Hayward Police Department

Unmanned Aerial Systems (UAS) Operations Manual

August 1st, 2021

Table of Contents

I. Preface

The following procedures are intended to promote the safe, efficient, and lawful operation of the Hayward Police Department (HPD) Unmanned Aerial Systems (UAS). Safety, above all else, is the primary concern in every operation, regardless of the nature of the operation.

II. Philosophy and Mission Statement

It shall be the mission of the HPD and HPD personnel, who are trained in the use of UAS, to follow procedures that are intended to promote the safe, efficient, and lawful operation of the department's UAS, using this resource to protect the lives and property of community members and first responders. HPD personnel and UAS will used in compliance with applicable laws and regulations, including but not limited to the Constitution of the United States of America, the Constitution of the State of California, and the Federal Aviation Administration (FAA).

UAS can support first responders in hazardous incidents and incidents outlined the HPD's policy section 610.6, which governs the use of UAS. These incidents include the following: Public safety and life preservation missions, mass casualty events, lost or missing persons, search and rescue events, disaster response and recovery, suspected explosive devices, fire suppression or investigation, hazardous materials releases, post-incident crime scene preservation and documentation, pursuant to a search warrant, mass gatherings or special events where security concerns exist or criminal activity is occurring, when probable cause to believe a felony has been committed or a particular person has committed a felony, anti-UAS operations, training missions, Hayward Fire Department support missions, and mutual aid support missions.

The FAA Modernization and Reform Act of 2012 provided for the integration of civil UAS into national airspace by September 2015. Existing federal law required the Administrator of the FAA to develop and implement operational and certification requirements for the operation of public UAS in the national airspace system by December 31, 2015.

Both public and private operators of UAS have a responsibility to refrain from infringing on the rights or property of the residents of the State of California. Any data, information, photographs, or video or audio recordings of individuals should be minimized and retained in a manner consistent with current privacy standards and applicable HPD policies.

III. Protection of Rights and Privacy

The UAS Program Coordinator, HPD Managers, HPD Supervisors, operators, and observers will consider individual rights and the reasonable expectation of privacy as key components of any decision made to deploy UAS. Each UAS Operator and Observer shall ensure that UAS operations comply with local, state, and federal law. To accomplish this primary goal, HPD personnel shall:

A. When UAS are being flown, UAS Operators and Observers shall take steps to ensure the camera is focused on the areas necessary to the accomplish the mission and to minimize the unintentional collection of data about uninvolved persons or places.

B. All recordings and images shall be stored and maintained in strict compliance with applicable HPD and City policies.

C. UAS shall not be used to conduct the following (HPD Policy 610.8):

1. To conduct random surveillance activities.
2. 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.
3. To harass, intimidate, or discriminate against any individual or group.
4. To conduct personal business of any type.
5. UAS shall not be weaponized.
6. UAS shall not have facial recognition technology.
7. To conduct routine monitoring of a mass gathering, protest, or demonstration where security concerns do not exist or where criminal activity is not occurring.

D. The following are authorized missions for the HPD UAS (HPD Police 610.6):

1. Public safety and life preservation missions including, barricaded suspects, hostage situations, active shooters, apprehension of armed and dangerous fleeing suspects, and high-risk search warrants.
2. Mass casualty events.
3. Lost or missing persons.
4. Search and rescue events.
5. Disaster response and recovery.
6. Suspected explosive devices.
7. Fire suppression or investigation.
8. Hazardous materials releases.
9. Post-incident crime scene preservation and documentation.
10. Pursuant to a search warrant.
11. Mass gatherings or special events where security concerns exist or criminal activity is occurring.
12. When there is probable cause to believe UAS will record images of a place, thing, condition, or event, and that those images tend to show a felony has been committed, or tends to show that a particular person has committed a felony.
13. Anti-UAV operations when a person is operating a UAV in a manner which impedes emergency personnel who, in the course of their duties, are coping with an emergency (refer to Penal Code section 402(a)1).
14. Training missions.
15. In support of the Hayward Fire Department when the underlying mission meets the uses outlined in this policy.
16. Mutual Aid support when the underlying mission meets the uses outlined in this policy.

