



# AGENDA REPORT

**TO:** G. Harold Duffey  
Interim City Administrator

**FROM:** Darren Allison  
Acting Chief, Oakland  
Police Department

**SUBJECT:** Status of StarChase Technology

**DATE:** March 1, 2023

City Administrator Approval

Date: Mar 3, 2023

## **RECOMMENDATION**

**Informational Report On: 1) The Status Of Implementing And Utilizing StarChase Global Positioning Satellite (GPS) Technology To Avoid The Deadly Risks Of High-Speed Pursuits; 2) The Number of Vehicles Equipped With StarChase Technology And The Process Used To Designate Those Vehicles; 3) The Types Of Pursuits Where StarChase Is Used and For What Pursuits StarChase Could Be Used 4) What Is Needed For Full Deployment Of StarChase On All OPD Vehicles That May Be Involved In Pursuits; 5) Potential Funding Gaps Which Are Preventing The Use Of StarChase; And 6) Policy, Logistical, Or Other Challenges That Could Hinder The Expanded Use Of StarChase By OPD.**

## **EXECUTIVE SUMMARY**

This report is an informational report on the status of implementing StarChase at OPD. This informational report contains a legislative history and discussion on the following topics:

- The status of implementing and utilizing StarChase Global Positioning Satellite (GPS) technology to avoid the deadly risk of high-speed pursuits;
- The number of vehicles equipped with StarChase Technology and the process used to designate those vehicles;
- The types of pursuits where StarChase is used and for what pursuits StarChase could be used;
- What is needed for a full deployment of StarChase on all OPD vehicles that may be involved in pursuits;
- Potential funding gaps which are preventing the use of StarChase; and
- Policy, logistical, or other challenges that could hinder the expanded use of StarChase by OPD.

## **BACKGROUND / LEGISLATIVE HISTORY**

The Oakland Police Department (OPD) was awarded \$656,070 by the State of California

Public Safety Committee  
March 14, 2023

Legislature for the FY 2019 Citizens' Option for Public Safety and Multi-Agency Juvenile Justice Funds Grant (State COPS Grant XXII). State COPS Grant funds were distributed to each county for distribution to cities to support front-line law enforcement. OPD sought approval to use its allocation to fund helicopter maintenance and invest in new equipment such as pursuit management technology, security cameras, van alarms, evidence lockers, and a range of technology/computer upgrades.

As approved by the City of Oakland's Privacy Commission, funds were used to purchase new technology to help OPD manage high-speed pursuits to mitigate loss of life and injury. The StarChase system uses global positioning satellite (GPS) tagging and tracking technology solutions for managing high-risk events, real-time situational awareness, and day-to-day operations.

The "Pursuit Mitigation System Privacy Policy" report also presented to the Public Safety Committee on November 12, 2019 explains that the pursuit mitigation system provided by StarChase, contains a miniature GPS tag and a launcher mounted in a police vehicle. A compressed-air launcher, mounted behind the grille of a police cruiser, uses a laser to target the fleeing vehicle. It deploys a GPS tag. Dispatch views location and movements of the tagged vehicle in real-time on a secure web-based mapping portal. Through the efficient use of technology, a high-speed chase is replaced with a safer interdiction technology.

Only one manufacturer - StarChase LLC - makes the pursuit mitigation tagging system; staff therefore requested that the City Council waive the city of Oakland's competitive advertising and bidding process required for contract awards. StarChase, LLC explains the ways in which this technology is unique – the system is the only police vehicle installed device that allows an officer to tag and track a suspect vehicle. The system is capable of tracking in near real-time allowing OPD Communications (dispatch) to work with officers in real time to apprehend and/or perform surveillance on suspects' travel.

