Unmanned Aerial System

613.1 PURPOSE AND SCOPE

The purpose of this policy is to establish guidelines for the use of an unmanned aerial system (UAS) and for the storage, retrieval, and dissemination of images and data captured by the UAS (Minn. Stat. § 626.19).

613.1.1 DEFINITIONS

Definitions related to this policy include:

Unmanned aerial system (UAS) - An unmanned aircraft of any type that is capable of sustaining directed flight, whether preprogrammed or remotely controlled without the possibility of direct human intervention from within or on the aircraft (commonly referred to as an unmanned aerial vehicle (UAV)), and all of the supporting or attached systems designed for gathering information through imaging, recording, or any other means (Minn. Stat. § 626.19).

613.2 POLICY

A UAS may be utilized to enhance the Office's mission of protecting lives and property when other means and resources are not available or are less effective. Any use of a UAS will be in strict accordance with constitutional and privacy rights and Federal Aviation Administration (FAA) regulations.

613.3 PRIVACY

The use of the UAS potentially involves privacy considerations. Absent a warrant or exigent circumstances, operators and observers shall not intentionally record or transmit images of any location where a person would have a reasonable expectation of privacy (e.g., residence, yard, enclosure). Operators and observers 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 UAS operations.

613.4 PROGRAM COORDINATOR

The Sheriff will appoint a program coordinator who will be responsible for the management of the UAS program. The program coordinator will ensure that policies and procedures conform to current laws, regulations, and best practices and will have the following additional responsibilities:

- Coordinating the FAA Certificate of Waiver or Authorization (COA) application process and ensuring that the COA is current, and/or coordinating compliance with FAA Part 107 Remote Pilot Certificate, as appropriate for office operations.
- Ensuring that all authorized operators and required observers have completed all required FAA and office-approved training in the operation, applicable laws, policies, and procedures regarding use of the UAS.

- Developing uniform protocols for submission and evaluation of requests to deploy a UAS, including urgent requests made during ongoing or emerging incidents. Deployment of a UAS shall require written authorization of the Sheriff or the authorized designee, depending on the type of mission.
- Coordinating the completion of the FAA Emergency Operation Request Form in emergency situations, as applicable (e.g., natural disasters, search and rescue, emergency situations to safeguard human life).
- Developing protocols for conducting criminal investigations involving a UAS, including documentation of time spent monitoring a subject.
- Implementing a system for public notification of UAS deployment.
- Developing operational protocols governing the deployment and operation of a UAS including but not limited to safety oversight, use of visual observers, establishment of lost link procedures, and secure communication with air traffic control facilities.
- Developing a protocol for fully documenting all missions.
- Developing a UAS inspection, maintenance, and record-keeping protocol to ensure continuing airworthiness of a UAS, up to and including its overhaul or life limits.
- Developing protocols to ensure that all data intended to be used as evidence are accessed, maintained, stored, and retrieved in a manner that ensures its integrity as evidence, including strict adherence to chain of custody requirements. Electronic trails, including encryption, authenticity certificates, and date and time stamping, shall be used as appropriate to preserve individual rights and to ensure the authenticity and maintenance of a secure evidentiary chain of custody.
- Developing protocols that ensure retention and purge periods are maintained in accordance with established records retention schedules.
- Facilitating law enforcement access to images and data captured by the UAS.
- Recommending program enhancements, particularly regarding safety and information security.
- Ensuring that established protocols are followed by monitoring and providing periodic reports on the program to the Sheriff.
- Maintaining familiarity with FAA regulatory standards, state laws and regulations, and local ordinances regarding the operations of a UAS.
- Developing protocols for reviewing and approving requests for use of the Office UAS by government entities (Minn. Stat. § 626.19).
- Preparing and submitting the required annual report to the Commissioner of Public Safety (Minn. Stat. § 626.19).
- Posting the Office policies and procedures regarding the use of UAV on the office website, as applicable (Minn. Stat. § 626.19).
- Reviewing the program and UAS use for compliance with Minn. Stat. § 626.19.

613.5 USE OF UAS

Only authorized operators who have completed the required training shall be permitted to operate the UAS.

Use of vision enhancement technology (e.g., thermal and other imaging equipment not generally available to the public) is permissible in viewing areas only where there is no protectable privacy interest or when in compliance with a search warrant or court order. In all other instances, legal counsel should be consulted.

UAS operations should only be conducted consistent with FAA regulations.

