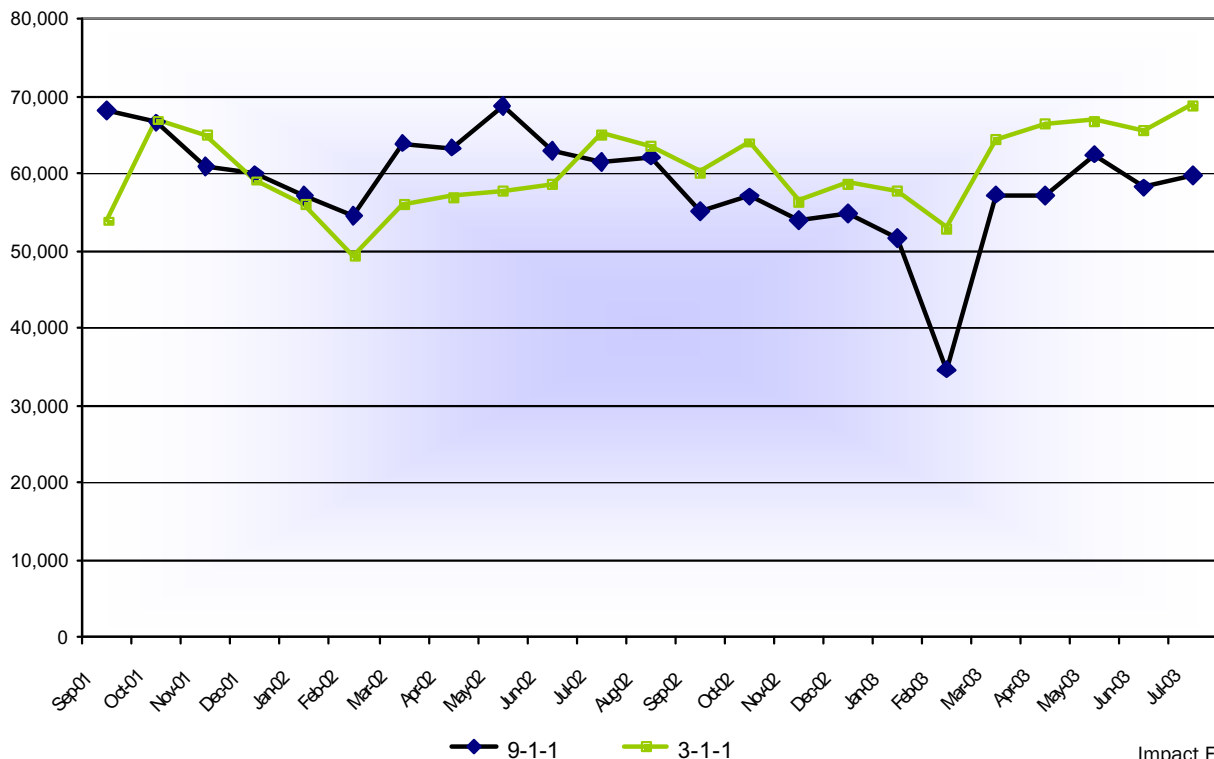
### Impact of 3-1-1

was more prone to report suspicious activity and more willing to contact public safety officials for information when they had safety concerns. Calls for service increased by 65 percent from September 11, 2001, to January 2002.<sup>8</sup> A *USA Today* editorial reported that many citizens now viewed themselves as "first responders."<sup>9</sup>

With the inception of 3-1-1, the total number of calls to APD increased substantially. In FY 2002, APD received 1,445,271 calls, with more than 700,000 calls received at the new 3-1-1 center. This represents a 70 percent increase in the total call volume for the Department. Since then, monthly call load levels have been similar for both 9-1-1 and 3-1-1, as shown in Exhibit 10. Some would question whether the sizable increase in calls for service, all originating with the new 3-1-1 service, is a good outcome. Has the management of all citizen calls to the police – both emergency and non-emergency calls -- improved?<sup>7</sup>

The additional media coverage gave the Department an unanticipated platform for educating the public on the importance of reserving 9-1-1 for emergency calls. They initiated and participated in as many media opportunities as possible with television, radio, and the print press. In the wake of the

Exhibit 10: 9-1-1 and 3-1-1 Calls by Month





tragedies, news media allotted significant coverage to the launch of 3-1-1. One television station produced a 3-minute piece on the new service on its official kick-off date. Later opportunities expanded the reach of this coverage beyond Austin audiences. For example, in a *USA Today* article dated March 2002, Ed Harris, Emergency Communications Manager for the Austin Police Department, lauded the success of 3-1-1 after 9/11. “3-1-1 has been a miracle. It has been a godsend for us... 3-1-1 saved us not only from having our 9-1-1 system swamped, but saved our citizens who had true emergencies, such as heart attacks and crime in progress, from getting a busy signal.”<sup>10</sup> APD’s quick action and consistent follow-through with public information have clearly driven the wide acceptance and use of 3-1-1.

Citizens benefited from being able to contact police for general information in this time of great uncertainty. They also used the system to report non-emergency incidents, such as the rash of flag thefts that peaked after the tragedy. The total number of calls to APD increased during the terrorist attacks and anthrax scares, but calls to the APD 9-1-1 center *eased*. The positive impact of the 3-1-1 system on emergency systems held up even during a period of public crisis and its uncertain aftermath.

Since 9/11, crime has increased in Austin, perhaps in part because of the downturn in the economy. In addition, police have been diverted from everyday patrol duties to homeland security responsibilities, including 17 APD officers who were called to military duty as reservists. Index crime increased by 20 percent from September 2000 to January 2001, according to APD FY 2004 budget presentation materials. Through 2002, the situation appears to have improved; the FBI Uniform Crime Report data show only a one percent increase in index crimes from 2001 to 2002. Nevertheless, crime did increase in the most serious categories during the same period that calls to 9-1-1 were decreasing.

In addition to having more frequent reasons to call the police, citizens today have a new tool to use – the cell phone. Nationally, 137 million people now own cell phones. Emergency 9-1-1 calls dialed from cell phones have increased from 193,333 in

1985 to over 56.9 million in 2001.<sup>11</sup> Some predict that the majority of emergency calls now or soon will originate from cellular telephones.<sup>12</sup> Austin callers often use cell phones to contact the police, especially to report traffic incidents. As both APD and local cellular companies, known as competitive local exchange carriers (CLEC), quickly learned, Austinites embraced 3-1-1 in non-emergency and traffic situations and expected it to be offered as a cellular service. Exhibit 11 shows that CLEC calls to 3-1-1 have steadily increased, from 3 percent at the introduction of the service to 16 percent one year later.

Considering these factors - heightened public safety concerns following the terrorist attacks, anthrax, and the war on terrorism; escalating crime rates within the City; and exploding cellular telephone use - we assert that 3-1-1 was timely. It improved management of calls for service, and it may even have prevented a 9-1-1 call load crisis in Austin. According to a public report from APD Emergency Communications managers, 3-1-1 reduced the 9-1-1 call load by more than 30 percent in 2002, and it is projected to have reduced it by more than 40 percent since 3-1-1 first became operational. To make these calculations, APD anticipated what the 9-1-1 call load would have been without 3-1-1, replicating the month-to-month rate of increase in demand experienced in the previous year. Although call loads cannot be projected with certainty, this approach is a straightforward and reasonable model, given the historical data. APD’s original projection, that without preventive action 9-1-1 calls would exceed one million, was probably accurate; this would have created a tremendous burden on 9-1-1 staffing and the aging system.

The public education campaign succeeded in exposing citizens to the new service and convinced them to call 9-1-1 with less frequency, returning 9-1-1 call loads to 1994 levels. This outcome improves the management of 9-1-1 calls.

