

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

ISSUED TO

TPS At Fort Mac, LLC
Responsible Person: Christian Cherniak
Waiver Number: 107W-2024-03802

ADDRESS –

541 10th St NW # 172
Atlanta, GA 30318

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

Operation from a moving land borne vehicle over other than sparsely populated areas. Operation not for transportation of property for compensation or hire; operations under this Waiver are to be conducted in Class G airspace only unless specific airspace authorization or Waiver is received from the FAA in accordance with § 107.41; 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 §§ 107.25—Operation from a moving vehicle or aircraft,
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 30, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from October 22, 2024, to October 31, 2028, 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
TPS At Fort Mac, LLC

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 § 107.25, Operation from a moving vehicle or aircraft, is waived to allow sUA operations from a moving vehicle or aircraft not meeting the requirements of § 107.25;

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 sUAS operations may be conducted from a land or water-borne vehicle over other than sparsely populated areas, over human beings and/or moving vehicles involved in the performing arts production. Operation not for transportation of property for compensation or hire.

OPERATIONAL PROVISIONS

All Operations

9. Visual Observers: All operations conducted under this Waiver must use one or more VO as described in the waiver application;
10. The remote PIC 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. Individuals directly participating in the operation of the sUAS must be easily identifiable visually (e.g., apparel, safety vests)
- g. Non-participant Company personnel inside the operational area are notified of sUA operations;

11. 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 as submitted in the Waiver application 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;
- 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 VOs 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;

12. 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;

13. 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;
14. 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,
 - d. A non-participating aircraft enters the designated flight operating area,
 - e. GPS signal is lost, or
 - f. GPS location information is degraded;

Operations from Moving Vehicles

15. sUAS operations may be conducted from a land or water-borne vehicle;
16. The remote PIC, the VO(s), and the person operating the moving land-based vehicle must be designated in advance of the commencement of the operation, and may serve only in a single role throughout the operation. For example, the person who operates the land based vehicle may not simultaneously act as the VO;
17. The Responsible Person must ensure:
 - a. The area of operation is sterile as described in the waiver application.
 - b. The manipulator of the sUAS controls must be the holder of a remote pilot certificate with a sUAS rating.
 - a. The remote PIC, VO, and driver have general knowledge of the topography and environment for the planned flight route and have briefed the intended flight to address matters such as vehicle route, speeds, obstacles and weather.
 - b. Vehicle movement does not interfere with the duties and responsibilities of the remote PIC and/or VO
 - c. The remote PIC, the person operating the moving vehicle, and the VO are different people and do not serve multiple responsibilities during the operation.
 - d. The remote PIC and VO must have an unobstructed field of view from the moving vehicle;
18. Any electronic communications conducted by the remote PIC, VO(s), or the land-based vehicle operator must be through the use of a hands-free full duplex communication device;

19. The loss of data link procedures account for the dynamic location of the remote PIC. These procedures must include a safe flight termination method or a safe lost link flight path around all obstacles, adverse weather conditions, non-participating aircraft, and persons on the ground, which are encountered during the operation;

Operations over Non-Participants

20. Operations Over Non-Participants:
 - a. Operations over open air assemblies of persons not involved in production is prohibited.
 - b. Operations over non-participants or moving vehicles must be transitory in nature. 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.
 - c. The flight paths and routes must be designed to avoid overflight of human beings and traffic areas;

TECHNICAL PROVISIONS

21. Operations conducted under this Waiver may only occur with the make and model sUAS selected using the criteria described in the waiver application. Proposed operations of any other manufacturer, make or model of sUAS not adhering to this criteria will require a new waiver application or a request to amend this Waiver;
22. ADS-B out (1090/978 MHz) may not be transmitted from the sUAS when operating pursuant to this Waiver. ADS-B in must be operational and monitored during all operations pursuant to this Waiver.
23. The sUA must be equipped with anti-collision lighting to increase the conspicuity of the sUA to 1 statute mile for daytime operations and 3 statute miles for civil twilight and/or night operations;
24. sUA \leq 0.88lbs AUW: For operations over non-participants:
 - a. Operations over open air assemblies of persons not participating in the production is prohibited.
 - b. Sustained operations over non-participants or moving vehicles is prohibited.
 - c. For the purposes of this waiver, ""sustained"" 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.
 - d. The maximum takeoff weight of the sUAS and all attachments such as shielding for rotating components (i.e., prop guards), remote ID module, camera, anti-collision lights, and/or payload must not exceed 0.88 pounds;
 - d. The sUAS must be equipped and operated with rotating component shielding (e.g., prop guards) or a system that will prevent lacerations to human skin.
 - e. The sUA must be equipped with anti-collision lighting to increase the conspicuity of the sUA to at least one statute mile for daytime operations;

25. sUA >.088 lbs AUW: For operations over non-participants:
 - a. Operations over open air assemblies of persons not participating in the production 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.
 - d. The sUA parachute system must be operational and comply with ASTM 3322-18 as revised.
 - e. Within the previous 7 calendar days prior to operations, the responsible person and remote PIC must have verified the parachute system has no known safety defects that would alter the efficacy or safety of the parachute system.
 - f. The sUA may not be operated lower than the altitude specified by the PRS manufacturer for parachute deployment;
26. The sUAS ground control station must display in real-time the sUA altitude, position, direction of flight, and sUA flight mode, and be configured to audibly or visually alert the remote PIC of degraded system performance and loss of Control link with the sUA. This information must be available at all times to the remote PIC;
27. Any modification to the sUAS design is prohibited; repair and replacement of damaged components is allowed with a replacement part that is exactly the same as the original; no substitutions are allowed unless the Responsible Person submits a new waiver request describing the substitution or modification;
28. 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;

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

ENVIRONMENTAL PROVISIONS

30. Operations conducted under this Waiver are limited to the location as described in waiver application.