

## 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 Pilot in Command (PIC) to identify areas where he/she performed well and areas he/she can improve 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 spreadsheet.

**Maintenance Spreadsheet:** The maintenance spreadsheet shall document all maintenance performed on a UAV. Each unit operating UAVs shall maintain a maintenance spreadsheet for each UAV. Maintenance spreadsheets shall be submitted to the UAV Chief Pilot on a quarterly basis.

**Mission Brief:** This form captures the nature of the UAV mission and provides the documentation necessary to track the use of UAVs.

**Person Manipulating the Controls:** A person other than the remote pilot in command (PIC) who is controlling the flight of a UAV under the supervision of the remote PIC.

**Remote Pilot in Command (Remote PIC or Remote Pilot):** 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 PIC shall also meet the training requirements as detailed in the ASB Training Manual.

**SQUAWK:** An aviation form utilized to document maintenance deficiencies on an aircraft.

**Unmanned Aerial Vehicle Chief Pilot:** The UAV Chief Pilot is the designated ASB UAV Pilot in Command (PIC) that will conduct flight evaluations on OCSD UAV PICs to ensure standardization of UAV deployments and to check knowledge of FAA regulations.

**Unmanned Aerial Vehicle (UAV):** A UAV (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 PIC and 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 PIC and VO shall ensure that operations of the UAV are consistent with federal, state, and local laws.

Absent a warrant or exigent circumstances, PICs and VOs shall adhere to FAA altitude regulations and shall not intentionally record or transmit images of any location where a person would have a reasonable expectation of privacy (e.g. inside residence, yard, enclosure).

PICs 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 the people 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,
  - (b) Bomb Squad 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 barricaded suspects, hostage situations, active shooters, apprehension of armed and dangerous and/or violent suspects, and high-risk search warrants,

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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,
- (h) Training flights in support of the Department UAV Training Manual,
- (i) In response to specific requests from local, state or federal fire authorities 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 certain felony had occurred or is occurring, or that a particular person committed or is committing a certain felony 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 is intended to provide personnel who are assigned to the Department UAV program with the responsibilities associated with the deployment of UAVs. The Air Support Bureau (ASB) 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 with regard to 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 qualified 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 qualified individual can be a sworn or non-sworn employee who must successfully 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).

The selection process for UAV pilots and visual observers will be initiated through a Department interest memorandum, and directed towards the Commander requesting the need for the UAV pilot or visual observer. The applicant's technical expertise and training background should be considered during the selection process, with the Commander making the final decision.

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 SUAS	Approval Authority	Deployment Type	Member
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Post-incident crime scene preservation and documentation	Unit Supervisor	Static/Dynamic	Any member (Sworn or Non-Sworn)
Bomb Squad missions	Unit Supervisor	Dynamic	Any member along with one CPC 830.1 member
Response to hazardous materials spills	Unit Supervisor	Dynamic	Any member along with one CPC 830.1 member
Traffic Collision Investigations	Unit Supervisor	Dynamic	Any member along with one CPC 830.1 member
Search and Rescue (SAR) missions as defined in the OCSD SAR Operations Manual	Unit Supervisor	Dynamic	Any member along with one CPC 830.1 member
Public safety and life preservation missions to include barricaded suspects, hostage situations, active shooters, apprehension of armed and dangerous and/or violent suspects, and high-risk search warrants	Unit Supervisor	Dynamic	Any member along with one CPC 830.1 member
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 member along with one CPC 830.1 member
Training flights in support of the OCSD UAV Training Manual	Unit Supervisor	Dynamic	Any member (Sworn or Non-Sworn)
In response to specific requests from local, state or federal fire authorities for fire response and prevention	Unit Supervisor	Dynamic	Any member (Sworn or Non-Sworn)

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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 certain felony had occurred or is occurring, or that a particular person committed or is committing a certain felony and use of the UAV does not infringe upon the reasonable expectation of privacy	Unit Supervisor	Dynamic	Any member along with one CPC 830.1 member
Pursuant to a search warrant	Unit Supervisor	Dynamic	Any member along with one CPC 830.1 member
Inspection of Orange County property and facilities, to include OCIAC locations designated under the US Department of Homeland Security's Critical Infrastructure Sectors.	Unit Supervisor	Dynamic	Any member (Sworn or Non-Sworn)
Production of video for OCSD and other County of Orange agencies/ departments for promotional, educational and/or training purposes	Unit Supervisor	Dynamic	Any member (Sworn or Non-Sworn)

#### 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.

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#### 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 PROCURMENT**

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 PIC shall ensure both the PIC and UAV are insured. All County Aviation Insurance is coordinated through the ASB Administrative Sergeant.