## **What Was the Response to Calls?**

Next we asked: What are the 3-1-1 calls about, how are they being managed, and how are they affecting operations in the Police Department to improve



**Exhibit 11: 3-1-1 Calls from Competitive Local Exchange Carriers (CLEC), including Cellular Users**

Month	Year	# of CLEC Calls	CLEC as % of Total
September	2001	1,842	3
October	2001	6,646	10
November	2001	7,714	12
December	2001	5,851	10
January	2002	5,516	10
February	2002	5,347	11
March	2002	6,158	11
April	2002	6,187	11
May	2002	6,231	11
June	2002	7,382	13
July	2002	8,502	13
August	2002	9,395	15
September	2002	9,408	16

customer service? How do 3-1-1 calls improve the response times for high priority calls? Do they increase citizen satisfaction with the police handling of calls for service? Do they free patrol officer time to provide more opportunities for problem-oriented and community policing activities?

**APD Response Times.** Response times are a continuous concern for APD. “Over the course of 2001, Austin police officers’ average response to Priority One emergencies – the most serious calls – crept up from 8 minutes 20 seconds in January to 9 minutes 1 second in December, while the number of crimes committed climbed 12 percent. Now the entire department, from street cops to the chief, are pushing to drive that response time back to 8 ½ minutes, still a longer time than other big Texas cities.”<sup>13</sup> APD set 8 ½ minutes response time as their goal, considering the size of their forces and the monthly call load, along with traffic conditions, construction delays, and road and communication technology factors.

In FY 2001, Austin 9-1-1 staff averaged 1 minute 20 seconds to take an emergency call. Dispatch staff averaged 1 minute 50 seconds in FY 2001<sup>14</sup> (see

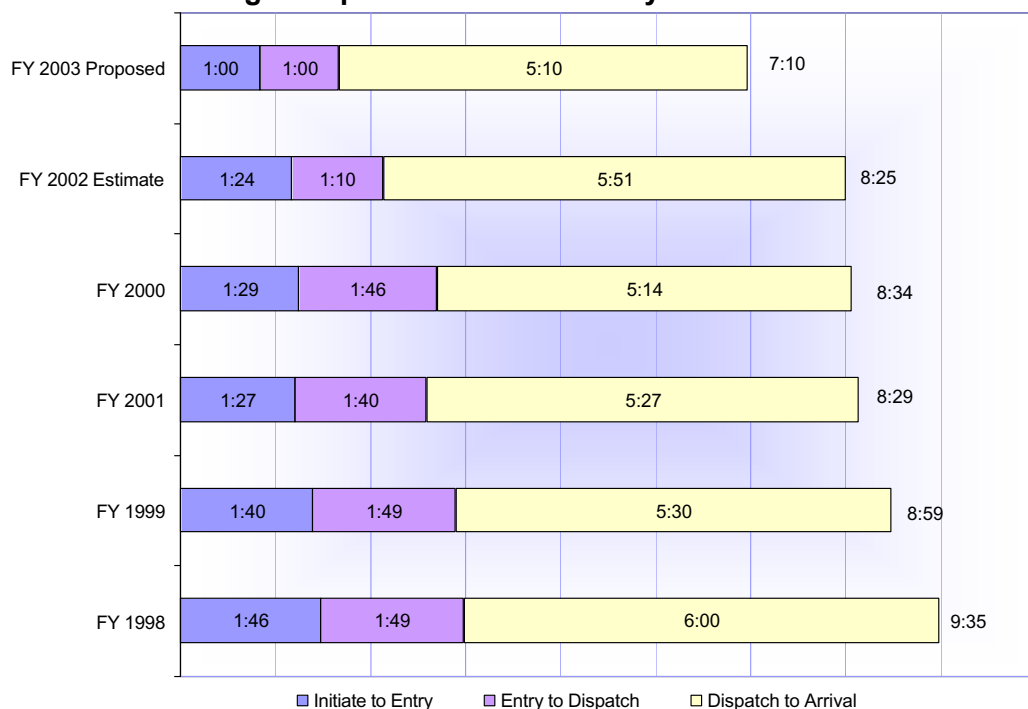
exhibit 12). Emergency Communications Division managers believe that the 3-1-1 system augmented with policy improvements should reduce their segment of the overall response time total. Timing data suggested that improvements were made in the dispatch portion, with response times reduced 43 seconds to 1 minute 7 seconds in FY 2002. We believe that this reduction was attributable in part to 3-1-1.

The number of dispatchable calls increased in part because Priority Two and Four calls increased. We suspect that the increase of more than 20,000 Priority Four calls may be associated with 3-1-1. As certified 9-1-1 call takers, 3-1-1 call takers have decision-making authority to dispatch 3-1-1 calls automatically whenever appropriate, while they are attempting to collect address and name information.<sup>15</sup> However, it is impossible to track whether this is the case, because APD cannot currently distinguish between CAD calls from 9-1-1 or 3-1-1, outside of some 3-1-1 calls that lack address data.

Considering the 70 percent increase in the number of calls for service, we would speculate that having a non-emergency call number may encourage police reports where none might have been made before, e.g., for thefts of items from a vehicle. During our observations of 3-1-1 call takers, we noted that call takers had discretion when determining whether a “report only” call is a Priority Four or Teleserve call. Priority Four calls are dispatched as soon as possible; they are defined as incidents where protection of life and property is not an issue and a delay is not likely to adversely affect investigation. Examples include abandoned property, checking welfare, fireworks violations, and prostitution. Teleserve calls are defined as incidents where (1) no threat to life or injury to a person exists, and/or there is no retrievable evidence; (2) it is unlikely that a suspect can be apprehended; and (3) the incident is “old” and there is little or no suspect description available. Examples include auto thefts, assaults by threat, credit card abuse, requests to locate a missing person, and theft.<sup>16</sup>

The increase in Priority Four calls may be associated with a combination of the increased willingness of citizens to call the police using 3-1-1 and the

**Exhibit 12: Average Response Time for Priority One Calls**



## Impact on Call Takers

To assess the impact of 3-1-1 on APD call takers, we conducted two surveys of 3-1-1, 9-1-1, and dispatchers and their supervisors in Fall 2001 and 2002. The first survey asked about their views on calls for service, police-citizen interactions, and knowledge about and the impacts of the new 3-1-1 system. We also asked respondents for their perceptions, in general, of the Austin Police Department, and the community that it serves.

One year later, in Fall 2002,

we repeated the survey, altering five questions and adding three new questions about the 3-1-1 system after implementation. We also added five new questions about the perceived impact on call taker and dispatcher workload of September 11, 2001.

In the first wave, 106 surveys were completed while 95 were completed in the second wave.

During each wave, we surveyed all call takers working each shift on one particular day. This did not allow us to survey every call taker, because shifts varied from day to day. However, we did reach a representative sample. The respondent samples for both survey waves are similar with respect to the number of call takers reached and distributions across the units, as well as demographically. The following summary describes and compares results from the two survey periods.

**Emergency Communications Work.** We initially asked respondents for their views of emergency communications work in general, in order to establish a context for interpreting their responses on community interaction and engagement, and organizational adaptation or change, under the 3-1-1 system. These questions focused on understanding

decision of the 3-1-1 call taker to more readily dispatch “gray area” report calls. Without the ability to track the type or number of calls dispatched by 3-1-1, we can only examine changes in the number of Teleserve reports. Thus, we sampled Teleserve reports to gain a sense of the types of report calls that were being directed to 3-1-1.

Prior to the introduction of 3-1-1, official budget materials documented that the APD Teleserve unit took 37,521 reports in FY 1999. The operation expanded its hours to 24 hours a day in FY 2001, when it processed more than 45,656 reports. During the first full year of operation, 3-1-1 call takers completed 51,836 Teleserve reports, representing 7 percent of all 702,964 3-1-1 calls answered. The number of Teleserve reports only increased 13.5 percent, while the number of calls for service increased 70 percent. If citizens were not calling to make reports, why were they making the remainder of the calls? Were citizens confused about calling 3-1-1 versus 9-1-1? Or were 3-1-1 call takers becoming the City’s all-purpose 4-1-1 service, as they feared?

what call takers viewed as emergency communication staff's roles and responsibilities.

