

Unmanned Aerial Vehicle (UAV)

308.1 PURPOSE AND SCOPE

The following procedures are intended to promote the safe, efficient, and lawful operation of the Orange County Sheriff's Department (OCSD) Unmanned Aerial Vehicles (UAVs) regardless of the nature of the mission.

308.1.1 DEFINITIONS

After Action Report (AAR) / Flight Log: The AAR is completed after each mission by the Remote Pilot in Command (RPIC) to conduct a structured review of the mission to analyze performance, identify lessons learned, improve future safety, efficiency, and operational success.

Drone as First Responder (DFR): Prepositioned drones at launch stations, enabling rapid, remote UAV deployment to incidents. RPICs fly UAVs from a remote location beyond visual line of sight to assist in gathering information on calls for service for the purpose of public safety.

Master Maintenance Log: A master maintenance log shall be maintained by the Real Time Operations Center (RTOC). The master maintenance log shall be comprised of information derived from each UAV's maintenance record.

Maintenance Record: The maintenance record shall document all maintenance performed on a UAV.

Mission Brief Form: This form captures the nature of the UAV mission and provides the documentation necessary to track the use of UAVs. A Mission Brief is only required when a UAV flight's data is not automatically captured on its software.

Person Manipulating the Controls: A person other than the RPIC who is controlling the flight of a UAV under the supervision of the RPIC.

Remote Pilot in Command (RPIC): A person who holds a remote pilot certificate with a remote pilot rating pursuant to 14 C.F.R. § 107.52 et seq., and has the final authority and responsibility for the operation and safety of the UAV operation. The RPIC shall also meet the training requirements as detailed in the OCSD's UAV Training Manual, which includes a requirement to be certified by UAV Chief Pilot.

Unmanned Aerial Vehicle Chief Pilot: The UAV Chief Pilot is the designated UAV RPIC that will conduct flight evaluations on OCSD UAV RPICs to ensure standardization of UAV deployments and to check knowledge of FAA regulations.

Unmanned Aerial Vehicle (UAV): An aerial vehicle (weighing more than 0.55 pounds, and less than 55 pounds including everything that is onboard or otherwise attached to the aircraft) which can be flown without the possibility of direct human intervention from within or on the aircraft.

Visual Observer (VO): A person acting as a flight crew member who assists the UAV remote RPIC and/or the person manipulating the controls to see and avoid other air traffic or objects aloft or on the ground.

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308.2 POLICY

It shall be the mission of those Members of the Department who are trained in the use of the UAV to use this resource to protect the lives and property of the people in Orange County and public safety personnel in full compliance with applicable laws and regulations, including but not limited to the State and Federal Constitutions and Federal Aviation Administration (FAA) regulations. UAVs shall not be used for missions that would violate the privacy rights of the public.

The use of a UAV can support public safety personnel in situations which would benefit from an aerial perspective and enable responders to detect dangers that could otherwise not be seen. The UAV can also be utilized for approved training missions.

308.3 PROTECTION OF RIGHTS AND PRIVACY CONCERNS

The Department shall consider the protection of individual civil rights and the reasonable expectation of privacy as a key component of any decision made to deploy the UAV. Each UAV RPIC and VO shall ensure that operations of the UAV are consistent with federal, state, and local laws.

Absent a warrant or exigent circumstances, RPICs shall adhere to FAA altitude regulations and RPICs and VOs shall not intentionally record or transmit images of any location where a person would have a reasonable expectation of privacy (e.g., inside residences, enclosed yards, garages, or other structures on a property).

RPICs and VOs shall take reasonable precautions to avoid inadvertently recording or transmitting images of areas where there is a reasonable expectation of privacy. Reasonable precautions can include, for example, deactivating or turning imaging devices away from such areas or persons during UAV operations.

