

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

ISSUED TO

Denver Fire Department
Responsible Person: Kyle McConnell
Waiver Number: 107W-2025-00193

ADDRESS—

4640 Lipan St
Denver, CO 80211

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 over human beings; 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,
107.39—Operation over human beings, 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 22, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from January 24, 2025, to January 31, 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 Denver Fire Department

General.

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 § 107.39, 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 § 107.145, 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.

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;

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.

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;

Waiver Specific Special Provisions. The remote PIC may conduct sUAS operations without the ability to see the unmanned aircraft throughout the entire flight, over people and moving vehicles, provided:

9. The sUAS must be equipped and operated with a mechanism to shield or prevent rotating components (i.e., prop guards) from causing lacerations to human skin;
10. The sUA must be equipped and operated with anti-collision lighting to increase the conspicuity of the sUA to at least 1 statute mile for daytime operations and at least 3 statute miles for civil twilight and night operations for collision-avoidance purposes. Operations under this waiver without lighting are prohibited;
11. 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;
12. sUA weighing more than 0.88 pounds at takeoff, (the takeoff weight includes the weight of the sUA, the required equipment listed above, and any payload carried by the sUA), must be equipped with a Parachute Recovery System (PRS) that conforms to the ASTM F3322-18 (or newer) standard and operated in accordance with the manufacturer's operator manual. The PRS manufacturer's operator manual must be accessible to the RPIC at all times during the operation. A digital copy of this manual is acceptable;
13. The maximum takeoff weight of the sUA and all attachments (such as prop guards, PRS, remote ID module, camera, anti-collision light, and/or payload) must be less than 55 pounds;
14. The use of an Automated Dependent Surveillance Broadcast-In (ADS-B In) receiver, (other than a cell phone or third party internet services) is required. The ADS-B In system must be operational and monitored by the RPIC at all times during the flight;

15. The RPIC must have situational awareness of air traffic in the vicinity of the operation, and be in compliance with §107.37;
16. Prior to commencing any flight under this waiver, a checklist must be completed by the RPIC to identify potential ground and air hazards that are within 1 statute mile of the intended operating area or route of flight. The checklist must:
 - a. Be briefed to VO(s) and person(s) flying the drone, and
 - b. Identify the following items, at a minimum:
 - 1) Areas or routes of low-level helicopter and airplane operations, such as helipads, grass airstrips, airports, military operations areas below 500 feet above ground level (AGL), tour operator flights, and farmland suitable for agricultural aircraft operations,
 - 2) Location(s) of expected pedestrian and/or vehicular traffic, and
 - 3) Highest obstacle or obstruction that may be encountered;
17. The route of flight must be planned to minimize the time spent operating over human beings and human beings located inside moving vehicles;
18. The sUA must remain within 200 feet laterally of any obstruction* being overflown, limited to:
 - a. A maximum of 200 feet above the highest obstruction along the route of flight, or
 - b. If the sUA is equipped with an ASTM-conforming PRS, the minimum deployment altitude above the ground as stated in the PRS operator's manual, whichever is higher;

* For purposes of this waiver, "obstruction" means any physical object, man-made or natural, that would stop or impede the flight of the sUA if physical contact is made.
19. The sUA must be limited to a maximum distance of 1 statute mile from the RPIC;
20. Prior to commencing operations under this waiver, the Responsible Person must provide a copy of this waiver to the following local entities for their awareness:
 - a. FAA Flight Standards District Office (FSDO). FSDOs can be located using this web page: https://www.faa.gov/about/office_org/field_offices/fsdo,
 - b. Law enforcement (LE) aviation units, agricultural aircraft operators, tour operators, helicopter emergency medical services (HEMS) operators, and other helicopter operators who routinely operate in the local area, and
 - c. Military representative (MILREP). Use the applicable regional service center email address below:
 - ❖ CSC MILREPs: ASW-CSA-MILREPS@faa.gov
 - ❖ ESC MILREPs: ESA-MILREPS@faa.gov
 - ❖ WSC MILREPs: ANM-WSA-MILREPS@faa.gov;
21. Prior to takeoff, the sUAS must be programmed to execute a pre-programmed return-to-home (RTH) command if the signal is lost or disrupted for more than 5 seconds; and
22. Prior to takeoff, the RPIC must program a RTH altitude that avoids any obstructions along the RTH route, limited to no higher than 200 feet above any obstruction encountered along the route or 400 feet AGL, whichever is lower.