Testimony of Roxana Kennedy

Chief of Police, Chula Vista Police Department

U.S. House of Representatives Committee on Transportation and Infrastructure

FAA Reauthorization: Harnessing the Innovation of Flight to Deliver for the American People

Washington, DC March 30, 2023

INTRODUCTION

Good morning, Chairman Graves, Ranking Member Cohen, and committee members. Thank you for the opportunity to talk with you today about FAA reauthorization and harnessing the innovation of Flight to Deliver for the American People. I cannot think of a better time to highlight the innovation of drone technology and how law enforcement's use benefits the safety and security of the American public.

I am the Chief of Police of the Chula Vista Police Department located in California. The City of Chula Vista is a beautiful city located in the southern portion of coastal San Diego County. It is the second largest city in the county, and boasts more than 52 square miles of coastal landscape, canyons, rolling hills, mountains, quality parks, and miles of trails. Our southern edge of the city is only seven miles from the US and Mexico border. Chula Vista has an approximate population of over 275,000 and growing with the development of our bayfront, which includes the development of a 535-acre hotel and resort property, convention center, parks, and residential housing.

You may be wondering why a Chief of Police from a mid-size agency in California is talking with you today. Our city has been one of the fastest-growing cities in our nation. As a result, I have had to adjust public safety strategies to meet rapid changes in the needs of our community. We have embraced the use of technology to ensure my department keeps up with the changes in population demographics, traffic density, the location and scale of public safety calls for service, and other factors, all of which result in increased demands from our community at a time when our department is facing hiring challenges that most if not all police departments are experiencing today.

I have been in law enforcement with the Chula Vista Police Department for over 30 years. I have seen innovation and technology go from nonexistent and minimal, to crucial and essential tools for the safety and effectiveness of our officers. When I began my career, technology was limited. We hand wrote our police reports, on paper report forms in pencil in case we made a mistake; there were no mobile data computers, and we would receive limited call information from a dispatcher over the radio. It was up to my partners and I to react and cope with whatever scene that we were thrust into. Sometimes that worked out well; other times, it was challenging to say the least. In police work, we don't have a crystal ball and usually can’t see whatever we may be

about to face. Without the ability to adequately prepare for what our officers will encounter, our profession leaves so much to chance, which can sometimes result in unpredictable consequences. Let me explain in detail about the Drone as First Responder program, and how it helps give officers real-time information before they arrive at a crime scene so that they can be better prepared to keep themselves and our community safe.

OVERVIEW

In 2018, the Chula Vista Police Department (California) pioneered a new concept in rapid response to police emergencies: Using uncrewed aerial systems (commonly known as drones) to pro-actively respond to emergency calls. The concept was so revolutionary that in May of 2018, it was chosen as the only municipal program in the nation a part of the FAAs Integration Pilot Program (IPP).

The Drone as First Responder concept is different than traditional drone programs in that it is proactive rather than reactive. Instead of launching a drone after an officer is already on scene, Chula Vista's DFR program stations drones at permanent locations throughout the city and respond proactively to emergencies as soon as they happen.

The intent of the program is to get a drone on scene before responding officers arrive. Certified teleoperators can evaluate the situation remotely and relay information to officers and field supervisors. The drone can also feed live-streaming video of the incident to commanders and first responders. This helps personnel determine the best tools, tactics, and resources to safely mitigate a problem-often before officers arrive on scene.

HISTORY OF THE DFR PROGRAM

In December 2015, the Chula Vista Police Department formed a UAS committee and began studying the use of technology in our public safety operations. The Uncrewed Aerial Systems (UAS) committee met dozens of times to explore best practices, policies, and procedures regarding using UAS technology within law enforcement. In 2017, we started tactical operations and deployed drones in the field.

Prior to implementing the UAS Program, Chula Vista police Department discussed its plan for UAS operations in the media, in public forums, and posted information about the project on the Chula Vista Police Department website. This outreach included a mechanism for the public to contact or email the UAS Team to comment on Chula Vista Police Department's UAS policy, to express concerns, or provide feedback. It is important to note that, out of respect for civil liberties and personal privacy, Chula Vista Police Department's UAS policy specifically prohibits the use of UAS systems for general surveillance. After exhaustive planning and research, Chula Vista Police department activated its UAS Program in the summer of 2017 to support tactical operations by our first responders.