Per the COPS legislation, AB 1913, funds are received by the Alameda County Treasury and distributed to local jurisdictions through the Law Enforcement Services Account within the Local Revenue Fund 2011. The entire grant amount and accrued interest is restricted by statute for front-line law enforcement. Examples of "front line law enforcement" include personnel and equipment (i.e. officer training, vehicles, officer equipment), which are utilized in everyday contact with the public. OPD has used past State COPS grant funds for a variety of allowed uses, such as:

- Vehicle purchases and upgrades;
- Anti-human trafficking operations (personnel);
- Ceasefire operations (personnel);
- Equipment and equipment maintenance;
- Software and technology upgrades; and
- Other personnel and training needs.

On November 7, 2019, [Resolution No. 87938 C.M.S.](#) was filed with the Oakland City Council. Resolution No. 87938 was a resolution authorizing the City Administrator, or designee, to:

1. Accept and appropriate the fiscal year (FY 2019 State of California "Citizens Options for Public Safety and Multi-Agency Juvenile Justice Funds" (State COPS Grant XXII) allocation in the amount of six hundred fifty-six thousand seventy dollars (\$656,070) plus accrued interest earnings of up to ten thousand dollars for a total amount not to exceed six hundred sixty-six thousand seventy dollars (\$660,070) to fund helicopter maintenance and purchase equipment, including pursuit management technology, security cameras, van alarms, evidence lockers, and technology/computer upgrades; and
2. Waive the City of Oakland's competitive advertising and bidding requirements to allow OPD to enter into a contract with StarChase to purchase pursuit management technology for a total amount not to exceed one hundred seventy-five thousand dollars.

On November 19, 2019, Resolution No. 87938 was passed by City Council.

**The status of implementing and utilizing StarChase global positioning satellite (GPS) technology to avoid the deadly risks of high-speed pursuits.**

With the passage of Resolution No. 87938, OPD entered into a contract with StarChase, LLC on December 5, 2019 for the following:

- 30 complete vehicle mounted launching systems (each with interior console and remote key fobs);
- Unlimited tracking projectiles;
- 12 months of data mapping;
- Vehicle installation; and
- On-site training.

The cost associated to the contract execution was \$171,598.63. The first two vehicle installations were completed on January 27, 2020. On January 6, 2021, all 30 vehicle installs were completed, Departmental General Order I-22 (Pursuit Mitigation System) was in place, and Departmental training was conducted.

StarChase, LLC marked January 6, 2021 as the "go live" date which marked the start of the 12-month data mapping (Total Solutions Package) period. The data mapping and warranty contract expired on January 6, 2022.

On December 31, 2021, VCOC Officers launched a 3G GPS projectile which failed to attach to a vehicle wanted for felony evasion. The suspect vehicle was also being followed by ARGUS who later directed marked units to Vallejo where the suspect was taken into custody.

Since January 6, 2022, OPD has been out of contact with StarChase, LLC. No funding source was identified/established to pay the \$53,550 annual invoice to StarChase, LLC to renew the Total Solutions Package and warranty for the 30 installed systems.

OPD was initially issued GPS projectiles with 3G modules in them, and the 3G cell towers sunset on July 31, 2022. Had OPD renewed its contact with StarChase, LLC, new 4G GPS

projectiles would have been issued.

On December 2, 2022, OPD meet with StarChase, LLC to discuss the technology, 4G GPS projectiles, training, and how OPD can further implement the system. During this discussion, StarChase, LLC agreed to service equipment for five Violent Crime Operations Center (VCOC) vehicles to support a proof of concept for the technology as OPD had not yet had a successful deployment.

On January 10, 2023, StarChase, LLC completed repairs and updates to 5 VCOC vehicles. StarChase, LLC provided a supply a number of 4G GPS projectiles to be utilized with the 5 vehicles. StarChase, LLC provided on-site training to the members of the VCOC.

On January 11, 2023, the 4G GPS projectiles were loaded into the launchers for the 5 VCOC vehicles and were ready for use.