E. The HPD UAS Program will operate strictly within policy and the law, continuously balancing all operations with the need to accomplish the mission while maintaining public privacy and the freedom from intrusion.

IV. Definitions

1. **Certificate of Authorization (COA):** Given by the FAA granting permission to fly UAS within specific boundaries and perimeters.

2. **Program Coordinator:** An HPD Sergeant or Lieutenant who manages the UAS Program and ensures the program operates in accordance with local, state, and federal laws, and within HPD and City policies and guidelines.

3. **Observer:** A member of the HPD or Hayward Fire Department who is trained and authorized to maintain visual observation of UAS while in flight.

4. **Operator:** A member of the HPD or Hayward Fire Department who is trained, certified, and authorized to control a UAS while in flight.

5. **Unmanned Aerial Vehicle (UAV):** A small, unmanned aircraft weighing less than 55 lbs.

6. **Unmanned Aerial System (UAS):** An unmanned aircraft of any type that is capable of sustaining directed flight, whether preprogrammed or remote controlled (commonly referred to as a UAV), and all of the supporting or attached systems designed to gather information through imaging, recording, or any other means.

V. Administration

5.1 Operations Manual

A. The policies and procedures contained in this manual are issued by authority of the HPD. As such, it is an official document of the HPD.

B. This Operations Manual is not intended to be all-inclusive, but as a supplement to other HPD and City policies and guidelines.

C. This Operations Manual was written to address HPD's UAS operations. Equipment, personnel, and environment (internal and external) change over time. The management of change involves a systematic approach to monitoring organizational change and is a critical part of the risk management process. Given this, it is essential that this Operations Manual be continually updated as necessary and undergo continuous review.

Annually, policies, procedures, and laws regulating the HPD's UAS operations shall be reviewed as follows: The Special Operations Captain, UAS Program Coordinator, and Internal Affairs Lieutenant shall meet quarterly to review the use of UAS. This review will minimally include a UAS Program audit and flight documentation review, which will be reported to the Chief of Police and, in turn, reported to the City Council as they determine necessary.

D. A copy of this Operations Manual will be issued to personnel assigned to the

UAS Program and will be made accessible to the public on the HPD website.

5.2 Organization

A. UAS shall only be operated by personnel who have been trained and certified by the FAA in the operation of the systems. All HPD field personnel will be provided training in the policies, procedures, and guidelines governing UAS operations.

B. The UAS Program will be comprised of qualified and trained HPD personnel.

5.3 Personnel

A. The UAS Program Coordinator is responsible for the management, operation, and performance of the UAS Program. The UAS Program Coordinator shall be appointed by the Chief of Police or his or her designee.

B. The Patrol Watch Commander or Incident Commander is responsible for the daily supervision of UAS Program personnel.

C. UAS Program Coordinator responsibilities include:

1. Coordinating the FAA Certificate of Waiver or Authorization (COA) application process and ensuring that the COA is current.
2. Ensuring that all authorized operators and required observers have completed all required FAA and HPD approved training in the operation, applicable laws, policies, and procedures regarding the use of UAS.
3. Developing uniform protocol for submission and evaluation of requests to deploy UAS, including urgent requests made during ongoing or emerging incidents. Deployment of UAS shall require written authorization of the Chief of Police or the authorized designee, depending on the type of mission.
4. Developing protocol for conducting criminal investigations involving UAS, including documentation of time spent monitoring a subject.
5. Implementing a system for public notification of UAS deployment.
6. Developing an operational protocol governing the deployment and operation of UAS including, but not limited to, safety oversight, use of visual observers, establishment of lost link procedures, and secure communications with air traffic control facilities.
7. Developing a protocol for fully documenting all missions.
8. Developing UAS inspection, maintenance, and record-keeping protocols to ensure continuing airworthiness of UAS, up to and including its overhaul or life limits.
9. Developing protocols to ensure that all data intended to be used as evidence is accessed, maintained, stored, and retrieved in a manner that ensures its integrity as evidence, including strict adherence to chain of custody requirements. Electronic trails, including encryption, authenticity certificates and date and time stamping, shall be used as

appropriate to preserve individual rights and to ensure the authenticity and maintenance of a secure evidentiary chain of custody.

