

## 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). Safety, above all else, is the primary concern in each and every operation, regardless of the nature of the mission.

#### 308.1.1 DEFINITIONS

**After Action Report (AAR):** The AAR is completed after each mission by the Remote Pilot in Command (RPIC) to identify areas where the RPIC performed well and areas that can be improved upon. An AAR is only required when a UAV flight is not flown through the Axon Air application.

**Axon Air:** Axon Air is a UAV flight application that records flight data, pilot data, aircraft maintenance, a flight synopsis, and UAV training documentation.

**Flight Log:** When missions or training flights are flown through the Axon Air application, the mission or training flight data is recorded. RPICs shall update flight log data at the conclusion of the flight to ensure accurate tracking of flight data, pilot data, evidence collection, and aircraft maintenance. The RPIC shall also complete the flight synopsis section of the flight log to identify areas where the RPIC performed well and areas that can be improved upon.

**Master Maintenance Log:** A master maintenance log shall be maintained by the Air Support Bureau (ASB). The master maintenance log shall be comprised of information derived from each UAV's maintenance record on Axon Air.

**Maintenance Record:** The maintenance record on Axon Air 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 is not flown through the Axon Air application.

**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 and has the final authority and responsibility for the operation and safety of the UAV operation conducted under the Federal Aviation Administration (FAA) 14 Code of Federal Regulations (CFR) part 107. The RPIC shall also meet the training requirements as detailed in the ASB Training Manual.

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

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**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.

### **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 residence, enclosed yard, garage, other structure on 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.

### **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 the Federal Aviation Administration (FAA) 14 Code of Federal Regulations (CFR) Part 107, to ensure UAVs are deployed under the most current federal rules. The Department shall operate under 14 CFR part 107 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,

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- (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, 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.

#### **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 Air Support Bureau (ASB) Captain will manage the UAV program and shall manage the program to ensure safe, effective UAV deployments are within Department policies and procedures.

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 law.

The Department shall provide certified UAV pilots under 14 CFR Part 107 who can deploy UAVs consistent with Part 107 in a safe and efficient manner while in the performance of their official duties. The certified individual can be any Member who successfully passes 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).

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In consultation with the Air Support Bureau, 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 Certified Member
(b) Hazardous Devices Section missions	Unit Supervisor	Dynamic	Any 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 Certified Member
(d) Traffic Collision Investigations	Unit Supervisor	Dynamic	Any Certified Member
(e) Search and Rescue (SAR) missions as defined in the OCSD SAR Operations Manual	Unit Supervisor	Dynamic	Any Certified Member
(f) Public safety and life preservation missions to include 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 Certified Member along with one CPC 830.1 Member
(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 Certified Member
(h) Training flights in support of the OCSD UAV Training Manual	Unit Supervisor	Dynamic	Any Certified Member

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(i) In response to specific requests from local, state or federal fire authorities for fire response and prevention	Unit Supervisor	Dynamic	Any 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 Certified Member along with one CPC 830.1 Member
(k) Pursuant to a search warrant	Unit Supervisor	Dynamic	Any 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 Certified Member
(m) Production of video for OCSD and other County of Orange agencies/departments for promotional, educational and/or training purposes	Unit Supervisor	Dynamic	Any Certified 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 any trained Member in an emergency situation if a Sworn Member is not immediately available or may otherwise be more usefully deployed elsewhere.

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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. ASB shall ensure the following material, in current form, is available:

1. 14 CFR Part 43, 61, 91, and 107
2. UAV equipment manuals, owner's manuals, and flight handbooks for each type of UAV to be used.

#### **308.5.2 POLICY DISTRIBUTION**

A hard copy of this policy shall be placed in the ASB Policy and Procedures binder located in the Ready Room. This policy is also available on Lexipol, and viewable through the Sheriff's Intranet with future revisions for all Department Members to review.

#### **308.5.3 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.

#### **308.5.4 CODE OF FEDERAL REGULATION LIBRARY**

The ASB 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. 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 ASB prior to submitting a request to determine if their operational needs could be satisfied by the ASB.

### **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.

#### **308.7.2 MISSION APPROVAL**

Prior to deployment, the RPIC shall ensure the UAV mission has been approved by the unit supervisor.

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### 308.7.3 PRE-FLIGHT INSPECTION

The RPIC shall inspect each UAV prior to each mission. 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. If the aircraft and mission can utilize Axon Air, the RPIC shall complete the flight log to ensure accurate reporting of flight data, pilot data, evidence collection, a flight synopsis, and aircraft maintenance.

Not all OCSD aircraft or missions can utilize the Axon Air application. 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 ASB 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.

### 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 ASB at the earliest opportunity.

### 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. The Visual Observer (VO) shall be used as an aid to the RPIC, during all aspects of the mission, except under the following conditions. The RPIC, under exigent circumstances, may fly an initial tactical mission without the aid of a VO to protect life

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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.

4. The VO shall make sure the information is relayed to the PIC with regards to collision avoidance with other objects and dangerous conditions.
5. The VO shall assist the PIC in capturing video and data to be collected during the mission so it frees up the PIC to fly the UAV.

#### 308.7.7 RECORDING / DATA

1. The primary purpose of Unmanned Aerial Vehicle (UAV) recordings is to document and preserve video evidence for law enforcement related and non-criminal incidents. The UAV recordings should be used to enhance criminal prosecutions, improve officer safety, limit civil liabilities, provide a visual record of significant events, and contribute to future law enforcement training.

It is recognized that not all UAV calls or assignments will require the mission to be recorded. The RPIC should only record activities when, in their judgment, it would be beneficial to do so, or when requested by a patrol deputy/sergeant or collaborating partner/agency. If UAV missions are recorded, the RPIC will be responsible for determining whether the recordings are of evidentiary value. Evidentiary 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. If the recording does not contain evidence or any value for training, it will not be uploaded and saved to the D.E.M.S.. Note: UAV recordings unassociated with an investigation may be subject to production in response to a Public Records Act request.

2. The RPIC assigned to each flight shall be responsible for uploading onto D.E.M.S. after their mission. All recordings containing evidence shall be booked pursuant to Policy 802. Recordings made by OCSO Members shall be kept on D.E.M.S. for a minimum of 2 years (per approved Board of Supervisors Retention and Disposition Schedule). Recordings which are evidence in any claim or pending litigation, shall be preserved until the claim or litigation is resolved.
3. Recordings relevant to a pending criminal prosecution or pending civil claim or lawsuit will not be made for use as a training tool until the prosecution, claim, or lawsuit is resolved.
4. Subpoenas, California Public Records Act (CPRA) and requests for discovery shall be directed to the Records Division.

#### 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.



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#### 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 the 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 ASB.
2. If maintenance cannot be performed in house, it is to be sent to the Original Equipment Manufacturer (OEM) or an approved service center.
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 ASB Maintenance Record. The ASB 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.
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 PIC will also need to log it into the digital ASB Maintenance Log located on the Sheriff's Network.

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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 ASB 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.