

OFFICE

CITY OF OAKLAND

AGENDA REPORT

2007 JUN 28 PM 1:54

TO: Office of the City Administrator
ATTN: Deborah Edgerly
FROM: Oakland Police Department
DATE: July 10, 2007

RE: An Informational Report from the Chief of Police on the Status of the Shotspotter Gunshot Location System Used by the Oakland Police Department in the City of Oakland.

SUMMARY

At the request of the Rules Committee on May 24, 2007, staff has prepared an informational report on the Shotspotter Gunshot Location System (Shotspotter), which provides an overview of the Shotspotter system and its effectiveness in the City of Oakland.

This is an informational report; therefore no action is requested of the City Council.

FISCAL IMPACT

The City of Oakland purchased the Shotspotter system in 2006 at a cost of \$366,920, which included a one-year lease of the system and the associated software license to monitor the system. The annual maintenance costs of the Shotspotter system after the first year is approximately 15% of the total system cost, or approximately \$55,038. In addition to the annual maintenance costs, there is a monthly fee of approximately \$4,000 for phone lines that are connected to the Shotspotter sensors.

If continued, the operating costs for the existing system will be approximately \$103,038 per year. This cost could increase if the Shotspotter system is expanded to include the Mobile PSC software and deployed in the field.

BACKGROUND

On April 11, 2006, the Public Safety Committee received an *Informational Report* introducing the Shotspotter technology. After this hearing, a test of the system was conducted on May 7, 2006.

On July 18, 2006, the City Council agreed to waive the competitive bid process and purchase the Shotspotter system. The system was installed in West Oakland (PSA 1) and East Oakland (PSA 5 and PSA 6), covering six square miles; 84 microphones were placed throughout the City (15 in PSA 1 and 69 in PSA 5 and PSA 6). Shotspotter software was installed at the Police

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Department's Communication Center, and on October 1, 2006, the Shotspotter system was activated.

KEY ISSUES AND IMPACTS

The benefit of the Shotspotter system is that it provides accurate, real time information on gunshot activity occurring in the City. This information creates an opportunity for officers to rapidly respond to shots fired, which enhances the Department's ability to protect life and property, arrest offenders, and seize illegal firearms.

Since its activation, the Shotspotter system has recorded over 2,800 gunshot alerts. As a result of Shotspotter alerts, Oakland police officers have made four arrests for firearm related crimes. These arrests were linked to gunshots located by the Shotspotter system. Additionally, officers have made five arrests for unrelated crimes while investigating Shotspotter alerts. These arrests were made at the alerted location but were not directly linked to gunshot activity.

Shotspotter information has also assisted in homicide follow up investigations. In one particular case, Shotspotter technology was used to disprove a suspect's self defense claim, alleging that the victim charged him and produced a weapon. The suspect maintained that he fired in self-defense. However, the Shotspotter recording of the incident proved that the suspect fired multiple times, paused for approximately 4-5 seconds, and then fired one additional at the suspect.

In a separate homicide investigation, a witness came forward to talk about a homicide that had just occurred (the Department was unaware of the murder). The witness was unfamiliar with the City of Oakland and consequently could not tell investigators exactly where the crime occurred. Based on the witness' timelines, investigators were able to use Shotspotter technology to confirm the time of the shooting as well as locate the exact crime scene. Evidence that would have been contaminated or destroyed was recovered.

Shotspotter technology has proven invaluable not only in the field with deployment, but in the follow up investigations.

Shotspotter System

When the Shotspotter system was activated in October 2006, the responsibility of monitoring the system was given to dispatchers in the Communications Center. After an alert occurred, dispatchers would analyze the alert and send field units to the location of the alert. The use of dispatchers to solely monitor the system created some challenges (most Shotspotter alerts occur when calls for service are the highest [evenings and weekends]). Depending on the number and priority of the calls for service, the response time of field units would vary from a rapid response to a delayed response. The delayed response time did not effectively capitalize on the real time response advantage offered by the Shotspotter system.