Members shall not use a UAS without a search warrant, except (Minn. Stat. § 626.19):

(a) During or in the aftermath of an emergency situation or disaster that involves the risk of death or bodily harm to a person.

(b) Over a public event where there is a heightened risk to the safety of participants or bystanders.

(c) To counter the risk of a terrorist attack by a specific individual or organization if the agency determines that credible intelligence indicates a risk.

(d) To prevent the loss of life or property in natural or man-made disasters and to facilitate operation planning, rescue, and recovery operations.

(e) To conduct a threat assessment in anticipation of a specific event.

(f) To collect information from a public area if there is reasonable suspicion of criminal activity.

(g) To collect information for crash reconstruction purposes after a serious or deadly collision occurring on a public road.

(h) Over a public area for deputy training or public relations purposes.

(i) For purposes unrelated to law enforcement at the request of a government entity, provided the request is in writing and specifies the reason for the request and a proposed period of use.

613.5.1 DOCUMENTATION REQUIRED

Each use of a UAS should be properly documented by providing the following (Minn. Stat. § 626.19):

(a) A unique case number

(b) A factual basis for the use of a UAS

(c) The applicable exception, unless a warrant was obtained

613.6 PROHIBITED USE

The UAS video surveillance equipment shall not be used:

- To conduct random surveillance activities.

- To target a person based solely on actual or perceived characteristics such as race, ethnicity, national origin, religion, sex, sexual orientation, gender identity or expression, economic status, age, cultural group, or disability.
- To harass, intimidate, or discriminate against any individual or group.
- To conduct personal business of any type.

The UAS shall not be weaponized (Minn. Stat. § 626.19).

613.6.1 ADDITIONAL PROHIBITIONS

Unless authorized by a warrant, a UAS shall not be deployed with facial recognition or biometric-matching technology (Minn. Stat. § 626.19).

Unless authorized by a warrant or for purposes of a permitted use outlined in this policy, a UAS shall not be used to collect data on public protests or demonstrations (Minn. Stat. § 626.19).

613.7 RETENTION OF UAS DATA

The Records Section supervisor shall ensure that data collected by the UAS is disclosed or deleted as required by Minn. Stat. § 626.19, including the deletion of collected data as soon as possible, and in no event later than seven days after collection, unless the data is part of an active criminal investigation (Minn. Stat. § 626.19).

613.8 PROCEDURE

See attachment: PCSO UAS Procedures.pdf

Attachments

PCSO UAS Procedures.pdf

Polk County Sheriff's Office
Unmanned Aircraft Systems Unit
Policy and Procedures Manual

PREFACE

The following procedures are intended to promote the safe and efficient operation of the department's unmanned aircraft. **SAFETY, above all else, is the primary concern in each and every operation, regardless of the nature of the mission.**

01.00.00 ADMINISTRATIVE MATTERS

01.01.01 The policies and procedures contained in this manual are issued by authority of the Sheriff as such it is an official document of the agency.

01.01.02 This manual is not intended to be all-inclusive, but as a supplement to other department guidelines, Federal Aviation Regulations, aircraft manufacturers' approved flight manuals, etc...

01.01.03 This manual has been written to address unmanned aircraft operations as they existed when the manual was drafted. Equipment, personnel, environment (internal and external), etc., change over time. The management of change (MOC) involves a systematic approach to monitoring organizational change and is a critical part of the risk management process. Given this fact, it is essential that this manual be periodically updated as necessary. The entire manual will be reviewed annually to assure it is up to date. Any changes to the manual will be communicated expeditiously to all affected personnel.

01.01.04 A copy of this manual (electronic or paper) will be issued to every member having unmanned aircraft responsibilities. In addition, a copy of the manual will be present during all UAS operations.

01.02.00 ORGANIZATION

01.02.01 The Unmanned Aircraft Operations Unit shall be comprised of those personnel assigned by the Sheriff and may include pilots, sensor system operators, visual observers, and others deemed necessary.

01.02.02 Unmanned aircraft operations are under the command of the Sheriff. Control and supervision of flight operations are hereby delegated to the UAS Chief Pilot. The UAS Chief Pilot may delegate such responsibility to UAS pilots and/or sensor system operators. Control and supervision of the law enforcement aspect of all UAS missions is retained by the Sheriff. The Sheriff may delegate such responsibility to other law enforcement personnel.