On January 31, 2023, VCOC Officers successfully launched a 4G GPS projectile which attached to a vehicle wanted for a strong-armed robbery which had just occurred. The projectile affixed to the rear truck lid of the vehicle and showed to be tracking the suspect vehicle's movement. The suspect vehicle was also being followed by ARGUS who observed the suspect vehicle enter onto the freeway, reach 104 mph, then take the next exit. The suspects then exited the vehicle, removed the 4G GPS projectile discarding it on the ground, and continued to flee in the suspect vehicle. ARGUS continued to follow the suspect vehicle until the suspect vehicle became incapacitated. At which time the vehicle's occupants fled on foot. Argus directed uniformed officers to the area and the vehicle's occupants were detained in nearby residential yards. Three suspects were placed under arrest for their part in the robbery.

OPD has been in communication with the Executive management team of StarChase, LLC and has been providing regular implementation updates on the five pilot program vehicles. StarChase, LLC Executive management has been fully supporting the re-launch of the StarChase system. However, if OPD is to provide a full report as requested, OPD needs additional time to have the opportunity to test the product and offer a full evaluation of the product. There are too many variables that need to be evaluated during the testing period to properly assess the true viability and efficacy of the product.

OPD recognizes that StarChase can be a great tool in combination with other methods and techniques such as aerial observations and observations by plain cloths officers. By affixing a GPS tracking device to a pursued or about to be pursued vehicle, officers are able to create distance from the suspect vehicle, and in some cases, marked police vehicles can remain completely out sight from the suspect vehicle. Theoretically, this affords the vehicle's occupants an opportunity to operate the suspect vehicle at safer speeds lessening risk of danger of death or serious physical injury to the suspect(s), the suspect vehicle(s) occupants, pedestrians in the area, motorists in the area, and officer(s) engaged in the vehicle pursuit. OPD is currently unable to prove the theoretical benefits of StarChase as described above due to a contract laps for the Total Solutions Package and warranty. Further, OPD is unable to determine if the StarChase product can reduce the number of pursuits or just reduce the time OPD engages in a pursuit.

**The number of vehicles equipped with StarChase technology, and the process used to designate those vehicles.**

In Jan 2021, there were 30 vehicles which had StarChase installed. These vehicles are assigned to the Bureau of Field Operations I (administered out of the Police Administration Building in downtown Oakland) as well as Bureau of Field Operations II (administered from the Eastmont Substation). The vehicles are deployed throughout the city of Oakland in a patrol function as well as special resource teams to allow for large areas of the city of Oakland to have access to StarChase equipped vehicles.

As of the completion of this report, there are 27 vehicles which currently have StarChase installed. Three vehicles are no longer in service due to a total loss. The vehicles ("Veh" or "Vehs") are as follows:

Unit	Veh #	Veh Type	Note
CeaseFire	1502	Exp	
CeaseFire	1503	Exp	
CeaseFire	1509	Exp	
CeaseFire	1517	Exp	
VCOC	1955	Tahoe	Confirmed Operable
VCOC	1958	Tahoe	Confirmed Operable
VCOC	1545	Exp	Confirmed Operable
VCOC	1539	Exp	Confirmed Operable
VCOC	1527	Exp	Confirmed Operable
CRO2	1531	Exp	Confirmed Operable
CRO2	1533	Exp	Confirmed Operable
CRO3	1538	Exp	
CRO3	1809	CV	
CRO4	1525	Exp	
CRO5	1526	Exp	
CRO5	1543	Exp	
Patrol	1475	Exp	Patrol Beat 24 SW
Patrol	1485	Exp	Patrol Beat 20 D/D
Patrol	1861	Exp	Patrol Beat 31 SW
Patrol	1866	Exp	Patrol Beat 28 SW
Patrol	1874	Exp	Patrol Beat 32 D/D
Patrol	1875	Exp	Patrol Beat 30 SW
Patrol	1878	Exp	Patrol Beat 33 D/D
Patrol	1881	Exp	Patrol Beat 30 D/D

Patrol	1422	Exp	Patrol Pool
Patrol	1813	CV	Patrol Pool
Patrol	1826	CV	Patrol Pool

The distribution of vehicles between sections is as follows:

