

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CERTIFICATE OF WAIVER

ISSUED TO

Wing
Responsible Person: Chris Jackman
Waiver Number: 107W-2025-01254

ADDRESS –

3400 Hillview Ave.
Bldg 4
Palo Alto, CA 94304

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the provisions contained in this certificate.

OPERATIONS AUTHORIZED

Small unmanned aircraft system (sUAS) operations beyond the visual line of sight of the remote pilot in command (PIC); Small unmanned aircraft system (sUAS) operations in which a participating Visual Observer (VO) is not able to see the unmanned aircraft; Acting as a remote pilot in command (PIC) or visual observer (VO) in the operation of more than one small unmanned aircraft (sUA) at the same time; Small unmanned aircraft system (sUAS) operations over human beings; Operating Limitations for Small Unmanned Aircraft — Visibility; Operating Limitations for Small Unmanned Aircraft — Cloud Clearance; Small unmanned aircraft system (sUAS) operations over a moving vehicle.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR §§ 107.31—Visual line of sight aircraft operation,
107.33(b) & (c)(2)—Visual observer,
107.35—Operation of multiple small unmanned aircraft systems,
107.39—Operation over human beings,
107.51(c)—Operating limitations for small unmanned aircraft - Visibility,
107.51(d)—Operating limitations for small unmanned aircraft - Cloud Clearance, and
107.145—Operations over moving vehicles

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 31, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from September 2, 2025, to September 30, 2029, and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

Emerging Technologies Division, AFS-700

SPECIAL PROVISIONS ISSUED TO Wing

General.

This Certificate of Waiver is an amendment which supersedes and replaces Waivers 107W-2021-02516, 107W-2021-03097, 107W-2023-00788A, 107W-2023-00386, and 107W-2023-01489 issued to Wing for operations under 14 CFR 107. Waivers 107W-2021-02516, 107W-2021-03097, 107W-2023-00788A, 107W-2023-00386, and 107W-2023-01489 are no longer valid.

The FAA's Flight Standards Service has reviewed your application to ensure compliance with the requirements of 14 CFR § 107.200 and § 107.205. Pursuant to these authorities, the Administrator finds that the proposed small unmanned aircraft (sUA) operation can be conducted safely under the provisions of this Certificate of Waiver (Waiver) as listed below because you have established adequate mitigations for risks involved with operating your sUA in the manner you described. Adherence to the provisions of this Waiver establishes the required level of safety within the national airspace system.

The Administrator may cancel this Waiver at any time. As a general rule, this Waiver may be canceled when it is no longer required, there is an abuse of its provisions, or when unforeseen safety factors develop. Failure to comply with any provision listed below is a violation of the terms of this Waiver and will serve as justification for cancellation.

List of Regulations Waived by Section and Title. The following regulations are waived:

14 CFR § 107.31, Visual line of sight aircraft operation, is waived to allow operation of the small unmanned aircraft (sUA) beyond the direct visual line of sight of the remote pilot in command (PIC);

14 CFR § 107.33(b) & (c)(2), Visual observer, is waived to the extent necessary to allow operation of the small unmanned aircraft (sUA) when any Visual Observer (VO) who is participating in the operation may not be able see the unmanned aircraft in the manner specified in § 107.31;

14 CFR § 107.35, Operation of multiple small unmanned aircraft systems, is waived to allow a person to act as the remote Pilot in Command (PIC) or visual observer (VO) to operate multiple small UAS simultaneously;

14 CFR § 107.39, Operations over human beings, is waived to allow sUA operations over human beings who are not direct participants, necessary for the safe operation of the small unmanned aircraft;

14 CFR § 107.51(c), Operating limitations for small unmanned aircraft - Visibility, is waived to allow operations when the flight visibility as observed from the location of the control station is less than 3 statute miles;

14 CFR § 107.51(d), Operating limitations for small unmanned aircraft - Cloud Clearance, is waived to allow sUA operations not meeting the cloud clearance requirements of § 107.51(d);

14 CFR § 107.145, Operations over moving vehicles, is waived to allow sUA operations over a moving vehicle.

No part of this waiver will function as an airspace authorization under 14 CFR § 107.41. The FAA's Air Traffic Organization responds directly to requests for such authorizations. The LAANC system may not be used for Airspace Authorizations for Waivered Operations.

Common Special Provisions. The Responsible Person is directly responsible for safety of operations conducted under this Waiver and will ensure the Remote Pilot in Command (remote PIC), manipulator of the controls, and visual observer(s) (VO)¹ comply with all provisions of this Waiver.