Without the officer's ability to conduct a firsthand assessment of the information (review of audio and GPS map), the officer could be placed in a tactically difficult situation.

Since the City's implementation of the system, Shotspotter, Inc. has developed a Mobile PCS software (installed on laptop computers) that allows officers to receive gunshot alerts in the field, making it easier to conduct a firsthand assessment of the information and develop an appropriate tactical response; improving officer safety. Also, gunshot alerts received in the field helps alleviate the delay associated with alerts coming from dispatch through the Communications Center. The Mobile PSC software capitalizes on the real time capabilities of the system and could help improve response to gunshot alerts. The Department is testing the Mobile PSC software to determine the most effective method of deployment.

Dispatchers are currently used to monitor Shotspotter alerts, however; response is dependant upon the number of alerts, location of the alerts, availability of officers, and other calls for service.

PROJECT DESCRIPTION

The Shotspotter system uses acoustic microphones to identify the location of shots fired. The microphones are placed on buildings and/or poles and connected to phone lines that send the information to the participating law enforcement agency. The microphones recognize gunshots within a targeted neighborhood and immediately triangulate the location of the shots fired via GPS tracking devices. The system displays the location of the shots fired on a computer map, alerting police within 5-15 seconds of the occurrence (within approximately 10-30 feet). This allows for faster response times and more accurate deployment, usually before any 9-1-1 calls have been received.

The Shotspotter system works well in capturing both audio and GPS data on gunshots within the system's coverage area. Officers in the field like the system and believe it could be effective but would like more accessibility to the real time information provided.

Staff has contacted other law enforcement agencies that use the Shotspotter system to ascertain their method of deployment.

The Chicago Police Department uses video cameras with its system. This provides the *eyes and ears* during shots fired incidents, enhancing officer safety and criminal investigations. The Gary, Indiana Police Department uses its dispatchers to monitor Shotspotter alerts, similar to how OPD does. However, Gary PD receives 25% less gunshot alerts per month than Oakland PD. Charleston, North Carolina PD dedicated four officers to Shotspotter alerts and believed it was effective. Staff will continue to contact other law enforcement agencies that have successfully implemented the Shotspotter system to examine their methods of deployment.

SUSTAINABLE OPPORTUNITIES

Economic: With more illegal firearms confiscated and removed from the streets, neighborhoods are safer and crime (and the fear of crime) is reduced. With a safer community, citizens are more likely to reside and shop in Oakland, thereby stimulating economic growth for the City.

Environmental: There are no environmental opportunities associated with this report.

Social Equity: The deployment of the Shotspotter system is an effort to address the increase in gun-related violent crimes. The ability to immediately respond to gunshots enhances the Oakland Police Department's efforts to protect and save lives, seize illegal firearms and investigate gun related crimes, which can increase public safety and public trust.

DISABILITY AND SENIOR CITIZEN ACCESS

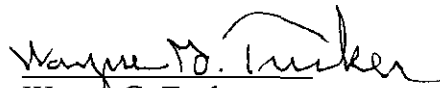
There are no ADA or senior citizen issues associated with this report.

RECOMMENDATION / RATIONALE

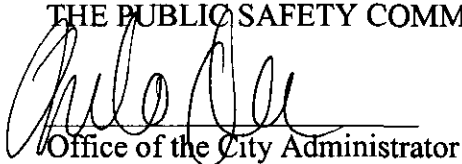
The Shotspotter system is effective in accurately locating, alerting, and recording gunshots. It has led to arrests, and firearm seizures, and has provided key information to violent crime investigations. The Oakland Police Department continues to evaluate the effectiveness of the Shotspotter system, and the best methods to utilize and support the technology. The Department is committed to its efforts in addressing violent crime in the City of Oakland and will continue its work to effectively implement the Shotspotter system.

Staff recommends acceptance of this informational report.

Respectfully submitted,


Wayne G. Tucker
Chief of Police

APPROVED AND FORWARDED TO
THE PUBLIC SAFETY COMMITTEE:


Office of the City Administrator

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