Beginning on October 22, 2018, with strong support from the community, we began deploying drones from the rooftop of the police department headquarters to 911 calls and other reports of emergency incidents, such as crimes in progress, fires, traffic accidents, and reports of dangerous subjects. This unique Concept of Operations (CONOPS) for drones developed out of a partnership between Chula Vista Police Department and third-party entities. Chula Vista Police Department was a part of the San Diego IPP Team, selected as one of only 10 teams among hundreds of applicants as part of the FAA's Integration Pilot Project (IPP). The IPP was a federal initiative designed to help integrate drones into the National Air Space (NAS).

Chula Vista Police Department's CONOPS is called Drone as First Responder (DFR), and it is a transformational method of policing that has demonstrated the ability to increase officer and community safety and reduce overall police response times. DFR provides the ability to see what is going on at an incident before emergency personnel arrive on scene. In addition to the overhead perspective that traditional air support has always provided, DFR allows a trained incident commander to "virtually" arrive on scene first, sometimes minutes before officers are in harm's way.

The drone has a powerful on-board camera that streams HD video back to the department's real-time operations center where the teleoperator, who is a trained critical incident manager, not only controls the drone remotely, but communicates with the units in the field to give them information and tactical intelligence about what they are responding to. The system also streams the video feed to the cell phones of the first responders, supervisors, and command staff, so they can see exactly what the drone is seeing.

The DFR Program continued to expand its capabilities with the ultimate goal of providing the ability to respond to any location in the city within minutes. In May 2019, the FAA authorized Chula Vista Police Department to fly Beyond Visual Line of Sight (BVLOS waiver). This allowed the drones to fly up to 3 miles in any direction from the launch site (within city limits). Moving from a 1-mile flight radius to 3 miles increased the area of service exponentially.

In August 2019, Chula Vista Police Department partnered with private entities in our city and expanded its operations from one launch site to two launch sites in the city. The addition of the second site allowed the police department to provide DFR coverage over the entire western portion of the city. This area is roughly 30% of the City's geographic area but, due to its density and commercial activity, is responsible for about 70% of the priority calls for service.

In March 2021, we again made history as the first in the United States to obtain Federal Aviation Administration (FAA) authorization to launch from anywhere in the city. In addition, Chula Vista Police Department formed business community partnerships with other third-party entities in strategic locations in the eastern parts of the City to add three more launch sites. With the addition of the three new launch sites, we now have five launch sites available to Chula Vista Police Department, which allows the DFR Program to provide city-wide coverage and can launch drones to much of the geographical area of Chula Vista (see below figure 1).