1. The Responsible Person listed on the Waiver is responsible to the FAA for the safe conduct of the operations. Prior to conducting operations that are the subject of this Waiver, the Responsible Person:
 - a. Must ensure the remote PIC, manipulators of the controls, and VO(s) are informed of the terms and provisions of this Waiver and strictly observe the terms and provisions herein;
 - b. Must ensure the remote PIC, manipulators of the controls, and VO(s) are informed and familiar with part 107 regulations; and
 - c. Evidence of the above (a and b) must be documented and must be presented for inspection upon request from the Administrator or an authorized representative;
2. This Waiver may not be combined with any other waiver(s), authorizations(s), or exemption(s) without specific authorization from the FAA;
3. The FAA has the authority to cancel or delay any or all flight operations if the safety of persons or property on the ground or in the air are in jeopardy or there is a violation of the terms of this Waiver;
4. A copy of this Waiver must be accessible and available to the remote PIC at the ground control station during sUA operations that are the subject of this Waiver;
5. The Responsible Person listed on this Waiver must maintain a current list of pilots by name and remote pilot certificate number used in operations under this Waiver. This list must be presented for inspection upon request from the Administrator or an authorized representative;
6. The Responsible Person listed on this Waiver must maintain a current list of sUA by registration number(s) used in operations under this Waiver. This list must be presented for inspection upon request from the Administrator or an authorized representative;
7. For the purposes of this Waiver, direct participants are the remote PICs, persons manipulating the controls, VOs, and any persons whose involvement is necessary for safety of the sUA operation. All other persons are considered non-participants;
8. If a discrepancy exists between the provisions in this Waiver and the waiver application, the Waiver takes precedence and must be followed;

¹ Title 14 CFR § 107.3 defines the term "visual observer." Any VO participating in operations conducted under this Waiver must meet the requirements listed in § 107.33 throughout the duration of flight operations.

Waiver Specific Special Provisions The remote PIC and VO/s may conduct multiple sUAS operations over people and moving vehicles, in reduced visibility and cloud clearance minimums, without the ability to see the unmanned aircraft throughout the entire flight, provided:

9. Remote ID: The sUA must be a standard remote identification unmanned aircraft listed on the FAA-accepted declaration of compliance list (found here: <https://uasdoc.faa.gov/>), unless otherwise authorized by the Administrator in writing;
10. General Operational Parameters:
 - a. The sUA must not exceed 400 feet AGL;
 - b. Reserved;
 - c. Must use sufficient VO(s), defined as the minimum number of VO(s) required to continuously observe at least a 2 statute mile radius of airspace surrounding the sUA in flight, are;
 - 1) Used to identify any non-participating aircraft prior to their entry into the planned operational area;
 - 2) Physically located such that the remote PIC receives sufficient notice to ensure the UA remains well clear of all other aircraft;
 - 3) Physically located to notify the remote PIC of any moving vehicle or human presence that may pose a hazard to the operation;
 - d. Communication between the remote PIC and VO must occur to facilitate, when necessary, for the remote PIC taking action to maneuver the sUA with sufficient time to;
 - 1) Give way to all other aircraft in accordance with § 107.37;
 - 2) React to any unforeseen operational or mechanical failure without creating a hazard to other people, other aircraft, or property in the event of a loss of control of the sUA; and
 - 3) Maintain compliance with this Waiver and un-waived provisions of part 107;
 - e. If communication between the VO and the remote PIC will occur by electronic device:
 - 1) The device must be continuous full-duplex;
 - 2) The remote PIC must be able to use the device hands-free; and
 - 3) There must be a reliable back-up communication method;
 - f. All VO(s) must receive documented training for their duties and responsibilities to include;
 - 1) Scanning of the Operational Volume for Air and Ground based intruders;
 - 2) Communications procedures and phraseology; and
 - 3) Overall operations conducted under this Waiver;
11. Operations Over Non-Participants:
 - a. Operations over open air assemblies of person is prohibited;
 - b. Sustained operations over non-participants or moving vehicles is prohibited. For the purposes of this waiver, sustain is defined as loitering, hovering, and continuous or sequential overflight of non-participating persons or moving vehicles, including the payload delivery portion of the flight;
 - c. The flight paths and routes must be designed to avoid overflight of human beings and traffic areas;

12. Minimum Visibility and Cloud Clearance Requirements:

- a. Test Sites as Identified in the Site Index Document specified in Special Provision 30
 - 1) Operations may be conducted in Zero Visibility Conditions while remaining completely within the operational area of the Test Site;
 - 2) Operations into clouds may be conducted while remaining completely within the operational area of the Test Site;
- b. Operational and Demonstration Sites as Identified in the Site Index Document specified in Special Provision 30
 - 1) During operations conducted under this Waiver the remote PIC will not fly the sUA unless the minimum flight visibility, as observed from the location of the control station or where sUA is positioned for flight, is no less than 1/2 statute mile;
 - 2) Operations into clouds is prohibited. The sUA must remain clear of clouds at all times;