# of Vehs	Unit
11	Patrol
7	Community Resource Officers
5	VCOC
4	CeaseFire
3	Out of Service

In an effort to support a pilot program and assist OPD in developing the StarChase program, StarChase, LLC agreed to repair and update 5 vehicles. On January 10, 2023, StarChase, LLC completed repairs and updates to 5 VCOC vehicles. StarChase, LLC provided a supply a number of 4G GPS projectiles to be utilized with the 5 vehicles. StarChase, LLC provided on-site training to the members of the VCOC. These 5 vehicles are the only operational StarChase equipped vehicles at OPD. The remaining 22 vehicles in the StarChase fleet are in need of software updates and hardware repairs which are unbudgeted since the laps in coverage for the Total Solutions Package and warranty.

## **ANALYSIS AND POLICY ALTERNATIVES**

**The types of pursuits where StarChase is used and for what pursuits StarChase could be used.**

Departmental General Order (DGO) I-22, Pursuit Mitigation System, became effective on December 15, 2020. DGO I-22 specifies the following regarding authorized Uses of StarChase:

The StarChase system may be utilized during the following situations:

1. To tag a vehicle which officers are pursuing as part of an authorized vehicle pursuit under DGO J-4 (Pursuit Driving).
2. A monitoring commander may authorize the deployment under exigent circumstances other than what is authorized in J-4 above.

DGO I-22 also specifies StarChase equipment in the patrol vehicle will only be operated by officers who have been trained in its use. Policy allows officers to deploy StarChase during an active pursuit as well as deploying the StarChase prior to or to mitigate a possible pursuit. Absent authorization to pursue a vehicle pursuant to DGO J-04, officers shall not engage in vehicle pursuits simply to get close enough to affix the StarChase GPS tag.

DGO J-04 defines when a vehicle pursuit may be initiated.

Vehicle pursuits may only be initiated when there is reasonable suspicion to believe the suspect committed a violent forcible crime and/or a crime involving the use of a firearm, or probable cause that the suspect is in possession of a firearm.

For purposes of DGO J-04, a Violent Forcible Crime is defined as the commission or attempted commission of:

1. Murder;
2. Manslaughter;
3. Mayhem;
4. Kidnapping;
5. Robbery;
6. Carjacking;
7. Arson to an inhabited structure, inhabited property or that causes great bodily injury (GBI);
8. Explode or ignite a destructive device or any explosive causing GBI or death;
9. Use or possession of a weapon of mass destruction;
10. Use of a firearm in the commission of a felony;
11. Assault with a deadly weapon, firearm;
12. Assault with a deadly weapon, other than a firearm\*, with serious bodily injury (SBI)/GBI;  
\* The use of a motor vehicle to solely flee a scene or enforcement action does not meet the criteria for this part unless there is a clearly articulable intentional act by the driver to use the vehicle as a weapon.
13. Aggravated Battery with SBI/GBI; and
14. Any of the following sexual assaults committed against a person's will by means of force, violence, duress, menace, fear of immediate and unlawful bodily injury on the person or another, or in concert:
  - a. Rape;
  - b. Sodomy;
  - c. Oral Copulation;
  - d. Lewd Act on a Child under the age of 14; or
  - e. Sexual penetration

DGO I-22 specifies a search warrant is required after a GPS tag is affixed to a vehicle. The member who deploys a StarChase tag that affixes to a vehicle, is required to prepare an affidavit and search warrant which details the probable cause surrounding the deployment. The affidavit and warrant shall be presented to a judge for authorization. Vehicle tracking search warrants require the following grounds for issuance:

There is probable cause to believe that the tracking device would provide information that established any of the following:

1. That a particular person committed a felony or is committing one.
2. That a particular felony was committed or is being committed.

DGO I-22 has an exception to the warrant requirement when the StarChase GPS tag is applied to a vehicle where the occupants/operator(s) have no standing (e.g., Stolen vehicle, carjacked vehicle, embezzled vehicle).