Any official legitimate law enforcement or public safety purposes reference in this policy shall be limited to purposes that comply with this policy and any applicable laws, including but not limited to California Civil Code 1798.90.5 et seq. The following uses of the UAV are specifically prohibited:

1. To conduct random surveillance activities.
2. To target a person based solely on a person's or group's actual or perceived characteristics such as race, ethnicity, national origin, religion, gender, sex, sexual orientation, gender identity or expression, economic status, age, cultural group, political affiliation, disability, or other classification protected by law.
3. To harass, intimidate, or discriminate against any individual or group.
4. For the purposes of infringing on the lawful exercise of rights protected by the First Amendment.
5. For non-law enforcement matter or to conduct personal business of any type.
6. In an unsafe manner or in violation of any applicable laws, rules, or regulations.
7. The UAV shall not be equipped with weapons of any kind.

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308.4 UAV MISSIONS

The Department is committed to maintaining strong public support in the use of UAVs to better support public safety in Orange County. The Department shall adhere to all laws and regulations including 14 C.F.R. § 107 et seq., which are the same stringent regulations established for civilian commercial operators.

1. The authorized missions for the Department UAVs are:
 - (a) Post-incident crime scene preservation and documentation,
 - (b) Hazardous Devices Section missions,
 - (c) Response to hazardous materials spills,
 - (d) Traffic collision investigations,
 - (e) Search and Rescue (SAR) missions as defined in the Department SAR Operations Manual,
 - (f) Public safety and life preservation missions to include, but not be limited to, calls for service, barricaded suspects, hostage situations, active shooters, apprehension of armed and dangerous and/or violent suspects, and high-risk search warrants,
 - (g) Disaster response and recovery to include natural or human caused disasters including a full overview of a disaster area for post incident analysis and documentation,
 - (h) Training flights in support of the Department UAV Training Manual,
 - (i) For fire response and prevention,
 - (j) When there is probable cause to believe that (1) the UAV may record images of a place, thing, condition, or event; and (2) that those images would be relevant in proving that a crime had occurred or is occurring, or that a particular person committed or is committing a crime and use of the UAV does not infringe upon the reasonable expectation of privacy,
 - (k) Pursuant to a search warrant,
 - (l) Inspection of Orange County property and facilities, to include OCIAC locations designated under the US Department of Homeland Security's Critical Infrastructure Sectors.
 - (m) Production of video for the Department and other County of Orange agencies/departments for promotional, educational and/or training purposes.
 - (n) Drone as First Responder (DFR) program.

308.5 UAV OPERATIONS

This policy outlines the responsibilities associated with the deployment of UAVs for those personnel assigned to the Department UAV program. The Real Time Operations Center (RTOC) Captain will manage the UAV program and shall manage the program to ensure safe, effective UAV deployments are within Department policies and procedures.

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This policy is to be followed for general operations, information gathered, and law enforcement purposes. The Department shall operate UAVs in a manner which observes Constitutional rights, and in accordance with local, state, and federal laws and regulations.

All UAV pilots must maintain a Remote Pilot Certification pursuant to 14 C.F.R. § 107.52 et seq. UAV pilots must pass an in-house written test and check flight test (If the employee fails the initial written test and/or check flight test, they will be remediated on their deficiencies and given an opportunity to retest after 7 days).

In consultation with the RTOC, the deployment of UAVs shall only be for authorized missions, and they must comply with the approval authority and Members from the matrix below:

Authorized use of UAVs	Approval Authority	Deployment Type	Member
(a) Post-incident crime scene preservation and documentation	Unit Supervisor	Static/Dynamic	Any FAA Certified Member
(b) Hazardous Devices Section missions	Unit Supervisor	Dynamic	Any FAA Certified Member along with one CPC 830.1 Member
(c) Response to (non-criminal) hazardous materials spills (for criminal cases, refer to section (f) below)	Unit Supervisor	Dynamic	Any FAA Certified Member
(d) Traffic Collision Investigations	Unit Supervisor	Dynamic	Any FAA Certified Member
(e) Search and Rescue (SAR) missions as defined in the OCSD SAR Operations Manual	Unit Supervisor	Dynamic	Any FAA Certified Member
(f) Public safety and life preservation missions to include calls for service, barricaded suspects, hostage situations, active shooters, apprehension of armed and dangerous and/or violent suspects, criminal hazardous materials investigations, and high-risk search warrants	Unit Supervisor	Dynamic	Any FAA Certified Member along with one CPC 830.1 Member