13. Multiple UAS Operations:

- a. The remote PIC may conduct operations of up to **100 sUA** of the make/model defined in the Waiver application controlled and monitored using an aggregated solution, equipped with redundant flight control and transmission systems, and must ensure adequate simultaneous control of the sUA so they remain inside the area of operation, as described in the waiver application;
- b. The remote PIC must ensure that an individual system failure must not interfere with the operation of any other sUA or cause incidents, accidents, or loss of control involving any other sUA that are subject to this Waiver;
- c. Each sUA must be equipped with an independent Flight Termination System that will allow a safe maneuver for recovery inside the defined operational area if the command and control system fails
- d. The flight termination and Geo-fencing systems must be verified operational prior to each flight;

14. During sUAS operations subject to this Waiver the payload must be secured in a manner that prevents the payload from being detached or shifting from its intended position within the container during flight, and during a parachute deployment;

15. Commercial Operations: No sUA flight that occurs under this waiver Beyond Visual Line of Sight (BVLOS) of the remote PIC may carry the property of another for compensation or hire;

16. The Flight Crew for operations under this Waiver must consist of the personnel specified in the Waiver application and supporting documentation, in the number and crew specialties as specified;

17. The remote PIC (RPIC) must be located within the continental United States;

18. Operations subject to this waiver must cease as soon as possible in a manner that does not jeopardize the safety of human beings, property or other aircraft, if, at any time:

- a. Safety of human beings or property on the ground or in the air is in jeopardy;
- b. Any failure to comply with the provisions of this Waiver exists;
- c. Full-duplex communications cannot be maintained between the remote PIC and any VO participating in the operation

19. The remote PIC (RPIC) must ensure:

- a. Prior to conducting operations under this Waiver, the RPIC must perform a documented site survey to:
 - 1) Identify flight operational area obstacles and boundaries so as to avoid collision with, or damage to property;
 - 2) Validate C2 signal strength is sufficient for control through the entire route;
 - 3) Validate suitable launch/recovery site(s); and
 - 4) Complete and document a Flight Risk Assessment;
- b. Routes are preplanned (using waypoints) prior to flight and aircraft are programmed to automatically follow the route. Manual flights are allowed as necessary;
- c. Geofencing is used to confine the Operational Volume. (defined as the property lines of the assets or perimeter boundaries of the controlled access area or right of way specified in the Waiver application + maximum allowed altitude);
- d. Return to Home/Return to Land feature must not allow the sUA to deviate from the defined operational volume;
- e. Launch or recovery areas are pre-designated and monitored to keep any human being who is not directly participating in the operation out of the areas prior to, during, and immediately following flight operations;
- f. Reserved;
- g. Individuals directly participating in the operation of the sUAS must be easily identifiable visually (e.g., apparel, safety vests);

20. The Responsible Person must ensure:

- a. A copy of the Waiver application and Waiver is available to the remote PIC and all other direct participants prior to and during sUAS operations that are the subject of this Waiver;
- b. A copy of the current operations manual required by this Waiver is available to the remote PIC and all other direct participants prior to and during sUAS operations that are the subject of this Waiver;
- c. All operations conducted under this Waiver follow the procedures outlined in the current operations manual. If a discrepancy exists between the provisions in this Waiver and the procedures outlined in the operations manual, the provisions of this Waiver take precedence and must be followed;
- d. A documented notification from the operator(s) of the sUA to any airport, heliport, known agricultural aerial application operation or aerial military installation within a 3 mile radius of the operating area; and
- e. Each remote PIC who will conduct operations under this Waiver is trained in a manner that addresses the items listed in § 107.49(a) and in a manner that is consistent with how the sUAS will be operated under this Waiver. All training and demonstration for all remote PICs and VO(s) must be documented and made available upon request by the Administrator or an authorized representative. Training operations may only be conducted under the standard requirements of part 107 (without waiver).

The training must include:

- 1) sUA limitations;
- 2) sUA programming;
- 3) sUA operational procedures;
- 4) Abnormal procedures;
- 5) Air traffic avoidance procedures;
- 6) Crew Resource Management;