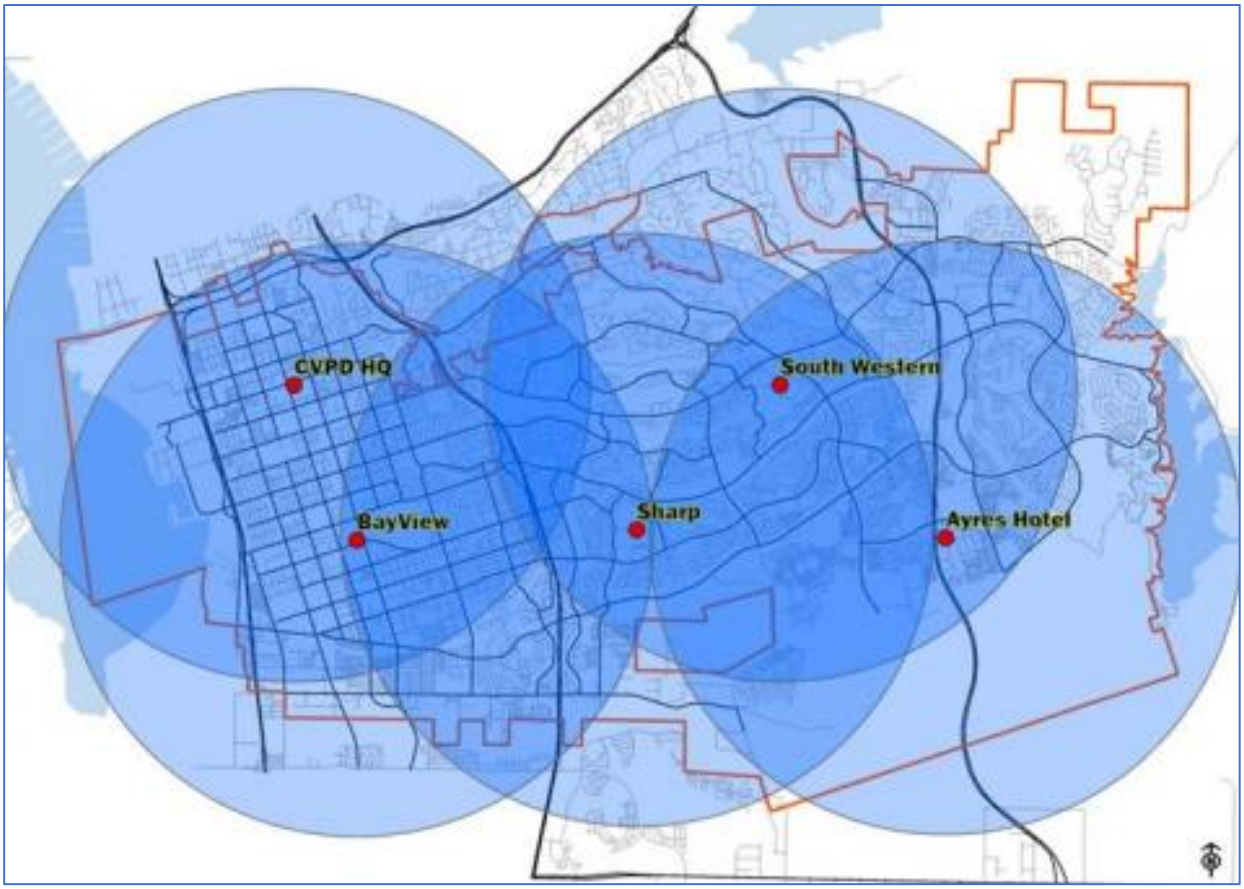

Figure 1. DFR launch locations

Additionally, Chula Vista Police Department was the first in the nation to obtain a two-to-one waiver, allowing us to launch two drones from each location. Flight time is limited for each drone but having the ability to launch two drones from each location gives us uninterrupted coverage when the community needs us most.

DFR PROGRAM STAFFING

The Chula Vista Police Department's DFR program includes two dedicated full-time police officers who are teleoperators for the drones. The teleoperators work from a dedicated office space within the police headquarters building, located near the watch commander's office and the police department's Real Time Operations Center. Additionally, when our DFR program started the FAA regulations required additional personnel to always maintain direct visual observation of the UAS while in flight.

At that time, the FAA prohibited using technology or virtual presence to meet this requirement. As a result, the Police Department must also maintain a physical presence of at least one Pilot-in-Command (PIC) at each launch site to directly view and monitor the airspace around the drone, who can take immediate control of the drone if necessary to avoid an accident. To meet this requirement, the Police Department utilizes a private third-party company to provide staffing to fulfill this FAA requirement for Pilots-in-Command.

CURRENT STATUS OF THE DFR PROGRAM

Since the program's inception, DFR has responded to more than 14,000 calls for service. In a statistically significant number of situations (over 25% of the time, or 3,509 deployments), DFR avoided the need to send ground units to the scene. Most of these calls for service (without DFR support) would have otherwise required a two-officer response. In addition, the DFR program allows the Police Department to have a drone resource on the scene of an emergency much quicker than ground units.

As seen in Figure 2, on average, since the start of our DFR program, a drone arrives on the scene of a call in just under 2 minutes. The drone's rapid arrival allows the teleoperator to relay information to responding officers and helps document crimes-in-progress to enhance subsequent criminal investigations and prosecution.

