

Unmanned Aerial System

606.1 PURPOSE AND SCOPE

The purpose of this policy is to establish guidelines for the use of an unmanned aerial system (UAS) and for the storage, retrieval, and dissemination of images and data captured by the UAS.

606.1.1 DEFINITIONS

Definitions related to this policy include:

Small Unmanned Aircraft System (sUAS) - An unmanned aircraft or drone 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 of the supporting or attached systems that are required for the safe and efficient operation of the small unmanned aircraft in the national airspace system.

Small Unmanned Aircraft - Means an unmanned aircraft weighing less than 55 pounds on takeoff, including everything that is on board or otherwise attached to the aircraft, which does not carry a human operator.

Federal Aviation Administration (FAA) -The division of the United States Department of Transportation that inspects and rates civilian aircraft and pilots, enforces the rules of air safety..

Unmanned Aircraft Crew Member - A pilot, visual observer, payload operator or other person assigned duties for a sUAS during flight operations.

Visual Observer (VO) - An unmanned aircraft crew member designated by the Unmanned Aircraft Pilot who assists in the safe operation of the sUAS and keeps the sUAS in the Visual Line Of Sight (VLOS) during operations.

Remote Pilot in Command (RPIC) - An unmanned aircraft crew member exercising control over the sUAS during flight operations. The RPIC is responsible for and is the final authority as to the operation of the sUAS.

Qualified Non-Crew member - An authorized designee of the Palatine Police Department, its subsidiaries, or affiliates who has requisite knowledge to operate safely in the environment the sUAS is being flown, but may not act as a crew member.

Unmanned Aircraft System Coordinator - A sworn member of the Palatine Police Department responsible for overseeing the Small Unmanned Aircraft System Program at the Palatine Police Department. The UAS Coordinator reports directly to the Investigations Commander.

Digital Multimedia Evidence - Digital records of images, sounds, video, and associated data.

Temporary Flight Restrictions - A restriction on an area of airspace due to the movement of government VIPs, special events, natural disasters, or other unusual events.

Notice to Airmen - A written notification issued to pilots before a flight, advising and warning them of circumstances that may potentially affect the safety of the flight.

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National Transportation Safety Board (NTSB) - The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation- railroad, highway, marine, and pipeline.

Information - Means any evidence, images, sounds, data, or other information gathered by the small unmanned aircraft system.

606.2 POLICY

A UAS may be utilized to enhance the department's mission of protecting lives and property when other means and resources are not available or are less effective. Any use of a UAS will be in strict accordance with constitutional and privacy rights and Federal Aviation Administration (FAA) regulations.

606.3 PRIVACY

The use of the UAS potentially involves privacy considerations. Absent a warrant or exigent circumstances, operators and observers shall not intentionally record or transmit images of any location where a person would have a reasonable expectation of privacy (e.g., residence, yard, enclosure). Operators and observers shall take reasonable precautions to avoid inadvertently recording or transmitting images of areas where there is a reasonable expectation of privacy. Reasonable precautions can include, for example, deactivating or turning imaging devices away from such areas or persons during UAS operations.

606.4 PROGRAM COORDINATOR

The Chief of Police will appoint a program coordinator who will be responsible for the management of the UAS program. 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 or Authorization (COA) application process and ensuring that the COA is current, and/or coordinating compliance with FAA Part 107 Remote Pilot Certificate, as appropriate for department operations.
- Ensuring that all authorized operators and required observers have completed all required FAA and department-approved training in the operation, applicable laws, policies, and procedures regarding use of the UAS.
- Developing uniform protocols for submission and evaluation of requests to deploy a UAS, including urgent requests made during ongoing or emerging incidents. Deployment of a UAS shall require written authorization of the Chief of Police or the authorized designee, depending on the type of mission.
- Coordinating the completion of the FAA Emergency Operation Request Form in emergency situations, as applicable (e.g., natural disasters, search and rescue, emergency situations to safeguard human life).

