



CITY OF OAKLAND

AGENDA REPORT

TO: G. Harold Duffey
Interim City Administrator

FROM: Darren Allison
Acting Chief, Oakland Police
Department

SUBJECT: SUPPLEMENTAL – OPD RSI
Helicopter Maintenance Contract

DATE: February 23, 2023

City Administrator Approval

Date: Feb 23, 2023

RECOMMENDATION

Adopt A Resolution Authorizing The City Administrator Or Designee To Enter Into A Professional Services Agreement With Rotorcraft Support, Inc. (RSI) To Provide Helicopter Maintenance Services To The Oakland Police Department (OPD) For Helicopter Use In Assisting Various Departments With Responding To Emergencies Throughout The City, For The Period Of July 1, 2023 To June 30, 2025 In An Amount Not To Exceed Eight Hundred Fifty Thousand Dollars (\$850,000) Per Year For A Total Contract Not To Exceed One Million, Seven Hundred Thousand Dollars (\$1,700,000).

REASON FOR SUPPLEMENTAL

This report is being provided in direct response to questions raised by Public Safety Committee after its January 23, 2023 meeting. Staff was asked to return with responses to the following questions.

General helicopter information:

The (Oakland's) helicopter operates as a patrol car in the sky. The helicopter responds anywhere in the City when it is dispatched or requested. Similar to a patrol car leaving the police station and not knowing what call may or may not come in, the helicopter also leaves the airport ready to be dispatched to any call that may come in.

- If the helicopter is already in the air, it can respond anywhere in the city in under 4 minutes. If the helicopter is on the ground at the airport, it has a 10–15 minutes response time to anywhere in Oakland.
- The helicopter has enough fuel for 2 hours of flight time.
- In 2022 the helicopter unit assisted with 27 missing persons cases, mitigated 165 vehicle pursuits, assisted with 28 arrests for murder, 64 arrests for armed robbery, assisted in recovering over 150 guns, handled over 5,000 calls for service, and recovered 197 stolen

Public Safety Committee
February 27, 2023

vehicles 46 of which were carjacking vehicles.

- The helicopter unit also assisted Ceasefire 88 times and VCOC 151 times in 2022.
- Supporting Oakland Fire Department (OFD):
 - Assisted with 75 fires in 2022
 - A helicopter in the air is usually first to see smoke, first on scene, gives best route for OFD to access the fire, and gives best route for evacuation
 - OPD's helicopter is small compared to other helicopters and cannot perform water drops
 - OPD's helicopter has a public address system that can assist with evacuations
 - In 2022, the helicopter unit assisted with freeway fires, hills fires, and multiple other fires across the city
 - The helicopter has a Forward Looking InfraRed (FLIR) camera that is vital in seeing hot spots, especially in the hills

Inquiry:

How much funding is proposed to come out of General Fund 1010 – and what are other constraints in that fund right now?

Response:

OPD is asking for spending authority for a contract with RSI for up to \$850,000 per year for a two-year period. Funding will be paid from the following funding codes: Fund: 1010 - General Fund: General Purpose, Organization: 107710 - Special Operations, Project: Project to be determined, and Program: PS13 – Special Operations. Approximately 40% will come from GPF or \$340,000 each year.

Inquiry:

Given that the proposed increase for maintenance is \$100K – does OPD believe that the project that will increase in the 2 years being proposed for the 850K each? Increased use inflation?

Response:

The budget was \$750,000 per year for the last 3 years. OPD is planning on \$850,000 per year for 2023 to 2025. As the helicopters age, the cost to maintain them rises, and on top of that inflation, the cost of fuel, and parts and labor have all increased. The proposed budget was based on a cost analysis for 2021. If inflationary pressure subsides, the budget should be adequate.

Inquiry:

The informational report references helicopter uses to break down sidseshows – do they suspect increased use for sideshow enforcement or investigative purposes?

Response:

In 2022, helicopter flew 115 missions for sideshows. OPD expects to use the helicopter about the same amount for sideshows in 2023 and plans on flying every Saturday and Sunday in 2023 to support sideshow missions.

Inquiry:

Does OPD have a grant writer hired that can or has already helped assist with exploring other sources of funding for this line item? Homeland security funding or state/fed sources?

Response:

OPD is currently sending two sergeants to a "Grant authoring" school in an effort to reduce financial pressure on the department.

Inquiry:

What is the status of the camera drones that were approved to be a substitute/compliment for helicopter? Are they still in use? How much are they in use? How much of the helicopter usage can be transferred to the drones?

Response:

Drones are a complement to the Air Support Unit, but are highly limited to current technology challenges as noted below:

Limited Distance: As of now, the farthest distance a drone can fly is limited at 4.3 miles. Even some of the best drones currently on the market such as the [Phantom 4 Pro](#) and [Inspire 2](#) are only limited to this distance. Any further distance will cause the drone to be at a standstill because it is out of range. For example, if an officer is engaged in a police car chase and the suspect happens to leave the precedent, the drone cannot follow that far due to signal limitations.

- Although, the distance for drones will continue to improve, DJI, the top leading drone manufacturer recently announced [Mavic 2 drone](#) that has an incredible control range up to five miles. The pilot would be able to fly the drone over larger areas at a greater distance. But the drones will not replace helicopters and jets. In a situation where a remote pilot is flying above the forest area, their range gets limited because the signals are bouncing off the trees. As of result, the drone gets less focused signals and that makes it harder to communicate with the remote controller.
- **Flight Time:** The best drones usually have a flight time between 25 to 30 minutes. These batteries use Li-Po that operates with limited capacity. The remote pilot will need to bring a few additional batteries to keep the drone running if the mission is going to take several hours or longer.
- **Weather Limitations:** Most of the top-end drone models have a wind resistance up to 22.4 miles per hour. However, if the drones are pushed into overdrive mode, they can slice through the winds with ease. However, this is not recommended because the drones are not built to withstand high wind speed due to their light weight. Drones also have less propulsion force compared to helicopters and jets. Flying drones in rain or snow can damage the electronic components and interfere with the communication between the drone and the controller.

