
Unmanned Aerial System (UAS) Operations

605.1 PURPOSE AND SCOPE

This policy establishes the authorized use and operational guidelines for CSUPD Unmanned Aircraft Systems (UAS). The UAS program is a function of the Operations Division. This policy is designed to minimize risk to people, property, and aircraft during the operation of the UAS while continuing to safeguard the rights of privacy of all persons.

605.2 POLICY

Unmanned aerial systems may be utilized to enhance the department's mission of providing a safe and secure community when other means and resources are not available or are less effective. UAS systems may be also used for aerial photography and digital imaging. Any use of a UAS will be in strict accordance with constitutional and privacy rights and Federal Aviation Administration (FAA) regulations.

605.3 DEFINITIONS

Program Coordinator (PC): The individual responsible for administrative functions related to the UAS program, including maintaining a current list of all certified crew members to include Pilots and Observers. The PC is responsible for maintaining the training records for crew members.

The PC is also responsible for the condition, maintenance, and flight records of the UAS and its associated equipment.

Pilot: The individual exercising control over the UAS during flight.

Pilot in Charge (PIC): The individual responsible for the overall flight operations for a specific mission.

Visual Observer: The individuals trained to maintain the line-of-sight and 360-degree hazard awareness around the UAS at all times and assist the PIC in carrying out all duties required for the safe operation of the UAS.

Defined Incident Perimeter: A defined perimeter to be determined based on the scope of the operation and a defined operational ceiling at or below 400 feet Above the Ground (AGL). Fight ceiling may also be defined as 400 feet AGL above the highest point of an obstacle, manmade or otherwise, and within a 400-foot diameter of the same obstacle.

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Uncontrolled Airspace: All airspace classified as Class G airspace and further controlled by a NOTAM or Temporary Flight Restriction.

Certificate of Authorization (COA): COA is an authorization issued by the Federal Aviation Administration (FAA) to a public operator for a specific UAS. After a complete application is submitted, the FAA conducts a comprehensive operational and technical review. If necessary, provisions or limitations may be imposed as part of the approval to ensure the UAS can operate safely with other airspace users.

Unmanned Aircraft System / Vehicle (UAS/UAV): An aircraft without a human pilot on board. Its flight is controlled either autonomously by computers in the vehicle or under the remote control of a pilot on the ground or in another vehicle.

Night Flight: Flight of a UAS that occurs between the hours of one half hour after sunset and one half hour before sunrise. The time of sunset and sunrise are determined by the National Oceanic and Atmospheric Administration (NOAA).

Pre-Flight Briefing: A briefing led by the PIC prior to aircraft launch, which includes, but is not limited to:

- Review of the mission's goals and expected outcomes
- Review of current and forecasted weather conditions
- Review of current Notice to Airmen (NOTAMs) and Temporary Flight Restrictions (TFRs) that have been issued for the proposed flight area
- Identification of mission limitations and safety issues such as battery charge, GPS strength, and potential for radio interference
- Review of proposed flight area, including maximum ceiling and floor
- Review of communication procedures between PIC, Observer, and other personnel used to support the mission. Including verifying cell phone numbers used to communicate with Air Traffic Control in the event of a fly-away or other flight emergency
- Review of emergency/contingency procedures including aircraft system failure, flight termination, divert, and lost link procedures
- Review of required video or digital images

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- Execution of a pre-flight check utilizing the approved checklist

605.4 PRIVACY

The use of the UAS potentially involves privacy considerations. The UAS shall not intentionally be used for the purpose of gathering evidence or other information, or to intentionally view, record or transmit images or video within the curtilage of a residence, or at any other location or upon any property at which a person has a reasonable expectation of privacy unless a lawfully-obtained search warrant or court order has been approved or clear exigent circumstances related to officer safety are present at that location in such a capacity.

Department members will not post, transmit, or otherwise disseminate any information, documents, photos or videos, to which members have access as a result of employment, without written permission from the Operations Division Commander or designee.