10. Developing protocols that ensure retention and purge periods are maintained in accordance with established records retention schedules.
11. Facilitating law enforcement access to images and data captured by UAS.
12. Recommending program enhancements, particularly regarding safety and security.
13. Ensuring that established protocols are followed by monitoring and providing periodic reports to the Chief of Police.
14. Maintain all training flight and maintenance records for each operator and observer, as well as individual airframes.
15. Maintain contact with the FAA and familiarity with applicable FAA regulations.
16. Evaluate airframes based on mission needs.
17. Remain up to date with current UAS case law, best practices, and industry standards.
18. Develop and maintain UAS Program Operational Manual.

D. Personnel selection – UAS Operator:

1. To be considered for selection as a UAS Operator, applicants must submit a request for transfer to the UAS Program Coordinator and successfully pass an interview. Applicants must have a minimum of 2 years of Patrol experience, be off probation, and be in good standing in their current assignment. An internal background check will be conducted to determine an applicant's suitability for this position. Once selected, applicants must pass the Basic Part 107 Test to serve as a UAS Operator.

E. Personnel selection – UAS Observer:

1. To be considered for selection as a UAS Observer, applicants must submit a request for transfer to the UAS Program Coordinator and successfully pass an interview. Applicants must have a minimum of 2 years of Patrol experience, be off probation, and be in good standing in their current assignment. An internal background check will be conducted to determine an applicant's suitability for this position. Once selected, applicants must pass the Basic Part 107 Test to serve as a UAS Observer.

5.4 Facilities

A. The UAS and all related equipment will be available to be issued at the HPD and will be stored in a secure location as designated by the UAS Program Coordinator.

B. HPD personnel will ensure UAS and related equipment is working properly prior to deployment and will secure UAS in the designated storage location after use.

C. All HPD personnel are equally responsible for maintaining UAS facilities in a neat, clean, and orderly fashion.

5.5 Scheduling

A. UAS will be readily available for approved operations.

B. To maintain proficiency, UAS Operators and Observers will be required to attend training. Training will be coordinated by the UAS Program Coordinator and announced in advance for scheduling purposes.

5.6 Miscellaneous

A. Media inquiries will be forwarded to the HPD Community Engagement Specialist/Public Information Officer. UAS Operators and Observers will follow HPD policy regarding interactions or inquiries from the media.

B. Complaints regarding UAS usage will be referred to the HPD Internal Affairs Unit for follow up and investigation.

VI. Safety

6.1 Safety Policy

A. The HPD is committed to maintaining a safe and healthy workplace, including:

1. The ongoing pursuit of an accident-free workplace and one that avoids harm to people, equipment, property, or the environment.
2. Maintaining a culture of open reporting of all safety hazards.
3. Supporting safety training.
4. Conducting regular reviews of safety policies, procedures, and practices.
5. Monitoring UAS trends to ensure best safety practices are incorporated into the program.
6. Encouraging collaboration with other area UAS Programs on safety policies, procedures, and practices.

B. Every UAS Operator and Observer has a duty to contribute to the HPD's goal of continued safe UAS operations. Contributions include operating UAS in the safest manner possible without taking unnecessary risks. Any procedural, operational, or maintenance related safety hazards should be identified as soon as possible. Identifying hazards and making safety suggestions should be made to the UAS Program Coordinator through the chain of command.

C. HPD personnel who observe or have knowledge of an unsafe or dangerous act committed by UAS Program personnel shall immediately notify the UAS Program Coordinator, through the chain of command, so corrective action can be taken.

6.2 Operational Hazard and Occurrence Report (OHOR) and Investigations

A. Occurrences are unplanned incidents, including accidents and incidents that impact safety. A hazard is something with the potential to cause harm, whether it be created by person or the environment. The identification and control of all hazards is paramount for safety.