Neither DGO I-22 or DGO J-04 make any specific allowances to either pursue a vehicle or deploy a StarChase GPS tracker on vehicles associated with Sideshow, reckless, driving, evading police in a vehicle, or human trafficking cases. Officers are bound by policy to initiate a pursuit and/or deploy a StarChase GPS tracker only when the criteria as discussed above are met. Outside of these criteria, a monitoring commander is bound by law to authorize the deployment of a StarChase GPS tracker only when there is probable cause to believe that the tracking device would provide information that established that a particular person committed a felony or is committing one; or that a particular felon was committed or is being committed.

**What is needed for full deployment of StarChase on all OPD vehicles that may be involved in pursuits**

If the Department were to install StarChase on all OPD vehicles that may be involved in pursuits, it is estimated that 115 vehicles will need to have the technology and equipment installed. On December 4, 2022, StarChase, LLC provided a quote to install StarChase on 85 additional vehicles to support a full patrol role out of the system. The quote totaled \$762,091.42 for the following:

- 85 complete vehicle mounted launching systems (each with interior console and remote key fobs);
- Unlimited tracking projectiles;
- 12 months of data mapping;
- Vehicle installation; and
- On-site training

This would come with a cost of \$127,500 each year following to renew the Total Solutions Package and warranty for the 85 installed systems.

This would bring to OPD fleet to a total of 115 installed systems with a cost of \$172,500 each year to renew the Total Solutions Package and warranty for the 115 installed systems.

Training staff would need to be identified to provide training to officers, dispatchers, department safety coordinator, and fleet coordinator.

- Officer's training will need to cover policy and have a reality-based hands-on section for launching GPS trackers.
- The fleet coordinator will need training on how to conduct regular inspections of StarChase Equipment and GPS trackers to ensure functionality. The fleet coordinator will need to coordinate with the vendor for any repairs / updates that need to occur.
- The Department Safety Coordinator will need training in how to record deployments with the vendor.
- Communications will need training on mapping and tracking GPS trackers to provided updates to field units on successful StarChase deployments.

StarChase, LLC provided a quote to install StarChase on 85 vehicles. See **Attachment A – 85 Vehicle Install Quote** for details.



### **Potential funding gaps which are preventing the use of StarChase**

No funding source was identified/established to pay the \$53,550 invoice to StarChase, LLC to renew the Total Solutions Package and warranty for the 30 installed systems. The data mapping and warranty contract expired on January 6, 2022.

In an effort to propel the StarChase program forward, StarChase, LLC is willing to set aside the past two years of renewals. StarChase, LLC has prepared renewal contracts with 1-3-5 year options. See **Attachment B - OAKLAND PROGRAM PRICING PLAN** for details.

Should the 5 units currently in service remain as such (beyond April 9, 2023), each operational unit will be billed for the annual Total Solutions Package and extended warranty amounts referenced in the one-year pricing quote as well as the transfer kit, installations, and training costs. See **Attachment B - OAKLAND PROGRAM PRICING PLAN** for details.

### **Policy, logistical, or other challenges that could hinder the expanded use of StarChase by OPD**

Successful StarChase deployments are dependent on several factors:

- The deployment of StarChase is bound by policy to only be deployed in cases that meet the criteria enumerated within DGO J-04 and DGO I-22. Refer to discussion above for the specific criteria.
- Vehicle tracking search warrants require probable cause to believe that the tracking device would provide information that established that a particular person committed a felony or is committing one; or that a particular felon was committed or is being committed.
- A StarChase equipped vehicle must be geographically nearby and available to respond to incidents where StarChase could be utilized.
- Vehicles and their occupants who are wanted for violent crimes often begin evasive driving maneuvers upon observing marked police vehicles in the area. A successful StarChase deployment requires the StarChase equipped vehicle to be behind the suspect vehicle within a few yards.
- StarChase allows law enforcement to track a vehicle and not the vehicle's occupants. Observations are still needed to track suspects who abandon their vehicle and flee on foot. The use of aerial observations has typically filled this gap.
- StarChase allows law enforcement to create space between them and the suspect vehicle. When too much space is created, the occupants of the suspect vehicle can exit the vehicle, remove the GPS tracker, and continue to flee in the vehicle. The use of aerial observations has typically filled this gap.
- Vehicles and their occupants who are wanted for violent crimes often flee at high speeds that exceed the capabilities of UAV's. The use of ARGUS or outside agency air support has typically filled this gap.
- StarChase equipped vehicles must be inspected and/or serviced regularly to ensure equipment is operable.
- StarChase users must be trained in the deployment of GPS trackers and how to utilize the mapping tool to track a GPS tagged vehicle.

