




**City of Winchester  
Fire & Rescue Department  
STANDARD OPERATING PROCEDURE**



<b>Section:</b>	Rescue and Special Operations	<b>SOP:</b>	10.5
<b>Subject:</b>	Small Unmanned Aerial Systems Operations	<b>Executed:</b>	June 11, 2018
		<b>Revised:</b>	
<b>Approved:</b>			
 Allen W. Baldwin, Fire Chief			

**PURPOSE**

To provide Winchester Fire and Rescue (WFRD) personnel who have assigned responsibilities associated with the deployment and use of small Unmanned Aircraft Systems (sUAS) with direction on how and when to use this technology.

**POLICY**

The mission of the sUAS program is to provide aerial support and assistance to any municipal service during situations where the operating environment is too hazardous or unreachable by other means. The information obtained by this service shall be used in accordance with the law at all times and where aerial advantage will provide increased efficiency in operations.

It shall be the policy of the WFRD that only trained and authorized agency personnel may deploy sUAS when such use is appropriate in the performance of their official duties and where the collection and use of any audio/video recordings or other data originating from or generated by the sUAS, comport with the policy provisions provided herein and by applicable laws. Prior to each mission, a determination shall be made as to operating as a Part 107 entity or following the City Certificate of Authorization (COA). These two shall never be combined for use in the same mission.

Considerations for using sUAS by WFRD personnel shall always consider the preservation of safety for personnel and the public. All deployments of sUAS must be specifically authorized only by supervisory personnel. The WFRD has adopted the use of sUAS to provide an aerial visual perspective in responding to and operating at emergency and/or disaster situations, exigent circumstances, and for the following objectives:

- Situational Awareness
- Thermal Sensing
- Search and Rescue
- Visual Perspective
- Incident Command and EOC Support
- Scene Documentation
- Pre-incident Planning
- Training
- Public Education

## **PROCEDURES**

1. The WFRD must obtain and maintain current applicable authorizations, certificates, or registrations required by the Federal Aviation Administration (FAA) prior to deploying or operating any City owned sUAS.
2. A Remote Pilot-In-Charge (RPIC) will supervise the mission and the aircrew during all operations. The sUAS will be operated only by personnel (pilots and crewmembers) who have been trained and certified in the operation of the sUAS.
3. At a minimum, there shall be one (1) RPIC crewmember for sUAS operations. This person may function as the RPIC and Visual Observer (VO) at the same time. The desirable minimum crewmember requirements for sUAS operations are three (3), one (1) RPIC, one (1) Visual Observer (VO), and one (1) scribe/liaison. The Scribe/Liaison's responsibilities will be flight logging, radio communications, data management, and liaison to other public officials. If assigned, the VO shall maintain a safe distance from the RPIC to give an alternate perspective of the sUAS in operation.
4. Notification requests for sUAS services shall be made only by a municipal supervisor through the Winchester Emergency Communications Center (ECC) 540-662-1111 and requesting the sUAS team for deployment. The ECC shall notify the sUAS team by utilizing the established sUAS page group. The page shall include the statement "sUAS Deployment Request" in the notification message. Team members will confirm their response ETA with the ECC, and coordinate the gathering of the necessary sUAS equipment needed to respond to the incident location. The sUAS team shall be considered available at all times unless they specifically notify the ECC otherwise. The ECC shall generate a CAD incident report at the time personnel confirm their response to the ECC.
5. Prior to any flight operations, the sUAS personnel shall inspect and test sUAS equipment before each deployment to verify the proper functioning of all equipment and the airworthiness of the sUAS. A pre-flight check of the sUAS shall be completed in accordance with the manufacturer's recommendation and

operated in accordance within manufacturer specifications and applicable FAA limitations and restrictions.

6. The sUAS equipment is the responsibility of the sUAS crewmembers and will be used with reasonable care to ensure proper functionality. Equipment malfunctions shall be brought to the attention of the team leader as soon as possible so that an appropriate repair can be made or a replacement unit can be procured.
7. Except in Law Enforcement/Fire Marshal related incidents, the sUAS equipment and all data, images, video, and metadata captured, recorded, or otherwise produced by the equipment is the sole property of the City of Winchester. All data shall follow Federal, State, and Local laws for data retention.
8. Safety of the sUAS operations (including persons and property) is the responsibility of the entire team and therefore Crew Resource Management shall be utilized for all sUAS operations. sUAS team members should bring to the attention of other members and on-scene supervisors any condition that they feel is a safety concern.
9. The privacy of individuals shall follow established federal, state and local laws.
10. All sUAS team members will be familiar with the City of Winchester Certificate of Authorization (COA) and associated attachments. All sUAS team members shall comply with all limitations, restrictions and requirements as enumerated in the COA.
11. Members shall not utilize personal aircraft while on duty, in uniform, or while representing the WFRD.
12. All radio communications required by the FAA shall be complied with. Communications with sUAS team members during operations will be limited to operationally necessary communications in order to minimize disruptions to sUAS team members and incident operations. sUAS operations shall consider utilizing alternate radio talkgroups for flight operations. The aircraft unit designator shall be utilized when communicating with the on-scene incident commander or other municipal services (e.g., AIR 6-1).
13. A flight risk assessment profile shall be completed prior to all flight operations.
14. A pre-flight checklist shall be developed and utilized prior to all flight operations.
15. All flights shall be documented utilizing the WFRD subscription to "Drone Logbook" and include all information pertaining to the flight. In addition, each deployment of the sUAS shall include information regarding the reason for the

flight; the time, date, weather conditions, and location of the flight; the agency and name of the supervisor approving the deployment and the staff assigned; and a summary of the activities covered, actions taken, and outcomes from the deployment.

