



Vermilion County Sheriff Department

Departmental Order

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Subject Unmanned Aircraft System	Date of Issue 07-01-22	Effective Date 07-01-22	Cancellation Date
Distribution All Sworn Officers	Special Instructions		

PURPOSE:

A drone's ability to reach inaccessible or dangerous locations has an advantage over manned helicopters because they eliminate the risk to human life. UAS have the potential to help in search and rescue missions by covering more ground and keeping police officers safe by providing an eye in the sky in dangerous situations. The UAS (Unmanned Aircraft System) will be used to enhance public safety and in assist law enforcement search and rescue operations.

- A. Tactical Operations:** The UAS will be used to enhance and support tactical operations in area of Vermilion County should a request for assistance be made and approval authorized. SOG (Special Operations Group) and narcotics operations, and detectives, during the execution of warrants, may utilize UAS to provide real time situational awareness of the target during high risk operations. The ability to provide this aerial view may enhance officer safety and document movements of officers and civilians.
- B. Search and Rescue:** Unmanned systems equipped with thermal/optical camera and multi-sensor navigation systems are designed to find people in rugged outdoor environments. The ability to use this aircraft to search large areas quickly using the attached technology equipment will improve the resolution of search and rescue operations.
- C. Crime and Collision Scene:** The USA can also be used for crime scene over watch; as well as, used to document and record crime scenes and accident scenes.

POLICY:

- A.** It is the policy of this agency to use UAS in coordination with law enforcement offices conducting specific missions as guided by the Certificate of Authorization

(COA) issued by the Federal Aviation Administration (FAA) &/or Part 107 Waiver. This policy is designed to minimize risk to persons, property, and aircraft during the operation of the UAS while safeguarding constitutional protections and privacy interests of all persons.

DEFINITIONS:

- A. UAS:** Unmanned Aircraft Systems.
- B. Operator (UA Pilot):** The individual responsible for the overall flight operations of a specific mission.
- C. Observer:** Monitor the flight characteristics of the aircraft while in communications with the operator to ensure proper flight and that the aircraft remains clear of obstacles and low flying air traffic. The individual responsible for the operation of all camera and remote sensing functions during UAS operations.
- D. COA:** For public operation, the FAA issues a Certificate of Authorization or waiver that permits public agencies and organizations to operate a particular UAS for a particular purpose, in a particular area. The COA allows an operator to use a defined block of airspace and includes special safety provisions unique to the proposed operation. COAs usually are issued for a specific period – up to two years in many cases.

PROCEDURES:

UAS operators and observers and supervisors will have the protection of citizen's civil rights and reasonable expectations of privacy as a key component of any decision made to deploy the UAS. UAS operators and observers and supervisors will ensure that operations of the UAS cause no greater intrusion on privacy interests than is necessary to carry out the mission in accordance with the law. To accomplish this primary goal this agency will:

- A.** When the UAS is being flown the onboard cameras will be turned so as to be facing away from occupied structures, etc to minimize inadvertent video or still images of uninvolved persons.
- B.** All video and still images will be maintained in strict compliance with Agency policies and procedures.
- C.** The UAS unit will not conduct random surveillance activities. The use of the UAS will be tightly controlled and regulated by the Sheriff or their designee.
- D.** The authorized missions for the UAS are:
 - a.** Video/photographs for investigative support (homicide Scene, SOG)
 - b.** HAZMAT Response
 - c.** Search and Rescue
 - d.** Barricaded persons / Hostage situations / Active shooters

