


ELIZABETH POLICE DEPARTMENT GENERAL ORDERS			
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SUBJECT: UNMANNED AERIAL SYSTEMS (UAS)			
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BY THE ORDER OF: Chief Giacomo Sacca			
BY AUTHORITY OF: Police Director Earl J. Graves			

PURPOSE The deployment of Unmanned Aerial Systems (UAS), commonly referred to as "drones," have become more commonplace in law enforcement. These systems offer strategic and tactical insight into ongoing critical events that may assist in reducing injuries or death to those involved and more efficient handling of a variety of situations. The purpose of this policy is to guide the agency and set parameters for the proper use of UAS equipment.

POLICY It is the policy of the Elizabeth Police Department to establish a UAS unit utilizing trained UAS pilots to assist in police operations and general public safety missions. Safety above all else, is the primary concern in each activity, regardless of the nature of the task. Only trained and authorized personnel may deploy an Elizabeth Police Department UAS in the performance of official duties.

PROCEDURE

I. DEFINITIONS

- A. **Unmanned Aerial Vehicle (UAV)** - any powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can be programmed to fly autonomously or can be piloted remotely, may be expendable or recoverable and can serve as a platform for devices or systems which are capable of:

1. Photographing persons, objects or mapping surface or geological formations and storing or transmitting captured images;
 2. Tracking or detecting persons or objects using infrared, thermal or any similar storing or transmitted the captured information;
 3. Engaging in a real-time video recording of the movements of persons or objects and storing or transmitting the captured information; and
 4. Detecting and capturing aural, digital and other forms of communication and storing or transmitting the captured communications
- B. **Unmanned Aircraft System (UAS)**- An all-encompassing description that encapsulates the aircraft or UAV, the ground-based controller, the system of communications connecting the two and the personnel who operate the UAV itself, maintain the UAV and who supervise the staff involved in the operation of the UAV.
- C. **Small Unmanned Aircraft Systems (sUAS)**- UAS systems that utilize UAVs weighing less than 55 pounds and are consistent with the Federal Aviation Administration (FAA) regulations.
- D. **Digital Media Evidence (DME)**- Digital recordings or images taken with a camera affixed to the UAS.
- E. **UAS Flight Crewmember**- A pilot, visual observer, payload operator, or other person assigned duties for a UAS for the purpose of a flight or training exercise.
- F. **Pilot in Command (PIC)**- An individual who is solely responsible for all aspects of the UAS operations, including but not limited to safety, flight operation, flight planning, and reporting. The Pilot-In-Command is the final authority to determine if a specific mission can/will be flown.
- G. **Unmanned Aircraft Pilot**- An adequately trained individual who operates the UAS under the general supervision of the Pilot-In Command.
- H. **Visual Observer (VO)**- Individuals assigned to maintain constant observation of the UAS during flight operations and report any safety issues or concerns that may affect the flight of the UAS. Concerns can include birds, aircraft, utility poles, towers, or any unforeseen circumstances.
- I. **Routine Law Enforcement Purpose**- Any law enforcement activity that does not require judicial approval under the statutory or decisional law of the jurisdiction or the State of New Jersey.

- J. **Public Safety Agency-** Any local, state, or regional agency or entity that must enforce the law, respond to or plan response to emergencies.
- K. **Certificates of Waiver or Authorization (COA)-** An authorization issued by the Air Traffic Organization to a public operator for a specific unmanned aerial activity.
- L. **Federal Aviation Administration-** More commonly known as the FAA, a National Authority with powers to regulate all aspects of civil aviation.
- M. **Drone as a First Responder (DFR)-** program to increase law enforcement efficiency and productivity through the integration of UAS technology with the traditional patrol function. DFR provides law enforcement personnel a real time operating picture enabling faster decision making and rapid resource deployment.

II. **Organization**

- A. The Chief of Police will designate the person to serve as the UAS Unit supervising officer. The UAS Unit supervisor shall be responsible for the overall management and supervision of all unmanned aircraft operations.
- B. The UAS Unit supervising officer shall name a Chief Pilot who will report to the UAS Unit supervising officer. The Chief Pilot will be responsible for UAV registration and COA updates and renewals.
- C. The UAS Unit supervising officer will designate senior pilots who will be responsible for UAV updates, general UAV upkeep, UAV training, tracking, and monthly flight reporting.
- D. The Elizabeth Police Department UAS program consists of two components:
 - 1. Patrol UAS Team- consists of UAV pilots from the Patrol Division, Neighborhood Services Unit (NSU) and the Emergency Service Unit (ESU). The Patrol UAS team is tasked with the spontaneous and rapid deployment of UAS systems in support of agency operations.
 - 2. DFR Team-full time UAS operators responsible for providing continuous UAS coverage to the city, aiding police, fire, EMS as well as assisting with large city events. The DFR Team operates the Drone as a First Responder program.

