

 City of Dublin POLICE	Policy and Procedure: 303.25
	Drone as a First Responder Program
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	Approved by: Justin Páez, Chief of Police

PURPOSE

The purpose of this policy is to establish guidelines for the use of the Drones as First Responder (DFR) program. This includes the storage, retrieval, and dissemination of images and data captures by the UAS, as well as operational protocols for the DFR system responding to emergency scenes. This program is aimed at enhancing the department's mission of protecting lives and property through advanced aerial support.

POLICY

The Drone as First Response (DFR) program involves a semi-autonomous drone launching from its docking station around the City of Dublin to respond to emergency scenes, providing real-time aerial support to first responders. The DFR program prioritizes rapid deployment for critical incidents, ensuring that the drone can arrive ahead of ground resources to offer situational awareness.

DEFINITIONS

Drone as First Responder (DFR): A program utilizing a semi-autonomous drone that launch from a docking station to respond to emergency scenes, providing real-time aerial support.

Unmanned area system (UAS): An unmanned aircraft of any type that is capable of sustaining directed flight, whether preprogrammed or remotely controlled (commonly referred to as an unmanned aerial vehicle (UAV)), and all supporting or attached systems designed for gathering information through imaging, recording or any other means. The UAS is designated as a "Special Purpose Vehicle."

Pilot: The individual responsible for exercising, operating and manipulating control over the UAS during flight under the direct supervision of the Pilot in Command.

Pilot in Command (PIC): An individual who holds a current Federal Aviation Administration (FAA) remote pilot certification as defined by 14 CFR 107 and an Ohio Department of Transportation (ODOT) government permit that is authorized and in command of the operations of a UAS. The Pilot in Command is responsible for all UAS operations, even when not physically controlling it.

Temporary Flight Restrictions (TFR): A restriction of an area of airspace due to the movement of government VIPs, special events, natural disasters, or other unusual events. The

TFR will contain the location of the temporary restriction, effective time period, area defines in the statute miles and altitudes affected by the restriction.

Visual observer (VO): A designed person who is not located with the UAS operator but can communicate with the pilot and relay information concerning the airspace.

Beyond Visual Line of Sight (BVLOS): The operation of an unmanned aircraft system (UAS) or drone outside of the pilot's direct line of sight.

Authorization/Waiver: In the context of this policy, a document issued by the Federal Aviation Administration (FAA) allowing authorized flight within a certain airspace or allowing operations deviating from standard allowable 14 CFR 107 rules.

Certificate of Waiver (COW): An authorization issued by the Federal Aviation Administration (FAA) permits public agencies and organizations to operate a particular UAS for a particular purpose in a particular area, including special safety provisions unique to the proposed operation.

Flight log: A log that records every flight of the UAS. The flight log will include takeoff and landing location, launch/landing/elapsed time, battery number and percentage of battery remaining when landing, and any flight notes. Each flight will also require the completion of a UAS flight checklist approved by the Unmanned Aircraft System Administrator.

Notice to Air Missions (NOTAM): A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations. A NOTAM is also issued to designate a temporary flight restriction.

Part 107: 14 CFR Part 107 (Part 107) is the set of FAA rules specifically governing small unmanned aircraft systems, including rules for UAS pilot licensing, UAS registration, and UAS flight operations. Part 107 is generally more restrictive than the rules set out in a COW. Nevertheless, assuming a given flight operation meets Part 107's requirements, that law enforcement flight operation may be flown either under the Certificate of Waiver (COW) or Part 107 (but not both). By contract, all non-law enforcement flights operations must be flown under Part 107.

PROCEDURE

I. Program Coordinator

- A. The Chief of Police will appoint a program coordinator who will be responsible for the management of the DFR programs. 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 (COW) application process and ensuring that the COW and all waivers are current, and/or coordinating compliance with FAA Part 107 Remote Pilot Certificate, as appropriate for agency operations.
 - Ensuring that all authorized DFR pilots and visual observers have completed all required FAA and department-approved training in the operations, applicable laws, policies, and procedures regarding use of the DFR.

- Developing uniform protocol for submission and evaluation of requests to deploy a DFR, including urgent request made during ongoing or emerging events.
- Developing operational protocols governing the deployment and operations of a DFR, 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 DFR inspection, maintenance, and record-keeping protocols, if applicable, to ensure continued airworthiness of a DFR up to including its overhaul or service life limitations.
 - Recommending program enhancements, particularly regarding safety and information security.
 - Ensuring that established protocols are followed by monitoring and providing annual reports on the program to the Chief of Police.
 - Maintaining familiarity with FAA regulatory standards, state laws and regulations, and local ordinances regarding the operations of DFR.

