City of Johns Creek Police Department

Subject: Small Unmanned Aerial Systems (sUAS)			*Number:* 02-55
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PURPOSE:

The purpose of this policy will be to describe the conditions, limitations, and authority to operate small Unmanned Aerial Systems (sUAS) for law enforcement operations to include: search and rescue, area searches, person searches, aerial observation of critical incidents, crime scene photography, traffic crash photogrammetry, and community outreach photography.

POLICY (02-55):

It is the policy of the Johns Creek Police Department that trained and authorized personnel may use/deploy a sUAS when such use is appropriate in the performance of their duties. The deployment of a sUAS will be in accordance with federal, state, and municipal law and as the needs of the department dictate.

DEFINITIONS:

Certificate of Authorization (COA): A COA is an authorization issued by the Federal Aviation Administration (FAA) for public operation of small unmanned aircraft systems. COAs must be renewed every two years.

Pilot-in- Command (PIC): During a sUAS operation, the Pilot-in-Command is in charge of the sUAS Operator (if not one in the same), sUAS Visual Observer(s), or anyone else that may be directly participating in the sUAS operation.

Small Unmanned Aircraft System (sUAS): A system that includes the necessary equipment, network, and personnel to control an unmanned aircraft that weighs less than 55 pounds.

sUAS Agency Coordinator: The sUAS Coordinator will be assigned by the Chief of Police or hisdesignee and will have overall control of any maintenance, records, and deployment of the sUAS. The sUAS Coordinator will also be responsible for any necessary reporting, licensing, or approval required by the Federal Aviation Administration (FAA) and ensuringall sUAS operators are aware of and comply with FAA regulations.

sUAS Operator: A person exercising control over the sUAS during flight

sUAS Visual Observer: Observers are trained officers who act as spotters for the sUAS Operator.

Visual Flight Rules (VFR): Must have a minimum visibility of 3 statute miles and a cloud layer above 500 feet Must maintain 2,000 feet distance horizontally from a cloud. Winds must be less than 20 knots or 23 miles per hour for any Mavic 2 sUAS and 23 knots or 27 miles per hour for any Mavic 3 sUAS.

PROCEDURES:

Administration (02-55-01)

The sUAS Coordinator will be the administrator of the drone program and will be the point of contact for the FAA. On a monthly basis, the sUAS Coordinator will complete a report in the FAA COA Application Processing System (CAPS). The report procedures are documented in the department's approved COA. These reports shall be completed, even if no COA flights were made. The sUAS Agency Coordinator will be the Organization Administrator through the Axon Air/Drone Sense drone management program.

Authorized Uses (02-55-02)

Deployment of the sUAS must only be for law enforcement purposes and shall not be done in a manner that will violate FAA guidelines or regulations under 14 CFR (Code of Federal Regulations) Part 107 and/or Certificate of Authorization. It is the operator's responsibility to inform any requesting supervisor or command staff of those guidelines if they feel that the requested deployment violates any federal regulation. The sUAS use is to provide an aerial visual perspective that will further the department's mission and enhance the safety of the public and law enforcement officers. Such deployments include but are not limited to:

1. Public Relations: The sUAS may be used to record, document, and display its use at events sponsored by the department.

2. Area/ Person Searches: The sUAS may be deployed when conducting an area search for articles and/or persons where a ground search may pose a danger to officers or the public.

3. Crime Scene/Area Documentation: The sUAS may be deployed to assist in documenting crime scenes that cover large areas or are located in areas that may be unsafe for personnel. The sUAS may also be deployed to document any scene where an aerial perspective is needed. The sUAS will be the primary means of documenting and mapping serious injury or fatality crashes, to include photogrammetry.

4. Search and Rescue: The sUAS may be deployed during search and rescue operations to assist in locating lost persons, subjects of AMBER Alerts, Mattie's Call, or other search and rescue operations.

5. Tactical Situations: The sUAS may be deployed during certain tactical situations such as hostage/barricaded gunman, active shooters, warrant services, or any other situation where an aerial or remote view is necessary.

Deployment of UAS (02-55-03)

Prior to deployment of any sUAS the operator will ensure that all permits, authorizations, and certificates (COA) from the FAA are in place and current.

1. Only authorized approved personnel will be permitted to deploy the sUAS. Personnel deploying the sUAS will be trained and authorized by the department. All sUAS operators will obtain a TRUST and Remote Pilot Airman Certificate as listed in FAR (Federal Aviation Regulations) Part 107.

2. The sUAS Operator will inspect all equipment to include the unit, controller, batteries, and display prior to deployment. Any malfunction equipment will be reported to the sUAS Coordinator. Prior to flight, the sUAS Operator will complete the Pre-flight Checklist within the Axon Air software displayed on the sUAS controller.