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- Developing protocols for conducting criminal investigations involving a UAS, including documentation of time spent monitoring a subject.
- Implementing a system for public notification of UAS deployment.
- Developing operational protocols governing the deployment and operation of a UAS 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 a UAS inspection, maintenance, and record-keeping protocol to ensure continuing airworthiness of a UAS, up to and including its overhaul or life limits.
- Developing protocols to ensure that all data intended to be used as evidence are accessed, maintained, stored, and retrieved in a manner that ensures its integrity as evidence, including strict adherence to chain of custody requirements. Electronic trails, including encryption, authenticity certificates, and date and time stamping, shall be used as appropriate to preserve individual rights and to ensure the authenticity and maintenance of a secure evidentiary chain of custody.
- Developing protocols that ensure retention and purge periods are maintained in accordance with established records retention schedules.
- Facilitating law enforcement access to images and data captured by the UAS.
- Recommending program enhancements, especially regarding safety and information security.
- Ensuring that established protocols are followed by monitoring and providing periodic 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 a UAS.
- Developing procedures for the use of facial recognition software to evaluate information gathered by a UAS, as permitted by 725 ILCS 167/17.
- Ensuring that the department's current UAS policy is posted on the department's website (725 ILCS 167/35).

606.5 USE OF UAS

Only authorized operators who have completed the required training shall be permitted to operate the UAS.

Use of vision enhancement technology (e.g., thermal and other imaging equipment not generally available to the public) is permissible in viewing areas only where there is no protectable privacy interest or when in compliance with a search warrant or court order. In all other instances, legal counsel should be consulted.

UAS operations should only be conducted consistent with FAA regulations.

The Department may not use the UAS to gather information except (725 ILCS 167/15):

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- (a) To counter a high risk of a terrorist attack by a specific individual or organization if the United States Secretary of Homeland Security determines that credible intelligence indicates there is a risk.
- (b) Pursuant to a search warrant based on probable cause. The warrant must be limited to a period of 45 days, renewable by a judge upon showing good cause for subsequent periods of 45 days.
- (c) Upon reasonable suspicion that under particular circumstances, swift action is needed to prevent imminent harm to life, forestall the imminent escape of a suspect, or prevent the destruction of evidence. The use of a UAS under this paragraph is limited to a period of 48 hours. Within 24 hours of UAS initiation under this paragraph, the Chief of Police must report its use, in writing, to the State's Attorney.
- (d) To locate a missing person, engage in search and rescue operations, or aid a person who cannot otherwise be safely reached while not also undertaking a criminal investigation.
- (e) To obtain crime scene and traffic crash scene photography in a geographically confined and time-limited manner. The use of the UAS under this paragraph on private property requires either a search warrant or lawful consent to search.
- (f) To obtain information necessary for the determination of whether a disaster or public health emergency should be declared, to manage a disaster by monitoring weather or emergency conditions, to survey damage, or to coordinate response and recovery efforts.
- (g) To conduct an inspection of the infrastructure of a designated building or structure when requested by a local government agency.
- (h) To locate victims, assist with victims' immediate health or safety needs, or coordinate the response of emergency vehicles and personnel, when dispatched to an emergency.
- (i) In advance of or during a routed event or special event, as defined in 725 ILCS 167/5, for those uses allowed under 725 ILCS 167/15.
 - 1. The notice for UAS use in these instances should be posted at a time, place, and manner as required by 725 ILCS 167/15.

606.5.1 PRIVATE UAS OWNERS

This policy and its restrictions apply to the department's directed use of a UAS owned by a private third party and information gathered by a UAS voluntarily submitted to the Department by a private third party (725 ILCS 167/40).

606.5.2 FACIAL RECOGNITION WITH UAS

Facial recognition software onboard a UAS shall not be used during a flight (725 ILCS 167/17). Use of facial recognition software to evaluate information gathered by a UAS is permissible only under those circumstances described in 725 ILCS 167/17.

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606.6 DEPLOYMENT PROCEDURES

A. The small unmanned aircraft system shall be deployed and used only to support official law enforcement and public safety missions and be operated by personnel who have been trained and certified in the operation of the system.