Other than the renewal contract and warranty laps, the StarChase program has some policy challenges that hinder its use.

- DGO I-22 does not list a Departmental unit who is responsible for coordinating repairs to StarChase system hardware installed on vehicles with vendors.
- DGO I-22 does not list a Departmental unit who is responsible for managing GPS tracker inventory, registering new GPS trackers, collecting deployed trackers, logging deployed tracker information with the vendor, exchanging deployed/damage/obsolete trackers/equipment with the vendor, etc.
- DGO I-22 does not list exigency and/or community caretaking as exceptions to the search warrant requirements.
- DGO I-22 states that the requirements and provisions detailed in the California Electronic Communications Privacy Act (CalECPA) - SB 178 are the reasons why a search warrant is required after a GPS tag is affixed to a vehicle. After conversations with the Alameda County District Attorney's Office, CalECPA does not apply.

If the Public Safety Committee favored a motion to support a pilot program with the 5 operational StarChase equipped vehicles beyond April 9, 2023, The cost would be \$15,222.64. This will cover the cost for the annual Total Solutions Package and extended warranty amounts referenced in the one-year pricing quote as well as the transfer kit, installations, and training costs. See **Attachment B - OAKLAND PROGRAM PRICING PLAN** for details.

### **FISCAL IMPACT**

There is no fiscal impact. OPD will need to determine whether to extend and/or expand the use of the system beyond a one-year pilot program.

### **PUBLIC OUTREACH / INTEREST**

No outreach was deemed necessary for the proposed policy action beyond the standard City Council agenda noticing procedures, because additional questions were directed to the Police Department subject matter experts.

### **COORDINATION**

The City Administrator's Office reviewed this report.

### **SUSTAINABLE OPPORTUNITIES**

**Economic:** The City of Oakland can more readily attract economic activity in a safer city. StarChase system offers OPD a technology alternative to vehicle pursuits while mitigating some of the risks inherent to police pursuits, and that could improve public safety.

**Environmental:** There are no environmental issues associated with this report.

***Race & Equity:*** OPD uses the StarChase system to aid in patrol, CRO, VCOC, and Ceasefire operations. Policing operations serve to enhance public safety, especially in areas more prone to violent crime. Residents and visitors living in areas with a greater proportion of crime will particularly benefit from police services that promote public safety in these neighborhoods. All Oakland residents and visitors also benefit from efforts to address criminal activity and promote public safety.

**ACTION REQUESTED OF THE CITY COUNCIL**

Informational Report On: 1) The Status Of Implementing And Utilizing StarChase Global Positioning Satellite (GPS) Technology To Avoid The Deadly Risks Of High-Speed Pursuits; 2) The Number of Vehicles Equipped With StarChase Technology And The Process Used To Designate Those Vehicles; 3) The Types Of Pursuits Where StarChase Is Used and For What Pursuits StarChase Could Be Used 4) What Is Needed For Full Deployment Of StarChase On All OPD Vehicles That May Be Involved In Pursuits; 5) Potential Funding Gaps Which Are Preventing The Use Of StarChase; And 6) Policy, Logistical, Or Other Challenges That Could Hinder The Expanded Use Of StarChase By OPD.

For questions regarding this report, please contact Lt. Scott Bezner at [sbezner@oaklandca.gov](mailto:sbezner@oaklandca.gov).

Respectfully submitted



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Attachments (2)

A: 85 Vehicle Install Quote

B: Oakland Program Pricing Plan