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(g) Disaster response and recovery to include natural or human caused disasters including a full overview of a disaster area for post incident analysis and documentation	Unit Supervisor	Dynamic	Any FAA Certified Member
(h) Training flights in support of the OCSD UAV Training Manual	Unit Supervisor	Dynamic	Any FAA Certified Member
(i) In response to specific requests from local, state or federal fire authorities for fire response and prevention	Unit Supervisor	Dynamic	Any FAA Certified Member
(j) When there is probable cause to believe that (1) The UAV may record images of a place, thing, condition, or event; and (2) That those images would be relevant in proving that a crime had occurred or is occurring, or that a particular person committed or is committing a crime and use of the UAV does not infringe upon the reasonable expectation of privacy	Unit Supervisor	Dynamic	Any FAA Certified Member along with one CPC 830.1 Member
(k) Pursuant to a search warrant	Unit Supervisor	Dynamic	Any FAA Certified Member along with one CPC 830.1 Member
(l) Inspection of Orange County property and facilities occupied by the Orange County Sheriff's Department, to include OCIAC locations designated under the US Department of Homeland Security's Critical Infrastructure Sectors.	Unit Supervisor	Dynamic	Any FAA Certified Member

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(m) Production of video for OCSD and other County of Orange agencies/departments for promotional, educational and/or training purposes	Unit Supervisor	Dynamic	Any FAA Certified Member
(n) Drone as First Responder (DFR)	RTOC RPIC	Dynamic	Any FAA Certified 830.1 Member

When deployed in a timely manner, UAVs enhance safety for law enforcement and the community. Policy Sections 308.5 (b), (f), (j) and (k) require a Sworn Member to be either the RPIC or VO. A supervisor, Incident Commander, or other Sworn Member with authority over the use of a UAV may authorize the operation of a UAV by non-Sworn Members in an emergency situation if a Sworn Member is not immediately available or may otherwise be more usefully deployed elsewhere.

All non-Sworn Members, as referenced above, must be trained and certified by the OCSD as having the requisite knowledge to safely operate a UAV. For DFR, the non-Sworn Member must be listed as an RPIC used for DFR.

When a trained Sworn Member later becomes available, that Sworn Member will be assigned as the RPIC or VO.

308.5.1 INFORMATION DISTRIBUTION

UAV personnel are responsible for ensuring they are informed about the specifications that apply to his/her duties and responsibilities. RTOC shall ensure the following material, in current form, is available:

1. 14 C.F.R. Parts 43, 61, 91, and 107
2. UAV equipment manuals, owner's manuals, and flight handbooks for each type of UAV to be used.
3. The applicable waivers granted to the OCSD from the FAA.

308.5.2 UAV OPERATOR'S MANUAL AND FARs

All limitations and regulatory information with respect to the specific UAV and Federal Aviation Regulations (FARs) pertaining to the use of UAVs shall be strictly followed.

308.5.3 CODE OF FEDERAL REGULATION LIBRARY

The RTOC shall maintain a current library of UAV manuals, policy and procedures manuals, notices, and applicable FARs.

308.6 UAV PROCUREMENT

The Technology Management Program was adopted to create a uniform process for identifying, reviewing, vetting, planning, and approving technology for the Department. Prior to the purchase of a UAV, a request shall be submitted to the Department Technology Panel for review and approval.

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Upon the approval of the Technology Panel and Executive Command, a unit may operate their own UAV.

1. A unit seeking to purchase and operate a UAV may consult with the RTOC prior to submitting a request to determine if their operational needs could be satisfied by the RTOC.

308.7 UAV DEPLOYMENT

308.7.1 UNMANNED AIRCRAFT SYSTEMS INSURANCE APPLICATION

The RPIC shall ensure both the RPIC and UAV are insured. All County Aviation Insurance for all UAVs is coordinated through the UAV Chief Pilot and CEO Risk Management.

308.7.2 MISSION APPROVAL

Prior to deployment, the RPIC shall ensure the UAV mission has been approved in accordance with Policy 308.5.