- **The Future:** Drones are a rapidly evolving technology, however, according to UAV expert Keith Ericksen, drone technology is decades away from making helicopters and airplanes obsolete for police work.
- Drones are an integral part of the Air Unit despite their limitations. Drones were deployed 134 times in 2022.

In addition to technological challenges, Federal regulation on drones and other limitations must be considered:

- An OPD drone-trained officer is not always on duty.
- An OPD watch commander must give permission for a drone deployment.
 - The Federal Aviation Administration (FAA) required the drone officer to call its headquarters in Washington D.C. to request permission to operate.
 - Typically, this process takes between 10 to 20 minutes.
 - This permission from the FAA is required because of the proximity to the Oakland International Airport. Most of Oakland is underneath the Class C airspace of Oakland International Airport.
 - It is not safe for occupied and unoccupied aircraft to operate in the same airspace.
 - Typically, when the FAA grants permission for the drone to operate, it will restrict the drone to 100 feet or less. This is to keep separation from other occupied aircraft.
 - This 100-foot ceiling restriction limits the visibility of the drone.
- The drone officer must report to the scene of an incident, which can take 10 to 20 minutes for arrival; thus further delaying the deployment time of the drone.
- The drone officer must operate the drone within line of sight, meaning the operator must always be able to see the drone. This requirement combined with the altitude restriction means the drone can usually only operate within one City block radius of the drone officer / operator.
- The drones have a 5-pound payload, which limits the size of the camera it can carry. The size of the camera limits its quality, thus also reducing the distance the camera can see. The department's current drone and camera combinations can only effectively see within a 2 or 3 house radius at a time.
- Drones cannot mitigate pursuits due to their technical limitations.
- Drones cannot respond to a call for service in seconds, or minutes, like an occupied aircraft can.
- Drones cannot fly for routine patrol or handle calls for service.

Inquiry:

What are the comparisons of the costs between the camera drones vs. the helicopter for such uses?

Response:

There is no accurate comparison between the two because drones and helicopters do not perform the same functions.

Inquiry:

What are the options for collaborating with other agencies/renting helicopters for helicopters when there is a unique need?

Response:

Collaborating or renting helicopters is an option to explore. Below are issues that need to be considered.

There are 3 agencies in addition to Oakland that operate Law Enforcement helicopters in Alameda County; (1) California Highway Patrol (CHP), (2) Alameda County Sheriff's Office (ACSO), and (3) East Bay Regional Park District (EBRPD).

CHP is based in Napa and is 30 miles from Oakland. It is a state agency, and the Napa office is responsible to serve over 7.7 million people in all 9 Bay Area counties. As a state agency, CHP will not collaborate or asset share.

ACSO is in Livermore and is 19 miles from Oakland. Its response time to Oakland would be exceptionally long. Alameda County has 14 cities and 6 unincorporated communities, and ACSO is tasked with providing service to all of these areas. ACSO has a smaller Air Unit than OPD and has concerns that Oakland would use most of its resources.

EBRPD is in Hayward and 6 miles from Oakland. It provides service to 73 parks across both Alameda County and Contra Costa County. EBRPD is tasked with the "safety of all park visitors" and does not have the resources to assist Oakland with all of its needs.

All three of the above agencies operate larger, louder, and more expensive helicopters, which also burn more fuel more fuel than Oakland's helicopter. Oakland has the smallest and quietest helicopter in law enforcement.

The City of Oakland has a unique need for Air Support multiple times a day, every day. On average OPD's helicopter unit is requested over 40 times a day. These requests are made from OFD, and OPD patrol, dispatch, traffic, Ceasefire, and VCOC. These are all internal City of Oakland requests not counting outside agency requests.

If Oakland did have an asset sharing or collaboration with an outside agency, the City would use a disproportionately large amount of the resources. Oakland's cost contribution would be more than that of the other agency.

Using a larger, more expensive helicopter that burns more fuel coming from a greater distance will not yield cost savings. At best, Oakland's cost would stay the same but likely be higher.

Oakland's helicopter costs \$600 dollars per flight hour to operate, compared to \$850 dollars an hour for the other agencies helicopter, plus the additional flight time to and from the respective starting location.

ACTION REQUESTED OF THE CITY COUNCIL:

Adopt A Resolution Authorizing The City Administrator Or Designee To Enter Into A Professional Services Agreement With Rotorcraft Support, Inc. (RSI) To Provide Helicopter Maintenance Services To The Oakland Police Department (OPD) For Helicopter Use In Assisting Various Departments With Responding To Emergencies Throughout The City, For The Period Of July 1, 2023 To June 30, 2025 In An Amount Not To Exceed Eight Hundred Fifty Thousand Dollars (\$850,000) Per Year For A Total Contract Not To Exceed One Million, Seven Hundred Thousand Dollars (\$1,700,000).

For questions concerning this report, please contact Sgt. Jonathan Vanerwegen, OPD, Helicopter Unit, at (510) 615-5875.

Respectfully submitted



Darren Allison
Acting Chief of Police
Oakland Police Department

Reviewed by:
Casey Johnson, Captain
OPD, Special Operations Division

Jonathan Vanerwegen, Sergeant
Helicopter Unit, Special Operations Division

Tracey Jones, Police Services Manager
OPD, Bureau of Services

Prepared by:
Michael Sze, Management Assistant,
OPD, Bureau of Services

Public Safety Committee
February 27, 2023