01.02.03 Personnel assignments may be on a full-time, or volunteer basis.

01.03.00 PERSONNEL

01.03.05 Sensor System Operators/Visual Observers (SSO/VO)

1. The sensor system operator/visual observer is responsible for assisting the pilot in scanning the airspace surrounding UAS operations and interpreting downlink data received from the UAS.
2. The sensor system operator/visual observer must maintain a valid drivers license.

02.00.00 SAFETY

02.01.00 The Sheriff is committed to a safe and healthy workplace, including:

1. The ongoing pursuit of an accident free workplace, including no harm to people, no damage to equipment, the environment and property.
2. A culture of open reporting of all safety hazards in which management will not initiate disciplinary action against any personnel who, in good faith, disclose a hazard or safety occurrence due to unintentional or intentional conduct.
3. Support for safety training and awareness programs.
4. Conducting regular audits of safety policies, procedures and practices.
5. Monitoring the unmanned aviation community to ensure best safety practices are incorporated into the organization.

02.01.01 It is the duty of every agency member to contribute to the goal of continued safe operations. This contribution may come in many forms and includes always operating in the safest manner practicable and ***never taking unnecessary risks***. Any safety hazard, whether procedural, operational, or maintenance related should be identified and corrected as soon as possible. Any suggestions in the interest of safety should be made to the Sheriff or Chief Pilot without reservation.

02.02.00 If any member observes, or has knowledge of, an unsafe or dangerous act committed by another member, the Sheriff, Supervisor or Chief Pilot is to be notified immediately so that corrective action may be taken.

02.06.00 SAFETY STAND DOWN

02.06.01 A safety "stand down" will be conducted annually. During a stand down, all members with unmanned aviation responsibilities assemble to review the agency safety program. It is also an opportunity to solicit changes to this manual, identify potential hazards, update emergency notification forms, conduct safety training, etc... The length of the meeting is dependent on the needs of the agency.

02.06.02 During the safety stand down meeting, normal operations are suspended to assure that all members are focused on the safety of the program.

02.07.00 MEDICAL

1. Each member shall report to work rested and emotionally prepared for the tasks at hand.
2. Physical illness, exhaustion, emotional problems, etc... can seriously impair judgment, memory and alertness. The safest rule is not to act as a flight crew member when suffering from any of the above. Unit members are expected to ground themselves when these problems could reasonably be expected to affect their ability to perform flight duties.
3. A self-assessment of physical condition shall be made by all flight crew members during preflight activities.
4. No member shall act as an air crew member within eight hours after consumption of any alcoholic beverage, while under the influence of alcohol, or while having an alcohol concentration of 0.04 or greater in a blood or breath specimen.

03.00.00 TRAINING

03.01.01 OBJECTIVE

1. The key to continued safe operations is maintaining a professional level of aviation competency. The first step in this process is establishing minimum qualifications for selecting aircrew. The second step involves training.

03.02.00 BUDGET

1. The Sheriff, or his/her designee, will meet with the UAS Unit Chief Pilot annually to ascertain training needs for the upcoming fiscal year. When applicable and subject to funding, appropriate budget documents will be prepared and submitted requesting the necessary funds to support training.
2. Every effort will be made, using resources that are available, to provide meaningful training to new and existing members.

03.07.00 USE OF PCSO UNMANNED AIRCRAFT SYSTEMS FOR TRAINING

1. PCSO unmanned aircraft systems may be used to meet training objectives.

04.00.00 GENERAL OPERATING PROCEDURES

04.01.00 CALL OUT PROCEDURES

1. PCSO, and other agencies' personnel, requesting UAS Unit support for planned events should submit the request to the Sheriff or designee at least 5 working days in advance of the event.

2. Requests for immediate support of unplanned events shall be made to the Public Safety Answering Point (PSAP) via telephone, radio, or in-person. The decision to respond UAS personnel will be made by the on-duty PCSO Sergeant after consultation with the UAS Unit Chief Pilot or his designee.

3. Once a request for UAS response has been approved by the on-duty PCSO Sergeant, PSAP personnel will notify UAS Unit Personnel via the radio, paging system or telephone. PSAP personnel will then dispatch any on-duty sensor system operator to the incident. If there is no sensor system operator/ Visual Observer on-duty, the PSAP dispatcher will advise the Chief Pilot.

4. Upon being directed to respond to an incident, the UAS pilot will pick-up the UAS Unit and respond to the identified staging area. Unless a sworn law enforcement officer is operating an emergency response equipped vehicle, UAS pilots and SSO/VOs shall obey all traffic laws while responding to the UAS staging area.