Responses from both surveys were remarkably similar in this category. The vast majority of respondents (more than 95 percent in both surveys) believed that answering calls effectively was by far the call takers' most important responsibility. Further, 83 percent in the first wave and 86 percent in the second wave believed that actually assisting citizens with their specific needs was just as important as how quickly calls were answered. Eighty percent of respondents in both surveys believed that a good 3-1-1 call taker will try to find out how to solve the caller's issue during the call.

With the introduction of 3-1-1, the percentage of respondents who felt that there were too few call takers to meet the call for service demand increased by 8 percent, from 68 percent in 2001 to 70 percent in 2002.

**Knowledge and Views of 3-1-1.** In the first survey (before 3-1-1 implementation), 80 percent of respondents reported being aware of 3-1-1 as a universal non-emergency telephone number. When asked in the second survey about the impact of 3-1-1 on their day-to-day work, 57 percent of the respondents reported that 3-1-1 had made positive changes in their job responsibilities, an increase of 5 percent over the 2001 responses. Asked about their preferred assignment, 32 percent in the first survey said they preferred 9-1-1. In the second survey, this percentage had increased to 51 percent. Sixteen percent and 18 percent, respectively, preferred working in 3-1-1.

During the first survey, 20 percent had believed that 3-1-1 would increase their workload; in the second survey, 34 percent reported that it had done so. Almost half of respondents in both surveys felt that 3-1-1 had increased their knowledge about APD and the City of Austin. In the second survey, 90 percent of call takers felt that 3-1-1 had improved call loads for patrol officers, an increase of 8 percent over their 2001 responses. Eighty-four percent felt that 3-1-1 had improved customer service within the APD Emergency Communications Division.

**Organizational Adaptation.** Organizational adaptation or change within a department is a major component of community policing. We asked respondents about their perceptions of management support for emergency communications with respect to the amount of time provided, information exchanged, and recognition given. Finally, we asked call takers about their perceptions of department management.

**Views of Department Management.** Half of respondents in both surveys felt that executives understood call takers' day-to-day jobs. Sixty-four percent of 2001 respondents felt that top leaders had made department priorities clear, compared to 70 percent of 2002 respondents. More than 80 percent felt that the Emergency Communications Division was effectively handling calls, in both surveys.

**Impacts of Terrorism.** After 9/11, the role of public safety agencies was perceived by the public to have changed significantly. During the first wave of surveys, call takers were receiving a new type of 9-1-1 emergency call, reflecting public concerns about anthrax and weapons of mass destruction. In our study, we anticipated that the shifting police role would have an impact on perceptions of 3-1-1. In the second wave of surveys conducted one year after 9/11, we asked call takers five questions about the impact of terrorism on workloads and their ability to do their jobs. Only 50 percent of call takers felt that calls for service had increased as a result of heightened public safety and security concerns. Seventy-three percent of respondents felt that officer responsibilities had increased. Thirty-six percent felt that APD call takers had received adequate training, and just 22 percent felt that they had received adequate equipment to do their part in addressing terrorism concerns. Fifty-five percent of respondents felt that citizens were willing to call 3-1-1 regarding terrorism security concerns, and 66 percent felt that APD had done an excellent or good job of responding to crisis and emergency situations such as terrorist threats, flooding, and racial tensions during the past year.

**Perceived Calls Per Shift.** We asked call takers in each unit about the number and types of calls they were handling. 9-1-1 calls takers perceived

that they were receiving fewer calls than before in each priority area except non-emergency, non-police calls (exhibit 13), totaling approximately 10 fewer calls per shift.<sup>17</sup> We did not receive an adequate number of responses from dispatchers to generalize about their perceptions on call types.

Exhibit 14 reflects the perception of 3-1-1 call takers that their call loads dropped over time. However, the statistics show that 3-1-1 call loads consistently increased instead. Perhaps as call takers became more familiar with their roles, they felt less overwhelmed and perceived that they were answering fewer calls.

We asked 3-1-1 call takers to recall the nature of the non-emergency calls they received. Call takers perceived that the largest number of calls they handled were for directory information and general information requests (exhibit 15). 3-1-1 call takers estimated that they spent less than 1 minute with 20 percent of the calls, 1 to 3 minutes on 30 percent of the calls, and 4 to 5 minutes on 40 percent of the calls. Call tracking data supported their estimates; the average 3-1-1 call time was 2 minutes.

To learn more about the nature of the 3-1-1 calls, we look at their origination points. These data are generated by the 3-1-1 call tracking switch software purchased by APD. Calls to 3-1-1 can be generated by:

- Users dialing 3-1-1 from residential or business phones (land lines)
- Users dialing the seven-digit APD main number, the former PBX number. These calls were typically requests for information or for APD staff.
- Users dialing the seven-digit Teleserve number

**Exhibit 13: Average # of Calls Per Shift As Perceived by 9-1-1 Call Takers**

Priority Level	2001 responses	2002 responses	Difference
1	9.0	5.9	-3.10
2	14.6	11.2	-3.42
3	10.1	8.6	-1.47
4	8.4	7.1	-1.29
5	-	-	-
Non-Emergency Police Call	11.7	8.8	-2.90
Non-Emergency, Non-Police Related Call	6.0	7.8	1.80

- Users dialing 3-1-1 from a cell or pay phone through local exchange providers
- Wrecker and impound services calling APD about vehicles towed and impounded, as required by city ordinance

We obtained these data for September 2001 to September 2002, when 764,780 calls were made to 3-1-1. Calls to the seven-digit Teleserve number represented almost 21 percent (159,364) of the total calls (exhibit 16). This finding raises questions about why only 52,000 Teleserve reports were completed, especially since Teleserve reports could be generated from calls placed with the seven-digit Teleserve number, 3-1-1 (dialed either way), or as a result of calling the APD main number.

**Exhibit 14: Average # of 3-1-1 Calls Per Shift As Perceived by 3-1-1 Call Takers**

Type of Call	2001 responses	2002 responses	Difference
Emergency Police Calls - should have been a 9-1-1 Call	3.8	6.2	-2.4
Non-Emergency Police Calls	33.6	30.0	-3.6
Non-Emergency, Non-Police Related Call	17.6	13.0	-4.6
<b>Total</b>	<b>51.2</b>	<b>43.0</b>	<b>-8.2</b>

Since APD was unable to use the CRM software to gather information about the nature of each 3-1-1 call, we are unable to answer those questions. We raise these issues about the “report calls” because of their possible link with the increase in the number of dispatchable Priority Four calls. If APD seeks to focus on reducing the officer element of the response times and to free officer time for other activities, further examination of the nature of calls to 3-1-1 is needed. Performance objectives limiting the amount of time spent per call could inadvertently

8. Burglary of Non-Residence (5)
9. Harassment (4)
10. Violation of Protective Order (3)

Eighty-two of the reports were made within a week of the precipitating incident; 73 were reported within a day. Fifty-three percent were located in five census tract areas. This is a sample of the types of information that could be gleaned by collecting and analyzing data with the CRM software. It could be used to identify potential or emerging hotspots

**Exhibit 15: Type and Nature of 3-1-1 Calls (Perceived)**

Type of Call	2001 responses	2002 responses	Difference
General Information Request - Police Related	17.2	13.7	(3.5)
General Information Request - Non-Police Related	12.6	10.2	(2.4)
Teleserve Report	8.9	8.4	(0.5)
Directory Information - PBX Calls	14.0	9.6	(4.4)
Report of Problem Referred to District Representative	4.5	5.1	0.6
Other	1.0	13.0	12.0
<b>Total</b>	<b>58.2</b>	<b>60.0</b>	<b>1.8</b>

and problem types, and to examine how information about police department efforts such as 3-1-1 are being received and used by citizens. For example, it could be that neighborhood associations and/or District Representatives<sup>19</sup> are actively promoting 3-1-1 in census tract 18. In the next section, we look at the impacts of 3-1-1 on problem-solving efforts by police.

motivate call takers to dispatch report calls whenever feasible, rather than take time to complete reports over the phone. This outcome would negate one of the primary reasons for having 3-1-1, to reduce the amount of time officers spend responding to dispatch calls.