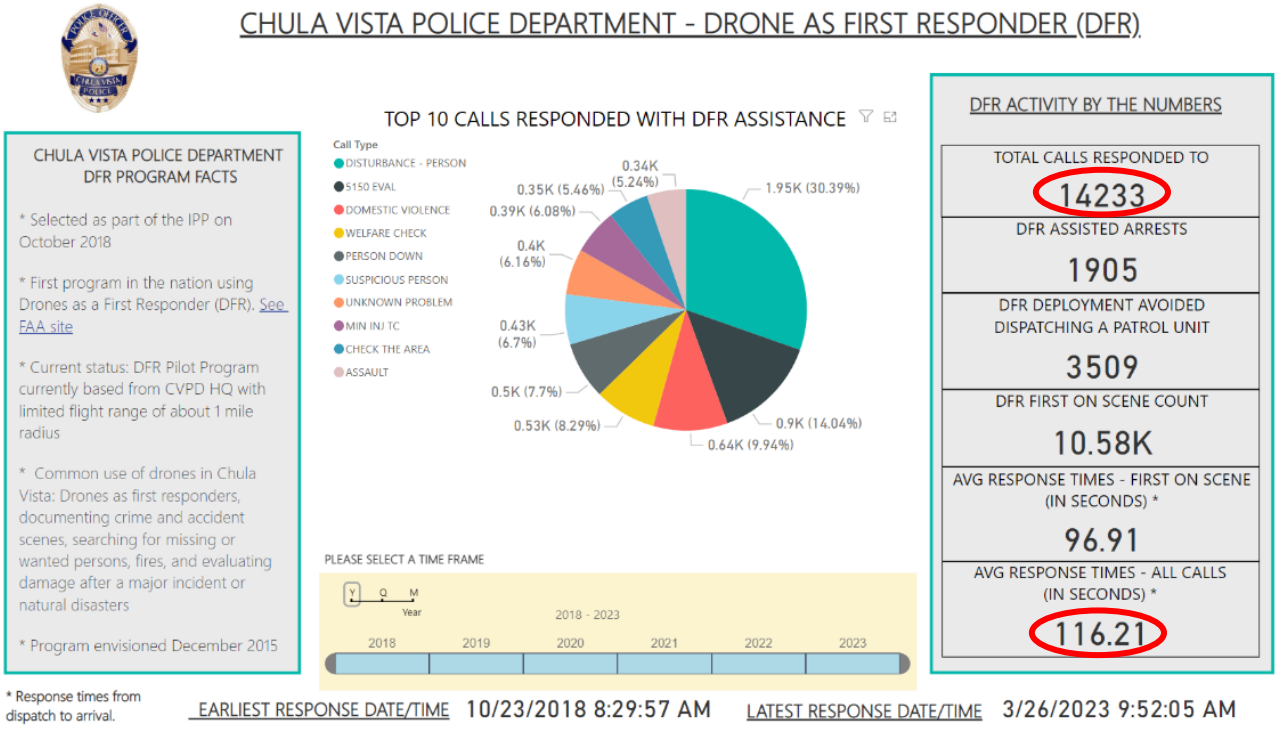

Figure 2. Drone as First Responder Dashboard (October 2018 to March 26, 2023)

TRANSPARENCY

Transparency and building trust with our community is so important to Chula Vista Police Department that we created a dashboard for our community. Often the community mistakes any drone as a law enforcement drone. Beginning in April 2021, Chula Vista Police Department along with third party vendors partnered to provide information on every flight by a Chula Vista Police Department drone.

Chula Vista Police Department uses drone software to track all drone flights launched by the department to achieve public transparency. The drone flight dashboard displays the date, time, incident or case number, and flight path. Chula Vista Police Department 's policies prohibit drone operators from intentionally recording or transmitting images of any location where a person would have a reasonable expectation of privacy, except where authorized by a warrant issued by a judge or in emergencies. See figure 3 below.