605.5 PROGRAM COORDINATOR

The program coordinator will be responsible for the management of the UAS program. The program coordinator will ensure that policies and procedures conform to current laws, regulations and best practices and will have the following additional responsibilities:

- Coordinating with regional UAS team members and affiliates regarding any required FAA Certificate of Waiver or Authorization (COA) processes, including ensuring any required waivers are current and valid.
- Ensuring that all authorized operators and required observers have completed all required training in the operation, applicable laws, policies and procedures regarding use of the UAS.
- Developing uniform protocol for submission and evaluation of requests to deploy a UAS, including urgent requests made during ongoing or emerging incidents. Deployment of a UAS may require authorization of the appropriate Division Commander or the authorized designee, depending on the type of mission.
- Maintaining operational protocols governing the deployment and operation of a UAS including, but not limited to, safety oversight, use of visual observers, establishment of lost link procedures and secure communication with air traffic control facilities.
- Ensuring the documentation of all missions.
- Developing a UAS inspection, maintenance and record-keeping protocol to ensure continuing airworthiness of a UAS, up to and including its overhaul or life limits.
- Developing protocols to ensure that all data intended to be used as evidence are accessed, maintained, stored and retrieved in a manner that ensures its integrity as evidence, including strict adherence to chain of custody requirements.
- Facilitating law enforcement access to images and data captured by the UAS.
- Recommending program enhancements, particularly regarding safety and information security.

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- Ensuring that established protocols are followed by monitoring and providing periodic reports on the program to the Chief of Police.

605.6 TRAINING REQUIREMENTS

605.6.1 PILOT REQUIREMENTS

Initial Training: All personnel selected to be pilots that will be flying law-enforcement missions shall have participated and successfully completed an approved safe flight training class. The pilots will have a current working knowledge of the airspace intended for operations, Air Traffic Control communication requirements, specific UAS aerodynamic factors, and the ability to obtain and interpret weather information. All pilots shall be familiar and proficient with the role and functions of a visual observer.

Proficiency Training: In order to maintain proficiency, all pilots shall conduct at least one training flight to include one take-off and landing each month. Training flights shall be documented by the individual pilots, and reported to the Program Coordinator on a frequent basis.

Pilot proficiency training is not limited to actual pilot or observer skills, but also includes knowledge of all pertinent UAS related matters and understanding of current 107 guidelines. Members who do not have documented training or flight time for the preceding 90 days shall demonstrate proficiency before performing pilot or visual observer duties during a mission. This shall include a minimum of one hour of ground instruction and flight time, including making three take-offs and landings to demonstrate proficiency.

Annual Training: Each pilot must attend the regional in-service training at least two times per year.

Pilot Mission Eligibility: All pilots must be able to show proficiency in specific core competencies in all UAS controls and operating systems in accordance with FAA regulations before being approved to fly missions. All pilots must have a minimum of three qualifying UAS flights to include take-offs and landings in the preceding 90 days to be eligible to fly UAS missions.

Failure to maintain and demonstrate proficiency will result in removal from UAS operations.

605.6.2 VISUAL OBSERVER REQUIREMENTS

Initial Training: UAS Observers will have a current working knowledge of the airspace intended for operations, Air Traffic Control phraseology and communication requirements, specific UAS aerodynamic factors, and the ability to obtain and interpret weather information. The Observer will receive specific training on relevant Code of Federal Regulation regulations (14 CFR Parts 91

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and 107), such as the obligation to see and avoid other aircraft and the ability to identify position for purposes of relaying position reports to the PIC.

605.7 AIRCRAFT

605.7.1 REGISTRATION

An FAA UAS certificate or N-number will be obtained for each UAS operated.

605.7.2 MAINTENANCE

UAS maintenance is the responsibility of the PC in accordance to manufacturer recommendations. If maintenance outside of routine is performed, a test flight shall be conducted and documented. The PIC is required to notify the PC if any defects, damage, or maintenance issues with the UAV are discovered that would impact safe, stable flight to any degree.

605.7.3 STORAGE

Any department-owned UAS shall be stored at the Department or an approved offsite location, and shall be stored in accordance with manufacturer recommendations.

605.8 USE OF UAS

Only authorized operators who have completed the required training shall be permitted to operate the UAS.

Use of vision enhancement technology (e.g., thermal and other imaging equipment not generally available to the public) is permissible in viewing areas only where there is no protectable privacy interest or when in compliance with a search warrant or court order.