We sampled 105 Teleserve reports received in May 2002, to get a snapshot of the types of reports that the system was receiving.<sup>18</sup> The top ten offense types covered by the reports were:

1. Burglary of Vehicle (23)
2. Theft (17)
3. Auto Theft (14)
4. Criminal Mischief (10)
5. Forgery and Passing (7)
6. Shoplifting (5)
7. Burglary of Residence (5)

**Exhibit 16: 3-1-1 Calls by Origination Point from Sept. 01 to Sept. 02**

3-1-1 Origination Point	# of Calls	% of Total
3-1-1	293,122	38.3
APD Main 5000	185,255	24.2
Teleserve	159,364	20.8
CLEC 3-1-1	86,179	11.3
Zone Wrecker	28,969	3.8
Impounds	11,891	1.6
<b>Total</b>	<b>764,780</b>	



## Impact on Patrol Officers, Problem-Solving and Community Policing Activities

As discussed in the introduction, APD has a sworn force of more than 1,270 officers. Since 1998, APD has implemented Neighborhood-Based Policing, a philosophy that incorporates tenets of community policing. Problem solving is an element described in the literature as a fundamental component of community policing. The Community Policing Consortium (1994) suggests that problem solving is based on the assumption that “crime and disorder can be reduced in small geographic areas by carefully studying the characteristics of problems in the area, and then applying the appropriate resources...”<sup>20</sup> APD’s Chief has articulated two primary responsibilities for his patrol officers: respond to calls for service and engage in problem-solving activities.

To assess the impact of 3-1-1 on APD patrol officers, we surveyed patrol officers and their supervisors. We asked about their views of calls for service, knowledge of the 3-1-1 system, and principal tenets of community policing, such as community interaction and engagement, problem solving, and organizational development. Respondents were surveyed about their perceptions of police work in general, of the Austin Police Department, and of the community that APD serves; they were also asked questions about public safety, their fears with respect to crime, and their own problem-solving efforts. One year later, in Fall 2002, we repeated the survey, altering five questions and adding four new questions about the 3-1-1 system. We also added

**Exhibit 17: Teleserve Calls By Census Tract - Top Census Tract Locations of Sample Teleserve Calls**

Tract Number	# of Teleserve Reports
18	20
17	17
23	7
15	6
19	6

five new questions about the perceived impact of September 11, 2001, on officer workload.

In 2001, from October through December, 232 surveys were completed during “show-ups” (roll calls). The second wave of surveys was completed during 3 days in October 2002. Staff from 21<sup>st</sup> Century Solutions, Inc. administered 194 surveys; an additional 86 surveys were administered by supervisors during show-ups.<sup>21</sup> These were mailed back within two weeks.<sup>22</sup> In total, 281 surveys were collected during the second wave. During each wave, we surveyed respondents working all shifts that were scheduled on one particular day, at each substation, by attending every show-up on that day. This did not allow us to survey every officer, because not every shift works on all days. However, we did reach a representative sample of the patrol officers. The respondent samples are similar with respect to the number of officers reached and the distribution across areas (exhibit 18).<sup>23</sup> This summary compares the surveys and points out similarities and differences between the respondents in each of the two waves.

**Police Work, General.** First, we asked respondents for their general views of police work in order to establish a context for interpreting their responses about problem solving, community interaction and engagement, and organizational adaptation or change. These questions focused on understanding what patrol officers and supervisors viewed as police roles and responsibilities. Responses from both surveys are remarkably similar in this category. The vast majority of respondents (95 percent in both surveys) believed that listening to and assisting citizens was just as important as enforcing the law. The number of respondents who strongly agreed with this statement decreased by 14 percent between 2001 and 2002, from 69 percent to 55 percent. Further, the number of respondents who agreed that police officers have reason to be distrustful of most citizens increased by 5 percent, from 24 percent to 29 percent.

We were somewhat surprised by the positive finding that the number of respondents who believed that too few patrol officers were available to answer calls for service dropped by 11 percent, from 91 percent

**Exhibit 18: Officer Survey Response by Command Area**

Area	Pre Survey	% of Respondents	Post Survey	% of Respondents	Difference in the # of Respondents	Difference in % of Respondents
Northwest	25	11	45	16	20	5
Northeast	30	13	39	14	9	1
Central West	31	13	31	11	-	-2
Central East	52	22	34	12	-18	-10
Downtown	38	16	36	13	-2	-4
Southwest	36	16	49	17	13	2
Southeast	15	6	42	15	27	8
Other	2	2	5	2	-	0
<b>TOTAL</b>	<b>232</b>		<b>281</b>			

in 2001 to 80 percent in 2002, in spite of increasing demands on public safety staff nationwide by Fall of 2002.

**Responding to Calls.** Responses from the two survey waves were very similar. Officers reported that they are the primary responders to an average of 3.6 Priority One calls per shift. In addition, they said that they responded as the primary unit to about 12 calls per shift. In total, in the first wave of surveys, officers said they responded to about 27 calls per shift (including back-up units); in the second, they reported responding to about 25 calls per shift. In the first survey, officers indicated that the top three *emergency* calls were for family violence (35), collisions (30), and disturbances (26). In the second survey, officers reported responding to collisions (45), family disturbances (35), and family violence (25). Sixty-one percent reported that it took less than an hour to clear calls, with 18 percent of these calls taking less than 10 minutes each to clear in 2001. These responses dropped to 56.4 percent and 15 percent, respectively, in the 2002 survey.

Officers indicated that the top three *non-emergency* calls were for noise (26), animal control (18), and 9-1-1 hang-up calls (17). Noise (40), 9-1-1 hang-up calls (31), and false alarms (35) topped the 2002 response list. (Animal control calls did not appear on the non-emergency response list.) Eighty-one percent of these calls took 30 minutes or less to resolve in the 2001 survey. In the 2002 survey this response changed; only 69 percent of these calls took 30 minutes or less to resolve.

Officers estimated that at the busiest times during their shifts, an average of seven calls were holding in 2001. Even though dispatchable calls increased in 2002, officers estimated an average of six calls holding at the busiest times.

Officers reported that 44 percent of the calls they responded to as a back-up unit were emergency calls, down slightly from 46 percent in the first survey. Officers reported that 47 percent of the calls, 7 percent fewer than in 2001, were not emergency calls. Officers were attending to these calls for fewer than 30 minutes for 67 percent of the calls in 2001, and for 57 percent in 2002. These perceptions about call loads suggest that officers might have perceived that 3-1-1 was removing a fraction of non-emergency calls from their workload.

**Knowledge and Views of 3-1-1.** In the first survey, nearly all officer respondents said they were aware of APD’s 3-1-1 system as a universal non-emergency telephone number. In the second survey, 90 percent reported that they were generally-to-very aware of the goals and functions of 3-1-1. Eighty-five percent of the officers had discussed 3-1-1 with citizens in their areas; 77 percent had discussed this during contacts made on non-emergency calls, 11 percent during problem-solving projects, and 10 percent during traffic incidents or stops.

When asked about the impact of 3-1-1 on their day-to-day work, 56 percent of the 2002 respondents reported that 3-1-1 had reduced the number of non-emergency calls for which an officer was dispatched.



However, respondents reported that this outcome was less positive than they had anticipated prior to implementation of 3-1-1. During the first survey, more than half believed 3-1-1 would reduce their workload; in 2002, only 43 percent reported that it had, in fact, reduced their day-to-day workload. Before implementation, only 2 percent had believed that 3-1-1 would increase their workload; after the fact, 3.2 percent reported that it had done so.