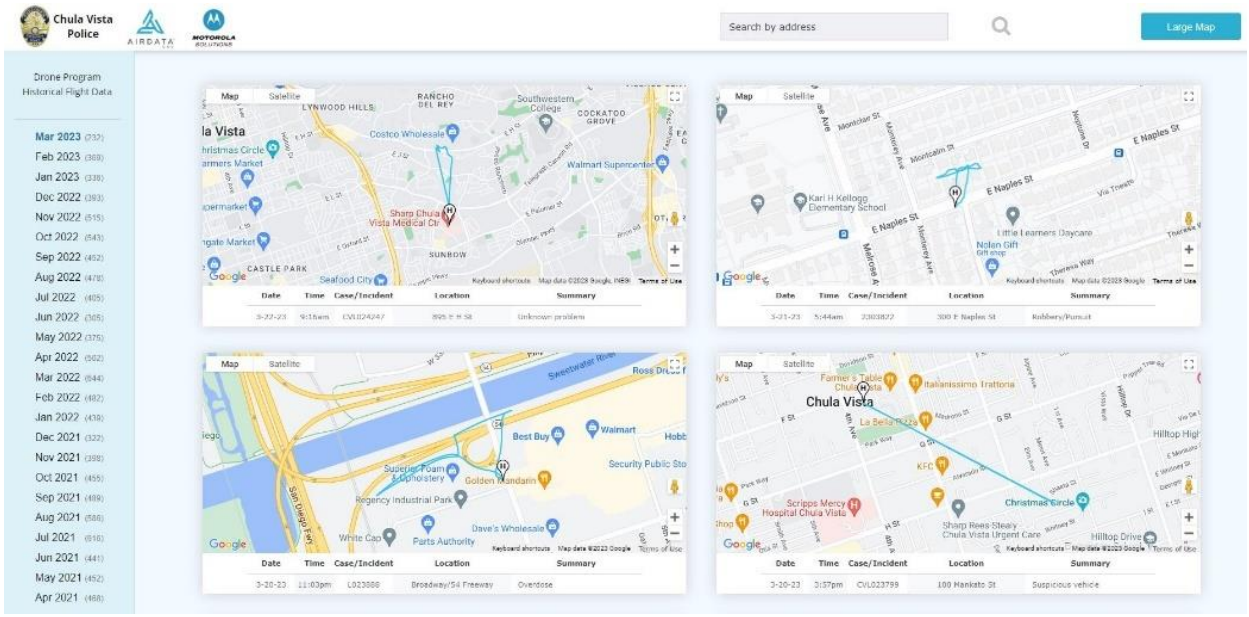

Figure 3. Drone as First Responder Flight Data

PRIVACY

Our community's privacy is of the utmost importance, and the Chula Vista Police Department is committed to maintaining and protecting the privacy rights of our community. One way we ensure our community's privacy is when clearing a call, the camera is automatically pointed to the horizon when returning to the launch location. The Chula Vista Police Department's use of drones is intended to enhance its response to calls for service. As such, drones are only used during an active response to an emergency or other call for police assistance, and the videos captured constitute investigatory records exempt from disclosure under California's open record laws.

In addition, any video that may not fall under the investigatory category may be shielded from disclosure under various other California state laws, such as the Welfare and Institutions Code and the Vehicle Code. The Chula Vista Police Department prohibits drone operators from intentionally recording or transmitting images of any location where a person would have a responsible expectation of privacy, such as private backyards or inside private buildings, except where authorized by a warrant issued by a judge or in emergencies.

DATA COLLECTION AND STORAGE

Video and photos collected by DFR are stored to conduct police investigations and subsequent prosecutions. Accordingly, videos and photos are generally accessible to police investigators for official use only. Like all police records, video and photos may also be subject to additional release under the same rules and restrictions as Body Worn Camera (BWC) Video and other items of evidence. Generally, UAS photos and videos are considered part of the investigative record. Therefore, they are unavailable under the California Public Records Act (CPRA) or Freedom of Information Act (FOIA).

I am aware of concerns with foreign drone technology and the potential for access to confidential law enforcement information. Our drone data does not utilize the onboard software from the drone manufacturer. From the onset of our program, we have used an encrypted, US-based software program to bypass the drone manufacturer's systems. Our data is encrypted and stored on US-based servers that meet federal requirements for confidential law enforcement databases.

Additionally, the Chula Vista Police Department owns ALL its data. Chula Vista Police Department does not share or sell any of its data with any 3rd party companies. Third party companies cannot access our data from the Chula Vista Police Department.

The Chula Vista Police Department's use of foreign drone technology is driven solely due to capabilities and equipment of the foreign drone system. This includes flight time and distance and most importantly the optical and digital zoom with the camera. I am hopeful that American made drone companies will be able to manufacture a credible option to their foreign competitors. I feel law enforcement agencies are struggling to keep up with rising crimes rates.

It is my understanding that American made drones that are capable of all the necessary requirements for a DFR program are still many years away of being a proven replacement. Being forced to use a less suitable drone will cripple, if not halt, a successful drone program. Cost factors are also a significant concern for law enforcement agencies.

SUCCESS STORIES

Person with a gun (Figure 4)

Let me give you a few examples of DFR success stories. There was a call for service to a local taco shop in our city. Multiple calls came in from frightened patrons reporting a man sitting at a table waving a gun and acting strangely. His behavior was concerning, and based on the details, we were unsure whether the subject was under the influence or experiencing a mental health crisis.

