

Part I Order - 2019-005

1.13.3 Use of Remotely Piloted Aerial System (RPAS)

(Effective: 2019.09.26)

POLICY

The Vancouver Police Department (VPD) supports the use of a Remotely Piloted Aerial System (RPAS) as a platform to gather digital imagery in an effort to support public safety, enhance investigative techniques, expand operational awareness and aid in critical incident resolution.

The Chief Constable, his/her delegate and/or a qualified VPD RPAS Pilot may authorize the deployment of a RPAS for specific purposes including but not limited to:

- Mass casualty events;
- Disaster response and recovery;
- Search & Rescue;
- Lost and/or missing persons;
- Mass event situational awareness aid;
- Investigative scene aid (mapping, modeling and documentation);
- Investigation of a hazardous material release or suspected energetic object;
- Critical incident and life preservation flights including but not limited to barricaded suspects, hostage situations, active deadly threat scenarios, high risk search warrants, and suicidal persons;
- Pursuant to judicial authorization;
- Flight testing, training and demonstrations;
- Public Affairs awareness and education applications;
- Training applications; and
- Mutual agency aid provided the scope of the mission falls within the VPD's RPAS regulations.

The VPD RPAS program shall be administered by the Emergency Response Section and all operations shall be carried out by VPD members in accordance with regulations established by [Transport Canada](#) and [Navigation Canada](#).

Flight missions may be recorded and all recorded digital flight imagery that is of evidentiary or training value shall be handled and stored in accordance with the Regulations and Procedures Manual Section 1.9.17 – Video Evidence and the Forensic Video Unit's *Standard Operating Procedures*. Imagery and/or data that is of no evidentiary or training value shall be retained for a period of 30 days and then purged in accordance with the VPD Forensic Video Unit's policy.

Electronic and/or manual flight logs will be kept in accordance with the VPD RPAS Operation Manual.

Information pertinent to conducting an RPAS investigation may be found in the Regulations and Procedures Manual Section 1.6.52 – Drones & Unmanned Aerial Vehicles (UAVs).

DEFINITIONS

Aeronautics Act R.S. 1985, c. A-2: the legislation that governs civil aviation in Canada (authority for establishment of the Canadian Air Regulations (CARs)).

Aerodrome: a location from which aircraft flight operations take place.

Canadian Aviation Regulations (CARs): the rules that govern civil aviation in Canada.

Canadian Domestic Airspace: includes all airspace over the Canadian land mass, the Canadian Arctic and Archipelago and certain areas over the high seas (CARs 101.01(1)).

Collection: collection of personal information occurs when an individual's image or voice is captured by a surveillance system. The personal information may be played back, displayed, saved or stored, or disclosed to other public bodies or organizations.

Command and Control Link (C2): the data link between the RPAS and the control station for the purpose of managing flight.

Crew Member: a person assigned to duties essential to the operation of the unmanned aerial vehicle during flight time.

Flight Review: Transport Canada sanctioned practical exam designed to assess a pilot's ability to operate an RPAS in a safe manner.

Handover: the act of passing pilot-in-command responsibilities from one control station or pilot to another.

Lost Link: the loss of command and control link contact with the RPAS such that the pilot-in-command can no longer manage the aircraft's flight.

Model Aircraft: an aircraft, the total weight of which does not exceed 35kg that is mechanically driven or launched into flight for recreational purposes and that is not designated to carry persons or other living creatures (CARs 101.01(1)).

NAV Canada: the company that owns and operates Canada's civil air navigation services.

Notice to Airmen (NOTAM): a notice filed with an aviation authority to alert aircraft pilots of potential hazards along a flight route or at a location that could affect the safety of the flight.

Operations Manager: is responsible for RPAS operations, as required and identified, within the SFOC.

Payload: in the case of an RPAS, means a system, an object or collection of objects onboard or otherwise connected to the RPAS that performs, or is related to, a mission function but is not required for flight.

Payload Operator: a crew member responsible for the operation of any payload carried by the RPAS while in flight.

Personal Information: recorded information about an identifiable individual, other than contact information. Video and audio recordings of an individual's image and voice are considered identifiable information.

Photogrammetry: the science of making measurements from photographs and establishing exact positions of surface points.