B. The OHOR concept provides a mechanism for reporting occurrences and hazards, real or perceived, to those overseeing UAS operations.

C. The OHOR does not have an official format, rather provides flexibility for reporting information to the UAS Program Coordinator through the chain of command. The OHOR concept will be used without hesitation to report anticipated, current, or past safety occurrences or hazards. Additionally, the OHOR can be submitted anonymously to any HPD employee, so follow up investigation can be conducted.

D. Any documentation generated resulting from an occurrence or hazard shall be forwarded to the UAS Program Coordinator through the chain of command.

E. Occurrences and hazards will be investigated in accordance with current HPD policy and corrective action shall be taken when necessary.

F. Occurrences or hazards requiring immediate attention will be reported to the UAS Program Coordinator without delay.

G. HPD personnel are authorized to take action to correct occurrences or hazards when, in the employee's opinion, delay will result in accident or injury. In such situations, the UAS Program Coordinator will immediately be notified.

6.3 Safety – UAS Operator and Observer

A. All UAS Operators and Observers are responsible for the following regarding safety:

1. Ensuring all HPD personnel involved in an operation understand the applicable regulatory requirements, standards, and safety policies and procedures.
2. Observing and controlling safety systems by monitoring all operations.
3. Reviewing standards and practices of HPD personnel that can impact operational safety.
4. Communicating all reported safety related problems, including any corrective action taken (e.g., in-flight problems or learned experiences including procedures for handling those problems).
5. Copying and circulating pertinent safety information to HPD personnel.

6.4 Safety Training

A. UAS Operators and Observers will receive training in the following areas:

1. HPD commitment to safety.
2. Pertinent HPD safety policies.
3. The safety role of UAS Operators and Observers in emergency operations.

B. UAS Operators and Observers will review program safety policies and procedures annually, which will be noted in their training records.

6.5 Medical Factors

A. UAS Operators and Observers will deploy UAS only when physically, mentally, and emotionally prepared to engage in operational tasks.

B. Physical illness, exhaustion, or emotional stress can impair judgment, memory, and attentiveness. For safety reasons, HPD personnel shall not act as a UAS Operator or Observer when suffering from any of the above listed issues. UAS Operators and Observers are expected to remove themselves from operations when these issues could affect their ability to perform safely. Self-assessments by UAS Operators and Observers will be conducted during pre-operational activities.

C. Prescription or over-the-counter medication can impair performance. Anytime such medication has been taken, the on-duty Watch Commander, UAS Program Coordinator, or shift supervisor shall be notified. If any of the above listed HPD personnel determines a UAS Operator's or Observer's performance may be impacted, the UAS Operator or Observer shall not participate in the operation or training exercise.

D. UAS Operators and Observers shall not act in either capacity within 8 hours of consuming an alcoholic beverage (FAR 91.17).

VII. Training

7.1 Objective

A. A key component to safe UAS operation is maintaining a professional level of competency. To do so, minimum qualifications must be established for selecting HPD personnel for the program and they must receive entry-level training.

7.2 Instructors

A. UAS Operators and Observers with FAA flight instructor certifications will be given instructor responsibilities. These responsibilities can include developing training courses, providing training, and evaluating and documenting student performance.

B. Approved training outlines will be developed collectively by the UAS Program Coordinator, the HPD Personnel and Training Unit, and UAS Operators and Observers.

7.3 Training Plans

A. UAS Operators and Observers will have a training file, which outlines annual training objectives. This training file will be maintained in accordance with existing HPD policies and procedures for maintaining training records.

B. Training plans will be developed collectively by the UAS Program Coordinator, the HPD Personnel and Training Unit, and UAS Operators and Observers.

C. All UAS operations will be documented and will be considered as UAS Operator and Observer training.

D. Each UAS Operator and Observer is responsible for ensuring his or her training file is up to date and contains all pertinent information.

