



DATE: October 23, 2019
TO: Council Infrastructure Committee
FROM: Police Chief
SUBJECT: Unmanned Aerial Vehicle Program

RECOMMENDATION

That the Committee discusses and recommends the implementation of an Unmanned Aerial Vehicle Program at the police department.

SUMMARY

Currently, only one City employee within the IT Department holds a Certificate of Authority (COA) to operate the City's UAV within City limits. The Police Department would like to expand the City's UAV program by securing the department's own COA. The utilization of UAVs by local government and public agencies is no longer considered new technology; many surrounding municipalities and law enforcement agencies are incorporating UAV technology to complete tasks more efficiently and safer.

BACKGROUND

Technology is rapidly changing the face of modern policing. One new technology, UAVs (often referred to as "drones"), is poised to transform law enforcement operations at a level not seen since the introduction of body-worn cameras. UAVs are a portable and easy-to-learn technology that are being used by law enforcement agencies across the country to improve operational efficiency, as well as officer and community safety.

UAVs are small, unmanned aircraft, operated by a ground-based pilot who maintains line-of-sight contact with the UAV. UAVs offer a safe, effective, and affordable option for enhancing a wide variety of law enforcement operations such as search and rescue missions, accident scene investigation, crime scene reconstruction, and protecting officers in high-risk environments such as high-risk warrant service and active shooter situations. UAVs are an affordable alternative to a fixed wing plane and/or helicopter air support. The use of an UAV is not excluded from privacy laws such as Fourth Amendment protections and therefore *will not* be used as a platform for random surveillance activities or as a means for intercepting electronic or other communications. The UAV will not be used as a weapons platform.

In 2015, approximately 147 agencies in the United States had an active UAV program. In 2018, over 900 agencies had an operating UAV program – and this year that number is on pace to grow exponentially. Locally, the Alameda County Sheriff's Office (ACSO) has been operating a UAV program since 2015 and the Fremont Police Department (FPD) started their own program last year. In 2018, Union City PD and Newark PD each created and are now operating a UAV program.

DISCUSSION

Today more than ever, law enforcement agencies are seeking ways to leverage new technologies and community partnerships to address public safety issues. While new technologies are sometimes viewed with suspicion, their introduction can also strengthen partnerships that promote safe communities. UAVs provide six possible crime control capabilities and have the potential to improve both community and officer safety, while decreasing the cost of improved operations.

De-escalation. The use of UAVs will increase the department's opportunities to implement de-escalation techniques during high-risk calls for service. UAVs will provide the ability to slow down incidents and gain critical intelligence prior to response. An increase in real-time intelligence will provide the opportunity to deploy police personnel in a way to decrease the need for use of force.

Improving Search and Rescue Operations. The ability of UAVs to maneuver in relatively small and difficult-to-access areas makes it a promising technology to assist with search and rescue operations. In 2016, FPD used the ACSO UAV to search for and document the location of body parts associated with a homicide investigation. Recently, ACSO used their UAV to search for the driver of a vehicle that crashed into the water in Niles Canyon, to search for a missing kayaker in the San Francisco Bay, and to search along the jagged cliffs near Highway 1 for a man who was thought to have fallen over the edge.

Accident and Crime Scene Investigations. An aerial survey by a UAV, particularly one equipped with GIS mapping software, can save hours in follow-up investigations. This technology can speed up accident and crime scene investigations by reducing the amount of time roadways are closed for scene investigation and diagramming, which may otherwise take several hours.

Support and Coordination with Fire/EMS. Firefighter safety and effectiveness can be improved by the use of an UAV to view roof damage during a fire or to locate "hot spots" that need to be controlled, to locate and assess victims in need of rescue, to monitor the integrity of burning buildings, to account for firefighting personnel on the fire ground, for natural disaster monitoring, fire-mapping, training, and other uses. Fremont Fire used their UAV to investigate a hazardous material spill and to assist with their response at several large structure fires.

Disaster Management. UAVs can survey damage in flooded or inaccessible areas quickly, saving first responders vital time and protecting their safety. Relief workers used UAVs to assess remote villages in the Philippines after a series of typhoons had hit the country and were also used to determine the stability of buildings after a devastating earthquake in Haiti. UAVs can also be used to deliver water, radios, and other equipment to first responders or others who may find themselves in locations that are difficult or impossible to access. Hayward sits on the Hayward fault line; as such, it is not if, but when, a large earthquake will occur. In the aftermath of an earthquake, an UAV can be used to identify infrastructure damage and identify those in dire need of medical care.

Protecting Officer Safety. Some departments use UAVs to get a better look at suspicious packages or locate hidden (and possibly dangerous) suspects while reducing risk to officers. For high-risk arrest and search warrants, UAVs are being used to provide overhead views of target properties, improving officer safety by observing fleeing or hiding suspects, tracking their directions, and helping determine whether they may be armed. In February of 2018, UCPD used an UAV to visually clear a large business where an in-progress burglary was reportedly occurring prior to sending officers inside. The UAV revealed the business was being used to grow large quantities of marijuana. The use of the UAV allowed officers to gather intelligence and adjust tactics before conducting a high-risk search. In July of 2018, UCPD, utilized their UAV during a foot pursuit. The suspect was surrounded in his home. While officers were still arriving, the UAV was deployed, and real-time surveillance footage captured the suspect throwing a gun and package into a neighboring yard. The UAV live feed helped officers locate both items.

As the use of this technology in police departments continues to increase across the country, mostly due to improvements in technology and reductions in associated cost, identification of more public safety uses for UAVs will likely occur.

FISCAL IMPACT

This proposal would require the purchase of equipment and special training for personnel.

The total initial cost of the required equipment (4 UAV devices, cameras, and other equipment) with tax included, is estimated to be \$14,000.

The total initial cost for training and certification of eight pilots is estimated to be \$4,700 (based on overtime, price would go down on any adjusted time).

The total initial cost to begin this program is estimated to be \$18,700.

According to local agencies, they expect to replace their UAV units every two to three years to keep up with developing and improving technology. This request does not require an increased appropriation. The City currently has the funds for this acquisition and training within the Police Department's General Fund budget.

PUBLIC CONTACT

While the benefits of UAV use by law enforcement are numerous, challenges also exist. The HPD understands the need for transparency regarding the expansion of the UAV program. To that end, staff will develop a public information campaign to introduce the technology to our community, explain the benefits of the program, and address any concerns in a collaborative manner. The policies for use and deployment can also be reviewed by the newly formed Police Community Advisory Panel, once formal meetings begin later this year. As part of this campaign, department personnel will meet with residents, face to face, to answer their questions and listen to their concerns and suggestions. Two public community meetings will be held to discuss concerns, policies, and to answer questions.

STRATEGIC INITIATIVES

This agenda item is not directly related to the City Council's Strategic Initiatives.

SUSTAINABILITY FEATURES

The implementation of an UAV program at the police department will significantly improve life saving and public safety capabilities. UAVs will provide increased efficiency during search and rescue operations, increase ability to increase de-escalation techniques, and provide real-time intelligence to officers during critical incidents.

NEXT STEPS

Upon Committee recommendation, staff will move forward with adding this item to the earliest Council consent calendar agenda to ask Council to approve the implementation of the UAV program at the police department.

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