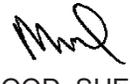


	VOLUSIA SHERIFF'S OFFICE GENERAL ORDER 42.21	Distribution All Personnel	Reissue/Effective Date 12/18/2019
		Original Issue Date 12/2019	Last Review NEW
Title UNMANNED AIRCRAFT SYSTEMS			
Section		AUTHORITY OF  /  MICHAEL J. CHITWOOD, SHERIFF	

To protect and serve with courage, honor and integrity by fighting crime, maintaining trust, and building community partnerships.

I. PURPOSE

The purpose of this general order is to establish guidelines for the safe operation of Volusia Sheriff's Office unmanned aircraft systems (UAS).

II. DISCUSSION

Unmanned aircraft systems provide an aerial viewpoint, as well as the ability to access locations a person cannot access or cannot safely access. These abilities make UAS a valuable tool for inspection, evidence collection, and public safety, such as search and rescue missions and critical incident response.

III. POLICY

It is the policy of the Volusia Sheriff's Office to deploy unmanned aircraft systems in a variety of approved missions covering critical incident response, suspicious packages, and threat assessment. Unmanned aircraft systems are only operated by personnel meeting FAA qualifications and VSO authorization and training requirements. All missions and training flights are flown within U.S. Code, Florida Statutes, and FAA Regulations.

IV. DEFINITIONS

Certificate of Waiver or Authorization (COA) – FAA waiver or authorization for an agency to self-certify UAS and operators for flights performing governmental functions.

Daylight Flight – Flight of a UAS that occurs one half-hour before sunrise and one half-hour after sunset. The time of sunset and sunrise are determined by the National Oceanic and Atmospheric Administration (NOAA).

Defined Incident Perimeter – A defined perimeter to be determined based on the scope of the operation and a defined operational ceiling at or below 400 feet above ground level (AGL)

Observer – Individual trained to maintain the line-of-sight and 360 degree hazard awareness around the UAS at all times and assist the pilot in carrying out all duties required for the safe operation of the UAS.

Pilot – The individual exercising control over the UAS during flight, who either

- Holds a current FAA remote pilot certificate with small UAS rating
- Is operating under a FAA certificate of Waiver/Authorization (COA).
- Is under the direct supervision of an individual holding a current FAA remote pilot certificate.

Remote Pilot in Command – Individual who is directly responsible for and is the final authority as to the operation of the small UAS.

Unmanned Aircraft System/Vehicle (UAS) – An aircraft without a human pilot on board. Its flight is controlled either autonomously by computers in the vehicle or under the remote control of a pilot on the ground or in another vehicle.

V. PROCEDURE

A. GENERALLY

1. All training, testing, and maintenance programs will fall under the oversight of the Investigative Services Section (ISS) Commander or his/her designee

B. UAS PILOTS

1. Pilots of small UAS are considered “pilots”.
2. UAS pilots will comply with all testing and vetting criteria as managed by the Investigative Services Section (ISS).

3. QUALIFICATIONS

- a. The requirements to pilot a VSO UAS are:
 - (1) Holder of a current FAA issued remote pilot's certificate with a small UAS rating.
 - The FAA Part 107 rules require the certificate holder to pass a recurring aeronautical knowledge test every 24 months to remain current.
 - (2) Approval to pilot VSO UAS from the ISS Commander or his/her designee.
 - (3) Are current with the VSO required proficiency training outlined below.

4. PILOT MISSION ELIGIBILITY

- a. All pilots must be able to show proficiency in specific core competencies in all UAS controls and operating systems in accordance with FAA regulations and this general order before being approved to fly missions.
- b. All pilots must have a minimum of three qualifying UAS flights, to include take-offs and landings, in the preceding 90 days to be eligible to fly UAS missions.

5. PROFICIENCY TRAINING

- a. In order to maintain proficiency, all pilots shall undergo monthly flight training. This training shall include at least one 15 minute flight with at least one take-off and landing along with a practical exercise as determined by the ISS Commander or his/her designee.
- b. All training flights shall be documented in the pilot's training records.
- c. Each pilot must attend in-service training once a year, to include updated industry standards.
- d. Any pilot that does not have documented training or flight time for 60 days or more is required to be retrained by another UAS pilot who is current.
 - (1) This training shall include a minimum of one hour ground instruction and flight time, including making three take-offs and landings to demonstrate proficiency.
 - (2) All pilots must complete the required flight time and documentation prior to operational deployment.
 - (3) Failure to maintain and prove proficiency will result in removal from UAS operations.

6. LOGBOOKS

- a. Pilots will be required to maintain an active electronic logbook, utilizing VSO approved software, which will document the Pilot's ratings and hours of operations.

C. UAS OBSERVERS

1. Initial Training:
 - a. Observers will have a current working knowledge of the airspace intended for operations, Air Traffic Control phraseology and communications requirements, specific UAS aerodynamic factors, and the ability to obtain and interpret weather information.

- b. The observer will receive training on their obligation to see and avoid other aircraft and the ability to identify position for purposes of relaying position reports to the pilot.

