

Unmanned Aircraft Systems Unit



Standard Operating Procedures (SOPs)

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PURPOSE

This policy is intended to provide authorized Department personnel who are assigned responsibilities associated with the deployment and use of an unmanned aircraft system (UAS) with instructions on when and how this technology may be used for law enforcement and public safety purposes in accordance with the law.

POLICY

It is the policy of the Department that duly trained and authorized agency personnel may only deploy an UAS for legitimate law enforcement purposes as specified herein. All UAS deployments, as well as the use, collection, and storage of any audio/video data originating from the use of the UAS, shall comply with applicable law and the policy provisions provided herein.

DEFINITIONS

Digital Multimedia Evidence (DME):

Digital recording of images, sounds, and associated data.

Unmanned Aircraft (UA) or Unmanned Aerial Vehicle (UAV):

An aircraft intended to navigate in the air without an onboard pilot. Also, alternatively called Remotely Piloted Aircraft (RPA), Remotely Operated Vehicle (ROV), or Drone.

Unmanned Aircraft System (UAS):

A system that includes the necessary equipment, network, and personnel to control an unmanned aircraft.

Small Unmanned Aircraft Systems (sUAS):

UAS systems that utilize UAVs weighing less than 55 pounds and are consistent with Federal Aviation Administration (FAA) regulations governing model aircraft.

UAS Flight Crewmember:

A pilot, visual observer, payload operator, or other person assigned duties for an UAS for the purpose of flight or training exercise.

Remote Pilot in Command (RPIC):

A person exercising control over a UA/UAV/UAS during flight.

Visual Observer (VO):

The flight crew member responsible for the visual observation of the UAS while in flight. The VO will alert the RPIC of any conditions (obstructions, terrain, structures, air traffic, weather, etc.) that may affect flight safety. The VO will be responsible for all aviation-

related communications required by the Federal Aviation Administration (FAA). To accomplish this, the VO will be in close proximity to the RPIC to ensure the timely relaying of information. All RPICs must operate the UAS with the assistance of a VO.

FAA Part 107:

To operate the controls of a UAV under Part 107, the RPIC must hold a current remote pilot airman certificate with an UAS rating or be under the direct supervision of a person with such a certificate.

Night Operations:

As published in the American Air Almanac, those operations that occur between the end of the evening, civil twilight, and the beginning of the morning, civil twilight, converted to local time (equal to approximately 30 minutes after sunset until 30 minutes before sunrise).

Certificate of Authorization (COA):

Permission granted by the FAA for a public safety agency to fly an UAS within specific boundaries and parameters.

ORDER:

Only adequately trained Department personnel are authorized to operate Unmanned Aircraft Systems in the National Airspace System pursuant to the provisions contained within the department COA and/or when allowable under FAA Part 107. It shall be the responsibility of the RPIC and the VO to ensure strict observance of the terms and provisions contained within the COA, addendums, and pursuant to FAA part 107.

- A. The use of the UAS will be limited to the following authorized missions:
 - 1. Post-incident crime scene preservation and documentation
 - a. A search warrant will be sought when processing a crime scene where a reasonable expectation of privacy exists (e.g., a residence, a private place of business that is not open to the general public, a medical facility such as a hospital, clinic, or doctor's office)
 - 2. Bomb Squad/Explosive Ordnance Disposal missions
 - 3. Incidents involving potentially hazardous materials
 - a. The RPIC shall ensure that the drone is being piloted from an area deemed safe by a hazardous materials expert such as the fire department.

4. Search and Rescue operations
5. Public safety and life preservation missions to include barricaded suspects, hostage situations, active shooters, and high-risk search warrants/tactical operations
6. The apprehension of armed and dangerous and/or violent fleeing suspects who pose an imminent danger to the public
7. Disaster response and recovery to include natural, technical, or human caused disasters
8. Authorized training missions and/or flight demonstrations
9. Authorized special events
10. In response to specific requests from local, state, or federal fire authorities for fire response and prevention
11. When there is probable cause to believe (1) the UAS will record images of a place, thing, condition, or event; and (2) those images would be relevant in proving a certain felony had occurred or is occurring, or a particular person committed or is committing a certain felony and use of the UAS does not infringe upon the reasonable expectation of privacy
 - a. RPICs should be mindful of the reasonable expectation of privacy in places such as a residence, covered/secluded backyard, high-rise building, private place of business that are not open to the general public, a medical facility and should seek a search warrant prior to conducting a flight without exigent circumstances or consent
12. Pursuant to a search warrant
13. To assist other City departments within the course and scope of their duties and responsibilities as long as it does not conflict with any established laws, policies, or guidelines