7.4 Initial Training (per UAS Interim Operational Approval Guidelines 08-01)

A. Once selected, UAS Operators and Observers shall acquire a Part 107 License.

B. UAS Observers must complete training on communication with UAS Operators, including communicating instructions designed to remain clear of obstacles or conflicting air traffic. At a minimum, this training shall include the rules and responsibilities described in *14 CFR 91.111 (Operating Near Other Aircraft), 14 CFR 91.113 (Right-of-Way Rules: Except Water Operations), and 14 CFR 91.155 (Basic VFR Weather Minimums).* Training shall also include knowledge of air traffic and radio communications, including the use of approved ATC/pilot terminology, and knowledge of appropriate sections of the *Aeronautical Information Manual.*

C. Prior to authorization to conduct flight operations, UAS Operators shall complete a minimum of 8 hours of flight training with a UAS instructor to demonstrate proficiency and safety. This must be accomplished to show their ability and knowledge of UAS.

7.5 Recurrent Training

A. UAS Operators and Observers shall maintain proficiency in their abilities. Those who do not have documented training or flight time within a 60-day period must show proficiency to a UAS instructor prior to involvement in an operation.

B. Recurrent training is not limited to actual UAS Operator or Observer skills but includes knowledge of all pertinent UAS or aviation matters.

C. Failure to show proficiency can result in removal from the UAS program.

7.6 Miscellaneous

A. Depending on training needs, every effort will be made to accommodate HPD personnel schedules to reduce the impact to HPD staffing.

B. All training requests shall be made and approved through a UAS Operator's or Observer's chain of command in accordance with existing HPD procedures.

C. UAS Operators and Observers are encouraged to attend and disseminate information from FAA safety seminars. This may be done on-duty with the approval from their chain of command.

D. Unless approval is obtained in advance, overtime will not be authorized for training.

E. Training shall only be conducted at approved locations and follow the provisions within the approved FAA Training COA.

VIII. General Operating Procedures

8.1 Requests for UAS Support

A. Requests for UAS support will be made through the HPD Communications Center and approved by the on-duty Watch Commander or Incident Commander.

B. Requests for UAS support can be made at any time during the day or night.

C. Requests for UAS support and associated deployments shall be entered into the Watch Commander's Log.

D. UAS Operators and Observers can deny requests for UAS support if they determine, based upon their expertise, the operation will violate FAA regulations, HPD or City policy, safety procedures, or the guidelines outlined in this document. Denial of a request for UAS support will prompt notification to the UAS Program Coordinator by the UAS Operator or Observer. UAS Operators and Observers are the final authority regarding UAS operations.

8.2 Call-Out Procedure

A. Any outside agency requests for UAS support shall be made through the HPD Communications Center. The Communications Center shall contact the on-duty Watch Commander for approval and provide all available information regarding the request. Once information is gathered, the Watch Commander will contact the UAS Program Coordinator to provide notification of the operation.

B. If there are no UAS Operators or Observers on-duty, the Watch Commander can authorize a call-out in accordance with established HPD procedures. Compensation for a call-out will be in accordance with the provisions outlined in the associated MOU(s).

8.3 UAS Deployment Priorities

A. If several requests for UAS support are received simultaneously, they will be prioritized.

B. Generally, requests for UAS support will be prioritized as follows:

1. Safety and the protection of life and property.
2. Evidence collection/Scene documentation.

8.4 Personnel Responsibilities During Operations

A. The on-duty Watch Commander or Incident Commander will be responsible for the following:

1. Provide authorization for the deployment of UAS in the field during ongoing and emerging incidents.
2. Initiate UAS call-out procedures when necessary.
3. Ensure UAS operation in accordance with HPD and City policies, and local, state, and federal law.

B. UAS Operators will be responsible for the following:

1. Safe operation of UAS in accordance with applicable HPD and City policies and local, state, and federal laws.
2. Reject UAS deployment requests based on safety, policy, or legal concerns or when a flight would violate FAA regulations. *HPD personnel, regardless of rank, shall not order a UAS Operator to use a UAS if, in the opinion of the UAS Operator, doing so would create a safety issue or violate provisions established by policy, procedure, and the law.*
3. Respond to UAS Observer input and requests to ensure the safe and effective deployment of UAS, including obstacle avoidance.