III. **UAV Minimum Specifications**

- A. All UAS acquired by the Police Department shall meet specifications required by the Federal Aviation Administration.

- B. All UAVs acquired by the agency must have an application that allows the UAV to autonomously fly back to a pre-determined takeoff point upon losing controller contact.
- C. UAV pilots shall not operate equipment in an unsafe manner or in violation of FAA rules.

IV. Certification

- A. The Elizabeth Police Department shall obtain all necessary Certificate(s) of Authorization(s) and/or Waivers (COA) from the Federal Aviation Administration before the use of a UAS. The Chief Pilot and Unit Supervisor are responsible for maintaining all records, verifying agency compliance, and reporting agency status to the Chief of Police and Police Director.
- B. Before operating an agency UAS, pilots must be certified through the Elizabeth Police UAV training program and demonstrate a working knowledge of the agency policy, procedures, and provisions of the FAA COA issued to the agency.
- C. During operations, UAS pilots may only fly the specific UAV model in which they are trained and received Police Department certifications.

V. Pilots

- A. The appropriate staffing of pilots is determined by the UAS Supervisor and may be adjusted at any time to meet agency needs. The minimum pilot staffing requirements are:
 - 1. Patrol UAS Team-one pilot each A1 and B1, two pilots each A3 and B3, two pilots each A4 and B4. NSU one pilot per platoon, ESU one pilot per platoon.
 - 2. DFR Team- two pilots per platoon.
- B. The pilot's primary duty is the safe and effective operation of the agency's UAS. Pilots must always operate following manufacturer's recommendations, FAA regulations, COA conditions, New Jersey state law, and agency policy.
- C. For independent operations, pilot certifications require the logged completion of a minimum of three (3) currency events within the previous 90 days. Currency events include but are not limited to landings, takeoffs, and emergency procedures.
- D. Pilots can be temporarily or permanently removed from active flight status at any time by the UAS supervisor. The UAS supervisor shall document the removal of the pilot's operational status and shall update the agency document system to reflect the change.

- E. All agency Pilots are responsible for ensuring that UAS operations abide by the provisions of the Certificate of Waiver of Authorization issued to the agency.

VI. Visual Observers

- A. All Pilots shall designate a visual observer responsible for assisting the pilot in scanning the airspace surrounding the UAS operational area.
- B. The visual observer can be any sworn police officer. The visual observer role is always to keep the UAV within line-of-site and scan the area for potential hazards.
- C. No UAS outdoor operations will be conducted without a designated visual observer. Generally, visual observers and pilots will remain within vocal communication distance. However, a pilot and visual observer may communicate via cellular phone or police radio if necessary. If communications between pilot and observer are not established, the pilot shall terminate the flight immediately.
- D. The visual observer will immediately notify the pilot of any obstructions, objects, and other aircraft in the airspace surrounding the UAS operations.
- E. A visual observer is not required on flights that are conducted indoors, such as when the UAS is used to clear the inside of a structure.

VII. Chief Pilot

- A. Is responsible for documenting and storing all records for agency UAS.
- B. Will provide training to all agency UAS pilots, ensuring all personnel involved with flight operations understand applicable regulatory requirements along with safety precautions, policies, and procedures.
- C. Will ensure all flight logs, pilot currency records, UAS maintenance records, and other related records are up to date and kept in a central file with the UAS Unit Supervisor.
- D. Will ensure maintenance on all agency UAS, as well as firmware on all agency UAS and ground control units are up to date and performed according to manufacturer's recommendations.
- E. Will provide technical assistance and guidance as needed.

VIII. Training

- A. All UAS pilots will receive the following training before serving in an operational capacity:
 - 1. Agency UAS policy / COA contents and provisions.
 - 2. UAS ground training.
 - 3. A minimum of five hours of flight time, five hours of lecture time, and a minimum of 15 successful flights with an agency instructor.
 - 4. UAS night flying training including the use of the live stream program.
 - 5. Successfully complete necessary online classes. All completion certificates are to be submitted to the UAS Supervisor for retention.
 - 6. Successfully complete a practical UAV test flight with the Chief Pilot demonstrating flight safety, proficiency, and emergency operations.
- B. Annual certification is required for pilots to maintain operational status. The Chief Pilot is responsible for organizing and documenting annual recertification sessions.
- C. The Chief Pilot shall organize monthly training sessions for all agency pilots to cover safety, FAA rules and regulations, and any relevant case law about UAV use by law enforcement personnel.
- D. Pilots must complete at least three (3) currency events every 90 days utilizing the make and model of the UAS to be deployed. Currency events include takeoffs, landings, and emergency procedures. Lapsed currency flights will prohibit the pilot from flying in any public safety mission. Pilots who experience a lapse of currency must perform their currency events under the supervision of the UAS Supervisor. A pilot shall record proficiency flights in their UAS logbook with an endorsement from the Chief Pilot.
- E. A Part 107 Remote Pilot certification issued by the FAA is not required, provided that the pilot is operating under a valid COA issued to the agency in an official law enforcement capacity.