- e. Traffic collisions
 - f. Disaster Response (floods, Tornado Damage, etc.)
 - g. Bomb Threats
 - h. All other requested uses will be approved by the Sheriff or their designee prior to deploying the UAS.
 - i. If UAS is going to be used over a residential property for an investigation a Warrant shall be obtained unless the UAS Commander can articulate probable cause that exigent circumstances exist. The Warrant should be obtained as soon as practical.
- E. The UAS program will operate strictly within the law and regulations. If in doubt, prior to operating the UAS the Sheriff or their designee will ensure that Warrants are applied for and obtained. The agency will balance all operations with the need to accomplish the mission while maintaining public privacy and the freedom from intrusions.
- F. A committee will be formed and meet at least annually, or when legal or regulatory issues arise, for the purpose of reviewing the existing UAS policy and procedures as well as new technologies and laws and regulations on UAS usage. The committee chaired by the Sheriff will consist of personal from UAS unit such as the UAS unit Commander, Operators and Observers, Professional Standards / Internal Affairs, Special Operations, Detectives and Patrol representatives, civilians who have specialized knowledge of UAS operations such as the Manufacture or FAA representatives. A copy of the policies and procedures (electronic and/or paper) will be issued to every person having UAS responsibilities.

PERSONNEL:

- A. The Sheriff shall be or will designate a command level officer to be the UAS Unit Commander. The Commander shall report directly to the Sheriff or Undersheriff. The UAS Commander shall be responsible for the overall direction and performance of the UAS unit.
- B. Responsibilities:**
- a. Selection of UAS personnel
 - b. Maintaining all training, flight and maintenance records for each operator and observer as well as individual airframes,
 - c. Maintain contact with the FAA and regulations as they change, calling for committee meeting when necessary to maintain up to date policies and procedures.
 - d. Evaluate airframes based on mission needs

- e. Maintain a current class II flight physical and proficiency on all UAS operated by the unit.
- f. Prepare a written "After Action – Mission Report" and brief the Sheriff or their designee.

C. Operators/Pilot in Command (PIC):

- a. An operator's primary duty is the safe and effective operation of UAS in accordance with the manufacturers' approved flight manual, FAA regulations and agency policy and procedures.
- b. Pilot Rating. Operators are authorized to conduct operations in accordance with the FSIMS 8900.1, Volume 16, Chapter 4, Section 1, Pilots. Operators must hold, at a minimum, a FAA Private Pilot Certificate, or FAA Remote Pilot Certificate, or the Manufacturer's UAS Flight School Certificate or a military equivalent. Currency in a manned aircraft is not required. The PIC's must be in general good health and not have any medical condition that could potentially hinder the safe flight of a mission or training exercise.
- c. Operators must remain knowledgeable of all FAA regulations COA; UAS manufacturer's flight manual and bulletins and Agency policy and procedures.
- d. Operators may be temporarily removed from flight status at any time by the UAS Commander, Undersheriff or the Sheriff for reasons including performance, proficiency, physical condition, etc. Should this become necessary, the operator will be notified verbally and in writing of the reason, further action to be taken and expected duration of such removal.

D. Observers:

- a. Observers must have been provided with sufficient training to communicate clearly to the operator any turning instructions required to stay clear of conflicting traffic. An observer's primary duty is to operate the UAS's equipment including cameras, FLIR, radio communications with patrol units as well as be an observer for anything that may affect the operator's primary duty (see and avoid).

E. Outside Jurisdiction – Request for Support – Mutual Aid:

- a. Requests for support from other government agencies within, or outside the jurisdiction of this agency will be forwarded to the UAS Commander who after consideration will either deny the request outright because the request is clearly outside the policy of the agency or forward the request to the Sheriff or the Undersheriff for approval for use of the UAS. Proper policy and procedure, as well as FAA regulations shall be followed when accepting mutual aid support for the UAS.