3. Each sUAS aircraft will be the responsibility of the officer assigned. The sUAS Operator is authorized to decline to fly the sUAS when he/she feels the flight wouldbe unsafe or against FAA regulations. The decision to fly or not fly resides solely upon the operator.

4. Each deployment of the sUAS will be documented in Axon Air/ Drone Sense. When deployed in conjunction with a call for service, the sUAS Operator will complete a supplemental report.

5. All data, images, video and metadata captured, recorded or otherwise produced by the sUAS is the sole property of the agency and shall be disclosed or released only as allowed by law. Any videos or photos taken from the sUAS during operation shall be entered as electronic evidence through evidence.com. If no case report number is generated, the evidence will be entered under the assigned CAD number. It shall be agency policy that sUAS use in conjunction with a call for service will be recorded, to prevent exculpatory evidence claims. Any digital evidence should be uploaded prior to the end of the PIC or operator's shift or rotation.

6. An sUAS Operator or Pilot may share live streamed or recorded footage with other sworn law enforcement officers in the course of an sUAS deployment when deemed appropriate for the mission by the operator or pilot or at the direction of a higher-ranking officer. The operator or pilot must ensure that only sworn law enforcement personnel are viewing the footage.

7. When flying under a COA, the sUAS Operator will deploy the sUAS with the aid of a Visual Observer, as required by the FAA. The exception to this will be under

the agency approved TBVLOS (Tactical Beyond Visual Line of Sight) COA. Part 107 certified pilots are not required to use visual observers, although their use is recommended. The visual observer can be collocated with the sUAS Operator or positioned at a ground site to give a better line of sight. All sUAS Visual Observers will be ground-based and should not be deployed from a moving vehicle. The sUAS Operator can request additional observers if needed. All sUAS Visual Observers will be designated by the PIC or operator and advised of their duties. The visual observer should maintain an open line of communication with the PIC during all phases of flight for the sUAS.

Training (02-55-04)

The sUAS Agency Coordinator will conduct and be responsible for sUAS training covering any and all facets of the program, including but not limited to: Axon Air/Drone Sense, flight operations, ground operations, current FAA rules and regulations, and maintenance. If the agency coordinator is not a certified instructor, the training will be proctored by a member of the department's training unit.

1. This training will include an initial presentation along with aircraft familiarization and basic flight competency at a location designated by the sUAS Agency Coordinator.

2. sUAS flight training will normally be held monthly and is intended to increase the skills of operators through flight operations covering search and rescue, K-9/persons tracking, NIST, general flight, FLIR, etc. All training will be documented and maintained by the sUAS Agency Coordinator.

3. sUAS Operators will participate in mandatory nighttime flight training every 90 days. The training will consist of a review of hazards of flying at night and a flight course with a min-imum of three (3) takeoffs and landings.

4. All sUAS Operators with an assigned drone are required to log four hours of flight time per quarter (one per month), through the Axon Air/Drone Sense program, to maintain flight status.

5. Any sUAS Operator who fails to maintain a satisfactory level of flight time, competency, or who fails to obtain their TRUST or Remote Pilot Airman Certificate (Part 107) will be re-moved from flight status and/or the drone program.

Restrictions (02-55-05)

The sUAS and equipment are only approved for uses that support legitimate law enforcement functions of the department.

1. The sUAS will only be used in a manner that is safe and in accordancewith departmental policies and FAA regulations.

2. The sUAS will not be weaponized or used to transport any weapons, explosives, or incendiary devices. Exceptions to this policy may includea request by EOD or Bomb Squad when dealing with a suspicious package where use of the sUAS

will prevent law enforcement officers orthe public from being exposed to unnecessary dangers. Use of the sUASin this manner can only be approved by the Chief of Police. Non-hazardous payloads may be carried and dropped, in accordance with FAA regulations and with the approval of the sUAS Agency Coordinator.

3. The sUAS will not be used or deployed for personal use, however, nothing in this policy prevents an operator or pilot from flying their assigned drone while off duty for personal flight training and familiarization.

4. The sUAS will not be used to surveil private areas such as inside buildings, through windows, or any other areas where a search warrant would be needed. If a request for deployment does not meet one of the search warrant exceptions, then the sUAS Operator must request a searchwarrant prior to deployment.

Launching/Recovery (02-55-06)

1. Prior to take off, all sUAS Operators will file a NOTAM (Notice to Airman/Air Mission) notifying the FAA of the flight mission, if required. It will be the discretion of Part 107 certified pilots whether his/her particular mission will be flown under their commercial license or an agency COA, mission dependent. NOTAMs will be filed one of two ways: Through the planning section of the Axon Air program or online through https://www.1800wxbrief.com. In the event a flight plan cannot be filed, for whatever reason, the operator may contact the Special Government Interest (SGI) at (202) 267-8276 or 9-ATOR-HQ-SOSC@faa.gov, for authorization.