UAS activities will be performed in a manner consistent with the Constitution and applicable laws, Executive Orders, and other Presidential directives

PROHIBITED USE:

Department-owned UASs, their accessories, or features/functionality shall not be used:

- A. For activities not having a legitimate public safety purpose
- B. To target a person based solely on individual characteristics, such as, but not limited to, race, ethnicity, national origin, religion, disability, gender, or sexual orientation
- C. To conduct personal business of any type
- D. The UAS shall not be weaponized
- E. UAS-recorded data will not be collected, disseminated, or retained solely for the purpose of monitoring activities protected by the US Constitution, such as the First Amendment's protections of religion, speech, press, assembly, and redress of grievances (e.g., protests, demonstrations)

While it is encouraged that licensed Department members who have access to a private UAS while off-duty fly the UAS to maintain proficiency, Department personnel shall not use any personally owned UAS or accessories in the course and scope of their duties.

OVERSIGHT & ACCOUNTABILITY:

- A. Adequate procedures are in place to receive, investigate, and address, as appropriate, privacy, civil rights, and civil liberties complaints. Members of the public may contact the San Jose Independent Police Auditor or Police Internal Affairs to log a complaint against UAS flights.
- B. Oversight procedures for SJPD's UAS use will include audits and/or assessments to ensure compliance with existing agency policies and regulations. These audits/assessments will be documented quarterly in the Program Manager's Report.
- C. SJPD will verify the existence of rules of conduct and training for Federal Government personnel and contractors who work on UAS programs related to SJPD work, including procedures for reporting suspected cases of misuse or abuse of UAS technologies.
- D. Policies and procedures are in place to provide meaningful oversight of individuals who have access to sensitive information (including any PII) collected using an UAS. All data that is collected shall only be released in accordance with SJPD's rules governing the release of information through the SJPD's Operations Support Services Division.

- E. Any data-sharing agreements or policies, data use policies, and record management policies applicable to UAS will conform to applicable laws, regulations, and policies. SJPD's Operations Support Services Division shall monitor and control such sharing.
- F. Policies and procedures are in place that authorize the use of UAS in response to a request for UAS assistance in support of Federal, State, local, tribal, or territorial government operations. Such use shall be in accordance with the above-listed authorized missions.

TRANSPARENCY:

- A. Providing notice to the public regarding where the agency's UAS are authorized to operate. This notice is on the SJPD UAS public flight log at SJPD.ORG. UAS authorized operation area is on file with the FAA. SJPD has a Certificate of Authorization on file with the FAA that describes areas of operations.
- B. How SJPD intends to keep the public informed about the agency's UAS program and changes that would significantly affect privacy, civil rights, or civil liberties SJPD's UAS program maintains a public flight log on the Department website (SJPD.ORG). This website lists flights and program updates that affect privacy, civil rights, and civil liberties.
- C. Annual summary requirement. SJPD maintains a public flight log that lists the Date, Case #, Duration, Location, and further details such as reason and other agencies assisted.
- D. SJPD will provide a web link on the UAS Records page to SJPD Internal Affairs and San Jose Independent Police Auditor. Outcomes of the complaint process will follow the current practice of publishing employee discipline on the City of San Jose's webpage.

PERSONNEL:

Sworn Personnel:

- A. Sworn personnel are authorized to use a Department UAS for any purpose authorized by the Duty Manual and these guidelines.