Fifty-seven percent of the 2001 respondents had not anticipated any impacts from 3-1-1 on their interactions with citizens, and 42 percent of 2002 respondents reported that it did not impact those interactions. Twelve percent had anticipated that 3-1-1 would increase their citizen interactions, and 9 percent reported this to be the case. A third of 2002 respondents reported that they did not know whether 3-1-1 had changed their interactions with citizens.

Forty-one percent of 2001 respondents did not anticipate any impact on their problem-solving efforts; 33 percent of 2002 respondents reported that 3-1-1 had not affected those efforts. A disappointing finding: 30 percent anticipated 3-1-1 would improve their problem-solving efforts, but only 18 percent reported that it had done so. Approximately one-fifth of respondents were unsure whether 3-1-1 would have any impact on their problem-solving efforts; after a year of operation, one-third were unsure whether it had had any impact.

**Problem Solving.** Over half of the respondents in each survey reported regularly working on problem-solving efforts during their shifts. The responses for all problem-solving questions were remarkably similar. In each survey:

- Forty-one percent of respondents reported spending between 30 minutes and 2 hours on problem-solving efforts during their most recent shifts.
- Approximately 20 percent of officers and supervisors felt that APD had done a good job of giving officers enough time for problem solving. Fifteen percent reported that they were unable to spend any time problem solving.

- Approximately one-third of officers and supervisors felt that APD has done a good or excellent job in providing information that officers need about the problem in their assigned areas. Up from 39 percent in 2001, 42 percent felt that APD had done a fair job of providing the information, according to the 2002 survey.

When asked to identify problems that officers targeted with problem-solving efforts, one quarter of respondents reported working on drug problems. Up from one-quarter in 2001, 30 percent reported in 2002 working on problems related to burglary and breaking and entering. The number working on solving traffic problems increased from 16 percent to 21 percent.

Approximately 30 percent of respondents reported that they targeted their problem-solving efforts to a geographical area covering two to four blocks. Seventy-one percent of officers and supervisors felt APD had done a fair-to-excellent job of distributing the workload fairly among patrol officers responsible for taking calls and specialized problem-solving units such as District Representatives and Street Response Units.

With respect to recognition, 13 percent of respondents on the 2002 survey - 5 percent more than on the 2001 survey - felt that APD had done a good job of rewarding officers who do well with problem solving. However, 47 percent still felt APD had done a poor job in this respect.

**Organizational Adaptation.** To perform the functions of community interaction and problem solving, officers are required to change their thinking about their work and their environment. Instead of working in a reactive atmosphere, officers and partners are asked to shift their emphasis to a proactive, preventive mode. Also, rather than focusing on major crimes, they are asked to deal with disorders, disputes, and other quality of life problems. Organizational adaptation or change within a department is necessary in order to implement community policing. We asked all respondents about their perceptions of management support for community policing with respect to the amount of time provided, information exchanged,

and recognition given. Finally, we asked officers and supervisors about their perceptions of department management.

Remaining focused on the potential impacts of 3-1-1, we asked questions about what organizational changes had improved over time for community policing. We also inquired about respondents' current views of the Emergency Communications operations.

**Handling Calls.** In both surveys, the majority of respondents stated that organizational changes had led to police officers responding to more appropriate and more important calls for service. Two-thirds of respondents felt that the Emergency Communications Division effectively handles calls. Over two-thirds also stated that establishing differential police response has led to police officers responding to more appropriate and more important calls for service.

**Specialized Units.** Civilian crime scene specialists and Teleserve were perceived to have made the largest contributions to improving call loads. In the 2001 survey, 90 percent of respondents felt these units were improving call loads for patrol officers. In the 2002 survey, 83 percent felt that the civilian crime scene specialists were improving call loads for patrol officers; 80 percent felt that the 3-1-1 call takers were having this effect; and two-thirds felt that District Representatives were reducing calls for service to patrol officers.

**Views of Department Management.** The majority of respondents did not feel that management priorities were made clear or that executives understood officers' day-to-day jobs; this perception changed only slightly between the two survey periods. Almost half (49 percent) of 2001 respondents felt that top leaders had made department priorities clear; only 45 percent of 2002 respondents felt priorities were being clearly communicated. As in other work places, rank and file officers perceived that leaders did not understand their day-to-day work; these perceptions increased slightly between 2001 (65 percent) and 2002 (69 percent).

**Impacts of Terrorism.** After 9/11, the role of public safety agencies was perceived by the public to have changed significantly. During the 2001 surveys, officers had just been subjected to an influx of domestic security training courses and were responding to a new type of 9-1-1 emergency call—anthrax and weapons of mass destruction calls. In our study, we anticipated that this shift in the police role would have an impact on perceptions of 3-1-1 and of police officer workloads. In the 2002 surveys conducted one year after the tragedies of 9/11, we asked five questions about the impacts of terrorism on the officers' workloads.

Eight-five percent of respondents felt that officer responsibilities increased as a result of the terrorist activities on 9/11. Sixty-six percent felt that APD officers had received adequate training, and 75 percent felt that they had received adequate equipment and supplies to address terrorism concerns.

Eight-three percent felt that calls for service increased as a result of heightened public safety and security concerns. Only 37 percent of respondents felt that citizens were willing to call 3-1-1 regarding terrorism security concerns. However, 56.4 percent felt APD had done an excellent or good job of responding to crisis and emergency situations such as terrorist threats, flooding, and/or racial conflicts during the past year.

**Officer Deployment Changes.** Patrol allocation is an important issue for APD. Officers are assigned to Command Areas based on the number of calls for service. In exhibit 8, we highlight that APD had created two new policing areas, for a total of eight policing areas. APD created these new areas because call loads in the Downtown area had expanded, justifying the subdivision in order to improve call response times and to ensure equitable distribution of calls among the call areas.

We had thought that if 9-1-1 calls were reduced, officer deployment could change dramatically. In areas where non-emergency calls were high, more time and more officers should be available for other activities, or officers could be shifted to other areas. In our pre- and post-implementation surveys, we

asked officers about the impacts of organizational adaptations such as officer deployment changes. We note, however, the impacts of 9/11 on the police department may have absorbed any officer time that was freed by the reduction in 9-1-1 calls.

### **Role of District Representatives**

Each command area has five to seven officers serving as District Representatives (DRs) – liaisons between patrol officers and neighborhoods who engage in problem solving. DRs are involved in a number of activities that have solved numerous problems. When the program first began, some confusion existed over the roles and responsibilities of the DRs, but with time and training, that has changed. We anticipated that 3-1-1 would increase the DRs' communication with residents, businesses, and other officers. As the liaison between the community and the Department, DRs resolve numerous quality of life issues likely to be reported through 3-1-1.

We attempted to survey the DRs within the Command Areas at the same time that we surveyed patrol officers. Because DRs work on flexible schedules, we relied on an electronic dissemination method for the first round of surveys, using an e-mail link to an online survey, and we distributed an interoffice mail survey in 2002. We received 17 surveys during the 2001 period and 26 during the 2002 period. Given these low response rates combined with the small sample size, we have chosen not to generalize from their responses. We note that of those who responded, all were aware of 3-1-1 and had discussed it with citizens in their areas. In the pre-survey, slightly over half felt that 3-1-1 would increase their interactions with citizens; in the post survey, slightly less than half felt that it had done so. One-third anticipated that 3-1-1 would improve their problem-solving efforts, but less than a quarter felt it had accomplished this.

In the second survey of call takers (described above), call takers reported that they referred approximately five calls to DRs per shift. If this is the case and referrals continue at this rate, it could amount to 500-1,000 calls referred per week, or 35,000 calls referred per year. More data and analysis on the nature of the calls referred to DRs could be useful in helping them

with their problem-solving efforts. We also note that DRs were relieved of answering calls to allow them time to focus on problems. If the 3-1-1 call loads continue to grow, it is important that the referrals are framed within the larger context of the DR's priorities and are used to support problem solving within the area. As the key liaison between the Police Department and active community organizations, DRs play a critical role in facilitating neighborhood policing. With systematic information, DRs should be able to use 3-1-1 information to enhance Austin's active citizens as an extra set of "eyes and ears" for the Police Department.