- F. Safety:** The Vermilion County Sheriff's Department is committed to having a safe and health workplace, including:
- a. The ongoing pursuit of an accident free workplace, including no harm to people, no damage to equipment, the environment and property.
 - b. 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 conduct.
 - c. Support for safety training and awareness programs.
 - d. Conducting regular audits of safety policies, procedures and practices.
 - e. Monitoring the UAS unit to ensure best safety practices are incorporated into the unit.
 - f. It is the duty of every member within the UAS unit to contribute to the goal of continued safety operations. This contribution may come in many forms and includes always operating in the safety manner practicable and never taking unnecessary risks. Any safety hazard, whether procedural, operational or maintenance related should be identified as soon as possible after, if not before, an incident occurs. Any suggestions in the interest of safety should be made to the UAS Commander.
 - g. If any member observes, or has knowledge, of an unsafe or dangerous act committed by another member, the UAS Commander is to be notified immediately so that corrective action may be taken.
 - h. In regards to safety, all members of the UAS unit are responsible for the following:
 - i. Ensuring all flight operations personnel understand applicable regulatory requirements, standards and organizational safety policies and procedures.
 - ii. Observe and control safety systems by monitoring all operations
 - iii. Review standards and the practices of agency personnel as they impact operational safety.
 - iv. Communicate all reported safety related problems and the corrective action taken. If there were any in-flight problems (or learned experiences)
 - v. Reading and understanding all pertinent safety information
 - vi. Reading and understanding all emergency safety bulletins
 - vii. It is emphasized again that safety is the responsibility of ALL members of the UAS unit.

G. Medical Factors

- a. Operator and Observers shall only deploy the UAS when rested and emotionally prepared for the tasks at hand.
- b. Physical illness, exhaustion, emotional problems, etc., can seriously impair judgement, memory and alertness. The safety rule is not to act as an operator or observer when suffering from any of the above. Member are expected to “stand down” when these problems could reasonably be expected to affect their ability to perform flight duties.
- c. A Self-assessment of physical condition shall be made by all members during pre-flight activities.
- d. Performance can be seriously hampered by prescription and over the counter drugs. Many medications cause drowsiness and hamper sound decision making abilities and reaction. The UAS commander will be advised anytime such drugs are being taken. If it is determined that the medication being taken could hamper an operator or observer, that member shall be prohibited from the deployment or exercise.
- e. No member shall act as an operator or observer within eight hours after consumption of any alcoholic beverage, or while under the influence of alcohol.

H. Operational Hazard and Occurrence Report (OHOR) and Investigations

- a. Occurrences are unplanned safety related events, including accidents and incidents that could impact safety.
- b. A hazard is something that has the potential to cause harm. The systematic identification and control of all major hazards is foundational to safety.
- c. The OHOR concept provides a mechanism to report hazards and occurrences, real and perceived, to those responsible for UAS operations.
- d. There is no specific OHOR form. The information provided is what is important. Incidents should be documented without hesitation to report any anticipated, current, or experiences safety hazard, or occurrence. Further, the OHOR can be submitted anonymously, and to whatever level in the chain of command of this agency to get the matter proper attention, without fear of reprisal.
- e. Every hazard and/or occurrence will be investigated, with the results and corrective action taken communicated to all members. The investigation will be conducted by the UAS commander and the designee of the Sheriff who has authority over internal investigations. Due to the technical aspects of the UAS operations an independent subject matter expert may be necessary in some cases to assure a thorough and complete investigation.

- f. ALL UAS MEMBERS ARE AUTHORIZED TO TAKE ACTION TO CORRECT A HAZARD if in that member's opinion delay will result in accident or injury. The UAS Unit Commander will be notified immediately in such situations.

I. Training

- a. The key to continued safe operations is by maintaining a professional level of competency. The first step in this process is establishing minimum qualifications for selecting members, and the second step involves training those personnel.
- b. In conjunction with fulfilling all FAA requirements for operator/observer duties, the new member will also become familiar with the agency UAS operations, and its related equipment.
- c. Before a member can fly as an operator, they must complete at least 8 hours of flight training with the UAS instructors to show proficiency of the flight training exercises and the airframe. This must be accomplished to who their ability and knowledge of the UAS in compliance with the manufacturer's manual and instructions.

J. Call Out Procedures / Use of the UAS:

- a. When feasible a supervisor will screen all initial requests to use a UAS from patrol or investigation units. All reasonable requests will be forwarded to the UAS commander for consideration. In the absence of the supervisor the dispatcher will forward the request to the UAS Commander.
- b. UAS Commander will screen the request using the following factors:
 - i. Is the proposed use of UAS within the capabilities of the UAS equipment and personnel to perform?
 - ii. Does the proposed use of the UAS fall within the FAA and departmental policies and regulations for UAS usage?
 - iii. Can the UAS be deployed safely given current weather conditions?
 - iv. If the UAS deployment requires a Warrant has one been requested and approved?
 - v. Are sufficient trained and qualified personnel available to safely operate the UAS?
- c. The UAS Commander will either accept or decline the request for UAS support. If the request is denied, the UAS Commander will provide a reason for declining the support request to the requestor. If the UAS Unit Commander accepts the support request he/she will contact the Sheriff or the Undersheriff for final authorization or denial.