Community Service Officers

- A. Community Service Officers shall only use a Department UAS for the following authorized reasons:

1. Post-incident crime scene preservation and documentation
 2. Search and Rescue operations
 3. Disaster response and recovery to include natural, technical, or human-caused disasters
 4. Authorized training missions and/or flight demonstrations
 5. Authorized special events
 6. In response to specific requests from local, state, or federal fire authorities for fire response and prevention
 7. In incidents involving potentially hazardous materials
 - a. The RPIC shall ensure that the drone is piloted from an area deemed safe by hazardous materials experts such as the Fire Department.
 8. Public safety and life preservation missions
 - a. During an exigent circumstance, when no sworn pilots are available, CSOs are authorized to utilize a Department UAS for public safety and life preservation missions (e.g., active shooter, hostage situations, etc.). They are only authorized to fly after obtaining permission from the on-duty watch commander. In these circumstances, the CSO must utilize a sworn officer as their VO to maintain their safety and provide tactical assistance.
 9. To assist other City departments within the course and scope of their duties and responsibilities as long as it does not conflict with any established laws, policies, or guidelines
- B. For non-sworn staff, if the need arises, they may fly Department UAS for any of the 14 authorized mission types with the authorization of their lieutenant and the lieutenant of the UAS program

Civilian Staff:

- A. Civilian staff shall only use a Department UAS for the following authorized reasons:
1. Post-incident crime scene preservation and documentation
 2. Authorized training missions and/or flight demonstrations

3. Authorized special events
 4. To assist other City departments within the course and scope of their duties and responsibilities as long as it does not conflict with any established laws, policies, or guidelines
- B. For non-sworn staff, if the need arises, they may fly Department UAS for any of the 14 authorized mission types with the authorization of their lieutenant and the lieutenant of the UAS program

PROCEDURES:

Request for Deployment:

- A. Requests for a UAV deployment will be made to the on-duty watch commander, special operations lieutenant, or BOI lieutenant in command of the investigation.
- B. During exigent situations, appropriately certified RPICs may deploy their UAS for missions authorized within this general order before seeking approval. Upon successful mission completion, or as soon as practicable, the RPIC will notify the appropriate command officer via their chain of command.
- C. RPICs are authorized to evaluate and accept or decline any mission or portion thereof due to policy, safety concerns, the request being outside the pilot's skillset, or other FAA requirements.

MINIMUM PERSONNEL REQUIREMENTS:

- A. Due to the nature of the law enforcement mission, the minimum personnel required on all missions shall be two, a pilot and a visual observer.
 1. During exigent circumstances, an RPIC may launch their UAV without a VO to maintain operational visibility of the scene. A VO should accompany the RPIC as soon as reasonably possible.
- B. Although training is not considered a mission, a VO should be used.

PREFLIGHT RESPONSIBILITIES:

- A. UAS Flight Crewmembers will utilize the mission briefing card, preflight and post-flight checklists, and emergency procedure checklist.

- B. Before each flight, the RPIC will evaluate the situation to determine the risks of deploying the UAS. The RPIC should weigh the risk of a UAV deployment against the benefit it may bring to the mission's overall success.
- C. Before each flight, the RPIC will ensure they have a hand-held aviation radio and monitor the proper frequency.
- D. Before each flight, the RPIC will determine the airspace they will operate within and make appropriate notifications [i.e., Notice to Airmen (NOTAM), control tower notifications]. Pursuant to the SJPD COA, when required, NOTAMs will be filed no less than 48 hours and no more than 72 hours before the flight.
 - 1. Due to the immediacy of some operations, the NOTAM may be filed as soon as practicable before the flight. If the issuance of a NOTAM may endanger the investigation and/or safety of the UAS Flight Crewmembers or officers, it may be waived. If a NOTAM is not filed, the RPIC must be prepared to justify their reasoning to the FAA upon request.
- E. The RPIC will determine the weather conditions and ensure they do not exceed weather minimums for both day and night flight operations, as outlined in SJPD COA and FAA Part 107.
- F. UAS night operations are authorized in the SJPD COA and Part 107 waiver. For purposes of night flights, the following apply:
 - 1. Additional training will be provided on the lighting configuration of the UAS to ensure proper recognition during night flight operations.
 - 2. Before conducting flights, the RPIC and VO must be trained to recognize and overcome visual illusions and limitations caused by darkness.
 - 3. The RPIC and VO must ensure the area of operation is sufficiently illuminated to allow the crew to identify people and obstacles on the ground. The RPIC and VO must conduct a daytime site assessment before night operations, noting any hazards or obstructions.
 - 4. The UAS must be equipped with anti-collision lighting visible from a distance of no less than three statute miles. In the interest of public safety, the RPIC may reduce the intensity of the lighting if they determine it is necessary.
- G. RPICs should not operate a UAV over a human being, except for operations where it is necessary to safeguard human life, the human being is directly participating in the operation (i.e., city employee), the human being is located under a covered structure, or the human being is inside a stationary vehicle that can provide reasonable protection. The following applies to flights over human beings while operating under the COA or Part 107:

- a. The ground speed of the UAS must not exceed 100mph.
 - b. No person may operate an aircraft below an altitude that will allow, in the event of a power failure on the UAS, an emergency landing without undue hazard to persons or property on the surface.
 - c. SJPD must report any accident or incident resulting in any human injury during COA operations over human beings.
 - d. For those operations where it is necessary to operate over human beings to safeguard human life, the RPIC must not operate any lower or in proximity to human beings than is essential to accomplish the operation.
 - e. The UAV must not have any exposed rotating parts that would cause lacerations. All pilots shall use the supplied propeller guards when operating over people.
- H. After a flight, it is the responsibility of the RPIC to complete the Department UAS flight log by submitting it via a prearranged form, current cloud-based software that is subscribed to by the Department, or by email to the UAS Program Coordinator. Information shall include:
1. Date of flight
 2. Case#
 3. Authorizing commander
 4. Flight duration
 5. Pilot ID
 6. Flight location
 7. Drone ID
 8. Reason for flight
 9. Equipment malfunctions/damage
 10. Lost links
 11. Deviations from ATC/COA/procedures
 12. Details on any damage to the UAS, City property, or private property
 13. If evidence was collected

14. What case number the digital evidence was uploaded under

TRAINING REQUIREMENTS:

- A. All UASs will only be operated by Department personnel trained in the system's operation, maintain FAA currency, possess a current FAA Part 107 certificate with an UAS rating, and are authorized by the UAS Program Manager.
- B. All agency personnel with UAS responsibilities, including command officers, will be provided training in the rules governing UAS use.
- C. The UAS Program Coordinator shall conduct an annual qualification of all Department Part 107 pilots. The test shall be consistent with the National Standards and Technology (NIST) – Standard Test Methods for Aerial Systems. Pilots who do not participate in the qual or fail to complete the qualification within the set parameters will not be eligible to pilot a Department UAS.
- D. It shall be the responsibility of the RPIC to designate a VO for all UAS flights. The RPIC shall instruct the VO on their duties and expectations for the duration of the UAS flight.
 - 1. The RPIC shall ensure that the VO understands they must assist the RPIC with abiding by 14 CFR 91.111, Operating Near Other Aircraft; 14 CFR 91.113, Right-of-Way Rules: Except Water Operations; and 14 CFR 91.155, and Basic VFR Weather Minimums, air traffic and radio communications, including the use of approved ATC/pilot phraseology; and knowledge of appropriate sections of the Aeronautical Information Manual.

RECURRENT TRAINING:

- A. To maintain proficiency, UAS Flight Crewmembers must attend and/or participate in regular training. Training will be coordinated through the UAS Program Manager.
- B. All UAS Flight Crewmembers in the assignment shall maintain proficiency in their pilot/observer abilities. Flight Crewmembers who do not have any documented training or flight time within six months will need to demonstrate proficiency before being a pilot/observer during a deployment or exercise.
- C. Recurrent training is not limited to piloting/observer skills but includes knowledge of all pertinent UAS/aviation matters.

- D. Failure to demonstrate proficiency or follow department rules can result in removal from the voluntary UAS program.

TRAINING RECORDS:

- A. All UAS Flight Crewmembers will have a training file on record that details their training history. This training file will be maintained in conjunction with the member's regular training file per Department policy at the SJPD training unit.
- B. All deployments or exercises will be documented in a flight log and count toward a RPIC's training.
- C. It is the RPIC's responsibility to verify their training file contains all pertinent information.