5. Whenever possible, only the pilot-in-command and the SSO/VO will occupy the flight operations area. All other personnel will observe from a distance that discourages conversational communication with the PIC and SSO/VO. Staff other than the PIC and SSO/VO may view downlinked imagery via a remote viewing terminal (RVT) located away from the flight operations area.

- PICs shall be responsive to the requests of the sensor system operator/visual observer in order to accomplish the mission.

04.05.02 SENSOR SYSTEM OPERATOR/VISUAL OBSERVER (SSO/VO)

- The SSO/VO is responsible for the law enforcement aspect of the mission.
- The SSO/VO will assist the pilot in maintaining visual awareness of the airspace and advise the pilot of any imminent hazards including other aircraft, terrain, and adverse weather conditions.
- The SSO/VO shall operate the payload and handle radio communications between ground units and dispatcher.
- The SSO/VO shall remain alert for suspicious persons or activities on the ground and coordinate response by ground units.
- The SSO/VO will avoid unnecessary communications with the pilot during takeoff and landing.
- The SSO/VO is the custodian of evidence. In this capacity, the SSO/VO is responsible for the safeguarding and proper processing of any evidence including, but not limited to, digital imagery to include still and video images.

04.05.03 CREW COORDINATION

- The PIC and SSO/VO will work together to form the crew which will ultimately accomplish mission objectives.
- In the interest of safety, both the PIC and SSO/VO must be comfortable with any decision made while working as a crew. This begins when deciding whether to accept a mission and continues throughout the mission. If there is genuine concern on the part of either the PIC, or SSO/VO, the mission should not be accepted or should be terminated.
- Concern on the part of either crew member should be immediately expressed to the other member. Effective communication is the key. Many times, reservations about something can be put to rest with a simple explanation.
- PICs and SSO/VOs have the right, as well as the responsibility, to question the other crew member whenever there is ambiguity, or they are uncomfortable with certain procedures, weather, etc.
- THE CREW CONCEPT AND OPEN COMMUNICATION WILL HELP ACHIEVE SAFE OPERATIONS.

04.08.04 WEATHER

1. Prior to initiating a flight, the pilot shall obtain a full weather briefing. The pilot will ensure that he/she gathers enough information to make themselves familiar with the weather situation existing throughout the area of operation.
2. Subsequent to the original weather briefing, pilots will obtain, as necessary, sufficient weather information to ensure that the flight(s) may continue safely. The frequency of these additional weather checks will be determined by the speed at which weather conditions are changing. Rapidly changing conditions require more frequent weather updates.
3. Weather minimums for UAS Operations are contained within section 14.04.04 of this manual.

04.08.05 DISPATCH and DOCUMENTATION

1. All flights will be dispatched per Polk County flight dispatch procedures. Prior to beginning flight activity, at least two Unit Members must concur that the flight can be conducted safely. Whenever possible, one of the members should be at a location other than the flight operations location. All flights will be documented in the (Polk County) UAS Flight Log.

04.08.06 PRE-FLIGHT PLANNING

1. The pilot shall familiarize themselves with all available information concerning the flight.
2. Pilots shall insure that all required FAA notifications have been made prior to conducting any flight.

04.09.00 GROUND HANDLING

1. The pilot is responsible for operation of UAS in the air and on the ground. Pilots will ensure that no unauthorized items are attached to the aircraft prior to movement. During movement, adequate clearance will be maintained.
2. Upon "Repack" of the unmanned aircraft the Pilot will ensure that all items are returned to their proper place using the system inventory checklist stored in the system case.

b. The specific kinds of information or data the unmanned aerial system will collect about individuals and how that information or data will be used, disclosed, and otherwise handled, including:
    i. The period for which the information or data will be retained; and
    ii. Whether the information or data will be destroyed, and if so, when and how the information or data will be destroyed.

04.11.00 ACTIVITY REPORTING PROCEDURES

1. Flight activities will be documented within the PCSO Flight Log. Search warrant compliance flights will be recorded on the Polk County Log and Initial Complaint Report.