2. Prior to take off, the sUAS will be programed to allow it to return homeif the signal is lost from the transmitter. This will normally happen automatically, however, operators should check that it's been set.

3. When the sUAS is deployed to meet an approved mission task, it shall be recovered within the same general area if possible.

4. A designated safe area of at least 25 feet shall be maintained during liftoff between the sUAS and personnel.

5. The sUAS should not be flown within unsafe distances to any object orperson.

6. The sUAS should be launched and recovered from non-hard and dry surfaces with the operator's assigned landing pad.

7. All drone accidents shall be reported to the sUAS Agency Coordinator. Damaged equipment must be documented through an agency incident report. If the accident meets FAA reporting requirements, such reporting will be handled by the sUAS Agency Coordinator.

Weather –The PIC shall verify the weather conditions in the immediate area of

operations. The local weather may be accessed via internet, phone application, or may be observed on site. The sUAS will not be flown outside the weather minimums identified by the manufacturer or the approved Certificate of Waiver/Authorization (COA), or by the FAA. The PIC shall have final determination ofrisk due to weather and authority over any mission.

Hazards to the public – The PIC shall make every effort to ensure that flight operations will not pose any undue risk to the public who are not directly involved with the effort. The PIC shall have final determination of risk to the public and authority over any launch of his/her own aircraft. In all cases, the sUAS will not be flown over people. This does not preclude the sUAS from flying over a person while in transition from one air space to another.

Hazards to personnel – The sUAS Operator shall make every effort to ensure that flight operations will not pose any undue risk to the personnel directly involved with the effort. The PIC shall have final determination of risk to the public and authority over any launch of his/her aircraft.

Proximity to controlled airspace – Operations inside any controlled airspace shallonly be performed under approval of the controlling ATC (Air Traffic Control (Tower)). The PIC is the ONLY person authorized to have direct communications with Air Traffic Control except in case of emergency.

Launch site selection shall be driven by safety first and foremost. Selection of launch sites will be considered based upon:

1. Ability to maintain adequate buffer zones between aircraft and personnel. The sUAS Operator shall maintain a buffer of at least 25feet for vertical take-off and landing (VTOL), aircraft between aircraft operations, and all non-essential personnel. A designated individual can be identified as a safety officer to ensure the safety ofthe launch and recovery area.

Environmental Assessment (02-55-07)

No launches shall occur until all environmental assessments have been considered. The sUAS Operator has the final authority to abort any launch based upon hazards to the environment, themselves, or other personnel in the area.

The sUAS Operator shall select a launch site that ensures sUAS departures are not overpopulated areas.

Primary Landing Site (02-55-08)

Typically, the primary landing shall be the same as the launch site. The sUAS Operator has final authority for any approaches to the primary site and may wave off any approach deemed unsafe.

Alternate Landing Sites (02-55-09)

1. The sUAS Operator shall designate at least one alternate landing site. In the event that the primary landing site is deemed unsafe, procedures to utilize the

secondary site will be invoked.

2. Mission Abort Sites - The sUAS Operator may optionally designate an "abort site"whereby the aircraft may be "dumped" in an emergency situation. The abort site shall be so far removed as to provide absolute minimal risk should the aircraft be required to vacate airspace in an emergency. Should the sUAS Operator deem it necessary, the sUAS may be flown to this site and inserted without regard to the safety of the aircraft or flight equipment.

Landing Safety & Crowd Control (02-55-10)

All landing sites shall be maintained and operated as the launch sites. Personnel shall maintain a buffer of at least 25 feet for VTOL, aircraft between aircraft operations, and all non- essential personnel.

Emergency Procedures (02-55-11)

Lost Link - If during flight operations the link between the sUAS and the remote station/controller is lost (flight controls), the sUAS is designed to utilize onboard GPS to return to the take-off position. The sUAS will either gain altitude if below 20 meters or maintain altitude if above 20 meters. sUAS Operators should always be mindful that the sUAS has no collision avoidance in RTH (Return to Home) mode. The Operator will observe the sUAS and attempt to recover control. The remote control is designed to re-establish connection automatically. If a lost link occurs and the sUAS auto returns, the sUAS Operator will advise all units in the area via radio.

Lost Communications - If operating in controlled airspace, the sUAS Operator will maintain communications with the Air Traffic Control (ATC) through use of a two-way radio or cellular phone. If communication is unable to be established, the sUAS Operator will immediately land the sUAS until communications are established. Communication between the sUAS Operator and the Observer will be via cell phone, police radio, or verbal commands. If communication is lost between the sUAS Operator and the sUAS Observer, thesUAS Operator will land the sUAS until communication can be restored, emergencies notwithstanding.