IX. Missions

- A. Requests for the use of the UAS must follow the guidelines outlined within this order. Acceptable UAS missions include:

1. Search and Rescue- To assist in missing person investigations, Amber Alerts, Silver Alerts, missing swimmers, suicidal persons, lost persons, and other search and rescue missions.
 2. Situational Awareness- To assist officials in understanding the nature, scale, and scope of the incident, and for the planning and coordinating of an effective response.
 3. Tactical Deployment- To support the tactical deployment of law enforcement personnel and equipment in emergencies (e.g., incidents involving hostages and barricades, support for large scale tactical operations, and perimeter situations)
 4. Visual Perspective- To provide an aerial visual perspective to assist law enforcement personnel in traffic incident management, crowd control, temporary perimeter security, assessing suspicious packages or other unusual circumstances
 5. Fleeing/Hiding Suspects- To assist with locating fleeing or hiding suspects in wooded areas or other public areas.
 6. Scene Documentation- To document a crime scene, a crash scene, fire scene, natural disaster scene, or other incidents.
 7. Aerial Photography- To obtain still photography or video when appropriate to be used for agency press releases or social media posts or other purposes as directed by the Chief of Police or his/her designee.
 8. Routine Safety Deployment- To assist with an aerial visual perspective of densely populated pedestrian areas (e.g., river trail, waterfront, marina, and parks) or to make public safety announcements.
 9. Medical Calls_ - To assist medical personnel with situational awareness.
 10. Other Incidents - Any other incident approved by the Chief of Police or his/her designee that would benefit the law enforcement objective by providing an aerial visual perspective.
- B. Before approving the use of a UAS, pilots must consider the practical application and likely successful benefit of a deployment.
- C. Before every flight, the UAS pilot is responsible to conduct a visual inspection of the UAS to ensure it is in safe operating condition, with all batteries for the UAS and controllers fully charged. Ultimately, the UAS pilot has the final authority to determine whether conditions and circumstances are safe to conduct the flight.

- D. All equipment issues, malfunctions, or maintenance concerns that effect the safe operation of the UAS shall cause the UAS to be removed from flight ready status and shall be immediately reported to the chief pilot. The chief pilot will ensure that the appropriate maintenance is performed before the UAS is placed back in service.
- E. All deployments and flights of the UAS will be documented on the appropriate log, including but not limited to: the name of the deploying officer, date, time, location and reason for the deployment.
- F. When there are reasonable articulable grounds to believe that a police UAS will collect evidence of criminal activity and the UAS may intrude upon a reasonable expectation of privacy, police personnel must obtain a search warrant before conducting the flight. Exceptions to the warrant requirement shall mirror that of case law, or during a mission where the exigency to protect the safety of the public negates the practicality of obtaining a search warrant.

X. Minimum Flight Crew Requirements

- A. The minimum crew on all UAS operations will be a UAS pilot and a visual observer.
- B. The UAS pilot and the visual observer will work together to accomplish the objectives of the mission safely.

XI. Duties and Responsibilities

- A. Patrol Division
 - 1. UAS pilots assigned to the Patrol Division will work their assigned patrol posts unless a UAS pilot is requested by a supervisor.
 - 2. UAS pilots assigned to the Patrol Division will use the assigned UAS vehicle for their shift. Assigned UAS vehicles contain a power inverter to charge the batteries and controller, assigned UAS, rapid charger, and a daily flight log in addition to standard patrol equipment.
 - 3. To maintain optimum readiness, UAS pilots assigned to the Patrol Division should not be a member of other specialized programs such as the Patrol Rifle or FTO program. UAS pilots should not routinely be assigned to the cell block or front desk.
 - 4. The position of Patrol Division UAS pilot remains with the shift. If a pilot moves to a different assignment, the pilot is removed from active status unless the new assignment has an open pilot position.
- B. Neighborhood Services Unit (NSU)

1. UAS pilots assigned to NSU will work their assigned posts unless a UAS pilot from NSU is requested by a supervisor.
2. There is one UAS assigned to NSU. UAS pilots assigned to NSU will ensure that all UAS batteries and controllers are charged daily prior to beginning their shift.
3. The position of NSU UAS pilot remains with the Unit. If a pilot moves to a different assignment, the pilot is removed from active status unless the new assignment has an open pilot position.