B. Incident Prioritization for DFR Deployment

- Priority 1: Life-Threatening/Major Injury Incidents
- Priority 2: Property Protection Incidents
- Priority 3: Routine Calls for Service

C. Prohibited Uses of DFR (CALEA 41.1.3 a)

- DFR shall not be used for:
 - Random or unauthorized surveillance
 - Any use outside of emergency response or incident documentation
 - Continuous flight over people or vehicles
 - Flight near, during, or in the path of manned aircraft

D. Training Requirements for the DFR Program

Pilot

- To be eligible to pilot a department-owned UAS, members shall have:
 - A valid FAA Part 107 certification. (PICs will see FAA Part 107 special use waivers needed to maximize the operational capabilities of a UAS.)
 - Basic and Specific for Beyond Visual Line of Sight training with a certified pilot.

Visual Observer Training

- All sworn members of the Dublin Police Department will be trained as visual observers to support the DFR program, forming a network of trained personnel to ensure safe operations within the drone's airspace.

There is no requirement that a Visual Observer be certified by the FAA; the training curriculum for Visual Observers shall include, at a minimum, the following responsibilities:

- When a visual observer is required:
 - Visual observers should be aware of the scenarios that can impact flying conditions, including weather conditions, ground hazards, and airborne hazards.
 - Visual Observers should be aware of the FAA's Small Unmanned Aircraft (or Part 107 or regulations under COW) Regulations regarding flights over people and other prohibited activities and support the PIC in flying within the bounds of what is legally permissible.
 - Visual Observers need to be able to identify issues in the sky and direct the PIC to take the necessary action to avoid them.
 - Visual Observers should constantly scan the skies and the ground to identify potential hazards and notify the PIC of those hazards as they arise.
 - Visual Observers should understand how to effectively communicate with the PIC in a timely manner in a wide variety of situations, such as hazards, obstacle avoidance manned aircraft in the mission area, and other potential hazards.
 - Visual Observers need to understand the proper procedure for scanning a mission area effectively and systematically.

Mission Training – Visual Observers will be instructed on the duties of a Visual Observer during a flight mission by the PIC; to include the obligation to see and avoid other aircraft and the ability to identify relay positions reports of the UAS to the PIC.

Visual Observer Training shall be made a component of the Field Training and Evaluation Program for all new hire sworn employees.

E. Protocols

- Missions operated under the Drone as a First Responder Program (DFR) will be conducted under an FAA-approved Certificate of Authorization (COW) and the associated attached "Special Provision (A to J) for Beyond Visual Line of Sight (BVLOS) operation, including operating over persons and moving vehicles in pursuit of public safety.
- Per the COW, the PIC of DFR missions will be stationed at a central location with the DFR-designated aerial system, authorizing an/or controlling the system's functionality at all times.
- Small, unmanned aircraft system (sUAS) operations beyond the visual line of sight of the remote pilot in command (PIC), are permitted in operations at or below 200 feet AGL, or within 50 feet of an object in Class G Airspace, and, at or below the UASFM altitudes in Class B, C, D or E (Surface Area) airspace whichever is lower.

- The DFR PIC must communicate via radio with all ground personnel serving as visual observers (VO), if applicable, throughout the full mission operation.
- During DFR responses for a call for service, the UAS should fly from a centralized location with the gimbal camera on the horizon and not pointed downward until arrival in the area of the scene unless the need to identify elements associated with the call(s) for service warrant otherwise.
- The City of Dublin Certificate of Waiver (COW) for the DFR Program authorizes deployment in the counties where we have jurisdiction (Franklin, Delaware, Madison and Union County) and DFR flights are not restricted only to the City of Dublin.
- The PIC for all DFR missions will follow the Preflight, Inflight, and Post flight checklists published by the DFR UAS manufacturer.

F. Live Streaming

All live streaming for DFR operations will be conducted through agency approved software platform.

The live-streaming link will not be provided to anyone outside of the Dublin Police Department or another public safety agency without the approval of the Chief of Police or their designee.

G. Digital Multimedia Evidence (DME)

Prior to each flight, the UAS operator should activate the recording and verify an SD card is installed in the UAS. This will enable the flight to be recorded to both the cloud and the SD card on the UAS.

All digital multimedia evidence acquired by or on the UAS shall be handled in accordance with existing policy on evidence, data, and record retention, where applicable and uploaded to Evidence.com.

All DME deemed to be of evidentiary value shall be securely downloaded by the UAS operator at the completion of each mission into the agency's software platform.

The UAS operator shall complete a report for each DMW recording deemed to be of evidentiary value that shall include, at a minimum, the date, time, location, and case number or other mission details and identify the UAS personnel involved in the mission and documenting the UDE upload occurred.

The SD card(s) should be cleared once the footage is downloaded and should be empty when re-inserted into the UAS to ensure enough storage space for the next mission.

All recordings not deemed to be evidence or have administrative value will remain in the UAS cloud software program(s) and be retained in accordance with the established records retention schedule of the UAS cloud server program.

