



DEPARTMENTAL GENERAL ORDER

I-20: GUNSHOT LOCATION DETECTION SYSTEM

Effective Date: 24 Sep 20

Coordinator: Ceasefire Division

The Oakland Police Department (OPD) strives to use technology that promotes accountability and transparency. This policy provides guidance and procedure for response, immediate actions, follow up, documentation, and auditing of OPD's Gunshot Location Detection (GLD) System incidents that occur within the City of Oakland.

All data, whether sound or image, generated by OPD's GLD System are for the official use of this department. Because such data may contain confidential information, such data is not open to public review.

A. Description of the Technology

OPD uses a GLD System (currently the ShotSpotter® Flex™ system, provided by ShotSpotter, Inc. "Shotspotter") to record gunshot sounds and use sensors to locate the origin of the gunshots. The GLD system enables OPD to be aware of gunshots in the absence of witnesses and/or reports of gunshots to OPD's Communications Division (Communications). The GLD system notifies Communications of verified gunshot events, which allows OPD to quickly respond to gunshots and related violent criminal activity.

A – 1. How Shotspotter Works

OPD's GLD system employs acoustic sensors strategically placed in specified areas (commonly referred to as a "coverage area.") When a gun is fired, the sensors detect the firing of the weapon. The audio triangulation of multiple installed sensors then pinpoints a gunfire location and sends the audio file and triangulation information to Shotspotter Headquarters (HQ) for gunshot verification. Verified gunshots and related information are then sent to Communications in real-time so that Communications may notify responding officers where guns were fired.

A – 2. The GLD System

There are three components to GLD system:

1. GLD Sensors: Sensors are installed in different coverage areas in Oakland. Oakland currently has five coverage areas (or phases) where sensors are

installed to triangulate gunshots.

2. ShotSpotter Headquarters (HQ): Sensors send acoustic information to HQ where computer-based machine-learning algorithms are used to analyze the sound. If the sound and visual audio signature match gunfire, the incident file is then passed along to the Incident Review Center (IRC). Acoustic experts at the IRC review incidents within seconds and provide additional information (e.g. number of gunshots, number of guns, types of guns). Confirmed gunshots are pushed out to Communications (dispatch) as well as to the OPD Shotspotter software system within seconds.
3. The OPD Shotspotter Software System: This system is cloud-based and desktop-based; OPD authorized personnel can use internet browsers to connect to the Shotspotter system via OPD computers. Certain authorized personnel use desktop applications that connect to the Shotspotter system for more in-depth gunshot analysis.

B. General Guidelines

B – 1. Authorized Use

The Chief of Police or designee shall provide necessary training and/or technical assistance for GLD usage. Only OPD personnel shall be granted access to OPD's GLD System. The GLD system shall only be used for locating gunshots. The system shall never be used to record human conversations except where such conversations are unintentionally recorded in connection with gunshot recordings.

B – 1. Restrictions on Use

Department members shall not use or allow others to use the GLDS acoustical recording equipment, software or data for any unauthorized purpose.

B – 2. Use Priority

All GLD activations shall be treated as priority one calls.

B-3. Data Access

1. Authorized personnel may access the GLD system via vehicle computers and receive notifications of verified GLD activations. OPD Communications may also notify authorized personnel of GLD activations. Authorized personnel may respond to such notifications based upon priorities as mandated by their supervisors.
2. The GLD system shall only be used for official law enforcement purposes.

3. Only specifically authorized personnel authorized by the Chief or Chief-designee (e.g. personnel with OPD's Ceasefire Unit and CID crime analysts) will have access to historical GLD system data via desktop GLD system applications.

The GLD system may be used for authorized patrol and investigation purposes. Contacting individuals at locations where GLD activations occur shall be conducted in accordance with applicable law and policy.
4. Accessing data collected by the GLD system (currently Shotspotter) requires a right to know and a need to know. A right to know is the legal authority to receive information pursuant to a court order, statutory law, or case law. A need to know is a compelling reason to request information such as direct involvement in an investigation or assignment to a unit which responds to gunshot calls (e.g. Patrol Division).
5. Members approved to access GLD system data may only use data for legitimate law enforcement purposes only, such as when the data relate to gunshots, a specific criminal investigation or department-related civil or administrative action.
6. All verified GLD system activations are entered into OPD's computer-aided dispatch (CAD) record management system (RMS) with GLD system-specific ID numbers. Authorized personnel can then query the CAD/RMS system for any and all GLD system activations.