- d. If the Sheriff or the Undersheriff accepts the support request the UAS Commander will contact a UAS operator and observer who will be provided all available mission information.
- e. The UAS operator is responsible for transporting the UAS and all required equipment to the scene. Upon arriving at the requested location the UAS operator will contact the on scene Incident Commander and will check in and receive a briefing on the mission requested. The UAS operator will make an on scene determination of the ability of the UAS to perform the requested mission safely and within department and FAA policies and procedures.
- f. If the UAS operator determines that the use of the UAS would violate department policy or directives, then the UAS operator will inform the Incident Commander of the potential conflict along with recommendations for modifying the requested mission to conform to the department policies and procedures. As this is a change from the original approved mission the UAS operator will contact the UAS Commander for direction on how to proceed. As soon as possible after the completion of the mission, the UAS operator will make a full report of the circumstances and their concerns to the UAS Commander.
- g. UAS operators will have sole discretion for declaring safety or violation of FAA rules. If the UAS operator determines that a requested mission would violate FAA rules or endanger civilians, then the UAS operator will respectfully inform the Incident Commander of the reasons for refusing to operator the UAS and contact the UAS Commander immediately. **The UAS will not be flown in this circumstance and the authority of the UAS operator is absolute.**
- h. If the UAS operator determines that the requested mission will potentially damage the UAS or its associated equipment the UAS operator will inform the Incident Commander of their concerns. The UAS operator will contact the UAS Commander as this is a deviation of the originally approved mission. The UAS operator will fully document and send a report to the UAS Commander.
- i. **The UAS shall not be used for the purpose of random surveillance.**
- j. If several separate requests for UAS support are received simultaneously, they shall be prioritized. In general terms, requests for UAS support are prioritized as:
 - i. Live Safety
 - ii. Evidence / Documentation

K. Flight Boundaries

- a. Although there may be requests for UAS support outside the jurisdiction of this agency the FAA Certificate of Authorization (COA) for the UAS restricts deployment to certain areas.
- b. At no time shall UAS support be granted outside this agency's jurisdiction without first obtaining an emergency FAA COA and approval by the UAS Commander.
- c. Maximum altitude shall not be set more than **400 feet** per the FAA COA.
- d. Line of Sight: All UAS operations shall be conducted within line of sight of the Operator or observer such as the operator or observer may detect and avoid hazards such as aircraft or property.

L. Minimum Personnel requirements:

- a. Due to the nature of the law enforcement mission, the minimum personnel required on ALL missions will be an operator and observer. Under no circumstance will an operator attempt to complete a deployment alone.
- b. Although training is not considered a mission, an observer shall be used.

M. Open communication achieves safe operations:

- a. The operator is directly responsible for, and is the final authority over the actual operation of the UAS.
- b. Operators have absolute authority to reject a flight based on personnel safety or violation of FAA regulations. No member of this agency, regardless of rank, shall order an operator to make a flight when, in the opinion of the operator, it poses a risk to personnel or is in violation of FAA regulations.
- c. Operators are responsible for compliance with this manual, department policy and procedure and FAA regulations.
- d. The operator's main duty during the deployment of the UAS is to operate the UAS safely while accomplishing the goals of the deployment.
- e. Operators shall see-and-avoid any obstacle that will lessen safety during the mission.
- f. Operators shall be responsive to the requests of the observer in order to accomplish the deployment.
- g. Operators shall be responsive for documentation for their mission training and updating of their flight books
- h. Observers shall see-and-avoid any obstacle that will lessen safety during the mission.