B. Prior to deployment, an assigned crew member will verify approval has been received from the Investigations Commander and/or on-duty Patrol Supervisor.

1. Responsibility and final authority during flight operations shall remain with the assigned small unmanned aircraft system crew member(s).

2. Crew members and the on-duty Patrol Supervisor maintain concurrent authority to suspend or terminate any flight operations based on environmental, operational, and/or any other safety considerations.

3. Requests from outside agencies shall be directed to the on-duty Patrol Supervisor. The on-duty Patrol Supervisor will coordinate with an authorized Remote Pilot in Command (RPIC), if available, to ascertain whether flight operations may be conducted for the requested mission. The on-duty Patrol Supervisor will determine whether to approve deployment of small unmanned aircraft resources to assist outside agencies.

C. A trained Visual Observer (VO), if available, should be utilized during all flights operations to maintain Visual Line of Sight (VLOS). However, during night time operations, a Visual Observer is mandatory and shall maintain a Visual Line of Sight during the entire duration of the flight.

D. Certified personnel shall inspect and test the small unmanned aircraft system equipment and components prior to each deployment to verify the proper functioning and overall airworthiness of the unmanned aircraft.

E. The Remote Pilot in Command (RPIC), or authorized crew member shall determine the location of flight operations, check airspace restrictions, and obtain FAA authorization if required.

F. Except for those instances where officer safety or investigation could be jeopardized and where reasonably possible and practical, the Department, or requesting agency should consider notification to the public in the general area of the deployment.

G. All deployments will be documented in an applicable written report, and all flight time(s) shall be accurately recorded. Reports shall include, but are not necessarily limited to, the following:

1. Name of requesting officer/agency and approving on-duty Patrol Supervisor.
2. Reason and circumstances surrounding the deployment.
3. Date, flight time (s) and location(s).
4. Personnel assigned as crew members and respective responsibilities.
5. Equipment utilized and pre-flight operational readiness of such equipment.
6. Summary of activities performed, any actions taken, and outcomes from the deployment.

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H. Copies of any deployment reports will be forwarded to the Investigations Commander and UAS Coordinator.

I. Call out procedure:

[See attachment: sUAS Call Out Procedures Redacted numbers.pdf](#)

606.7 PROHIBITED USE

The UAS video surveillance equipment shall not be used:

- To conduct random surveillance activities.
- To target a person based solely on actual or perceived characteristics such as race, ethnicity, national origin, religion, sex, sexual orientation, gender identity or expression, economic status, age, cultural group, or disability.
- To harass, intimidate, or discriminate against any individual or group.
- To conduct personal business of any type.

The UAS shall not be weaponized (725 ILCS 167/18).

606.8 ACCIDENT REPORTING

The FAA requires notification of certain sUAS accidents:

A. Pursuant to 14 CFR 107 Drone Operation & Certification Regulations. Within 10 days after the accident, the Remote Pilot in Command (RPIC) under the supervision of the Investigations Commander must report accidents to the FAA in the following situations:

1. Serious injury to any person or loss of consciousness.
2. Damage to any property, other than the sUAS, unless one of the following conditions is satisfied:
 - a. The cost of repair including materials and labor does not exceed \$500.00 or
 - b. The fair market value of the property does not exceed \$500.00 in the event of a total loss.

B. The Remote Pilot in Command (RPIC) will complete an incident/offense report for any accident involving the sUAS. The report shall include, at a minimum, the following information:

1. Name and contact information for operators and witnesses.
2. Type of operation.
3. Type of device and registration number/certificate
4. Event location and incident details.
5. Evidence collection such as video, photos, and device confiscation, if necessary.

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C. The Investigations Commander and UAS Coordinator shall be immediately notified of any accident involving department owned UAS.

606.9 INSPECTION AND CARE OF EQUIPMENT

A. The sUAS and related equipment shall be maintained in the state of operational readiness at all times.

B. Assigned personnel shall use reasonable care to ensure the proper functioning of the sUAS equipment. Extra caution must be taken to ensure the equipment is not stored in extreme temperatures.