All training and mission flight operations will occur in uncontrolled airspace, unless the PIC has specific authorization from Air Traffic Control to be in the controlled airspace.

All training and mission flight operations will be conducted within FAA regulations 107, 48, and 91 unless authorized by a properly filed and approved FAA Certificate of Authorization or Airspace Security Waiver.

All public-safety mission flight operations shall require the use of at least one Observer at all times. Training, imaging, photography and other flight types do not require an Observer, but one is highly encouraged.

605.8.1 APPROVED USES / MISSIONS

All UAS mission requests shall be authorized by the shift supervisor or designee, and then forwarded to the appropriate Division Commander or his or her designee for approval.

Generally, the following are missions that will be considered for approval: large scale events, aiding in search and rescue operations, crime scene photography, accident reconstruction, hazmat scene deployment, major disaster scenes, storm damage, fire scenes, and tactical

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situations. Other missions may be approved by the appropriate Division Commander or designee if those missions are necessary to preserve the health, safety, and welfare of people or property within the CSU community.

Once a mission is approved, the Program Coordinator will assign a PIC and Visual Observer to the mission.

All missions will be flown in accordance with FAA regulations 14 CFR Parts 61, 91 and 107.

The PIC may terminate the mission, or decline the mission at any time if they believe it is unsafe, outside the capabilities of the aircraft, in violation of any State or Federal law, or violates the privacy of a citizen without due cause.

605.8.2 SEARCH AND RESCUE OPERATIONS

At the request of a bona-fide Search and Rescue (SAR) Agency, the Department's PICs and Visual Observers may participate in SAR Missions. This assistance must be approved by the appropriate Division Commander or their designee. During the participation of these missions the PIC and VO must operate with the parameters of this policy and any applicable FAA regulations and guidelines.

These missions will typically be in response to a request from Larimer County Search and Rescue, routed through the Larimer County Sheriff's Office (LCSO). Mutual aid agreements are currently in place with LCSO to facilitate a rapid response and assistance to LCSAR. If a request for a SAR mission originates outside of Larimer County, it must be approved by the Chief of Police prior to departure and flight operation.

605.8.3 VISUAL FLIGHT RULES

All flights with the UAS shall be conducted under VFR conditions and at an altitude below 400 feet Above the Ground (AGL). Flight ceiling may also be defined as 400 feet AGL above the highest point of an obstacle, manmade or otherwise, and within a 400-foot diameter of the same obstacle. VFR is established as a 3 SM visibility from the ground station, while the UAV must remain 500 feet vertically and 2,000 feet horizontally from any cloud mass.

605.8.4 EMERGENCY RESPONSE / EXIGENCY

If an imminent threat exists to the life and safety of an individual person or to the public at large, including without limitation, the threat of an act of terrorism, and requires the immediate deployment of a UAS in a manner which may otherwise be prohibited, the PIC shall document the factual basis for their belief that such an imminent threat existed.

605.9 PROHIBITED USE

The UAS video surveillance equipment shall not be used:

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- To conduct random surveillance activities.
- To target a person based solely on actual or perceived characteristics such as race, ethnicity, national origin, religion, sex, sexual orientation, gender identity or expression, economic status, age, cultural group, or disability.
- To harass, intimidate, or discriminate against any individual or group.
- To conduct personal business of any type.

The UAS shall not be weaponized.

605.10 DOCUMENTATION / RETENTION OF UAS DATA

All UAS mission flights shall be documented by completing a Department UAS flight report within five days of the flight. Any UAS law enforcement mission shall be documented by completing a police report or by supplemental narrative into an existing report. At a minimum, mission reports shall include the date, time, location, PIC's name, Visual Observer's name, flight time, and any other relevant details. If the flight is a public safety mission, the mission type and requesting agency shall be documented in the flight report.

Any recordings of a mission flights shall be retained for a minimum of three years. Any recordings of training flights shall be retained for a minimum of 60 days. This media shall be transferred to the Department's local storage pursuant to existing data storage / submittal procedures. A copy of all digitally recorded media of a mission flight shall be turned over to the requesting agency as soon as practical. Working copies may be retained by the Program Coordinator.

Operators will label and / or categorize mission recordings as soon as practical after the conclusion of flight, but no later than 48 hours after the recordings were obtained.