Remotely Piloted Aerial System (RPAS): a power-driven aircraft where the aircraft and its components are operated without an on-board flight crew. It is also commonly referred to as a drone, Small Unmanned Aircraft (SUA), Unmanned Aerial Vehicle (UAV) and Unmanned Aerial System (UAS). The Vancouver Police Department operates several different systems that are capable of carrying both still and video cameras, infrared cameras or thermal imagery. When in operation, the RPAS is flown by a pilot remotely, while a payload operator is responsible to capture any images and/or video.

RPAS Pilot Certificate (Advanced Category): qualification certificate that allows the holder of the certificate to:

- Fly an RPAS in a controlled airspace;
- Fly an RPAS over bystanders;
- Fly within 30 meters of bystanders; provided that,
- The RPAS has been registered with Transport Canada;
- The RPAS has been marked with a visible identification indicator; and
- The RPAS pilot has passed the Small Advanced RPAS Exam and the RPAS Flight Review.

RPAS (Remotely Piloted Aerial System): an unmanned aerial vehicle (UAV) or uncrewed aerial vehicle commonly known as a drone is an aircraft without an on board human pilot and a type of unmanned vehicle. The system includes, but is not limited to, a UAV, a ground based controller and a system of communications between the two. The flight of UAVs may operate with various degrees of autonomy; either under remote control by a human operator or autonomously by onboard computers.

RPAS Program Coordinator: responsible for all administrative functions of the RPAS program and identified within the SFOC application.

RPAS Operator: in respect of an aircraft, means the person that has possession of the aircraft or RPAS, as owner, lessee or otherwise.

RPAS Pilot: the crew member in charge of the RPAS during flight operation who has met the required qualification standards for the system being operated.

Scene Security Officer: a VPD member, designated by the pilot in command, responsible for operational scene security including any unexpected safety concerns during the span of flight operations including pre and post flight procedures.

Sense and Avoid: the capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

Small Advanced Exam: online exam administered by Transport Canada designed to test the knowledge requirements for RPAS pilots.

Special Flight Operations Certificate (SFOC): legislative authority to conduct RPAS operations within Canadian Domestic Airspace (Section 602.41 CARs).

Unmanned Aerial System: an unmanned aerial vehicle and its associated elements which are operated with no pilot on-board.

Unmanned Aerial Vehicle: a power driven craft that is operated without a flight crew member on board.

RPAS/UAS Base: a VPD unit where an approved UAS /RPAS is deployed.

Vancouver Area Control Center: is responsible for the provision of control services via radar, multiateration (MLAT), and satellite for IFR operations, largely during the enroute phase of flight and for positive control of high density aviation traffic areas, such as in the vicinity of major airports served by commercial carriers.

Vancouver Flight Information Region: covers airspace mainly above the central and southern part of British Columbia.

Visual Line-of-Sight: unaided (corrective lenses and/or sunglasses are exempt)visual contact with the aircraft sufficient enough to be able to maintain operational control of the aircraft, known location, and be able to scan the airspace in which it is operating to decisively see and avoid other air traffic or objects.

Visual Observer: a crew member who assists the pilot with sense and avoid duties.

PROCEDURE

Type and Purpose of Operation

Subject to restrictions, RPAS operations shall be conducted for the following purposes:

1. To obtain digital aerial images and/or video in support of public safety, operational awareness, critical incident resolution and/or to aid in investigative techniques (e.g. crime scene mapping, modeling and documentation).
2. Flight testing, maintenance flights, flight training and demonstration flights.
3. All flight operations shall be conducted as part of a police operation with appropriate, situationally dependent security provisions in place to minimize risks to the public and others involved in the operation.

Restrictions

4. Members shall not:
 - a. use any personally owned or otherwise acquired RPAS for the purpose of any police investigation or operation;
 - b. alter the RPAS and /or its system in any manner;
 - c. use the RPAS for any personal or unapproved purpose;
 - d. operate an RPAS in flight except in accordance with a SFOC, or an air operator certificate (Section 602.41 of the CARs); and
 - e. use the RPAS to obtain or record any aerial images or video that are not for the purpose of supporting a police investigation, training, demonstration, public affairs, maintenance flights or flights that could otherwise be deemed to be unprofessional.
5. Flights will not be conducted for surveillance purposes, however may be used in exigent circumstances where there is an imminent risk to life or safety that can be alleviated by

using an RPAS and/or where prior judicial authorization is so authorized. Permission must be obtained from the Duty Officer or designate in such circumstances.