04.12.00 CONSTITUTIONAL ASPECTS OF AERIAL SEARCHES

1. Aerial searches to inspect, or gather evidence on activity on the ground may, under some circumstances, intrude upon a person's reasonable expectation of privacy and therefore come under the protection of the Fourth Amendment to the U.S. Constitution.
2. The Supreme Court has cautioned against assuming that compliance with FAA regulations will automatically satisfy Fourth Amendment requirements. Instead, the courts will determine whether the law enforcement aircraft is in the public airways at an altitude at which members of the public regularly travel. Other considerations include; the type of property (open fields versus curtilage); frequency of other aircraft flights over the area; steps taken to conceal property and activity from aerial observation and location of the observer (altitude).
3. As a result of pertinent U.S. Supreme Court decisions, aerial searches of areas that can be reasonably interpreted to give rise to a reasonable expectation of privacy will be conducted no lower than 400' AGL absent possession of a search or arrest warrant specifying use of the UAS. This section is not intended to prohibit aerial searches of areas that do not give rise to a reasonable expectation of privacy or searches pursuant to a search warrant to be conducted at altitudes below 400' AGL. Additionally, in rare instances, extreme exigent circumstances would also justify searches of "reasonable expectation of privacy" areas at an altitude below 400' AGL.
4. Use of thermal imagers is passive and non-intrusive. In most circumstances, use of this device is not considered a search and does not require a search warrant. However, a 2001 U.S. Supreme Court decision (U.S. v. Kyllo), held that using sense-enhancing technology to obtain

04.13.04 Pre-Planning for Emergencies

1. Prior to any UAS operations, the pilot and/or SSO/VO will identify the nearest emergency medical facility and brief all involved personnel on an emergency transportation plan.

04.14.00 ADDITIONAL OPERATIONAL GUIDELINES

04.14.01 Personal use of Polk County's UAS is prohibited.

04.14.02 GENERAL – Unmanned Aircraft will be operated in accordance with this manual, UAS Manufacturer's manual and recommendations, letters of agreement, and Federal Aviation Regulations.

04.14.03 FLIGHT LIMITATIONS

04.14.04 Weather

1. Flight into instrument meteorological conditions, thunderstorms, or other severe weather is prohibited.
2. No operations will be conducted when the flight visibility is less than 3 statute miles (measured from the UAS control station).
3. All flights must be conducted at least 500' beneath any cloud ceiling.
4. Weather minimums are not applicable to indoor operations.

04.14.05 MAXIMUM AND MINIMUM ALTITUDES

1. The maximum altitude for operations is specified in the airframe/mission specific COA. For Part 107 operations, 400' AGL is the maximum altitude.
2. The minimum altitude is one at which operations can be conducted without undue risk to persons or property on the surface.

04.14.06 MISCELLANEOUS

1. Should the PIC or SSO/VO develop fatigue or a sudden illness, the flight shall be terminated as soon as practical.

04.15.00 ARMING OF UAS

04.15.01- Deployment of any type of projectile, chemical agent, or electrical current weapon from a PCSO UAS is **PROHIBITED**.

2. If possible, maintenance will be scheduled when it will have the least impact on operations.
3. The maintenance officer shall maintain the aircraft maintenance records.
4. The maintenance officer supervisor/chief pilot and Sheriff shall prepare the annual budget request for maintenance related needs. To do so, it will be necessary to accurately project which life-limited parts, or calendar-life components will need to be replaced, which systems require certification, required inspections, etc...

06.03.02 Pilot-in-command

1. Conduct a thorough preflight inspection of the aircraft in accordance with the aircraft checklist. The Discrepancy Reporting System shall be followed if problems are noted.
2. The Aircraft Flight Log shall be reviewed prior to flight and the appropriate data entered at the conclusion of each flight.
3. Pilots are generally not authorized to order repair work, parts, etc., from the commercial maintenance provider without prior approval. When exigent circumstances exist, pilots are authorized to order those repairs necessary to assure the aircraft is operational and safe. Such repairs shall be reported to the supervisor/chief pilot as soon as practical.
4. In accordance with the Federal Aviation Regulations (refer to FAR Part 43.3), pilots can perform preventive maintenance. All such work must be entered into the maintenance records.
5. The pilot is the final authority on whether an aircraft is airworthy.

06.04.00 DISCREPANCY REPORTING SYSTEM

1. For minor problems not requiring grounding, note the problem in the Aircraft Flight Log, complete a discrepancy form and notify the maintenance officer.
2. For major problems requiring grounding, note the problem in the Aircraft Flight Log, complete a discrepancy form, notify the maintenance officer and affix a placard to the system case indicating that the aircraft is not airworthy.
3. Software, hardware and firmware updates will be documented via discrepancy reporting system.