### **Police Perceptions of Citizen Satisfaction**

Neighborhood-based policing encourages officers to develop mutual respect, trust, and support with community members (interaction), and then to use this foundation to build a series of active partnerships (engagement).<sup>24</sup> In our surveys of call takers and police, we asked about their perceptions of citizen involvement with the police department.

In each survey, officers rated citizen cooperation with police as high; however, approximately half of the respondents believed that some citizens are afraid to cooperate with police because others might retaliate. Approximately 80 percent of respondents believed that citizens would call the police if they saw something suspicious. The number of respondents who thought that citizens with information about a crime would reveal it if asked by the police increased a small amount - from 71 percent in 2001 to 75.7 percent in 2002. Sixty-five percent of respondents in each survey reported believing that citizens would be willing to work with police to solve neighborhood problems. Although the percentages were slightly lower, call takers held the same perceptions about citizen cooperation as patrol officers.

With respect to 3-1-1, in the 2002 wave of surveys, we asked patrol officers four questions about the impact of 3-1-1 on the community of Austin. The majority of respondents (60 percent) believed that most citizens were aware of 3-1-1. Fifty-three percent felt that citizens understood the difference between 3-1-1 and 9-1-1; however, 73 percent felt that most citizens were continuing to call 9-1-1 for police-

related non-emergencies, even after being informed about 3-1-1. This result seems to contradict an earlier finding that 3-1-1 had reduced the number of non-emergency calls dispatched.

Call takers were not as sure as patrol officers about citizen awareness and use of 3-1-1. In the 2001 survey, 49 percent of call takers responded that some or most citizens were aware of 3-1-1; this percentage had only risen to 54 percent a year later. In the first survey, 38 percent felt that citizens knew the differences between 9-1-1 and 3-1-1; a year later, only another 4 percent agreed with this statement. Fewer than 20 percent of the call takers believed that citizens understood that 3-1-1 was to be used for police non-emergencies only. On a positive note, in 2001 before the launch of the new system, 70 percent of call takers anticipated that citizens would continue to call 9-1-1 for police-related non-emergencies even when informed of 3-1-1; a year later, this response rate dropped by 7 percent (63 percent). Forty-nine percent felt that some or most citizens would use 3-1-1 effectively for their issues.

## Perceptions of Citizens

We turn now to the perceptions of citizens, themselves. Austin citizens are active on behalf of the community and have many opportunities to give feedback to city officials through the use of city-wide surveys. The FY 2004 APD budget presentation reported that the majority of citizens are satisfied with APD. According to these documents, 85 percent were satisfied with Emergency Police Response, 69 percent were satisfied with neighborhood policing, and 94 percent were satisfied with 9-1-1 Emergency Services.

Approximately one year after the 3-1-1 non-emergency call system was implemented in Austin, we conducted a brief telephone survey with 105 residents who had placed calls to 3-1-1 on one of two dates, September 30, 2002, or October 1, 2002. With this survey, we gathered information about changes in customer satisfaction with Austin police services, in general, and with the 3-1-1 system, in particular.

We started by asking APD to use their Avaya Call Management software to generate a list of telephone

numbers captured during our target periods. The list gave us 1,087 candidates. To gain a representative sample, we attempted to reach approximately 30 callers from each of three shifts – morning (6 a.m. to 2 p.m.), afternoon (2 p.m. to 9 p.m.), and night (9 p.m. to 6 a.m.), for a total of 105 respondents. We placed our calls between 10:00 a.m. and 8:30 p.m. Central Standard Time.

From our survey, we learned that three-quarters of the respondents felt that 3-1-1 had improved the quality of service received from APD. Fifteen percent felt that 3-1-1 had made no impact on service, and 6.6 percent felt it had lowered the quality of APD's service.

During the survey, we asked respondents how many times they called before reaching a 3-1-1 call taker. Ninety-six percent (101 respondents) were able to speak with a 3-1-1 call taker on the first attempt. For 59 respondents, this was their first call to 3-1-1. The 46 respondents who had to call more than once to reach a call taker had made an average of five calls, excluding three respondents who stated that they had called 3-1-1 more than 100 times, or "two to three times per day, five days per week." Almost half of the respondents (49) reported communicating more frequently with APD than they would have without the 3-1-1 service.

Most respondents could remember the nature of their most recent call to 3-1-1. Forty had called to report a problem or incident: 26 were filing a police report, 18 were victims of a crime, and one was involved in a motor vehicle accident. Fourteen respondents were calling to obtain information about a particular issue. Twenty-two callers reported thefts, 12 reported noise disturbances, and 12 reported traffic issues, including four hit-and-run accidents. Others called about medical, mental health, or animal problems, concerns about airplanes, child custody issues, and conflicts with neighbors. Five respondents called to request telephone numbers for police officers and other agencies. More than three-quarters of the respondents (78 percent) felt that 3-1-1 call takers were helpful and knowledgeable. Sixty-nine percent stated that 3-1-1 call takers had been excellent or good at solving their problems. More than half (56 percent) stated that 3-1-1 call takers were excellent

or good at providing referral information. Half of the respondents had heard about 3-1-1 from media reports. Nineteen respondents had learned about 3-1-1 from a friend or by word of mouth, and an additional 10 reported having learned about it from police department employees. Fourteen heard about 3-1-1 during a call to 9-1-1. Eight reported seeing a 3-1-1 advertisement, most of these reporting that they saw the number printed on police cars. Five individuals learned about 3-1-1 at a community meeting, including two at commander forums. One reported learning about 3-1-1 as the result of living in another community with 3-1-1 service.

Thirty-seven respondents felt that most or some citizens were aware of 3-1-1. On the other hand, 39 respondents felt that few or no citizens were aware of 3-1-1. The majority of respondents (61) shared suggestions for improving the 3-1-1 service:

- Improve publicity (19).
- Improve the response of call takers, including follow-up, answering more quickly, adding more Spanish-speaking call takers, and allowing call takers to provide more information, including internet-based information (16).
- Improve training for 3-1-1 call takers (9).
- Improve police response and response times (7).
- Add cell phone access (3).

**Citizen Interactions with Police as a Result of 3-1-1.** Forty-five of the 105 respondents reported that an officer was dispatched in response to their 3-1-1 calls. Twenty-seven of these respondents reported that the officer arrived in 15 minutes or less; eleven reported that the officer arrived within 30 minutes; three stated that the officer arrived within an hour. Seventy-one percent of the 45 respondents felt that the officer was courteous; 88 percent stated that, in their opinions, the officer addressed their problems appropriately.

## End Notes

<sup>1</sup> We also pulled results from the 3-1-1 call switch tracking data, which proved consistent with data used by the APD Emergency Communications Division in presentations and briefings.

<sup>2</sup> APD Emergency Communications Division did not have call data available for FY00-01. The annual data provided was compiled as part of the research completed by the division while exploring the 3-1-1 option. It did not appear to be part of the normal reporting process.

<sup>3</sup> FY 2003 data is an estimate.

<sup>4</sup> Lorraine Mazerolle, Dennis Rogan, James Frank, Christine Famega, and John E. Eck, "Managing Citizen Calls to the Police: The Impact of Baltimore's 3-1-1 Call System," *Criminology & Public Policy*, Vol. 2, No. 1, Nov. 2002, at page 107.

<sup>5</sup> In order to compare these data, one would need to understand all of the types of calls that are included in the CAD system, and that are not "reactive," such as traffic stops. One must also understand how CAD data are extracted from the mainframe system. This level of specialized knowledge is outside the scope of the evaluation.