C. Emergency Service Unit (ESU)

1. UAS pilots assigned to ESU will work their assigned posts unless a UAS pilot is requested by a supervisor or the operation of a UAS is required during the execution of an ESU mission.
2. There is one UAS and one sUAS assigned to ESU. UAS pilots assigned to ESU will ensure that all UAS batteries and controllers are charged prior to beginning their shift or ESU mission.
3. The position of UAS pilot is considered an ancillary responsibility to the normal duties of an ESU operator. UAS pilots assigned to ESU will be selected from within the ranks of the Emergency Service Unit.

D. DFR Team (Drone as a First Responder)

1. Officers assigned to the DFR Team will consist of 2 UAS pilots working C Platoon 0900-2000 hours and 2 UAS Pilots working D Platoon 0900-2000 hours. UAS Team pilots will operate and deploy the DFR UAS from headquarters, with the goal of continuous aerial coverage of the city.
2. DFR Team pilots will monitor the pending calls for service and deploy the DFR UAS to calls for service which may benefit from the presence of a UAS. Such calls include:
 - a. Emergent and high priority calls where the UAS can respond to a location faster than a patrol vehicle. In such cases the DFR Team pilots will deploy the DFR UAS to the location to collect and relay pertinent real time information to the Communications Center while capturing video evidence if possible. The UAS will loiter in the area and assist patrol units as needed.
 - b. Non-emergent calls for service which may be cleared or further investigated by use of DFR UAS. Upon DFR UAS arrival on scene, the DFR Team pilot can determine whether the call can be cleared, or if further police response is necessary. If further police response is necessary, the DFR pilot will report

the findings to Communications along with any other information that will assist in the efficient response to the incident. Video evidence will be captured if possible.

3. When not responding to calls for service, DFR pilots will employ the DFR UAS to perform routine assignments including directed patrols, Strategic Response Initiative (SRI) details, and order maintenance observations.
4. Supervisors may request the assistance of the DFR Team as necessary. Any request that will require the DFR Team to leave the city, or any request that will generate overtime, must be approved by the UAS Supervisor. Supervisors are to recognize that the DFR UAS operates at a fixed altitude and cannot be used in certain areas of the city due to flight restrictions. DFR UAS pilots are to inform supervisors of flight restrictions if necessary.

XII. Assisting Other City Agencies

- A. The UAS systems maintained and operated by the Elizabeth Police Department are available to assist any entity of the City of Elizabeth (Fire, EMS, City Yard, etc.) as needed. Such requests can be made through the Communications Center or any police supervisor.
 1. Requests for assistance made between 0900-2000 hours will be assigned to the DFR Team.
 2. Requests made outside of the operating hours of the DFR Team will be assigned to a Patrol Team pilot. Upon arrival, the Patrol Team pilot will assist with the Patrol UAS. If, in the determination of the Patrol Team pilot, more advanced equipment is needed, the UAS Supervisor will be notified to recall and assign a DFR team to respond.
 3. Incidents of a prolonged duration that will last longer than one shift will require notification to the UAS Supervisor. The UAS Supervisor will create a coverage schedule utilizing Patrol Team and DFR Team pilots with the purpose to provide adequate UAS assistance while maximizing patrol coverage and minimizing the use of overtime.

XIII. Assisting Outside Agencies

- A. Requests by outside agencies for assistance from the UAS assets maintained and operated by the Elizabeth Police Department can only be approved by a supervisor holding the rank of captain or above, and with notification to the UAS Supervisor.
 1. The UAS Supervisor will assign approved requests for assistance to the DFR Team if occurring during between 0900-2000 hours.

2. Approved requests made outside of the operating hours of the DFR Team will be assigned to a Patrol Team pilot. Upon arrival, the Patrol Team pilot will assist with the Patrol UAS. If, in the determination of the Patrol Team Pilot, more advanced equipment is needed, the UAS Supervisor will be notified to recall and assign a DFR Team to respond.
3. Incidents of a prolonged duration that will last longer than one shift will require notification to the UAS Supervisor. The UAS Supervisor will create a coverage schedule utilizing Patrol TEAM and DFR pilots with the purpose to provide adequate UAS assistance while maximizing patrol coverage and minimizing the use of overtime.

XIV. Digital Media Evidence Retention and Management

- A. Pilots shall process all evidence obtained through a UAS in the same manner as all digital evidence prepared by the Elizabeth Police Department.
- B. All images recorded by agency UAS are the sole property of the Elizabeth Police Department. The sharing of pictures, videos, and collected data shall be per agency orders, rules, and regulations.
- C. All digital media evidence shall be handled per the provisions of the New Jersey Division of Archives and Records Management .