C. Malfunctions shall be brought to the attention of the UAS Coordinator as soon as possible.

D. Prior to use, assigned personnel shall:

1. Inspect the sUAS and related equipment to verify proper functioning and ensure the battery is fully charged in accordance to the manufacturer's recommendations. Each pre-flight check shall be documented on the **sUAS Pre Flight Checklist** forms for each UAV.

[See attachment: UAV1_preflight.pdf](#)

[See attachment: UAV2_MAVICMINI_INDOOR_preflight.pdf](#)

2. Inspect the body of the sUAS, the charging and camera cables to look for signs of visible damage. Ensure the propeller blades are in flight worthy condition.

E. Log all flights in the **sUAS Flight Logbook**, noting the date, location, flight duration, and reason for flight. All flight logs will be kept and maintained by the sUAS coordinator.

[See attachment: FlightLog.pdf](#)

606.10 TRAINING

A. Department personnel who are assigned to the sUAS operational responsibilities must complete a department approved training program to ensure proper use and operations.

B. Assigned personnel shall be trained in local and federal laws and regulations, as well as, policies and procedures governing the deployment and use of the sUAS.

C. Personnel acting in the capacity of a Remote Pilot in Command (RPIC) shall, at a minimum:

1. Obtain and maintain an FAA Remote Pilot Certification (to be renewed every 24 months)
2. Successfully complete training requirements in any prescribed FAA Certificates of Authorization (COA) or waivers.
3. Participate in periodic training to ensure the continued effective use, operation, proper calibration and performance of the equipment. Periodic training shall also incorporate any

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changes, updates, or other revisions in Department policy, statutes, federal regulations and/ or equipment.

D. Demonstrate annual proficiency to the UAS Coordinator and/or Investigations Commander.

E. Personnel acting in crew member capacities, other than that of the Remote Pilot in Command (RPIC) may also be subject to any training requirements in any prescribed FAA Certificates of Authorization (COA) or waivers.

F. The Investigations Commander may suspend, or revoke, any crew member's authorization to conduct flight operations should circumstances indicate such action would be in the best interest of the Department.

G. Copies of all training records shall be maintained by the UAS Coordinator. Copies of applicable training will be forwarded to Training Coordinator.

606.11 RETENTION OF UAS INFORMATION

The Records Section supervisor or designee shall destroy all information gathered by the UAS within the timeframe specified by law (725 ILCS 167/20).

Information may be retained by a department supervisor when (725 ILCS 167/20):

- (a) There is reasonable suspicion that the information contains evidence of criminal activity.
- (b) The information is relevant to an ongoing investigation or pending criminal trial.
- (c) The information will be used exclusively for training purposes and all personally identifiable information has been removed from it.
- (d) The information contains only flight path data, metadata, or telemetry information of the UAS.

606.12 REPORTING

The Records Section supervisor shall report annually, by April 1, to the Illinois Criminal Justice Information Authority the number of UASs owned by the Department and any other required information to be reported under 725 ILCS 167/35.

The program coordinator will conduct an annual documented assessment of equipment, deployments, training, program procedures, and compliance with regulations as set forth by 725 ILCS 167/35 submitted to the Chief of Police on or before February 1st of the calendar year.

The program coordinator will conduct and document monthly inspections of equipment, flight logs, training, and maintenance records. The program coordinator will keep all records in accordance with federal and state laws, local ordinances and department policy.

The report shall contain a copy of the department's current UAS policy (725 ILCS 167/35).

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606.13 DISCLOSURE OF UAS INFORMATION

Information gathered during an inspection of the infrastructure of a designated building or structure shall be given, as soon as practicable, to the requesting local government agency before it is destroyed (725 ILCS 167/20).

The disclosure of information gathered by the UAS is prohibited except (725 ILCS 167/25):

- (a) To another government agency when there is reasonable suspicion that the information contains evidence of criminal activity or the information is relevant to an ongoing investigation or pending criminal trial.
- (b) Pursuant to a court order or subpoena in connection with a criminal proceeding.
- (c) In regard to a completed traffic crash investigation.