Our teleoperator launched a drone, arrived on the scene within a minute, and provided invaluable information to responding officers.

As the teleoperator operator watched from above, he noticed the subject moved the gun toward his mouth at one point. The concern was this person might be preparing to commit suicide. Instead, the person placed a cigarette in his mouth while talking and then lit the cigarette with what appeared to be a gun. You could see him now puffing on the cigarette and blowing smoke. In reality, it was a cigarette lighter, not a gun. This information was provided to incoming officers, which helped create a clearer picture in their minds and changed the response of the arriving officers.

A traditional police response to this call could have ended tragically. However, the ability to view the scene before officers arrive saves lives. This is just one of the hundreds of examples of technology and innovation keeping officers and our community safer. Drone as First Responder is the best de-escalation tool, I have seen in my law enforcement career.

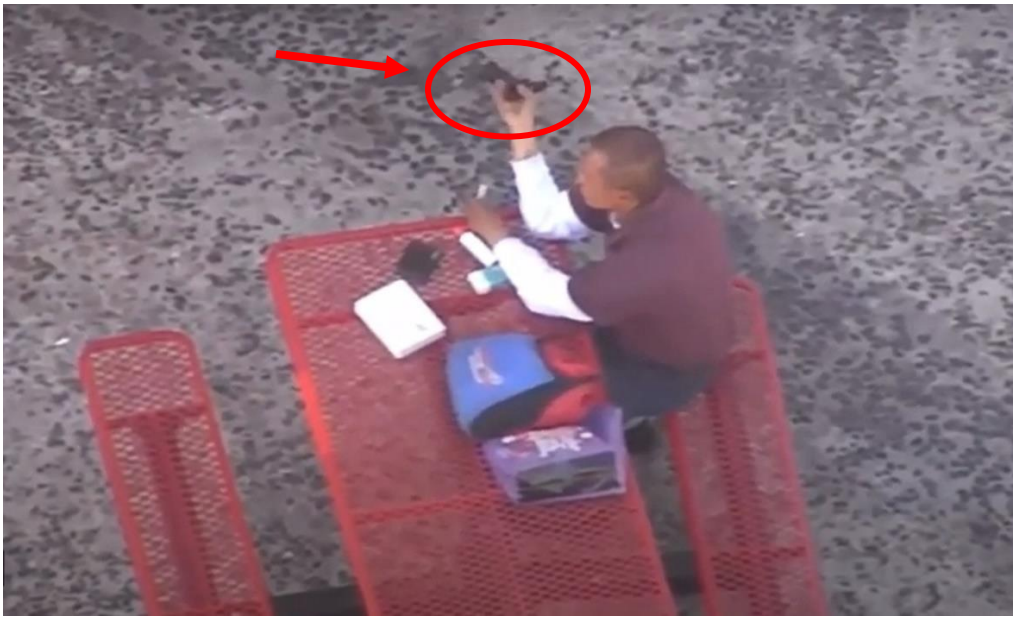

Figure 4. Photo depicts a subject with what appears to be a gun but is a cigarette lighter.

Domestic Violence Call (Figure 5)

Another example is when dispatch received a call about a domestic violence incident between a male and a female. Unfortunately, no officers were available to respond at the time, but our teleoperator heard the call and launched the nearest drone. The caller reported that one half of the dispute was on a motorcycle, and the other half was in a car. The caller continued stating the female in the car was trying to run into the male on the motorcycle.

Once overhead, the teleoperator saw a white vehicle driving erratically in reverse, chasing a motorcyclist. The motorcyclist was forced to ride on the sidewalk to avoid being run over by the car. The teleoperator immediately recognized the severity of the call and asked Dispatch to clear officers from other calls to respond to this evolving emergency.

During the call, the white vehicle is seen trying to ram the motorcyclist multiple times, even hitting the motorcyclist while he is stopped. The video is dramatic, and as it escalated, the motorcyclist was captured on video driving down an alley; trying to get away from the pursuing car.

The teleoperator was able to monitor the incident and direct officers to the scene. Once officers arrived and through their initial investigation, the vehicle driver was arrested for domestic violence. The motorcyclist was also arrested; the motorcycle he was driving was reported stolen.

Figure 5. Photo depicts a driver trying to run motorcyclists over.