<sup>6</sup> Referring to earlier comments about differences in the data and our understanding of the CAD data set, we note that it is unlikely that all of these calls were actually dispatched.

<sup>7</sup> The study of Baltimore 3-1-1 highlights that Baltimore had a reduction in the total number of calls received following the introduction of 3-1-1. However, the report states that "3-1-1 call operators were more willing than were their 9-1-1 call taker counterparts to treat non-police calls coming into the 3-1-1 call system as "type 79" calls and not record them into the CAD system." (Mazerolle et al., p. 108)

Thus, it is unclear whether the calls for service to Baltimore were truly reduced or more likely just not recorded. APD statistics do not rely on call taker discretion. APD call takers can choose not to record the call in the CAD system but APD purchased and relies on the call tracking system to account for all 3-1-1 calls received by the switch.

<sup>8</sup> Source: APD FY 2003-04 Budget Presentation Materials

<sup>9</sup> Jenkins, Brian Michael, "All Citizen Must Be First Responders," *USA Today*, March 24, 2003.

<sup>10</sup> McMahon, Patrick, "311 Lightens Load for Swamped 911 Centers: Non-emergency Number Catches on After Sept. 11," *USA Today*, March 5, 2002.

<sup>11</sup> *USA Today*, "Millions Dialing Wireless 911," *USA Today*, March 7, 2003.

<sup>12</sup> Public Safety Answering Points (PSAPs) report that they receive 30 to 50 percent of emergency calls from wireless phones."

Source: Kathleen Q. Abernathy and Jonathan S. Adelstein, Commissioners, Federal Communications Commission, Joint Written Statement, Hearing on Wireless E911 before the Subcommittee on Communications, Committee on Commerce, Science and Transportation, United States Senate, March 5, 2003.

<sup>13</sup> Taylor, Alex, "Austin Trails Other Cities in Police Response," *American-Statesmen*, February 26, 2002.

<sup>14</sup> APD FY 2003-04 Budget Presentation materials.

<sup>15</sup> For non-emergency calls, State of Texas privacy laws prohibit forwarding Automatic Locator Information (ALI) to 3-1-1 call takers.

<sup>16</sup> Source: APD Special Order @ 2002 (Effective 03/01/2002).

<sup>17</sup> We do note that of the few dispatchers who indicated their perceptions of the number of calls by priority, these perceptions did not change significantly between the two surveys. They estimated that approximately 9 to 12 calls were holding during the busiest times; officers perceived that approximately five calls were holding.

<sup>18</sup> This represents about 2 percent of the 4,496 reports filed by 3-1-1

call takers for May, 2002.

<sup>19</sup> District Representatives are sworn Austin police officers whose primary job responsibilities are to serve as liaisons between patrol officers and neighborhood members. District Representatives engage in extensive problem-solving activities and are relieved of handling calls for service.

<sup>20</sup> Community Policing Consortium, *Understanding Community Policing: A Framework for Action*, Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice, 1994.

<sup>21</sup> On one day, shift show-up was missed in the North Substation.

<sup>22</sup> The majority of the mailed surveys were completed by officers in the Downtown and Central West Areas.

<sup>23</sup> Examining the demographic characteristics of the two survey respondent pools, we note only two differences. First, the number of Black/African American respondents dropped from 12 percent (27 respondents) of the pool in the first wave to 6.4 percent (18 respondents) of the pool in the second wave. Second, the number of officers who had worked for APD for fewer than 2 years rose from 29 percent (68 respondents) to 39 percent (110 respondents).

<sup>24</sup> Trojanowicz, Robert, *Community Policing: A Survey of Police Departments in the United States*, U.S. Department of Justice, Federal Bureau of Investigation, 1994.

## Conclusions & Recommendations

# Impact Evaluation

## Chapter IV

Our analysis of the impacts of 3-1-1 in Austin reveals six principal findings:

1. The 3-1-1 system successfully reduced the 9-1-1 call load.
2. The 3-1-1 system accounted for an increase in APD's total call load.
3. Dispatchable calls for service increased after 3-1-1 was implemented, although it is not clear whether 3-1-1 contributed to the increase.
4. The addition of 3-1-1 has not freed more officer time for community policing, as had been expected.
5. The majority of citizens report satisfaction with emergency services in general, and with 3-1-1 in particular.
6. Citizens contact APD more frequently, probably about a broader range of problems, but APD is not yet systematically using this citizen input to guide problem-solving efforts. So far, citizens are not serving as "another set of eyes and ears," as the Chief had hoped.

**Implementation of the 3-1-1 call system resulted in a reduction of 9-1-1 calls.** During the first 12 months that 3-1-1 was in operation, 9-1-1 calls were reduced by 20 percent, a remarkable reduction considering the public safety environment following 9/11. From September 2002 through July 2003, 9-1-1 calls were reduced by 72,000; once data are available for the entire year, we may find that 9-1-1 calls were reduced by more than 25 percent in the second full year of 3-1-1's existence. (We do note that data from different source documents conflict with respect to actual 9-1-1 call loads; different reporting periods and reporting methods resulted in different results.)

Bringing the 9-1-1 call load back down to 1994 levels has allowed APD to maintain service standards during peak call loads. As the APD Emergency Communications manager states, 3-1-1 has been a



“godsend to Austin” in this era of heightened public safety requirements. It is allowing true emergency calls to be received by 9-1-1 call takers within the 10-second period required by their performance goals.

**The 3-1-1 system contributed to a significant increase in total calls for service.** During the first full calendar year that 3-1-1 was in operation, calls for service to APD grew by 70 percent, from 854,136 to 1,445,271 calls. More than 700,000 calls were received by the new 3-1-1 center alone. Fifty percent of them were from citizens dialing 3-1-1, while the other 50 percent were redirected from other phone lines to the 3-1-1 switch. This explosion of calls for service far exceeds the rate of increase in any of the prior 10 years, and is evidence of the success of APD’s public education and marketing campaign. Some of the increase probably is due to heightened public concern and interest in public safety issues following 9/11. Citizens have accepted the 3-1-1 system, and consider it a viable non-emergency reporting alternative to 9-1-1.

**Dispatchable calls for service increased.** Despite the reduction in 9-1-1 calls, APD tracked 23,000 more dispatchable calls than in the prior year. Priority One and Three calls decreased, but Priority Two and Four calls for service increased. Our analysis was unable to uncover the source of the increases or to determine whether they were associated with the introduction of 3-1-1. We infer (but cannot prove) that the increase in Priority Four calls is related to the overall increase in calls attributable to 3-1-1. The CAD system does not support analysis of the sources of CAD entries – that is, whether they originate with 9-1-1 or 3-1-1 callers. Call takers on the 3-1-1 system have the discretion to dispatch an officer on any call. Since we do not know the nature of 3-1-1 calls, however, we cannot assess whether 3-1-1 call takers are simply receiving more dispatchable calls than expected or whether they may be opting, on occasion, to dispatch as a way of meeting time-per-call performance goals.

**Time available for community policing has not increased following the introduction of 3-1-1.** Officer surveys showed that after 3-1-1 was introduced, officers reported working about the same amount of time on problem solving. They also reported answering roughly the same number

of calls for service per shift. Added public safety responsibilities associated with homeland security appeared to absorb time that otherwise might have been available for increasing community policing efforts.<sup>1</sup>

**Citizens report satisfaction with emergency communication services in general, and with 3-1-1 services in particular.** Surveys conducted by the City and as part of our research show that 94 percent of Austin’s citizens are pleased with the 9-1-1 system, and 75 percent believe that 3-1-1 has contributed to improvements in service.