C. Shotspotter Data

C – 1. Data Collection and Retention

1. GLD acoustic data is recorded when three sensors all record sounds that match the acoustic signatures of gunshots. The sensors are constantly recording a total of 30 hours into acoustical digital .wav format files, and then deleting the data unless triggered to send the data to Shotspotter for analysis; the buffer allows OPD to request data within 24 hours.
2. The sensors delete all acoustic data after 30 hours unless the gunshot-like impulsive acoustic event sends the data to Shotspotter for analysis. Only verified gunshot data is maintained in perpetuity, both by Shotspotter HQ as well as on OPD desktop applications.

C – 2. Data Security

All data will be closely safeguarded and protected by both procedural and technological means:

1. Authorized personnel may access the browser-based GLD system via vehicle computers to only access the cloud-based system. Authorized personnel must always gain access through a login/password-protected system which records all login access.
2. OPD has no direct access to actual GLD (Shotspotter) sensors. Only Shotspotter-specified support engineers can use a technology to access the data in the sensors prior to the 30-hour deletion period, if CID investigators need to search for previous gunshots.

C – 3. Releasing or Sharing GLD System Data

GLD system data may be shared only with other law enforcement or prosecutorial agencies based on a need to know and a right to know, or as otherwise required by law, using the following procedures:

1. The agency makes a written request for the Shotspotter data that includes:
 - a. The name of the requesting agency.
 - b. The name of the individual making the request.
 - c. The need for obtaining the information.
2. The request is reviewed by the Bureau of Services Deputy Chief/ Deputy Director or designee and approved before the request is fulfilled.
3. The approved request is retained on file, and shall be included in the annual report

Requests for Shotspotter data by non-law enforcement or non-prosecutorial agencies will be processed as provided in Departmental General Order M-09.1, Public Records Access (Civil Code § 1798.90.55) and per any interagency agreements.

D. GLD System Administration

OPD's GLD System is installed and maintained by Shotspotter in collaboration with

OPD. Oversight of the system as well as data retention and access, shall be managed by OPD's Ceasefire Division. The sensors as well as the system are maintained by Shotspotter.

D – 1. GLD System Coordinator

The title of the official custodian of the GLD System (Shotspotter Coordinator) is the Captain of the OPD Ceasefire Division, or designee.

D – 2. GLD System Administrator

The Ceasefire Captain shall administer the GLD system, implementation and use, in collaboration with OPD's Criminal Investigations Division (CID). The Ceasefire Captain, or designee, shall be responsible for developing guideline, procedures, and processes for the proper collection, accuracy and retention of GLD System data.

D – 3. Monitoring and Reporting

The Oakland Police Department will monitor its use of the GLD system to ensure the accuracy of the information collected and compliance with all applicable laws, including laws providing for process, and time period system audits.

Department members shall document each interaction with the GLD System, when in the field, and when uploading reports to the CAD system, by indicating in their report that such technology was used, and noting what benefit from use of the technology was received if any. Such benefits could include recovery of weapons, shell casings, identification of suspects, victims or witnesses, situational awareness, and faster transport to or received of medical care including first aid.

The Shotspotter Coordinator shall provide the Chief of Police, Privacy Advisory Commission, and Public Safety Committee with an annual report for the previous 12-month period. These reporting procedures will assist in evaluating the efficacy of this policy and equipment.

D – 4. Training

The Training Section shall ensure that members receive department-approved training for those authorized to use or access the Shotspotter system.

Trainings for Communications personnel (dispatchers and operators) may include training on how to acknowledge the GLD system activations and how to use the system software to identify activation locations so as to provide information to responding officers.

By Order of



Susan E. Manheimer
Chief of Police

24 SEP 20

Date Signed: