



NYPD's Oversight of ShotSpotter Technology

What questions did the audit look at?

- ▶ Did the New York City Police Department (NYPD) properly monitor and evaluate the ShotSpotter program?
- ▶ Did NYPD properly review ShotSpotter invoices?
- ▶ Were ShotSpotter sensors placed in neighborhoods with the highest shooting rates, as NYPD claims?

Why does it matter for New Yorkers?

In 2014, NYPD implemented ShotSpotter, a gunshot detection and location System. The system uses strategically placed sensors to detect gunshot activity and sends an alert to officers on patrol, potentially allowing NYPD to precisely pinpoint the location of suspected gunfire within covered areas.

ShotSpotter has courted controversy since its inception. Critics have expressed concerns that use of the technology may lead to over-policing in communities of color. Others have questioned the efficacy of ShotSpotter as a crimefighting tool.

The audit found that NYPD generally exercised appropriate oversight over the ShotSpotter contract. ShotSpotter is expected to report 90% or more of probable shootings, thus giving them a strong incentive to over-report loud noises that do not turn out to be confirmed shootings.

The formula used by NYPD fails to account for the number of confirmed shooting incidents. When the auditors measured this number against ShotSpotter performance metrics for two sampled months, the product's performance rate plummeted, with less than 20% of alerts leading to actual confirmed shootings. In June 2023, for example, officers responded to 940 ShotSpotter alerts; only 13% (122) were confirmed shootings.

Since 2014, the department has spent over \$45 million on the product and committed an additional \$9 million. This expense can also be measured in time; in June 2023, NYPD personnel spent almost 427 hours investigating alerts that ended up being unconfirmed. The audit calls on NYPD to critically assess ShotSpotter's performance and determine whether its continued use is in the City's best interests.

What changes did the agency commit to make following the audit?

- ▶ NYPD agreed to pay its invoices within 30 days and ensure that ShotSpotter upholds its part of the contract regarding performance rates.

AUDIT FINDINGS



NYPD exercises adequate oversight over the ShotSpotter program.



ShotSpotter sensors are placed in neighborhoods with high shooting rates.



Performance standards adopted by NYPD result in over-reporting loud noises that are not confirmed shootings.



Fewer than 1 in 5 ShotSpotter alerts result in a confirmed shooting.



NYPD officers spend hundreds of hours responding to unconfirmed shootings every month.



NYPD does not analyze or publish comprehensive ShotSpotter data.



NYPD does not pay invoices in a timely manner.



Audit Recommendations	Agency Response
<p>1 Decline to renew the ShotSpotter contract when it expires in December 2024 without first conducting a more thorough performance evaluation, considering the very low rates of confirmed shooting incidents detected, and factoring in the extensive NYPD officer time spent responding to alerts not ultimately confirmed as shootings.</p>	<p>DISAGREED</p>
<p>2 Develop more meaningful performance standards of ShotSpotter's accuracy that better factor in the very high rate of alerts not ultimately confirmed as shootings.</p>	<p>DID NOT AGREE OR DISAGREE¹</p>
<p>3 To increase transparency, NYPD should collect and publish relevant data, including the number of published alerts, percentage of alerts which result in confirmed shootings, the number of false negatives and missed incidents, time and staff costs spent responding to alerts that are not ultimately confirmed as shootings, and the relative response times to ShotSpotter alerts versus 911 reports of shots fired outside.</p>	<p>DID NOT AGREE OR DISAGREE²</p>
<p>4 Continue to follow up with ShotSpotter, Inc. on coverage areas where the 90% performance rate is not met and ensure that ShotSpotter, Inc. is upholding the agreed upon Service Level Agreement Performance Rate.</p>	<p>AGREED</p>
<p>5 Pay its invoices within 30 days after the invoice receipt or acceptance date per the Procurement Policy Board Rules § 4-06.</p>	<p>AGREED</p>

¹ NYPD stated: "NYPD is limited in what it can consider a 'confirmed shooting' in conjunction with a ShotSpotter alert by the nature of police work and alerts which don't result in the recovery of evidence (i.e. ballistics, property damage, shell casings/live ammunition, firearms, video, ear or eyewitnesses and/or victims). As discussed in previous meetings, the Department is open to any auditor recommendations for improved standards calculations but have not received a recommended standard."

² NYPD stated: "Shooting numbers are ever changing based on investigations and other factors that follow the shootings and therefore, parties that are not familiar with the data could misinterpret the information. In addition, this would need to go through various channels to determine feasibility and legality of such information request."