Person with a gun (Figure 6)

An additional example is our dispatch center received a call of a person with a gun at our marina area. This area in our city is very popular and at times can be filled with hundreds of pedestrians and vehicles. Dispatch began receiving multiple calls of a person with a gun at the marina. The only other information received was that the person was in a red vehicle.

Our teleoperator heard the call and launched the drone. Once the teleoperator arrived on scene, there were multiple cars at the marina but was lucky there was only one red car. As the teleoperator zoomed in with the camera it showed a female holding a weapon and pointing it towards the water. The female could be seen manipulating the weapon. The teleoperator directed ground units to the female and her companions. They learned the weapon was just a BB gun.

Without the technology of DFR, this situation could have ended tragically.

Figure 6. Photo depicts person handling what appears to be a firearm.

Missing Juvenile at Risk (No photo)

My last example is regarding a missing at-risk juvenile. One summer afternoon, dispatch received a call from a mother frantic, reporting her son was missing. The mother explained that her elementary school-aged child had run away. She continued stating that her son became upset, got out of the car, and ran in the opposite direction. The mother quickly lost sight of her son and immediately called the police, panicked, and worried about her son's whereabouts.

Our teleoperator launched the closest drone to check the area for the at-risk juvenile. Within minutes, our drone operator located a young child running in and out of traffic, who seemed lost or disoriented. The child matched the physical description given by his mother, which was relayed to officers in the area also looking for the child.

The teleoperator directed grounds units to the child's location. The officers were able to reunite the child with his mother. The child was found several blocks from where he initially ran from his mother. This call could have ended very differently without the use of our Drone as First Responder program.

RECOMMENDATIONS

Our staff has had to learn FAA regulations, navigate the COA process, work through technology issues, and fight tooth and nail at times to keep our program going with no funding. However, the FAA's support and guidance have been integral to our success. And while our relationship with the FAA Team has been amazing, there are some things they can do better to assist law enforcement agencies in implementing a DFR program such as ours.

1. ***FAA'S COA Application Processing System (CAPS) Webpage***

    - The website is cumbersome and difficult to navigate. It is not user friendly.

    - Additionally, the FAA requires a single user be registered to enter the monthly required COA flight data in the CAPS system. Only one user is allowed to enter information for any government agency changes. The website should allow multiple users per organization this is to prevent any single point of failure and allow an alternate or backup user to complete requirements.

2. ***Law Enforcement Assistance Program (LEAP) Agent Assistance***

    - LEAP Special Agents should be more available to agencies looking to apply for or renew COAs and waivers. There are over 18,000 law enforcement agencies in the

United States and very few LEAP agents which makes it challenging to locate and contact the LEAP agent for assistance.

3. New Technology Progression

- FAA should continue to support law enforcements use of drone technology. Recently the FAA authorized a completely BVLOS authorization for another law enforcement agency's DFR operation. This is huge step and a win for law enforcement agencies using drones.

  However, The FAA's inconsistencies when it comes to COA and Waiver approvals create confusion. We recommend the recent approval of what some call the "digital visual observer", become a standard option for COA's. Removing the Remote Pilot in Command requirement will reduce staffing costs allowing more law enforcement agencies the ability to have a DFR program such as ours.

CONCLUSION

In closing, the last few years have been challenging for law enforcement. Recruitment, hiring and retention are now at an all-time low. Law enforcement needs technology to help us meet the needs of the American people. Although, drones are not a replacement for first responders they are an important enhancement for modern policing.

For the last five years, Chula Vista Police Department has blazed a path that I never imagined was possible when I was appointed chief six and a half years ago.

Our success is a pleasant surprise after a lot of hard work, sacrifice, and trial and error.

We know the work we are doing is laying the foundation for the FAA to help other agencies and drone programs throughout the country and we are doing our best to help others realize the benefits of drones for good.

This endeavor has forged a pathway for other public safety agencies to follow our lead to establish their own innovative programs appropriate to their communities and airspace.

The Drone as First Responder program is de-escalation at its best. By using drones, we provide officers, dispatchers, and supervisors with invaluable information. This allows officers to view potential hazards and develop sound strategies and tactics before rushing into potentially dangerous situations. The use of drones by law enforcement is one of the best tools for protecting our communities and harnessing the innovation of flight to deliver for the American people.