

CHINO POLICE DEPARTMENT

UAS OPERATIONS

Chief Karen Comstock

MOST FREQUENTLY ASKED QUESTIONS

Q: What is a “Drone”?

A: A drone is a term used by the media, to describe a remotely piloted aircraft also known as an unmanned aerial system or “UAS.” The word drone comes from the 1970’s when the military used to make radio controlled airplanes for target and practice shooting. In an attempt to better describe what we do, we prefer a more descriptive term—***Unmanned Aircraft System or “UAS.”***

Q: How do they work?

A: There are many types of UASs on the market today. Some are like a fixed winged airplane and others are quadcopters, named after the four rotating helicopter blades. The UASs of today are so advanced they can completely fly autonomously once a flight plan is set. They can self correct in the wind and can even return to where they lifted off from if there is trouble. They most commonly operate on battery power.

Q: How many UAVs do you have?

A: This is a new program for the Chino Police Department. We are going to purchase two systems, so there can always be a second unit in case the primary unit fails. We plan to purchase a UAS that is available to all that will meet the requirements of the Chino Police Department, such as the DJI Inspire 2.

Q: What kinds of UAS are available to Law Enforcement?

A: There are many types, but in reality, the type used by the military are not practical for law enforcement purposes and are also cost prohibitive. Our agency is using UAS in place of manned aviation when appropriate, because of cost. However, for certain missions manned aircraft remains the most practical option.

Q: Do other Law Enforcement Agencies have or use UAS too?

A: Not many law enforcement agencies are currently using UAS. Of the 19,000 agencies in the United States, we estimate less than ten agencies are actively pursuing and/or utilizing UAS.

Q: How do we use UAS?

A: We most often use it for crime scene photography, and search and rescue missions. With aerial crime scene photography we can build three dimensional models useful for investigators,

prosecutors and juries. In search and rescue missions, aerial views can be enhanced with the use of infrared technology, which provides a better view for anything with a heat signature. While less frequent, we could use the system to attempt to locate dangerous fugitives in wooded areas and assist arson investigators in identifying heat sources on fires.

Q: How often will we use UAS?

A: It totally depends on the needs of the department and the city on any given day. Some days there may not be a use while other days we may need both UASs up at the same time.

Q: How much do they cost?

A: UASs range in price from \$50 to \$100,000 depending on the technology required for your purpose. The Chino Police Department has spent more than one year researching different companies and products to determine the best device for our purpose, which is to safely and effectively service the citizens of Chino. We have a duty to remain fiscally responsible while selecting the safest machine while making sure it is stable, has a quality camera (which is the primary purpose of the UAS) and the capability of broadcasting. We will outfit the department with two UASs with an infrared camera and zoom camera, spare batteries and spare rotors for less than \$50,000. Operating costs are expected to be low after the initial purchase. In contrast, manned aviation can cost hundreds to thousands of dollars per hour. ***We feel this one fact is the largest driver behind utilizing UAS.***

Q: What restrictions are in place to protect citizen's civil liberties and privacy concerns?

A: Historically, law enforcement has had the ability to have an aerial view with manned aircraft for many decades. As a result, case law has been established that guides our use and there is no effort here to use UAS to circumvent well established 4th Amendment protections. The technology in these civilian systems is appropriately limited. For example, our equipment does not allow us to see through walls, listen to conversations, monitor cell phone, etc. Our unmanned systems are mission and incident driven only. Images collected with the use of this technology are handled and retained within industry standards, consistent with images collected with any camera by law enforcement, and are subject to professional standards, codes of conduct, case law and ***with the public's trust in mind.***

Q: Can you legally fly over my backyard and do you need a warrant?

A: Yes, we can legally fly our UAS over your backyard with the same guidelines used by manned aviation. However, if the subject of a search is in your backyard, in the course of an investigation, we have taken the position as an agency to seek a warrant or consent from the property owner, until case law specific to UAS, can be established.

Q: Do your systems carry weapons?

A: No. In our experience, and opinion, there is no use for weapons and UAS in civilian law enforcement.

Q: Can your UAVs be hacked with the controls taken over?

A: No. The data that travels through the air is encrypted. In addition, safe guards are in place that if the technology fails, the aircraft slowly descends to the ground or returns to its launch site autonomously.

Q: Can the Chino Police Department be hired by local residents to fly our system(s) for commercial use?

A: No. This would violate our flight approvals from the Federal Aviation Administration.

Q: What is driving the use of UAS in law enforcement?

A: Thus far, UAS has demonstrated to be a practical, cost effective alternative to manned aviation. We have identified two core missions as crime scene photography, and search and rescue. However, the primary driving factor is the fact that these systems cost us just \$25.00 per hour to operate as compared to \$400.00 to \$1,200.00 an hour for manned aviation. It will not replace a manned helicopter, but it can be used in some situations where a manned helicopter would typically be requested.

Q: Do you have Policy and Procedures or other guidance documents you operate under?

A: Yes, as is recommended with any tool used by law enforcement, use of a UAV is within the guidelines of a robust policy.

Q: What training do your pilots have?

A: Our operators will receive training from a licensed UAS pilot instructor school or other flight school. However, the Federal Aviation Administration has not released any guidelines for operator certification for UAS, thus our current curriculum has been developed in-house. Once licensed, our operators will also have a training schedule requiring them to maintain flight time and proficiency on our systems.

Q: Do you have flight approval to operate UAS or is it required?

A: Yes, flight approval is required and the Chino Police Department will obtain flight approval by the Federal Aviation Administration to fly anywhere inside the City of Chino. The official document is referred to as a Certificate of Authorization/Waiver. It is the approval process by which the Federal Aviation Administration allows for public agencies (divisions of government) to operate UAS in the national airspace given there are no current regulations in place for UAS operations. For more information as to the Certificate of Authorization process please refer to the Federal Aviation Administration.

Q: What are the rules governing the use of unmanned systems in Chino?

A: To fly legally any public agency in the United States must obtain a Certificate of Authorization/Waiver (COA). This certificate comes after a significantly invasive process whereby the FAA evaluates everything from the training and medical condition of your UAS pilot to the specific system and airspace you can fly in. Along with providing numerous safety procedures addressing UAS operations, any agency is required to do an assessment of the airworthiness of the specific system they intend to fly.

Q: Can citizens buy their own unmanned aerial system and fly them?

A: Yes. In fact, as long as the use is for recreation the requirements are far less strict than for civilian law enforcement. The use of UAS for monetary gain is prohibited given the lack of any specific regulation from the FAA. However, the use of UAS for monetary gain is widespread. For example, the real estate industry, aerial video production, survey and agriculture are commercial uses currently utilizing UAS. There are an estimated 50,000 UAS users in the United States.

Q: What will be the economic impacts of using UAS in the United States?

A: It is projected that in the first three years of integration into the National Airspace more than 70,000 jobs will be created in the United States with an economic impact of more than \$13.6 billion. This benefit will grow through 2025 when more than 100,000 jobs are created and economic impact of \$82 billion.

Q: What steps are the Chino Police Department taking to limit personal injury or liability problems?

A: The Chino Police Department is keeping the safety of all people first and foremost. We specifically researched the different UASs on the market maintaining safety as a priority. We have chosen a device that will return to its take-off point if the batteries get too low, will stop and hover if the connection to the controller has been lost, and has sensors on all sides of the UAS that will automatically stop the UAS if it senses a pending collision with something. These, and other features will hopefully make a collision a very rare occurrence and will therefore make UAS related injuries an extreme rarity.