308.7.3 PRE-FLIGHT INSPECTION

The RPIC shall check the UAV to determine whether it is in a condition for safe operation. The check could include a systems check via the UAV's launch station. If the UAV is found to not be in flight worthy condition, the reason shall be documented in the UAV Maintenance Record and the UAV shall be taken out of service until the discrepancy can be remedied. The RPIC shall notify the UAV Chief Pilot immediately if a UAV is taken out of service.

The preflight inspection shall include, but not be limited to, general overview of the UAV and supporting electronic equipment, battery condition and life, motors, mounts and propellers, cameras, and data cards.

308.7.4 MISSION BRIEF

Due to the nature of most UAV missions, the actual flight time shall be somewhat short. It is critical the crew utilizes good Crew Resource Management (CRM) to maximize the time on the mission.

Not all OCSD aircraft or missions can utilize a proprietary software to maintain the flight log data. In the event it cannot be utilized, the following procedures shall be used:

1. Prior to, or as soon as practicable after deploying the UAV on a mission, the RPIC and VO shall file the OCSD Mission Brief by completing the form via the Field Based Reporting (FBR) system. The RTOC shall maintain the mission briefs for audits and inspections of the UAV program.
2. After the mission has been completed, the crew shall conduct an After Action Report (AAR) to identify areas where they performed well and areas they can improve upon. The crew shall then file the AAR by completing the online form via the FBR system. The AARs shall be retained in accordance with Department's Records Retention and Disposition Schedule.

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308.7.5 WAIVER REVIEW

1. If required, the RPIC shall ensure a waiver has been filed, and approved by the FAA prior to conducting the mission.
2. If an emergency waiver is needed, the RPIC shall notify the FAA via telephone and gain appropriate written approval prior to conducting the mission. The written approval shall be forwarded to the UAV Chief Pilot at the earliest opportunity.
3. A copy of the FAA waiver must be accessible and available to the RPIC during UAV operations that are the subject of the waiver. A digital copy is acceptable.
4. The RPIC shall obey all terms stated in the applicable waiver(s) set forth by the FAA.

308.7.6 REMOTE PILOT IN COMMAND / VISUAL OBSERVER

1. The RPIC shall be responsible for ensuring the UAV flight is conducted safely and efficiently.
2. The RPIC shall ensure the UAV and all mission equipment are ready and operational for the mission to be conducted.
3. With vision that is unaided by any device other than corrective lenses, the RPIC must be able to see the unmanned aircraft throughout the entire flight in order to:
 - a. Know the unmanned aircraft's location;
 - b. Determine the unmanned aircraft's attitude, altitude, and direction of flight;
 - c. Observe the airspace for other air traffic or hazards; and
 - d. Determine that the unmanned aircraft does not endanger the life or property of another.
4. The Visual Observer (VO) shall be used as an aid to the RPIC, during all aspects of the mission, except in the following circumstances:
 - (a) As otherwise waived by the FAA.
 - (b) Exigent circumstances, to protect life or property, or to aid in a felony arrest under daytime conditions only. However, as soon as possible, a VO shall be used after the start of such missions. Additionally, prior to the first flight, the unit supervisor shall approve all missions when a VO is not being utilized.
5. The VO shall make sure the information is relayed to the RPIC with regards to collision avoidance with other objects and dangerous conditions.
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308.7.7 RECORDING / DATA

1. The primary purpose of UAV recordings is to document and preserve video for law enforcement related purposes. The UAV recordings should be used to enhance criminal prosecutions, improve officer and community safety, limit civil liabilities, provide a visual record of significant events, and contribute to future law enforcement training.

RPICs must activate the UAV's video recording device when they believe the footage has evidentiary value or would be useful for another law enforcement purpose.

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At a minimum, UAV recording shall begin once the footage begins to capture OCSD personnel participating in a call for service or other enforcement action. If UAV missions are recorded, recordings are to be uploaded to the Digital Evidence Management System (D.E.M.S.), a secure cloud-based storage system designated for evidence, or as a training tool. Note: UAV recordings are subject to production in response to a California Public Records Act (PRA) request, but may be withheld if part of an investigation into a crime or potential crime or subject to another exemption. (See Gov. Code, § 7923.600.)