Available records of drone usage (e.g., flight path data, metadata, telemetry information of specific flights) may be disclosed subject to the Freedom of Information Act, 5 ILCS 140/1 et seq., and rules adopted under it (725 ILCS 167/25).

606.14 COMPLIANCE WITH THE FREEDOM FROM DRONE SURVEILLANCE ACT

If a determination is made that a member has violated the Act, the Department shall take prompt and appropriate action (e.g., training, discipline) (725 ILCS 167/45). If a determination is made that a UAS pilot has willfully violated the Act, the Department shall promptly remove the pilot from its UAS program and take other appropriate action (see the Personnel Complaints Policy) (725 ILCS 167/45).

Attachments

sUAS Call Out Procedures Redacted numbers.pdf

Palatine Police Department Small Unmanned Aircraft Systems (sUAS) Emergency Call-out Procedures

REQUESTS FROM PALATINE POLICE DEPARTMENT PERSONNEL

- Contact On-Duty Patrol Supervisor for approval and to facilitate deployment of resource.
- On-Duty Patrol Supervisor will call the UAS Coordinator to make sure sUAS is operational and “Clear to Fly”
- Indoor Drone flights (Mavic Mini only) will be approved by On-Duty Patrol Supervisor.
 - FAA Remote Pilot in Command (RPIC) are recommended, but not required. (Must have been trained by FAA RPIC)
- If no PD pilots are on-duty, initiate emergency call-out procedures for pilots.
 - * (2) Two PD pilots recommended for all police related emergency incidents, (2) two required at night.
- Notify D/C of Field Operations when practical.

REQUESTS FROM PALATINE FIRE DEPARTMENT

- Fire Personnel on-scene will contact NWCDS requesting drone
- NWCDS will contact the On-Duty Patrol Supervisor for approval and to facilitate deployment of resource:
- On-Duty Patrol Supervisor will call the UAS Coordinator to make sure sUAS is operational and “Clear to Fly”.
 - FD PILOTS AVAILABLE:
If Fire Department pilots are on-duty and available, facilitate pick-up or delivery of the sUAS equipment (sUAS equipment stored in Crash Reconstruction Room).
 - * (2) Two trained FD pilots recommended for fire related emergency incidents, (2) required at night.
 - ONLY ONE OR NO FD PILOTS AVAILABLE:
If no PD pilots are on-duty, initiate emergency call-out procedures for pilots.
 - * (2) Two pilots, either PD or FD, recommended for fire related emergency incidents, (2) required at night.
- Notify D/C of Field Operations when practical.

REQUESTS FROM OUTSIDE AGENCIES

- NWCDS will maintain the Department sUAS resources on file for utilization by outside agencies. Requests for outside agency use will be made through NWCDS.
- NWCDS will contact the On-Duty Patrol Supervisor for approval and to facilitate deployment of resource.
- On-Duty Patrol Supervisor will call the UAS Coordinator to make sure sUAS is operational and “Clear to Fly”.
- If no PD pilots on-duty, only initiate Emergency Call-out procedures for pilots if incident circumstances for the outside agency dictate the immediate need for the sUAS and no other area resources are available.
 - * (2) Two PD pilots are recommended for outside agency related emergency incidents, (2) two required at night.
- Notify D/C of Field Operations when practical.

INITIATING EMERGENCY CALL OUT PROCEDURES

Send text message with brief call-out details to: Everbridge System

Text message will be automatically sent to entire sUAS team for response. Pilots will contact the Patrol Operations Office 847-359-9000, unless another contact number is provided in call-out message. First responses receive priority. Depending on the immediacy of the incident, the On-Duty Patrol Supervisor may approve pilot responses based upon those with the fastest response time (i.e. closest available). Remote Pilots in Command (RPIC) and/or sUAS Coordinator will review incident circumstances with the On-Duty Patrol Supervisor to determine appropriateness of deployment, which may include, but not limited to: airspace restrictions, weather conditions, aircraft limitations, operational objectives, etc.

