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Drone law in Canada

Whether they are called unmanned aerial vehicles (UAVs), flying mini robots or remotely piloted aerial systems, drones are rapidly growing in popularity and relevance. They can be used through remote control, accessed via smartphone or fly autonomously to reach remote and hard-to-access places, typically with little to no manpower and minimal cost, time and effort.

Individuals, commercial entities and governments are utilizing drones to complete a variety of different tasks that include:

- aerial photography
- express shipping and delivery
- precision crop monitoring
- unmanned cargo transport
- cinematography and videography
- topographic mapping and analysis
- 3D renderings
- infrastructure and compliance inspection

Current regulatory landscape

Canada has some of the strictest drone laws in the world. Before commencing drone operations, it is often necessary that you obtain a pilot certificate, register your drone, follow proper safety protocols and both identify and comply with legal requirements for conducting specific drone operations.

General rules for flying a drone

- Drones that weigh below 250 grams do not require a licence or registration; these drones can be flown by simply following applicable safety requirements.
- Drones that weigh between 250 grams and 25 kilograms must be registered with Transport Canada and marked with their registration number before flying.
- Pilots of drones weighing between 250 grams and 25 kilograms must get their drone pilot certificate.
- Drones must be flown below 400 feet in the air.
- Drones must not be flown near sites for emergency operations or special events.
- Drones must be flown away from bystanders, at a minimum distance of 30 meters horizontally, if conducting basic operations (as set out below).
- Drones must not be flown within 3 nautical miles of an airport or 1 nautical mile of a heliport.

Numerous additional rules apply depending on the specific type of drone operation that is being conducted, such as flying an autonomous drone or flying multiple drones controlled by a single controller.

Basic vs. advanced drone operations

Under the current regulations, there are two categories for drone operations: basic and advanced. These categories are largely determined by the distance between the drone operations and bystanders, as well as airspace rules.

If these three conditions are met, the drone operations are considered basic:

- The drone is more than 30 meters horizontally from bystanders.
- The drone is never flown directly above bystanders.
- The drone is flown only in uncontrolled airspace.

If any one of these three conditions are not met, then the drone operations are considered advanced.

Rules for basic drone operations

Further to the general rules and regulations for flying a drone, pilots conducting basic operations must:

- have a pilot certificate granted after successful completion of the basic operations licensing test; and
- carry their pilot certificate and proof of registration at all times, when flying.

Rules for advanced drone operations

In addition to the general rules and regulations for flying a drone, pilots conducting advanced operations must:

- have a pilot certificate granted after successful completion of the advanced operations licensing test, which includes an in-person flight review;
- carry their pilot certificate and proof of registration at all times, when flying;
- fly a drone that meets all regulation-required safety and assurance standards; and
- survey the flying area and maintain records of all obstacles, such as buildings and power lines, before flying.

Flying a drone outside of basic or advanced operations

When flying a drone outside of basic or advanced operations, such as operating a drone that weighs over 25 kilograms, operating at an altitude higher than 400 feet in the air, operating at a special event or operating beyond the visual line-of-sight, an application for a special flight operations certificate (SFOC) must be submitted to the Minister of Transport. Once granted, the drone operations must be limited only to the specific purpose for which it was intended.

General considerations

Before engaging in commercial drone applications, there are many regulatory requirements that must be addressed in addition to the rules and regulations noted above. These requirements include maintaining up-to-date records, adhering to payload restrictions, complying with local by-laws, and following applicable privacy regulations.

As many drones retain information or may interfere with the enjoyment of private property, it is important for drone users to consider how to comply with applicable privacy legislation and how to avoid committing privacy-related torts.

Penalties and consequences

Operating drones outside the mandated rules and regulations could result in:

- up to a $5,000 fine for each violation of:
  - flying a drone without a pilot certificate;
  - flying an unregistered or unmarked drone; or
  - flying in a controlled or restricted airspace (without an SFOC); and
- up to a $15,000 fine for flying a drone in a manner that may place other aircrafts or people at risk.

Future regulatory landscape

Transport Canada has recognized that their strict drone law rules and regulations are a barrier to economic growth. As the drone industry and technology continue to develop, so does the demand for more complex flight operations. This is especially true for operations beyond the visual line of sight of the pilot (BVLOS). To promote further innovation in drone operations, Transport Canada is seeking to amend the current drone law regulations to permit visual line of sight operations (VLOS) with heavier drones and allow lower-risk BVLOS operations without having to apply for an SFOC.

Transport Canada is proposing a number of amendments that would:

- Expand the existing VLOS regulations so that:
  - Drones between 250 grams and 25 kilograms conducting VLOS flight may fly in uncontrolled airspace above 400 feet in altitude;
  - Drones between 25 kilograms and 150 kilograms conducting VLOS flight may fly under basic operations, near people and over people (with increase standoff distances), in controlled airspaces, and in uncontrolled airspaces above 400 feet in altitude; and
  - Drones between 150 kilograms and 650 kilograms conducting VLOS flight may fly under basic operations over 400 feet in altitude.
- Introduce a new lower-risk BVLOS framework so that:
  - Drones between 250 grams and 150 kilograms conducting BVLOS flight may fly in certain isolated and less populated areas; and
  - Drones between 150 kilograms and 650 kilograms conducting BVLOS flight may fly in certain isolated or less populated areas with a maximum altitude of 400 feet.

These amendments will also require an extension of the existing drone licensing regime by introducing an additional 'operational' level pilot certificate for BVLOS flight. To obtain an operational pilot certificate, pilots will be required to obtain an advanced pilot certificate and complete a flight review at a self-declared school that meets the requirements of BVLOS flight.

In addition, Transport Canada is also looking to add the following technical and maintenance related requirements:

- Certain BVLOS operations will require drones to be equipped with the technology to detect and avoid other aircrafts.
- Organizations will be required to appoint personnel and introduce strict drone maintenance procedures that are in accordance with the applicable drone manufacturer's manual.
- Drones may be required to be equipped with remote identification features to track, detect and identify the drone during both VLOS and BVLOS flight.

Transport Canada is targeting a pre-publication of these amendments in the Canada Gazette in spring of 2021, with a subsequent comment period. Once passed, these new amendments will make it simpler for organizations to perform more complex drone operations, expand the number of commercial use cases for drones and encourage further investment in the Canadian drone landscape.

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