16.A post-flight check of the sUAS will be completed in accordance with the manufacturer's recommendations.

17.Where there are specific and articulable grounds to believe that the sUAS will collect evidence of criminal wrongdoing and/or if the sUAS will be used in a manner that may intrude upon reasonable expectations of privacy, the requesting agency shall obtain a search warrant as applicable by state/local code prior to conducting the flight unless appropriate permissions are obtained by legal owners/occupants to which legal authority can be granted to conduct flights above their property.

## **RESTRICTIONS on USING the sUAS**

The sUAS shall be deployed and used to support official law enforcement, fire and rescue, other official public safety missions, training, public education, or other official business. The sUAS shall not be operated in an unsafe manner or in violation of:

- **United State Constitution:** 4<sup>th</sup> Amendment
- **Code of Federal Regulations:** 14 CFR Part 107
  
- **Code of Virginia:** 18.2-121.3 - Trespass with an unmanned aircraft system; penalty
- **Code of Virginia:** 19.2-60.1 - Use of unmanned aircraft systems by public bodies; search warrant required
- **Code of Virginia:** 18.2-130.1 - Peeping or spying into dwelling or occupied building by electronic device; penalty
- **Code of Virginia:** 27-151 - Authority of Chief or other officer in charge when answering alarm; penalty for refusal to obey orders
  
- **Code of the City of Winchester:** Sec. 16-12. - Entering or remaining on property of another after having been forbidden to do so
- **Code of the City of Winchester:** Sec. 16-13. - Instigating, etc., trespass by others; preventing service to persons not forbidden on premises.
- **Code of the City of Winchester:** Sec. 16-14. - Peeping toms.

## **DME RETENTION and MANAGEMENT**

All Digital Multimedia Evidence (DME) shall be handled in accordance with existing City of Winchester policy on data and record retention and where applicable by law. The sUAS-certified personnel will record information for each flight that shall include

the date, time, location, and case reference numbers or other mission identifiers and identify the sUAS personnel involved in the mission. sUAS-certified personnel shall not edit, alter, erase, duplicate, copy, share, or otherwise distribute in any manner sUAS DME.

It is understood that all DME shall be provided to authorized agencies in an expedient manner that have made an official request for the sUAS services and is part of an official operation. No DME shall be maintained by the WFRD sUAS team at any time. Additionally, non-classified and/or other legally permissible DME can be shared by the WFRD sUAS team for public information, training, professional peer group informational sharing, and/or other instances if approved by the official requesting agency.

While in possession, all access to sUAS DME must be specifically authorized by the official requestor and all access shall be audited to ensure that only authorized users are accessing the data for legitimate and authorized purposes.

Files should be securely stored in accordance with approved policies and state records retention laws and retained no longer than necessary for purposes of training, emergency scene documentation, damage assessment reporting, use in an investigation or prosecution, or other approved need.

## **sUAS SUPERVISION and REPORTING**

An authorized sUAS administrator will audit flight documentation at regular intervals. The results of the audit will be documented. Any changes to the flight time counter will be documented.

The administrators of the program will monitor and regularly evaluate the effectiveness and value of the sUAS program to determine whether continued deployment and use is warranted on operational, tactical, and technical grounds. Administrators will review after-action reports and analyze data on number of missions, types of missions, and mission locations.

## **TRAINING**

Personnel who are assigned to the sUAS program must be certified as a 14 CFR Part 107 Remote Pilot within six months of being accepted to the sUAS team. Additionally, all sUAS team member must complete all approved training as designated by the WFRD to ensure proper use and operations, as well as to meet the minimum requirements of the COAs that are in place for the City of Winchester. Additional training may be required at periodic intervals to ensure the continued effective use, operation, proper calibration, and performance of the equipment and to incorporate changes, updates, or other revisions in policy and equipment.

All personnel with sUAS responsibilities, including command officers, shall also be trained in local, state, and federal laws and regulations, as well as policies and procedures governing the deployment and use of sUAS. At a minimum, sUAS team members shall log a minimum of 3 take-offs and landings every month to maintain proficiency. This shall include flight operations exhausting at least 3 full battery cycles while conducting flying, still and video operations, and simulated in-flight emergencies.

## **MAINTENANCE and SERVICING**

All maintenance and servicing of sUAS equipment shall be in accordance with manufacturer's recommendations.

Any repairs shall be made only after consulting (as appropriate) with qualified manufacturer repair technicians. Should a repair be needed that is beyond the capabilities of sUAS team members, the aircraft shall be sent to a qualified repair center for repairs.

sUAS team members shall ensure that a spare tool and parts kits are available for deployment to allow sUAS operators to remedy minor issues in the field (e.g. tightening loose screws, replacing antennas, changing pod straps, etc.)

## **DAMAGE REPORTING**

Any damage to the sUAS or its support equipment shall be immediately reported to a sUAS team leader. Any damage to the sUAS or its equipment that is determined to render the system un-airworthy shall be labeled so as to be visually observable. A sUAS supervisor shall be contacted and advised. Any property damage shall follow current Department/City policy and FAA regulations for reporting such occurrence.

## **BATTERIES MAINTENANCE**

sUAS batteries will be maintained in a sufficient state of charge to ensure immediate operability upon deployment. Batteries shall be maintained as per manufacturer's recommendations. All batteries shall be exercised periodically to maintain longevity.

## **STORAGE/TRANSPORTATION**

The sUAS and support equipment will be securely stored as determined by WFRD facility in the designated trailer/container or vehicle for timely portability and deployment. Prior to transporting the sUAS for deployment, the sUAS team member responsible for transport will ensure that all necessary gear is loaded by comparing the gear with the sUAS equipment checklist and ensure that all aircraft and equipment is securely stored for transportation.