Emergency Landing- If during flight the Operator has an emergency, he/she will take every step to ensure that no person or property is damaged. In the event of a catastrophic failure such as a broken rotor or battery fire, the sUAS Operator will guide the sUAS to a safe location. If the sUAS makes an uncontrolled landing, the Operator will announce to all personnel. The sUAS Operator willrequest any necessary equipment be brought to the landing site (i.e. fire extinguisher).

In the unlikely event that the sUAS interacts with a person on the ground, either during flight or during an uncontrolled landing, EMS will be immediately summoned, and units on the ground will render first aid. All officers are trainedin first aid, CPR, and the use of an AED.

Night Operations (02-55-12)

Prior to any nighttime operations, the sUAS Operator must have documented nighttime flight training showing a minimum of three (3) take offs and landings within 90 days of nighttime flight operations.

Night operations will only be conducted when a sUAS Operator can provide a safety case to mitigate and avoid any collisions with hazards.

Night operations are considered any flight that occur 30 minutes after sunset and 30 minutes before sunrise.

Only sUAS Operators with previous daytime flight experience will conduct nighttime sUAS operations.

All night operations will be conducted at the minimum necessary altitude toavoid ground hazards not to exceed 400 AGL.

All night operations should be conducted with the use of an Observer to assist in navigation and hazard avoidance. The Observer will place themselves in a location that allows for compliance with VFR flight and allows for constant scanning of the flight area for any hazards. The Observer will notify the sUAS Operator immediately if they lose sight of the sUAS or observe a possible flight hazard.

The navigational lights on the sUAS will be used at all times, however, for tactical considerations, they may be turned off temporarily at the discretion of the PIC. The lights will bevisible 360 degrees from the sUAS. At no time will an Operator attempt to cover or disguise the aircraft status indicators located on the sUAS. Each aircraft is also equipped with a Night OperationsAnti-Collision Strobe Light. These lights are visible over 10 nautical miles.

Beyond Visual Line of Sight (BVLOS) Operations (02-55-13)

While operations are to be conducted with the operator or visual observer having visual contact with the sUAS, there are times in extreme emergency it is necessary to take the sUAS BVLOS. During those operations, the sUAS must maintain an altitude of 50 ft above the highest obstacle in the area and may not exceed a hard ceiling of 400 ft AGL. At no time should the sUAS go beyond 1500 ft from the sUAS Operator. The sUAS Operator and any Visual Observers must be able to monitor the airspace above the area the sUAS is operating BVLOS. Once the operation is complete, the sUAS Operator must be able to regain visual contact with the sUAS.

If it becomes necessary to operate a sUAS BVLOS in class B, D, and E airspace, the sUAS Operator must follow the guidelines above. However, the maximum altitude cannot exceed the sUAS Facility Map altitude values.

While operating BVLOS, should the sUAS experience a Lost Link, the sUAS Operator will activate the Return to Home procedure immediately.

Maintenance (02-55-14)

Each sUAS Operator is responsible for the maintenance of the sUAS aircraft assigned to them. The manufacturer recommended storage temperature for aircraft is 77 degrees. No drone will be exposed to extreme hot or cold temperatures for extended periods, when not in use. Assigned sUAS will not be left in assigned patrol vehicles, especially during peak summer and winter months. sUAS should not be flown in ambient air temperatures of 32 degrees Fahrenheit and below or 104 degrees Fahrenheit and above.

The maintenance will be continued and ongoing, at manufacturer's specifications. A pre-tourinspection will be conducted of the sUAS. Pre-flight inspections will be completed prior to launch using the JCPD Pre-Flight Checklist within the Axon Air software displayed on the sUAS controller. Additionally, apost flight inspection will be completed at the conclusion of the flight to ensure everything is in working order and undamaged.

If at any time the sUAS Operator observes any condition that would prevent the sUAS from flight or pose a possible hazard, the sUAS Operator will immediately move to a stand-down status until the problem is resolved. In addition, the sUAS Operator will immediately notify the sUAS Coordinator of the aircraft's current status.

If repairs are needed, only factory-approved DJI parts will be used. All noted discrepancies will be reported to the sUAS Agency Coordinator.

Equipment (02-55-15)

Each sUAS Operator will have the following equipment assigned to them:

1. Drone(s) with HD camera
2. Flight batteries
3. Battery charger for flight batteries
4. Controllers with approved monitors or iPads (with chargers)
5. Night operations strobe light (if applicable)
6. Case to protect all assigned equipment
7. Landing pad for drones
8. Atlanta Airspace Sectional

Airspace (02-55-16)

All sUAS missions will be flown in compliance with Federal Aviation Regulations, the locally pre-arranged FAA Certificate of Authorization (COA) or the local FAA facility or FAR Part 017 if applicable. All sUAS PIC's will be familiar with any airspace restrictions or requirements prior to flying any sUAS mission.