6. Flights will not be conducted for the purpose of recording and/or identifying members of the public involved in peaceful protests or demonstrations.
7. At no time shall an RPAS and a piloted aircraft operate in the same airspace at the same time. In such circumstances, the RPAS shall land immediately to avoid a collision.

Flight Parameters

RPAS flight parameters will include but are not limited to:

8. All flights will be conducted by trained VPD members on behalf of the VPD or another public safety service.
9. Flight locations shall take place within the Vancouver Flight Information Region unless approved by the Duty Officer or designate.
10. The Duty Officer or designate shall be notified prior to and at the conclusion of all flight operations.
11. The E-Comm Central Dispatcher, Team Manager or District Dispatcher shall be notified prior to any RPAS deployment and provided information related to the intended flight location and duration.
12. The E-Comm Central Dispatcher, Team Manager or District Dispatcher shall be notified at the conclusion of a flight mission.
13. In accordance with Transport Canada, the managing director or designate of any aerodrome within the prescribed flight path of a VPD RPAS shall be notified prior to and at the conclusion of the flight. Aerodrome contact information includes:
 - a. Vancouver International Airport
 - i. Planning: XXX-XXX-XXXX
 - ii. Operations: XXX-XXX-XXXX (Request Emergency Supervisor)
 - b. Vancouver Harbour Tower
 - i. Planning: XXX-XXX-XXXX
 - ii. Operations: XXX-XXX-XXXX (Request Emergency Supervisor)

Flight Operations

14. RPAS flights shall be conducted by an RPAS Pilot and a Visual Observer.
15. Every RPAS flight shall be documented via:
 - a. post flight collection and storage of electronic and manual logs;
 - b. inspection and maintenance logs; and where required,
 - c. a RPAS Pilot and/or Observer shall document their involvement in an investigation as required by Regulations and Procedures Manual Section -1.16.1 General Occurrence Reports.
 - d. Where practicable, all requests for RPAS services shall be communicated to and approved by the RPAS Coordinator or designate prior to deployment.
 - e. Where it is not practicable for the RPAS Coordinator to pre-approve an RPAS flight, the Inspector or designate i/c of ERS and the RPAS Coordinator will be notified via email and/or voice mail of the RPAS mission.

Duty Officer

16. The Duty Officer Shall:
 - a. be notified prior to and at the conclusion of all RPAS flights; and

- b. in the event of a collision or injury, the Duty Officer shall notify the Inspector i/c ERS and where applicable, the Inspector i/c Professional Standards Section and the City of Vancouver Risk Management Department: XXX-XXX-XXXX or risk.management@vancouver.ca.

RPAS Pilot

17. The RPAS Pilot shall:

- a. successfully complete the prescribed RPAS training;
- b. hold a valid advanced RPAS Pilot Certificate;
- c. meet the qualifications listed in the VPD RPAS Standard Operating Procedures Manual;
- d. ensure that all RPAS flights are conducted in accordance with the SFOC;
- e. make the required notifications in accordance with the SFOC;
- f. complete the VPD RPAS Pre-Flight Checklist;
- g. brief the designated Visual Observer and ensure they are capable of completing their responsibilities;
- h. maintain responsibility for ensuring that operating procedures detailed in the current SFOC and supporting applications are followed during all flights;
- i. keep detailed notes regarding the type and purpose of operation including:
 - i. dates and times of the operation;
 - ii. incident number(s);
 - iii. the requesting officer/unit; and
 - iv. lawful authority to fly.
- j. disclose any notes, training logs, electronic imagery/data that may be pertinent to the investigating unit;
- k. be responsible for the deployment of the RPAS and its safe operation for incidents described above; and not violate any federal and/or provincial search authorities during operations and shall consider privacy concerns of persons and/or property not directly involved in the operation; and
- l. report RPAS flight plans to NAV Canada.

Visual Observer

18. The Visual Observer shall:

- a. familiarize themselves with the role of a Visual Observer as contained in the VPD RPAS Standard Operating Procedures Manual;
- b. complete the VPD RPAS Pre-Flight Checklist;
- c. maintain a consistent line of sight with the RPAS while in flight; and
- d. immediately notify the RPAS Pilot of any safety issue or concerns.