D. UAS CONDITION AND MAINTENANCE

1. The ISS Commander or his/her designee is responsible for ensuring UAS are maintained in flyable condition and required maintenance is completed and documented.
2. UAS will be maintained in a safe operating condition at all times.
3. Pilots will comply with all maintenance guidelines as administered by the VSO Aviation Unit.
4. Maintenance will be conducted per the operational requirements of the UAS manufacturer's suggested maintenance plan.
5. Each UAS will undergo a 100 hour inspection by the VSO ISS Technical Operations Group.
6. All maintenance logbooks will be completed and maintained by the member responsible for the completion of the maintenance and will be subject to review by the ISS Commander or his/her designee.
7. Prior to each flight, the UAS will undergo a pre-flight inspection by the remote pilot in command of the flight, who shall possess a current certificate designated for that type of aircraft and relevant knowledge of that aircraft's operating systems.

E. UAS AVAILABILITY AND STORAGE

1. The availability, control, and authorized conditions of use of UAS equipment shall be determined by the ISS Commander or his/her designee.
2. The ISS Commander, his/her designee, or higher authority is authorized to direct the use of a UAS during a given operation.
3. The use of UASs will be restricted to personnel who have completed the requisite training and have logged the required number of hours. ONLY Sheriff's Office members who have been specifically identified as a Sheriff's Office pilot under the VSO UAS program are permitted to operate UASs for official Sheriff's Office purposes. Use of personal UASs by unsanctioned personnel is prohibited. Storage of UASs will be mandated by needs of use but in any case will be controlled by the Investigative Services Section.
4. A digital log of use and training will be kept by all personnel including maintenance logs, certification logs, and flight proficiency and standards logs.
5. UASs must be properly registered with the Federal Aviation Administration (FAA).
6. Personnel authorized to operate UASs will be determined by the ISS Commander, his/her designee or above.

F. DEPLOYMENT CRITERIA

1. UAS equipment will be deployed under specific criteria in compliance with Fla. Stat. § 934.50 (2015) which outlines search and seizure usage by UAS equipment, referred to in the statute as "Drones."
2. UASs will be deployed under five main criteria:
 - a. Upon a lawfully executed search warrant signed by a judge, specifically authorizing the use of a UAS.
 - b. To counter a high risk of a terrorist attack by a specific individual or organization if the United States Secretary of Homeland Security determines that credible intelligence indicates that there is such a risk.
 - c. With reasonable suspicion that under particular circumstances swift action is needed to prevent imminent danger to life or serious damage to property.
 - d. With reasonable suspicion that under particular circumstances swift action is needed to forestall the imminent escape of a suspect or the destruction of evidence.
 - e. To achieve other purposes including, but not limited to, facilitating the search for a missing person.

G. FLIGHT OPERATIONS

1. GENERAL FLIGHT REQUIREMENTS

- a. No person may act a crewmember:
 - (1) Within eight hours after the consumption of any alcoholic beverage
 - (2) While under the influence of alcohol, narcotics, or any medication which may negatively affect the crewmember's ability to safely conduct the flight
- b. All missions will be flown in accordance with FAA regulations 14 CFR Part 107 and current FAA National Policy regarding UAS Operational Approval.
- c. UAS operations (UASOPS) will be conducted by two personnel at all times. One Sheriff's Office member will act as the pilot, the other Sheriff's Office member will act as an observer and safety officer. Responsibility for the safe operation of the aircraft will ultimately fall on the pilot.
- d. The UAS will weigh less than 55 pounds.
- e. All flights with the UAS shall be conducted under VFR conditions and at an altitude below 400 feet above ground level (AGL).
 - (1) VFR for the purpose of UAS use in the Volusia County Area of Operations (AO) will be 3 miles visibility and a cloud ceiling of 1,000 feet for day operations.
- f. The UAS will only be operated under visual line of sight only. The UAS must remain within the visual line of sight of the pilot or visual observer.
- g. The UAS must remain close enough to the pilot or visual observer to be capable of seeing the UAS with vision unaided by any device other than corrective lenses.
- h. The UAS may not operate over anyone not directly involved in the operation.
- i. The UAS will be flown during daylight/nighttime operations.
- j. The UAS will yield the right of way to other aircraft manned or unmanned.
- k. All officer safety operations will involve the use of a visual observer.
- l. The UAS operator will follow "see and avoid" procedures. First person camera views will not satisfy this requirement.
- m. All personnel authorized to operate UAS equipment will do so while minimizing possible danger to civilians or bystanders in the area.
- n. The UAS will not exceed the maximum altitude of 400 feet above ground level (AGL), or if higher than 400 feet AGL, remain within 400 feet of a structure, unless otherwise authorized by waiver.
- o. The UAS will be allowed to fly in Class B, C, D, and E airspace with the appropriate Air Traffic Control (ATC) clearances.
- p. Operations in class G airspace will be allowed without ATC permission.
- q. Only one pilot per UAS at any one time. Multiple observers are allowed when needed depending on conditions.
- r. To the extent possible, prior to a positive change in controls, the UAS will be landed prior to handing over the control unit.