#### 308.7.2 MISSION APPROVAL

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

#### 308.7.3 PRE-FLIGHT INSPECTION

1. The PIC 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 log book and the UAV shall be taken out of service until the discrepancy can be remedied. The UAV log book shall be maintained by the unit that owns the UAV.
2. 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

1. Prior to, or as soon as practicable after deploying the UAV on a mission, the PIC and VO shall file the OCSO Mission Brief by completing the form via the ASB online link. The ASB shall maintain the mission briefs for audits and inspections of the UAV program.

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2. 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.
3. 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 ASB online link. The AARs shall be retained in accordance with Department's Records Retention and Disposition Schedule.

#### 308.7.5 WAIVER REVIEW

1. If required, the PIC 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 PIC shall notify the FAA via telephone and gain appropriate written approval prior to conducting the mission. The written approval shall be forwarded to ASB at the earliest opportunity.

#### 308.7.6 PILOT IN COMMAND / VISUAL OBSERVER

1. The PIC shall be responsible for ensuring the UAV flight is conducted safely and efficiently.
2. The PIC 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 PIC, during all aspects of the mission, except under the following conditions. The PIC, under exigent circumstances, may fly an initial tactical mission without the aid of a VO 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.
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 PIC 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 PIC will be responsible for

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determining whether to download it on a designated secure drive for evidence or as a training tool. If the recording does not contain evidence or any value for training, it will not be downloaded and saved to the designated secure drive.

2. The PIC assigned to each flight shall be responsible for downloading onto the designated secure drive after their mission. All recordings containing evidence shall be booked pursuant to policy 802. Recordings made by OCSD Members shall be kept on a secure hard drive at the office of the unit making the recordings 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 may be copied onto a DVD or removable drive for the purpose of booking as evidence or use as a training tool. 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. Every division using UAVs shall be responsible for creating and maintaining a Video Control Log. The Video Control Log shall be kept in a secure location at their division's office. The Video Control Log will consist of the date, time, deputy or officer making the copy, the deputy or officer receiving the copy, the number of copies made, and the DR number if applicable. The Video Control Log shall be signed by the deputy or officer making the copy and deputy or officer receiving the copy.
5. If a recording is needed for evidence, training, or review, OCSD Members shall make a copy of the recording then log the release in the Video Control Log.
6. If an OCSD Member books the Digital Media Evidence into evidence, they shall enter it into P.E.A.B.I.T.S. (Property/Evidence Automated Booking Information System). The evidence shall be placed in a manila envelope and stored in a locked locker in the same manner as any other piece of evidence.
7. Subpoenas, California Public Records Act (CPRA) and requests for discovery shall be filtered through the ASB and disseminated to the appropriate unit.

#### 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 PIC shall ensure after the mission is complete, the UAV has no damage and the equipment has been properly shut down and stored away.

#### 308.7.9 SHIFT LOG

The Department UAV Chief Pilot shall enter the UAV deployment into the ASB Shift Log after receiving both the Mission Brief and the After Action Form.



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#### 308.7.10 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, notification shall be made to the Flight Standards District Office within ten days per FAA guidelines. Notification shall be immediately made to the ASB for investigation of the accident. Damage to a Department UAV shall be documented on a Damage to County Property form.

### **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 is to be done utilizing the ASB Maintenance Log as a way to keep accurate tracking of Department UAVs. The ASB log shall keep records on flights, maintenance cycles, and the status of repair parts.
2. All maintenance conducted on Department UAVs shall be documented on the UAV Maintenance Spreadsheet.

#### 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 PICs 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 PIC to ensure that discrepancy is noted on the maintenance request for service on a "SQUAWK" form located in the log book for the UAV. The UAV's log book shall be retained in accordance with Department's Records Retention and Disposition Schedule.

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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.
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**

After action reviews should be generated to include the number of UAV operational deployments (not including training flights) conducted and a brief description of the missions flown along with the number of each type of mission. The Department shall continue to engage in meaningful review of UAVs and our policy as the technology advances.