Privacy

- 19. It is recognized that personal information, unrelated to the intended purpose of the RPAS deployment, may be inadvertently captured during an operational flight or training exercise.
- 20. All reasonable efforts, as operationally feasible, to avoid the capture of unrelated personal information shall be made by the RPAS pilot. Unless information is required to meet prosecutorial disclosure obligations, prior to the disclosure of any personally identifiable information outside the VPD, the VPD Information and Privacy Unit shall be consulted.

21. All reasonable efforts will be made to remove personal information of those not related to the investigation or purpose of flight. This includes but is not limited to faces, addresses, license plates, and voices.

Data Storage

22. All information collected during an RPAS deployment shall be stored in accordance with the Regulation & Procedures Manual Section 1.9.17 – Video Evidence and the Forensic Video Unit's *Standard Operating Procedures*.
23. Imagery and/or data that is of no evidentiary value shall be purged after a period of 30 days by the member who ordered the video to be obtained.

Safety

24. Safety is of paramount concern in all RPAS deployments and shall be the primary concern for the RPAS pilot prior to conducting any flight.
25. All persons directly involved in the RPAS flight operation shall be familiar with the contents of the SFOC, supporting application, and departmental policy.
26. For the purpose of operational and/or training flights, persons directly involved include: pilot, crew member and scene security officer.
27. The RPAS Program Coordinator will maintain an electronic document outlining the environmental and situational factors required for an RPAS deployment.
28. All pilots shall adhere to all safety requirements set forth by:
 - a. the RPAS manufacturer;
 - b. the SFOC;
 - c. VPD RPAS Operating Procedures Manual; and
 - d. [NAV Canada's RPAS Best Practice Manual](#).
29. Effective, complete and timely communication is critical to aviation safety. NAV Canada may be contacted in the following manners:
 - a. Email - RPASVRFIR@navcanada.ca (non-emergent communication).
 - b. Area Control Center Operations Shift Manager
 - i. Phone: XXX-XXX-XXXX (emergent situations including rogue lateral or vertical fly away scenarios).
 - ii. Email: VRSM@navcanada.ca
30. Towers
 - a. Vancouver Tower (CTVR)
 - i. Planning: XXX-XXX-XXXX
 - ii. Operations: XXX-XXX-XXXX (Request Emergency Supervisor)
 - b. Vancouver Harbour Tower (CYHC)
 - i. Planning: XXX-XXX-XXXX
 - ii. Operations: XXX-XXX-XXXX (Request Emergency Supervisor)
 - c. A list of all other BC Flight Towers may be located at: [NAV Canada - Vancouver Flight Information Region RPAS Best Practice for Air Traffic Services Coordination](#).
31. The Duty Officer shall be notified in the event of an RPAS collision or injury.
32. If there is injury and/or significant property damage as a result of an RPAS collision, Transport Canada shall be notified at (tc.aviationservicespac-servicesaviationpac.tc@tc.gc.ca or Toll Free Phone: X-XXX-XXX-XXXX) and policy pertaining to Regulations and Procedures Manual Section: 5.2.3 – Damage as a Result of Police Action shall be followed.

VPD RPAS Operation Manual

33. The VPD RPAS Operation Manual (RPASOM) is available to all RPAS Pilots and Visual Observers to assist with specific guidance for RPAS operations.
34. The VPD RPASOM content will be date stamped, reviewed and approved annually, and amended as required by the ERS Inspector.
35. The RPAS Program Coordinator, Pilots, and Visual Observers are responsible for familiarizing themselves with any changes/updates to the SFOC and or the VPD RPASOM.
36. The VPD RPASOM shall be accessible to the RPAS Pilot and/or crew during RPAS deployments.

Reporting

37. The VPD RPAS Coordinator shall coordinate the tracking of all RPAS flight missions and collate that data as required.
38. RPAS Flight missions that are not automatically electronically recorded and/or stored by the RPAS craft shall be recorded by the RPAS Coordinator and/or RPAS Pilot in a manual RPAS Flight-Log.
39. Amendments to RPAS policy should be made available on the VPD's public website.
40. RPAS flights that do not comply with or adhere to policy shall be brought to the attention of the ERS Inspector for further review and action if required.

PREVIOUS POLICY

There is no current policy or procedure specific to Use of Remotely Piloted Aerial System (RPAS).