- i. Observers are responsible for the law enforcement aspect of the deployment.
- j. Observers shall operate any attachments to the UAS, allowing the operator to maintain complete focus on the operation of the UAS.
- k. Observers shall remain alert for suspicious persons or activities on the ground and coordinate response by ground units.
- l. Observers shall monitor the radio updates
- m. Observers shall assist the operator in the main objective of safe operations of the UAS.
- n. Observers shall be responsible for documentation of their mission training and updating their flight books.

N. Personal Equipment

- a. Operators/Observers shall wear eye protection at all times while the UAS is in flight.
- b. Although there is no specific uniform for the UAS unit or required for proper operation of the UAS, the operator/observer should take necessary measures to deploy in a professional manner. Operators and observers shall wear clothing that easily identifies them as members of this agency.
- c. Operators/Observers will take into consideration the current weather conditions when planning to deploy, and wear appropriate clothing to deploy comfortably.
- d. Use of the radio, cell phone or other device is strictly prohibited **by the operator** during flight per the COA.

O. Pre-Flight/Post-Flight Actions:

- a. Operators/Observers are both responsible for a thorough preflight inspection of the UAS.
- b. Before and after each deployment (whether an incident or training), the operator and observer shall conduct a thorough inspection of the UAS in accordance with the instructions contained in the manufacturer's user's manual.
- c. Any issues found that will put in jeopardy the safe operation of the UAS shall be documented and resolved immediately prior to flight.
- d. It has been recognized that the use of a checklist is a significant method to combat UAS accidents. A pre-flight and post-flight checklist will be conducted in accordance with the manufacturer's instruction and will be utilized prior to each flight.

- e. Any physical equipment that cannot be resolved on-site, and which have an impact on safety or the mission, will override the deployment. These issues will be resolved before flight.

P. Weather

- a. Before each deployment the operator/observer will ensure that he/she gathers enough information to make themselves familiar with the weather situation existing throughout the area of deployment. The operator shall utilize FAA approved weather resources to obtain the latest and most current weather conditions.
- b. An anemometer or wind meter should be utilized in order to better estimate the wind speed and determine if it is within the capabilities of the airframe being flown.
- c. Operators/Observers should use the Beaufort Scale when making deployment decisions in regards to wind conditions. This scale can be located in the manufacture's user's manual.
- d. The weather conditions reported for the operation shall be recorded in the flight log.
- e. The operator shall ensure that the flight will occur within FAA VFR (Visual Flight Rules) weather requirements.
- f. Inspection and weather will be documented prior to flight within the log book.

Q. Planning

- a. The operator/observer shall familiarize themselves with all available information concerning the deployment including, but not limited to, the weather conditions, hazards, description of the incident, deployment goals, etc.
- b. Operators will ensure that the location for take-off and emergency landing is adequate for a safe deployment.
- c. The take-off/landing location should be clearly marked and identifiable with electric flares and short cones.
- d. At least one emergency landing area should be identified per deployment.
- e. Operators will ensure that they are aware of their surroundings in the event that an emergency landing is necessary. This includes the ability to recover the UAS.

R. Documentation:

- a. After each flight, the operator will complete a statement documenting the UAS operations.
- b. After each deployment, all video obtained by the UAS operation will be submitted to evidence in accordance with Agency policy and State of Illinois.
- c. Aerial photography (still or video) shall be stored in accordance with Agency policy and procedure and State of Illinois.
- d. The operator of the UAS is responsible for evidence handling as well as writing any supporting documentation for the incident.

S. Maintenance:

- a. Although there are few parts on the UAS that need servicing, it is necessary that the manufacturer's maintenance schedule is followed and properly documented.
- b. Any issues that arise during maintenance that cannot be resolved by routine methods shall be forwarded to the manufacturer for further technical support.
- c. Maintenance and service records associated with the UAS shall be maintained by the UAV Commander for UAV of the agency.
- d. Operators and or Supervisors of Unmanned Aircraft Systems (UAS) shall maintain manufactures software updates and operating requirements.



W. Patrick Hartshorn

Sheriff