II. OPERATIONAL PROCEDURES

The pilot shall document all flights (mission and training) in the flight log accompanying each UAS. The flight log will be immediately updated after the conclusion of the UAS deployment to remain current at all times.

Any mission that results in the development of evidence in a criminal case will be documented in a supplemental report for the corresponding investigation.

All Dublin Police Department UAS shall be operated in accordance with the limitations set forth by the manufacturer.

Precautions shall be taken to avoid flying the UAS over persons and property that could result in injury or damage whenever possible.

The PIC shall be responsible for the following at each flight mission: UAS setup, pre-flight inspection, flight operations, post-flight breakdown, proper packaging of the AS, and all pertinent reporting to document the flight. The PIC shall determine whether a visual observer is needed for each particular flight mission. The visual observer is responsible for maintaining the UAS within their visual line of sight and notifying the responsible pilot in charge of hazards (power lines, trees, buildings) or incoming manned aircraft (notifying the responsible pilot in charge of the direction of travel of the aircraft).

The UAS shall be programmed to "return to home" (RTH) in the event of a lost link as the onboard safety measure to ensure the UAS' return back to its take-off location. The UAS will be programmed for its RTH at an altitude to ensure obstacles will not impede a safe and quick return to its take-off location. This setting can be changed by the RPIC on the scene to the flight mission at hand if needed, given the area to be flown.

III. UAS/IUAS Maintenance Procedures

The UAS program shall adhere to the manufacturer's suggested maintenance plan to serve as a written record for an internal audit of operations or an FAA inspection of the agency program. This program not only applies to the UAS itself but also to the UAS accessories and optional equipment. The UAS Program Coordinator shall capture and maintain the following information:

- Overall flight data history
- Individual UAS information and history
- Individual battery information and history
- Maintenance history

Should a UAS become inoperable, the program coordinator shall arrange for the UAS or any of its systems to be repaired by a designated manufacturer or designated repair service center. The program coordinator shall document any maintenance, both self-fulfilled or from a third-party repair service. Copies of all maintenance records shall be maintained for internal records and/or FAA inspection.

UAS with maintenance issues impacting safe flight shall be grounded until the issue is resolved.

Batteries utilized with the UAS will be maintained to a maximum number of charging cycles recommended by the manufacturer for active missions. Any batteries with swelling or exterior casing cracks or damage shall be marked, retired immediately, and reported to the program coordinator.

The DFR UAS are located within the city, in designated secure areas.

IV. CRASH REPORTING (CALEA 41.1.3a)

Any incident involving a Dublin Police Department owned UAS that results in the serious bodily injury or death of any individual, or property damage in excess of \$500 shall be reported immediately to the UAS Program Coordinator and the Chief of Police through the proper chain of command.

Upon request the City of Dublin Police Department shall submit any flights logs for flights flown under the Certificate of Waiver (COW).

Department personnel on the scene shall render all assistance possible to victims involved and summon additional help needed (e.g., medics, firefighting equipment).

It is the responsibility of the UAS Program Coordinator to promptly submit a comprehensive report detailing the incident to the Chief of Police.

FAA regulation require that the FAA be notified within ten days of in-flight accidents and incidents involving fatalities, injuries requiring hospitalization, property damage exceeding \$500.00, and any fly-away be reported through the COA/COW online system. The UAS Program Coordinator shall be responsible for this reporting requirement. The FAA report shall include the following information:

- UAS Pilot in Command's name and contact number
- UAS registration number issued to the aircraft by the FAA
- Location of the accident or flyaway
- Date of the accident
- Time of the accident
- Person(s) injured and extent of injury
- Property damaged and extent of damage
- Description of what occurred detailing the accident

V. MANNED AIRCRAFT AIR SUPPORT DECONFLICTION

If manned aircraft air support (Life Flight, State Highway Patrol (OSP), Columbus Police, Children's Hospital, Federal Aviation units, etc.) is requested to respond to assist with a call for service, all UAS operations in the area should be terminated or coordinated with manned aircraft air support until they finish the mission and have left the area.

The City of Dublin will house and maintain our own Automatic Dependent Surveillance Broadcast (ADSB) receiver in coordination with our certificate of waiver (COW).

VI. RETENTION OF UAS DATA (CALEA 82.1.3)

All audio/video recordings generated during the DFR flight will be retained in electronic format and in accordance with the guidelines set forth by the Dublin Records Commission.

Evidentiary recordings needing to be retained as part of an investigation should be associated with a specific case and marked with the appropriate retention category.

Recording captured by inadvertent camera activation, which may violate a person's reasonable expectation of privacy, when identified by the officer, or a supervisor, shall be reviewed by the Chief of Police or their designee to determine if they are eligible for release.

REFERENCE:

None

CROSS REFERENCE TO FORMS:

Dublin Police Department UAS Flight Log, Form 303.22 A Dublin Police Department UAS Post-Flight Checklist, Form 303.22

REPLACES:

N/A