4. Complete all required mission documentation, including updating the flight book.

C. UAS Observers will be responsible for the following:

1. Assist the UAS Operator in avoiding obstacles.
2. Operate any attachments to the UAS.
3. Remain alert for safety issues surrounding the UAS Operator/Observer team.
4. Handle radio communications, including the coordination of other operational resources.
5. Assist in ensuring the safe operation of UAS.

8.5 Personal Equipment

A. UAS Operators and Observers shall wear eye protection while the UAS is in flight.

B. UAS Operators and Observers shall wear appropriate uniforms during operations, taking into consideration current weather conditions.

C. UAS Operators and Observers shall consider the use of issued portable radios or cellular phones as they can impact the safe operation of UAS. UAS Operators are prohibited from using radios or cellular phones during flight pursuant to the COA.

IV. Pre-Flight / Post-Flight Actions

9.1 Inspections

A. UAS Operators and Observers are responsible for conducting a thorough pre-flight inspection of the UAS.

B. After each operational or training deployment, UAS Operators and Observers are responsible for conducting a thorough post-flight inspection of the UAS in accordance with instructions contained in the UAS user's manual.

C. Identified issues, which may jeopardize the safe operation of UAS, shall be documented and resolved prior to flight.

D. UAS Operators and Observers are responsible for completing the pre-flight and post-flight checklist to document the inspections.

E. UAS equipment issues, especially those that can have an impact on safety, will result in the discontinuation of the operation until such issues can be resolved.

9.2 Weather

A. UAS Operators and Observers will gather information to familiarize themselves with current weather conditions in the operational area. UAS Operators and Observers will used FAA approved weather resources to obtain current weather conditions.

B. If available, an anemometer should be used to estimate wind speeds and to determine if UAS has the capability to fly during the operational time frame.

C. UAS Operators and Observers should use the Beaufort Scale when making decisions regarding wind conditions.

D. Reported weather conditions shall be documented on the pre-flight checklist.

E. UAS Operators and Observers shall ensure flights will occur within FAA VFR weather requirements.

9.3 Documentation and Evidence

A. UAS inspection and weather information will be documented on the pre-flight checklist.

B. After each UAS operation, recorded data shall be reviewed and evaluated for evidentiary value. Data shall be uploaded and retained in the approved digital evidence management system, which restricts access to authorized HPD personnel and can be internally audited. All retained data shall be maintained or destroyed in accordance with HPD's and the City's records retention policies and in compliance with applicable laws and regulations. Images of uninvolved persons or properties may be redacted in accordance with the provisions of the California Public Records Act and existing HPD procedures for the release of information.

C. After each operation, the UAS Operator will obtain a case number and advise the Communications Center of all pertinent information.

D. UAS Operators shall be responsible for booking evidence and authoring a police report (original or supplemental).

E. UAS Operators shall be responsible for updating the flight log.

9.4 Operational Planning

A. UAS Operators and Observers will gather all available information regarding the operation, including weather conditions, potential hazards, incident details, operational goals, etc. Prior to each operation, a Notice To Airmen (NOTAM) will be filed with the FAA and the closest airport control tower shall be notified.

B. UAS Operators and Observers will ensure the location for take-off and landing is adequate for a safe deployment.

1. The take-off and landing location should be clearly marked and identifiable.
2. At least one emergency landing area should be identified prior to deployment.
3. UAS Operators and Observers will ensure they are aware of their surroundings in case an emergency landing is necessary. Planning should include the ability to recover the UAS.

9.5 Checklists

A. UAS Operators shall complete pre-flight and post-flight checklists. Checklists shall be forwarded to and maintained by the UAS Program Coordinator.

B. UAS Operators shall initiate the flight log.

9.6 Maintenance

A. Although there are few parts on UAS that need servicing, the manufacturer's maintenance schedule shall be followed and documented.

B. Equipment issues, which cannot be resolved by HPD personnel, shall be forwarded to the manufacturer for technical support.