INVESTIGATIONS CMDR

Cmdr. Josh Hester

UAS COORDINATOR

Steve Bushore (PD)

FLIGHT OPERATION APPROVED PILOTS (Part 107)

(PD) Steve Bushore (Sprint)
(PD) Joe Murphy (Verizon)
(PD) Jeb Elliott (Verizon)
(PD) Martin Van der Hoek (Sprint)
(PD) Kyle Frangiamore (Verizon)
(PD) Max Gancarz (Verizon)
(PD) Travis Meeks (T-Mobile)
(PD) Andrew Olech (Verizon)
(PD) Todd Holtz (Sprint)
(PD) Sandra Blaylock (T-Mobile)
(PD) Ryan Huber (Xfinity)

(PW) George Ruppert (Verizon)

INDOOR (only) DRONE PILOTS

(PD) Mike Myerson (AT&T)

EverBridge text message will be sent to all active drone pilots cell phones as a text message.

*****PLEASE REMEMBER TO INCLUDE A CALL BACK NUMBER FOR CREW MEMBERS. PILOTS HAVE BEEN INSTRUCTED TO INITIATE VOICE CALL TO CONFIRM INCIDENT CIRCUMSTANCES AND MISSION DETAILS.*****

UAV1_preflight.pdf

UAV1 MAVIC 2 ENTERPRISE DUAL PRE-FLIGHT CHECKLIST

1	Smart Controller Transmitter Battery	Fully Charged
2	Transmitter Antennas	Extended
3	Mavic 2 Battery	Fully Charged
4	Four Rotors	No Damage
5	Arms	Extended
6	Propellers	No Damage
7	Rotor Locks	No Damage
8	Rotor Springs	Strong, No Distention
9	Motor Mounts	Secure
10	Motors	Free & Smooth Rotation
11	All Fasteners	Attached & Secure
12	Payloads	Attach, Verify Locked
13	Gimbal Motion	Free & Correct
14	Aircraft Battery	Secure
15	Weight & Balance	Verify
16	Smart Controller	Powered On, Lanyard attached
17	Launch DJI Pilot App/Weather App	Verify Connect
18	Aircraft	Powered On
19	Smart Controller	Verify Mode 2
20	Compass	Verify Calibrated
21	GPS Satellites	Verify > 8
22	Max Altitude	Set, Verify 120M
23	Warnings	Normal
24	Geofence?	Request Authorization LANNC
25	Activate Anti-Collision Lighting	As Required (Sunset to Sunrise)
26	Activate LZ Lighting	As Required
27	Hover Test	Begin Recording
28	Establish MOCA	+10 Ft

If temp < 50° = pre-heat batteries press/hold power button for 5 sec.

This Checklist is also located on the UAV Tablet for deployments

Sign off when mission complete

Signature

Date

UAV2_MAVICMINI_INDOOR_preflight.pdf

UAV2 MAVIC MINI INDOOR PRE-FLIGHT CHECKLIST

1	Smart Controller Transmitter Battery	Fully Charged
2	Transmitter Antennas	Extended
3	Mavic Mini Battery	Fully Charged
4	Four Rotors	No Damage
5	Propellers	No Damage
6	Payloads	Prop Guard Secure
7	Remove Gimbal Cover	Store
8	Aircraft Battery	Secure and Latch
9	Transmitter On	Press once, press and hold 2 secs
10	Launch DJI Fly App	Updated
11	Power on Aircraft	Press once, press and hold 2 secs
12	Calibrate Compass	Calibrate
13	Warnings	Normal
14	Activate Anti-Collision	If Needed
15	Record and Hover	Test
16	Establish MOCA	+10ft
This Checklist is also located on the UAV Tablet for deployments		**Sign off when mission complete**

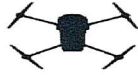
Signature

Date

FlightLog.pdf



FLIGHTLog



#	Date	Case#	PIC Star#	sUAS Make & Model	Location	Flight Time	Notes
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