2. The RPIC assigned to each flight shall be responsible for uploading onto D.E.M.S. after their mission. All recordings shall be booked pursuant to Policy 802. Recordings made by OCSD Members shall be kept on D.E.M.S. for the applicable retention period.
3. Recordings relevant to a pending criminal prosecution or pending civil claim or lawsuit will not be used as a training tool until the prosecution, claim, or lawsuit is resolved.
4. Subpoenas, PRA requests, and requests for discovery shall be directed to the Records Division.
5. Data shall be retained in accordance with the OCSD Retention Schedule.

REVIEW OF RECORDINGS

It is the policy of the Department to extend to its members the ability to review all available Department Media when writing reports, preparing for courtroom testimony and prior to making voluntary statements. Please refer to Policy 303 - Department Media for additional information regarding Department recordings.

308.7.8 POST FLIGHT INSPECTION

The RPIC shall inspect the UAV following the completion of each to ensure there is no damage to the UAV and the equipment has been properly shut down and stored away.

308.7.9 UAV ACCIDENT

If an accident occurs during the operation of the UAV and results in serious injury to any person, any loss of consciousness, or if it causes damage to any property (other than UAV) in excess of \$500.00 to repair or replace the property, the Flight Standards District Office shall be notified within ten days of mission completion per FAA guidelines. Notification shall be immediately made to the UAV Chief Pilot for investigation of any accident. Damage to a Department UAV shall be documented on a Damage to County Property form and attached to the AAR. The UAV Chief Pilot will forward the report to OCSD Risk Management via FBR.

308.8 UAV MAINTENANCE

308.8.1 MAINTENANCE PROCEDURES

1. Maintenance on Department UAVs is to be performed in house, by UAV maintenance personnel designated by the RTOC.
2. If maintenance cannot be performed in house, it is to be sent to the Original Equipment Manufacturer (OEM) or an approved service center.

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3. All UAV maintenance is to comply with manufacturer specifications, FAA Advisory Circular 43, and best practices set forth by the FAA.

308.8.2 MAINTENANCE DOCUMENTATION

1. UAV maintenance documentation shall be tracked with the UAV Maintenance Record. The UAV Maintenance Record shall keep records on flights, maintenance cycles, and the status of repair parts. .

308.8.3 BATTERY CARE / INSPECTION

1. Batteries are to be inspected before each flight, and at the end of each flight, with the exception of DFR missions when a VO and the UAV pilot are not at the physical location of the UAV. With DFR missions, the RPIC will verify the battery's health utilizing the UAV's software to ensure it is safe for operation.
2. If a battery is found to have bulging or excessive heat it is to be placed in a fire proof container until it can be disposed of properly.
3. Batteries are to be inventoried and inspected by UAV RPICs once a month, and if a battery is found to have lost charging ability, is damaged, or presents a fire danger, it is to be removed from service and placed into a fire proof container until it can be disposed of properly.

308.8.4 MAINTENANCE DISCREPANCIES

1. When a maintenance discrepancy is discovered, it is the responsibility of the RPIC to ensure that discrepancy is noted on flight log and the UAV Chief Pilot shall be notified.
2. Once a discrepancy has been noted in the UAV log book, the RPIC will also need to log it into the digital UAV Maintenance Log located on the Sheriff's Network.
3. If the discrepancy will affect the safety of flight, the UAV is to be grounded until the maintenance discrepancy can be remedied.
4. If the discrepancy does not affect safety of flight and can be deferred, the UAV Chief Pilot shall be notified.
5. If a UAV is grounded and not considered safe for flight (Red X), a red tag shall be attached to the UAV controller with the date which it was grounded, noting the mechanical problem with the signature of the person who grounded the UAV.
6. Maintenance records shall be maintained by the RTOC in accordance with Department's Records Retention and Disposition Schedule.

308.9 ONGOING POLICY MANAGEMENT

The Department shall continue to engage in meaningful review of UAVs and our policy as technology and UAV regulations advance.