

**An application for a Certificate of Waiver, issued in accordance with 14 CFR § 107.200, must provide justification that the operation can be safely conducted by satisfying the performance-based standards listed below.**

**§ 107.200 Waiver policy and requirements.**

- (a) The Administrator may issue a certificate of waiver authorizing a deviation from any regulation specified in § 107.205 of this subpart if the Administrator finds that a proposed small UAS operation can be safely conducted under the terms of that certificate of waiver.
- (b) A request for a certificate of waiver must contain a complete description of the proposed operation and justification that establishes that the operation can safely be conducted under the terms of a certificate of waiver.
- (c) The Administrator may prescribe additional limitations that the Administrator considers necessary.
- (d) A person who receives a certificate of waiver issued under this section:
  - (1) May deviate from the regulations of this part to the extent specified in the certificate of waiver; and
  - (2) Must comply with any conditions or limitations that are specified in the certificate of waiver.

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**§ 107.25 Operations from Moving Vehicle or Aircraft**

No person may operate a small unmanned aircraft system -

- (a) From a moving aircraft; or
- (b) From a moving land or water-borne vehicle unless the small unmanned aircraft is flown over a sparsely populated area and is not transporting another person's property for compensation or hire.

**Performance-Based Standards**

1. Applicant must provide a method to ensure the dynamic area-of-operation is properly evaluated for potential hazards, and the risks presented to non-participating persons and property by those hazards are controlled or eliminated.
2. Applicant must provide a method to ensure visual line of sight is maintained from a moving vehicle.

3. Applicant must provide a method to ensure all persons involved in the operation are free of any distractions that may prevent them from fulfilling their duties.
  4. Applicant must provide a method to ensure loss of data link procedures account for dynamic location of remote pilot in command.
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### **§ 107.29 Daylight operation.**

- (a) No person may operate a small unmanned aircraft system during night.
- (b) No person may operate a small unmanned aircraft system during periods of civil twilight unless the small unmanned aircraft has lighted anti-collision lighting visible for at least 3 statute miles. The remote pilot in command may reduce the intensity of the anti-collision lighting if he or she determines that, because of operating conditions, it would be in the interest of safety to do so.
- (c) For purposes of subsection (b) of this section, civil twilight refers to the following:
  - (1) Except for Alaska, a period of time that begins 30 minutes before official sunrise and ends at official sunrise;
  - (2) Except for Alaska, a period of time that begins at official sunset and ends 30 minutes after official sunset; and
  - (3) In Alaska, the period of civil twilight as defined in the Air Almanac.

### **Performance-Based Standards**

1. Applicant must provide a method for the remote pilot to maintain visual line of sight during darkness.
  2. Applicant must provide a method for the remote pilot to see and avoid other aircraft, people on the ground, and ground-based structures and obstacles during darkness.
  3. Applicant must provide a method by which the remote pilot will be able to continuously know and determine the position, altitude, attitude, and movement of their small unmanned aircraft (sUA).
  4. Applicant must assure all required persons participating in the sUA operation have knowledge to recognize and overcome visual illusions caused by darkness, and understand physiological conditions which may degrade night vision.
  5. Applicant must provide a method to increase conspicuity of the sUA to be seen at a distance of 3 statute miles unless a system is in place that can avoid all non-participating aircraft.
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### **§ 107.31 Visual line of sight aircraft operation.**

(a) With vision that is unaided by any device other than corrective lenses, the remote pilot in command, the visual observer (if one is used), and the person manipulating the flight control of the small unmanned aircraft system must be able to see the unmanned aircraft throughout the entire flight in order to:

- (1) Know the unmanned aircraft's location;
- (2) Determine the unmanned aircraft's attitude, altitude, and direction of flight;
- (3) Observe the airspace for other air traffic or hazards; and
- (4) Determine that the unmanned aircraft does not endanger the life or property of another.

(b) Throughout the entire flight of the small unmanned aircraft, the ability described in subsection (a) of this section must be exercised by either:

- (1) The remote pilot in command and the person manipulating the flight controls of the small unmanned aircraft system; or
- (2) A visual observer.

### **Performance-Based Standards**

1. Applicant must provide the method by which the remote pilot will be able to continuously know and determine the position, altitude, attitude, and movement of their sUA and ensure the aircraft remains in the area of intended operation.
2. Applicant must provide a method for the remote pilot to avoid other aircraft, people on the ground, and ground-based structures and obstacles at all times.
3. Applicant must provide a method to increase conspicuity of the sUA to be seen at a distance of 3 statute miles unless a system is in place that can avoid all non-participating aircraft.
4. Applicant must provide a means by which the remote pilot is alerted of a degraded sUAS function.
5. Applicant must provide a method to assure all required persons participating in the operation have relevant knowledge of all aspects of operating a sUA that is not in visual line of sight of the remote pilot.

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### **§ 107.33 Visual observer.**

If a visual observer is used during the aircraft operation, all of the following requirements must be met:

- (a) The remote pilot in command, the person manipulating the flight controls of the small unmanned aircraft system, and the visual observer must maintain effective communication with each other at all times.
- (b) The remote pilot in command must ensure that the visual observer is able to see the unmanned aircraft in the manner specified in § 107.31.
- (c) The remote pilot in command, the person manipulating the flight controls of the small unmanned aircraft system, and the visual observer must coordinate to do the following:
  - (1) Scan the airspace where the small unmanned aircraft is operating for any potential collision hazard; and
  - (2) Maintain awareness of the position of the small unmanned aircraft through direct visual observation.

### **Performance-Based Standards**

None. Visual Observers are not required, and thus waiving 107.33 stand-alone would not be valuable in a scenario.