2. PRE-FLIGHT BRIEFING

- a. A pre-flight briefing is required to be completed prior to all flights, in which both the pilot and observer must participate. The pre-flight briefing will include, but is not limited to the following:
 - (1) Mission – A review of the mission's goal and expected outcomes.
 - (2) Weather – A review of current and forecasted weather conditions.
 - (3) Pilot/observer duties
 - (4) Communication procedures – A review of communication procedures between pilot, observer, and other personnel used to support the mission. Including verifying phone

numbers or radio frequencies used to communicate with air traffic control in the event of a fly-away or other flight emergency.

- (5) Danger to non-participants/notification to interested parties
- (6) Notices to Airmen (NOTAMs) checked and filed, if necessary
- (7) Air Traffic Control (ATC) notified, if necessary
- (8) Check for temporary flight restrictions (TFRs)
- (9) Mission parameters area of operations boundaries – A review of the proposed flight area, including maximum ceiling and class of airspace.
- (10) Identification of mission limitations and safety issues – Such as battery charge, GPS strength, and potential for radio interference.
- (11) Emergency procedures – A review of emergency/contingency procedures including aircraft system failure, flight termination, divert, and lost link procedures.
- (12) Firmware updates – The UAS firmware is up to date.
- (13) Class of airspace checked. – The class of airspace determines whether ATC must be contacted for clearance to fly.
- (14) Checking video downlinks.

3. PRE-FLIGHT INSPECTION

- a. The remote pilot in command is required to complete the pre-flight inspection prior to takeoff.
 - (1) The inspection will be documented digitally using the VSO approved checklist.
 - (2) Any deficiencies found that would affect flight safety must be repaired before flight.
 - (a) The remote pilot in command may make any repairs within their training and abilities.
 - (b) Any required repairs outside the remote pilot in command's abilities will be completed by the Investigative Services Section's (ISS) Technological Operations Group.
 - (c) Any maintenance/repairs made will be documented in the UASs maintenance log.

4. FLIGHT VIDEO

- a. If the UAS provides the ability, video will be for the entire flight including takeoff and landing.
- b. To the extent possible, all video obtained through UAS equipment will be available through real-time telemetry.
- c. The drone's pilot for the flight is responsible for ensuring all video from the flight is uploaded into Digital Crime Scene (DCS) prior to ending their work shift.
- d. Flight video determined to not be evidence shall be retained for 180 days, unless determined otherwise through the administrative review process.

5. FLIGHT RECORDS

- a. All UAS training and mission flights shall be documented digitally using VSO approved software.
- b. All flights will be documented in an agency flight log. Each log entry shall include information regarding:
 - Duration of flight time
 - Reason for the flight
 - Time, date, and location of the flight
 - Name of the supervisor approving the deployment
 - Staff assigned
 - Summary of the activities covered, actions taken, and outcomes from the deployment

H. ACCIDENT/INCIDENT NOTIFICATION AND REPORTING

1. For all in flight accidents and incidents involving injury to any person, damage to property, other than the UAS, the remote pilot in command shall:
 - a. Notify the supervisor who authorized deployment of the UAS.
 - b. If the authority who authorized UAS deployment is not the supervisor over the incident for which the UAS was deployed, the incident supervisor shall be notified of the accident/incident.
 - c. The ISS Commander or his/her designee shall be notified of the accident/incident.
 - d. Complete a VSO report detailing the accident/incident.
 - e. All in flight accidents and incidents involving serious injury to any person or loss of consciousness, or property damage, other than to the UAS, in excess of \$500.00 shall be reported to the FAA by the remote pilot in command within 10 calendar days of the event.

I. FLIGHT VIDEO ADMINISTRATIVE REVIEW PROCESS

1. The administrative review process shall be the same as that used for reporting use of force; it shall be documented and reviewed through the respective chain of command to the Division Chief, or designee. If the Division Chief determines the recording needs additional review prior to finalizing a retention recommendation, a copy shall be sent to the Chief Deputy for final determination.
2. If a recording is accidental in nature, the deputy shall notify his supervisor. If the recording does not meet the agency's requirement for activation and the footage holds no law enforcement or public value for retention, the supervisor shall initiate the administrative review process and recommend an abbreviated retention period.
3. If a recording is related to a court order, citizen's complaint, or potential/pending legal issue, the recording may be kept for an additional period of time.
4. For recordings that require a retention period other than the standard 180 days, the Division Chief, or designee shall document the request via interoffice memorandum to the Digital Records Unit.

J. QUALITY CONTROL

1. Monthly the ISS Commander or designee shall randomly review 1-3 flight recordings to ensure that the UASs are being used in accordance with policy and shall identify any areas that may require additional training or guidance.

K. EVIDENCE

1. PHYSICAL EVIDENCE

- a. Any evidence collected in the form of physical samples, video, audio, biological sampling, or other evidence which may come into contact with the UAS will be deemed to have been collected by the operator piloting the UAS.
- b. The pilot of the UAS will be responsible for collecting, packaging, and submitting any physical evidence to the Evidence Section in order to preserve the integrity of any operations or investigations undertaken.

2. DIGITAL EVIDENCE

- a. Retention, research and disposal of flight video held as evidence shall be in accordance with *General Order 84.2 Digital Evidence Management System (DEMS)*