

ADMINISTRATIVE POLICY					
Wake Forest Fire Department Inc.					
Subject	Number	Rev	Effective Date	Page	Of
UNMANNED AIRCRAFT SYSTEM 	100-56		July 1, 2017	1	4
	Supersedes	Prepared By		Approved By	
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1. PURPOSE:

The purpose of the Wake Forest Fire Department (WFFD) Unmanned Aerial System (UAS) policy is to set out clear guidelines for the operation of vehicles in support of the services provided by the Wake Forest Fire Department. The overriding goal is to provide a framework for safe operation and the accomplishment of the mission required to satisfy the mission requirements under applicable rules and regulations.

2. SCOPE:

This policy will apply to all WFFD personnel and pilots authorized to operate UAS aircraft in support of the WFFD mission.

2.1. The aviation policy is divided into *authorized* mission categories that the UAS may operate in at this time.

- 2.1.1. Structure Fire
- 2.1.2. Outdoor Fire
- 2.1.3. Missing Person
- 2.1.4. Post Incident Assessment

3. PROCEDURE:

3.1. WFFD personnel authorized to operate the UAS must meet the required minimum qualifications as put forth by the Federal Aviation Administration (FAA) for the operation of UAS craft. This requires at a minimum that the pilot holds a valid pilot FAA certificate of operation for UAS aircraft and the certificate is active. Additionally,



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authorized pilots must possess a valid North Carolina government UAS operator permit obtained from the North Carolina Department of Transportation, Division of Aviation.

3.2.WFFD UAS pilots will operate the aircraft at all times with the safety of the public as the primary goal while making all efforts to accomplish the specific mission at hand.

3.3.The WFFD pilot will operate under the designation of (Car 6) and be labeled as the aviation unit of the WFFD. WFFD will appoint a chief pilot to be responsible for the oversight and operational use of all UAS operated by the WFFD. The chief pilot will hold all FAA operational certifications and UAS operational flight experience. The chief pilot will also be responsible for the supervision of future additional pilots and FAA required Visual Observer training.

4. GENERAL OPERATIONAL REQUIREMENTS:

4.1.When arriving at the scene of a WFFD mission, the pilot will position his vehicle in such a location that would permit for the safe launch and recovery of the UAS. The launch and recovery location of the UAS will be determined by the pilot and may not be co-located with the scene commander location if, at the sole discretion of the pilot, the mission can be better and safer accomplished from an alternative launch and recovery location.

4.2.If members of the public are nearby the pilot will then tape off a no entry zone for all others to not enter. This will be at least a 10 foot radius around the proposed takeoff and recovery point.

4.3.All WFFD operations should be in compliance with the FAA issued UAS operation guidelines AC-107-2 which are made a part of this policy. In addition, when operating at night, the UAS must have active visual strobe lights operational to allow for the identification of the craft in the air.

4.4.All WFFD field personnel must complete a training class to become a qualified approved Visual Observer (VO) to assist the WFFD pilot during the operation of the UAS. The primary responsibility of the VO will be to ensure the UAS remains clear of any potential collision hazard, maintain an awareness of the position of the UAS, and effectively communicate with the pilot.



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- 4.5. The WFFD UAS pilot will operate under the direction of the scene commander but the pilot maintains the sole and exclusive responsibility of operating the UAS in a manner acceptable to the pilot. This might mean the refusal to fly if the situation is determined to be unsafe in the sole discretion of the UAS pilot in command (PIC).
- 4.6. WFFD will dispatch the UAS PIC secondary to any incident dispatch. It will be the decision of the incident commander to determine when the UAS should be dispatched to the approved incident mission types.
- 4.7. The WFFD PIC will be required to be in radio contact with the scene commander and WFFD VOs at all times.
- 4.8. The UAS will be required to be held in an operational status at all times practical. This will require regular review of hardware and software and inspection of all components to maintain operational use and mission readiness.
- 4.9. The WFFD PIC will carry the UAS in his/her vehicle and be responsible for the delivery of the UAS and operation at a designated scene.

5. APPROVED UAS MISSION CATEGORIES

5.1. STRUCTURE FIRE

- 5.1.1. The WFFD UAS can serve a valuable role during a structure fire. Utilizing both the visual and FLIR (Forward Looking Infrared) camera on the aircraft the commander can obtain significant information about the status of the fire and building.
- 5.1.2. Flight operations during a structure fire will be at the request of the commander but all operations are to be conducted in the manner approved by the PIC.

5.2. OUTDOOR FIRE

- 5.2.1. Outdoor fires can create a secondary complication regarding the operation in the line of sight if tall trees obstruct the pilot's view of the UAS. At the sole discretion of the pilot it may be necessary to request a ladder truck to lift the pilot up above obstructions to maintain a line of sight with the aircraft if the aircraft cannot accomplish the mission with solely a vertical ascent within the line of sight.
- 5.2.2. The utilization of the UAS at an outdoor fire will allow the scene commander to determine the extent of the fire and/or areas of the fire that should be prioritized.



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Utilizing the onboard FLIR camera will provide additional information not otherwise available.

5.3.MISSING PERSONS

5.3.1. Depending on the target search area of the missing person search area, it will most likely require the pilot to conduct flight operations from the bucket of the ladder truck to maintain line of sight operations. The need for the ladder truck and elevated platform will be at the sole discretion of the pilot.

5.3.2. Utilizing the onboard FLIR camera the UAS will have significant capabilities otherwise not available for the location of missing persons.

5.4.POST DISASTER ASSESSMENT

5.4.1. As soon as practical for aerial operations and under the guidance of Command, the UAS will start damage assessment over areas that would be deemed a priority for damage assessment. Video and photos would be evaluated for secondary flights.

5.4.2. The utilization of the UAS at a post disaster assessment will allow the scene commander and municipality to determine the extent of the damage caused by large scale disasters to determine priority of resources and response.

6. INFORMATION CAPTURED BY UAS DURING WFFD RESPONSE

6.1.All visual images captured and recorded are the sole property of the WFFD.

6.2.After a WFFD UAS flight, and as soon as practical, the WFFD UAS PIC will upload captured still and video image files to a secure storage location designated and approved by the WFFD. (Note: Think Dropbox)

6.3.The WFFD UAS PIC will submit a flight report as soon as practical after a mission flight to a designated person. This report will include details on the mission flown; including a narrative description of the mission including goals, outcome, measured flight time, and location or folder of saved mission information captured.