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### **§ 107.35 Operation of multiple small unmanned aircraft.**

A person may not operate or act as a remote pilot in command or visual observer in the operation of more than one unmanned aircraft at the same time.

### **Performance-Based Standards**

1. The applicant must provide a means to resolve failure of single and multiple aircraft or systems.
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### **§ 107.37 Operation near aircraft; right-of-way rules.**

- (a) Each small unmanned aircraft must yield the right of way to all aircraft, airborne vehicles, and launch and reentry vehicles. Yielding the right of way means that the small unmanned aircraft must give way to the aircraft or vehicle and may not pass over, under, or ahead of it unless well clear.

### **Performance-Based Standards**

1. Applicant must provide a method for a manned aircraft pilot, who is participating in a joint operation involving a sUA, to detect and avoid the sUA.
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### **§ 107.39 Operation over human beings.**

No person may operate a small unmanned aircraft over a human being unless that human being is:

- (a) Directly participating in the operation of the small unmanned aircraft; or
- (b) Located under a covered structure or inside a stationary vehicle that can provide reasonable protection from a falling small unmanned aircraft.

### **Performance-Based Standards**

1. Applicant must provide a method such that any malfunction of the sUAS will not cause injuries to non-participating persons on the ground.
  2. Applicant must mitigate risk to non-participants through an operational risk assessment, testing, and data, addressing design features, operational limitations, or a combination thereof specific to the operation.
  3. Applicant must address the risk from exposure to rotating parts and sharp edges which could injure a non-participating person.
  4. Applicant must show the pilot in command, or person manipulating the controls, have adequate knowledge, experience, and ability to safely operate an unmanned aircraft over non-participating persons including recent flight experience within last 30 days.
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### **§ 107.41 Operation in certain airspace.**

No person may operate a small unmanned aircraft in Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport unless that person has prior authorization from Air Traffic Control (ATC).

### **Performance-Based Standards**

1. Applicant must provide a method to ensure the sUA will operate safely and efficiently within the specified controlled airspace without obtaining prior authorization from Air Traffic Control.

2. Applicant must have a way of being contacted by ATC in case the operation needs to be terminated.
  3. Applicant must explain why the FAA's established authorization process would prevent or hinder their UA operation from occurring.
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#### **§ 107.51(a) Operating limitations for small unmanned aircraft. Groundspeed.**

A remote pilot in command and the person manipulating the flight controls of the small unmanned aircraft system must comply with all of the following operating limitations when operating a small unmanned aircraft system:

- (a) The groundspeed of the small unmanned aircraft may not exceed 87 knots (100 miles per hour).

#### **Performance-Based Standards**

1. Applicant must provide a method to ensure loss of control of a sUA at higher speed poses no additional hazard to other aircraft, people, or property on the ground. Any additional risks posed by hazards must be controlled or eliminated.
  2. Applicant must provide a method for the sUA to be seen at a distance of 1 statute mile unless a system is in place that can avoid all non-participating aircraft.
  3. Applicant must have a way of being contacted by ATC in case the operation needs to be terminated.
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#### **§ 107.51(b) Operating limitations for small unmanned aircraft. Altitude.**

A remote pilot in command and the person manipulating the flight controls of the small unmanned aircraft system must comply with all of the following operating limitations when operating a small unmanned aircraft system:

- (b) The altitude of the small unmanned aircraft cannot be higher than 400 feet above ground level, unless the small unmanned aircraft:

- (1) Is flown within a 400-foot radius of a structure; and
- (2) Does not fly higher than 400 feet above the structure's immediate uppermost limit.

#### **Performance-Based Standards**

1. Applicant must provide a method to ensure the sUA will be able to avoid non-participating aircraft and structures when operating at altitudes other than § 107.51(b)
  2. Applicant must provide a method for the sUA to be seen at a distance of 1 statute mile unless a system is in place that can avoid all non-participating aircraft.
  3. Applicant must provide a method for the remote PIC to accurately determine the sUA's altitude, attitude and direction of flight.
  4. Applicant must provide the Lat/Long and radius of the proposed operation.
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### **§ 107.51(c) Operating limitations for small unmanned aircraft. Visibility.**

A remote pilot in command and the person manipulating the flight controls of the small unmanned aircraft system must comply with all of the following operating limitations when operating a small unmanned aircraft system:

- (c) The minimum flight visibility, as observed from the location of the control station must be no less than 3 statute miles. For purposes of this section, flight visibility means the average slant distance from the control station at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night.

### **Performance-Based Standards**

1. Applicant must provide a method for the remote pilot to maintain visual line of sight with the sUA when operating with visibility less than 3 statute miles.
  2. Applicant must provide a method to ensure the sUA will be able to avoid non-participating aircraft when operating with visibility less than 3 statute miles.
  3. Applicant must provide a method to increase conspicuity of the sUA to be seen at a distance of 3 statute miles unless a system is in place that can avoid all non-participating aircraft.
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### **§ 107.51(d) Operating limitations for small unmanned aircraft. Cloud clearance.**

A remote pilot in command and the person manipulating the flight controls of the small unmanned aircraft system must comply with all of the following operating limitations when operating a small unmanned aircraft system:

- (d) The minimum distance of the small unmanned aircraft from clouds must be no less than:
  - (1) 500 feet below the cloud; and

(2) 2,000 feet horizontally from the cloud.

**Performance-Based Standards**

1. Applicant must provide a method for the remote pilot to maintain visual line of sight with the sUA when operating closer to clouds than the distances prescribed in § 107.51(d).
2. Applicant must provide a method to ensure the sUA will be able to avoid non-participating aircraft when operating closer to clouds than the distances prescribed in § 107.51(d).
3. Applicant must provide a method to increase conspicuity of the sUA to be seen at a distance of 3 statute miles unless a system is in place that can avoid all non-participating aircraft.