**Communication between police officers and citizens, and between police officers and city agencies, does not appear to have changed due to the 3-1-1 system.** Although 3-1-1 provides citizens with a viable way to report non-emergency concerns to police, it has not yet allowed them to become “another set of eyes and ears” for the police, as the APD Chief had hoped. This is probably due in large part to the way citizen information is handled. APD is not yet collecting, tracking, analyzing, and managing information about 3-1-1 calls, so opportunities to move in this direction are likely being missed. New incoming information is not systematically being disseminated to police officers or District Representatives. Likewise, APD is not systematically communicating citizen-reported public safety and quality of life issues to other city service agencies. According to discussions with the Emergency Communications Director, however, plans are underway to begin limited tracking of calls using the CRM system. The City Manager is expecting to expand 3-1-1 city-wide in the near future.

## Recommendations

The above findings suggest that APD has successfully addressed its most critical issue – migrating non-emergency calls away from the 9-1-1 system has reduced the overall 9-1-1 call load and secured it for true emergencies. This accomplishment is especially remarkable post-9/11, when call loads were reported to have surged nationwide. As we said in the process evaluation, APD is to be commended for its focus on achieving its primary goal in a timely, cost-effective, and customer-oriented manner.

At the same time, although APD has achieved success with this highly visible outcome, it has yet to use the full range of capabilities of the call-tracking and analysis software to achieve long-term management and customer service benefits. The following recommendations are intended to suggest how APD might expand 3-1-1's external success to include internal management and problem-solving gains.

Based on the above findings, we make the following recommendations:

**1. Before expanding the system city-wide, APD and City executives should confer to consider the budget, staffing, and other consequences for APD of 3-1-1's success, and project the implications for the City of potential future call loads.**

Strategic decisions about the next goals of the 3-1-1 system need to be carefully evaluated. As the Baltimore study<sup>2</sup> suggests, police departments and cities need to think carefully about whether they want to increase or reduce calls for service.

APD's Chief sought through 3-1-1 to involve the community in gathering relevant, useful information to use in making policing decisions. Some argue that greater citizen involvement provides police with "better information about the spatial distribution of crime and quality of life problems and thus a more accurate picture of the locations of ongoing problems."<sup>3</sup> Conversely, others argue that public education campaigns should dissuade citizens from calling police about low-level neighborhood problems, in order to reserve police resources for the most serious law enforcement matters.

We assert that cities can and should do both – encourage citizen interaction with the department, while disseminating information that citizens can use independently to improve their quality of life and mitigate area problems. As chronic problems are addressed, call loads should theoretically decrease. Regardless of which objective is right for a given city,

however, making a conscious decision about the objectives for a 3-1-1 system is critical not only to guide its actions, but to prevent unintended consequences. Without clearly defining its intentions, Austin could inadvertently recreate a new workload and another call center overload in the future.

**2. Establish a systematic process for reporting the number of 9-1-1 and 3-1-1 calls received.**

For operational purposes, APD Emergency Communications Managers meticulously tracked the number of calls coming into both call for service systems. APD Research and Planning Division staff needed the tracking system for analysis and reporting requirements. Statistics generated within and across these two divisions varied, due to differences in reporting periods and data extraction techniques. Nevertheless, both sets of numbers were publicly available. As with many statistics, the specifics of how particular figures were generated are often lost as the number is used. Understandably, APD's statistics are generated and used for differing purposes, but we suggest that APD document the differences between how the various statistics for call loads are generated in order to maintain credibility and to ensure that those who generate and use call load statistics fully understand the differences and the reasons for them.

**3. Use the full capacity of Customer Relations Management (CRM) software systematically to track the nature of 3-1-1 calls.**

With deployment of the upgraded CAD and record management systems, we anticipate that APD will have a much better system for tracking the nature of 9-1-1 calls. This information will be critical if APD wants to continue to analyze and manage information about calls for service by priority classification. For example, with more information about the nature of Priority Four calls, APD might be able to manage or reduce the number of dispatched "report only" calls, freeing more officer time for problem solving and other needs.

Tracking the nature of 3-1-1 calls with the CRM system was an early goal set for the 3-1-1 system. In order for APD to make full use of information provided by citizens, that information must be recorded. Once recorded, it can be used for a variety of purposes, such as reducing calls through public education or solving quality of life problems with the help of police officers and District Representatives.

Understanding the nature of 9-1-1 and 3-1-1 calls is essential to managing them effectively and to allocating APD resources. One reason APD pursued 3-1-1 was to avoid adding more telephone switches and call takers to handle growing call loads. Without tracking and managing the issues that underlie the call load, history may repeat itself – the same problems that plagued the 9-1-1 system may soon plague 3-1-1. Without more complete data, APD also runs the risk of limiting its ability to make well-grounded policy decisions about how to use their resources.

- 4. Finally, renew and redirect the public education campaign.** APD has demonstrated how human elements rather than technological wizardry are at the heart of improving the public safety environment for citizens. The department reduced 9-1-1 call loads essentially by asking citizens to be more conscientious in their use of 9-1-1, and then giving them the means to comply. We encourage APD to build on this success and to continue to inform constituents about 3-1-1 as the non-emergency call alternative. Using data collected with the CRM system, for example, APD might target neighborhoods that under-use the system.

The 3-1-1 non-emergency call system allows citizens to become part of the solution for the problem of managing demand for police resources. It gives them some discretion about whether they need a patrol car dispatched, with 3-1-1 call takers having seamless access to the dispatch system.

To reduce the need for dispatching officers, a targeted public education campaign could address recurring crime and quality of life

issues, identified by using CRM software to monitor 3-1-1 call loads. We encourage the Department to use the information created from collective citizen input to educate the community about their problems and to involve them in the response.

## End Notes

<sup>1</sup> The relationship between 3-1-1 and time available for community policing is unclear. We could not verify time-related data using the CAD system data because the system does not track time information in a consistent and accessible manner.

<sup>2</sup> Mazerolle et al., page 119.

<sup>3</sup> Ibid.



## About the Authors

### Biographies

**Shellie E. Solomon** is the former senior financial manager with the Census Bureau, and senior manager at the Justice Department. Ms. Solomon has more than 12 years experience in operations and management, budgets, strategic planning, criminal justice evaluation, and technology. She oversaw budget operations for Census 2000 and managed the annual budget of \$1.3 billion for the COPS Office Grants Division for four years.

With 21st Century Solutions Inc, Ms. Solomon has served as the on-site project director for the community policing evaluations in Fort Lauderdale, FL and Miami, FL as well as for the school-based evaluation in Miami, FL. She serves as the research associate for the 3-1-1 evaluation in Austin, TX; iris scanning as an emerging school technology evaluation in New Egypt, NJ; the lethality review in Colorado Spring, CO; and National Assessment of the School Based Partnership Program. She is working with U.S. Attorney's offices on gun tracking and safe zone implementation. She has assisted with projects involving performance measurement, resource allocation, system implementation, and internet applications.

Ms. Solomon holds degrees from the University of Oklahoma and Rochester University and is the recipient of the JustWorks award from the U.S. Department of Justice for innovation in government.

**Craig D. Uchida** is a former senior executive at the U.S. Department of Justice and professor of criminology at the University of Maryland. He has more than 23 years of experience in criminal justice research, planning, and administration. During his years at the Justice Department, he served as the Director of Criminal Justice Research at the National Institute of Justice (NIJ) and as the Assistant Director of Grants Administration at the Office of Community Oriented Policing Services (COPS Office). He was responsible for developing and implementing the grant-making process, making grant awards, and monitoring. When he left the COPS Office he had provided \$3.4 billion to over 9,000 law enforcement agencies for hiring more than 65,000 officers. His efforts at the COPS Office resulted in two major U.S. Department of Justice Awards – the Attorney General's Distinguished Service Award in 1995 and the JustWorks Award for innovation in government in 1997. He has published numerous articles and book chapters in criminology and is the editor of two books on drug enforcement and police innovation.

Dr. Uchida holds a doctorate in criminal justice and two Master's degrees. He is currently President of Justice and Security Strategies, Inc., a consulting firm specializing in crime and public policy and homeland securities policies and serves as an adjunct professor at George Mason University's Administration of Justice Program.