DATA RETENTION AND PROCESSING:

- A. Upon completion of each UAS mission, the digital media evidence (DME) shall be reviewed and evaluated for evidentiary value. All DME shall be uploaded into the Department's digital evidence database (evidence.com) and retained per Department policy.
- B. Data of identifiable individuals captured during an UAS mission shall not be retained unless there is reasonable suspicion that evidence of criminal activity exists.
- C. All Public Records Act requests for data generated via an UAS deployment shall be referred to the Office of the Chief, Research & Development Unit.

PII collected by the SJPD by a grant-funded UAS will not be retained for more than 180 days unless retention of the information is determined to be necessary to an authorized mission of the retaining agency, is maintained in a system of records that complies with the Privacy Act of 1974 (5 USC 552a) in applicable circumstances, or is required to be retained for a longer period by any other applicable law or regulation (Section 1 (a) (ii), Retention).

- D. UAS-collected information that is not maintained in a system of records covered by the Privacy Act shall not be disseminated outside of the agency unless the dissemination is required by law or fulfills an authorized purpose and complies with agency requirements (Section 1(a)(iii), Dissemination).

FLIGHT TIME LIMITATIONS:

A. During any 24 consecutive hours, the total flight time of any pilot may not exceed 10 hours, which shall include any other unmanned flying by that pilot. A pilot's flight time may exceed the flight time limits if the assigned flight time occurs during a regularly assigned duty period of no more than 14 hours and:

1. If this duty period is immediately preceded by and followed by a required rest period of at least ten consecutive hours of rest.
2. If the flight time is assigned during this period, which total flight time, when added to any other unmanned flying by the pilot, may not exceed ten hours.
3. If the combined duty and rest periods equal 24 hours.
4. Each flight assignment must provide at least ten consecutive hours of rest during the 24 hours preceding the planned end of the agency's flight.
5. When a pilot has exceeded the daily UAS flight time limitations in this section because of circumstances beyond the control of the agency or pilot, the pilot must have a rest period before being assigned or accepting an assignment for a flight time of at least:
 - a. Twelve (12) consecutive hours of rest if the flight time limit exceeds 30 minutes.
6. No member shall act as a pilot or observer within eight hours after consuming any alcoholic beverage (FAR 91.17).

WEATHER:

Before each deployment, UAS Flight Crewmembers will ensure that they gather enough information to familiarize themselves with the weather situation existing throughout the deployment area. UAS Flight Crew Members shall utilize FAA-approved weather resources to obtain the latest and most current weather conditions.

PROGRAM MANAGER:

The Chief will appoint an UAS Program Manager (Lieutenant) who will be responsible for the overall direction and management of the UAS program. The Program Manager will have the following responsibilities:

- A. Ensure policies and UAS guidelines conform to current laws, regulations, and best practices.
 - 1. Compliance checks with this usage and policy will be completed in conjunction with Program Manager Reports every fiscal quarter.
 - 2. The Research and Development Unit will incorporate the UAS usage data into scheduled PSFSS bi-monthly reports.
 - 3. The UAS Program Manager will evaluate UAS policies at least every three years. This includes collecting, using, retaining, and disseminating information obtained by Department UASs.

PROGRAM COORDINATOR:

The Program Manager will appoint a Program Coordinator (Sergeant) who will be responsible for direct supervision of the UAS Program and its personnel. The UAS Program Coordinator may delegate any or all of the responsibilities in this section to another person or persons (Officer or Sergeant) within the UAS program. The Program Coordinator will have the following additional responsibilities:

- A. Coordinate the FAA Certificate of Waiver or Authorization (COA) application process and ensure the COA is current.
- B. Maintain contact with the FAA and familiarity with pertinent FAA regulations.
- C. Ensuring that all authorized Flight Crewmembers have completed all required FAA and Department approved training in the operation of the UAS and that the Flight Crewmembers comply with all applicable laws, policies, and procedures regarding the use of the UAS.
- D. Develop an UAS inspection, maintenance, and record-keeping protocol to ensure the continuing airworthiness of a UAV, up to and including its overhaul or life limits.
- E. Recommend program enhancements, particularly regarding safety and information security.
- F. Ensure that all training, flight, and maintenance records for each Flight Crewmember and airframe are maintained.

Standard Operating Procedures are general guidelines for specific operations and a tool for standardized training. They are not intended to cover every possible tactical scenario. They are subject

to constant re-evaluation and modification due to lessons learned during live operations and training exercises.