- 7) sUA flight training; and
 - 8) Demonstration of sUA ground and flight skills;
21. Operations Manual: The Responsible Person must update or revise the operations manual (aka CONOPs) submitted with the Waiver application for changes in the operation. The Responsible Person must track such revisions and present revised documents to the Administrator or an authorized representative upon request. The Responsible Person must also present revised documents when applying for extension of or amendment to this Waiver. If any revision to the manual would be contrary to the information provided in the waiver application or obviate a condition or limitation of this waiver, then the Responsible Person must apply for an amendment to this Waiver;
22. Lost Link Procedures: If the remote PIC loses command or control link with the sUA, the sUA must follow a predetermined route to immediately reestablish command and control link. If command and control link is not immediately reestablished and the remote PIC no longer has the ability to direct the sUAS to ensure compliance with applicable provisions of part 107, the sUA must follow the loss of command and control procedure as described in the waiver application;
23. As described in the waiver application, when operating within 3 statute miles of any airport, airport management must be notified prior to the sUAS operation, a method of radio or telephone communication with airport management must be established, and the remote PIC or VO must monitor the airport's common traffic advisory frequency;
24. Safety Briefing: Prior to operations under this Waiver, all Direct Participants must attend a safety briefing that addresses, at minimum, the following items as applicable:
- a. Designated positions, physical locations, responsibilities, and Crew Resource Management;
 - b. Planned flight operating area;
 - c. Designated launch and recovery areas;
 - d. Verification of geo-fence boundaries;
 - e. Verification of return home and land flight profile, and course;
 - f. Procedures for avoidance of other aircraft and obstacles;
 - g. Procedures for operating under this waiver;
 - h. Land vehicle speed;
 - i. Intended flight path;
 - j. Abnormal procedures; and
 - k. Emergency procedures;
25. ADS-B out (1090/978 MHz) may not be transmitted from the sUAS when operating pursuant to this Waiver. An ADS-B in Receiver (other than a cell phone or third party internet services) must be operational and monitored during all operations pursuant to this Waiver;
26. The area of operation must be sufficiently illuminated to allow both the remote PIC and VO to identify people or obstacles on the ground, or a daytime site assessment must be performed prior to conducting operations that are the subject of this Waiver, noting any hazards or obstructions;
27. Anti-Collision Lighting: The sUA must be equipped with anti-collision lighting compliant with §107.29 to appropriately increase the conspicuity of the sUA. The anti-collision lighting system must be operational at all times;

28. Ground Control Station, Control and Communications (C2) System:

- a. Telemetry: The sUAS ground control station must display in real-time the sUA altitude, position, direction of flight, ground speed, C2 signal strength, GPS or navigation system signal condition, battery condition, and sUA distance from the control station as described in the Waiver application;
- b. Alerting: The remote PIC must ensure the GCS is configured to audibly and/or visually alert the remote PIC of degraded system performance, geofence loss of containment, loss of Control link with the sUA, and intrusion alerts as described in the Waiver application;
- c. Emergency Profiles: The remote PIC must ensure the GCS is configured for automated emergency actions (e.g. RTL/RTH, altitude descend, position hold etc.) as described in the Waiver application; and
- d. Sensors: the remote PIC must ensure any installed collision/obstacle avoidance sensors are operational;

29. UAS Maintenance: All sUAS operations conducted in accordance with this Waiver must comply with all manufacturer recommendations and limitations for the sUAS:

- a. The Responsible Person must maintain each sUAS and its components in accordance with manufacturer's instructions and recommendations. sUAS maintenance includes scheduled and unscheduled overhaul, repair, inspection, modification, replacement, and system software upgrades of the sUAS and its components necessary for flight;
- b. A log of all maintenance performed must be kept for each aircraft operated under this waiver. This log must be available to the remote PIC for review prior to conducting operations that are the subject of this waiver. Each sUAS maintenance log must be presented to the Administrator when requested. The log must contain the following information for each maintenance activity:
 - 1) A description (or reference data acceptable to the Administrator) of work performed;
 - 2) The date of completion of the work performed;
 - 3) The name of the person who performed the work; and
 - 4) The signature of the person who performed the work;
- c. Any sUAS that has undergone maintenance must undergo a functional test flight prior to conducting operations under this Waiver. The functional test flight may only be conducted under the standard requirements of part 107 (without waiver). A log entry must be made for each functional test flight.

The log entry must contain at minimum the:

- 1) Calendar date;
- 2) sUA registration number;
- 3) Remote PIC who performed the functional test flight;
- 4) Duration of the flight; and
- 5) The result of the functional flight test;

30. All emitters used in sUAS must be compliant with all applicable FCC regulations provisions of the FCC authorization granted for the emitter. A FCC Experimental authorization may not be used for sUAS operations under this Waiver; and

31. Site Index of Operations Areas: Operations conducted under this Waiver are limited to the location(s) as described in the CONOPS Site Index.
- a. Prior to operations in a new area the Final Site Index document must be forwarded to 9-AVS-AFS-750-Part107Reports@faa.gov. The Administrator may request a review of all documents in the Site Index supporting the new operations area and request changes to site details;
 - b. The Site Index must contain documentation that analyses and documents each site for the elements land below. The Responsible Person must approve the final disposition:
 - 1) Area of Operation Plan (Flight planning)
 - 2) Collision Avoidance Plan (Air Risk and Airspace classification)
 - 3) Communication Service Assessment (C2 and Crew Communications)
 - 4) Ground Risk Assessment (Site description including hazard and obstruction identification)
 - 5) Final Site Index document (synopsis with Operational Area defined by Latitude/Longitudes).