

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

ISSUED TO

Northern Plains UAS Test Site
Responsible Person: Joseph Reilly
Waiver Number: 107W-2022-01821

ADDRESS –

4201 James Ray Dr Stop 8392
Grand Forks, ND 58202

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

sUAS operations higher than 400 feet above ground level, when not within a 400 foot radius of a structure.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR § 107.51(b)—Operating limitations for small unmanned aircraft - Altitude

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 27, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from **December 8, 2022, to December 7, 2024**, and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

Vonnie L. Giles
(Signature)

Manager, Tactical Operations Team (AJV-C23)
(Title)

SPECIAL PROVISIONS ISSUED TO Northern Plains UAS Test Site

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 § 107.51(b), Operating limitations for small unmanned aircraft - Altitude, is waived to allow sUAS operations higher than 400 feet above ground level (AGL), not to exceed 1200 feet AGL.

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;
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;

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.

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;

Operations higher than 400 feet AGL Special Provisions sUAS operations may be conducted above 400 feet AGL, **not to exceed 1200 feet AGL**, provided:

8. All operations under this Waiver must use one or more VO;
9. Operations may not be conducted at night, as defined in 14 CFR § 1.1;
10. As described in the waiver request, the sUAS ground control station must display in real time the following information: sUA altitude, sUA position, sUA direction of flight, and sUAS flight mode. This information must be available at all times to the remote PIC;
11. The Responsible Person listed on this Waiver must ensure the sUA is equipped with high visibility markings and/or lights visible during the daytime from a distance of no less than 3 statute mile;
12. Not less than 24 hours prior to conducting operations that are the subject of this Waiver, a Notice to Air Missions (NOTAM) must be filed. The NOTAM must include location, altitude, and/or operating area, time and nature of the activity, and number of sUA flying in the operating area;
13. Prior to conducting operations under this Waiver, the remote PIC must ensure that the geo-fence system, telemetry system, associated flight control systems, and sensors, as described in the Waiver application, operate properly;
14. ADS-B out (1090/978 MHz) may not be transmitted from the sUAS when operating pursuant to this Waiver;
15. 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
16. Operations conducted under this Waiver are limited to an area in the vicinity of Grand Forks Air Force Base within a polygon defined by coordinates, under the jurisdiction of Grand Forks Radar Approach Control (RDR RAPCON) as defined and depicted in Attachments 1 thru 3.

Operating Area and Air Traffic Control Requirements

17. Operations must only be conducted when RDR RAPCON is operational. RDR RAPCON hours of operation are normally: Monday – Sunday: 0600L – 2330L.
18. At no times are operations permitted over the lateral confines of Grand Forks Air Force Base (RDR) or the RDR Airfield or within the Accident Potential Zones located at either end of the runways. Photography and/or video of military installations and assets or the military ranges are illegal and prohibited by Federal Law.
19. Flight in the RDR AFB SSI is not authorized.

Coordination & Communication Requirements:

20. Operator shall contact RDR RAPCON at 701-747-6544, 30 minutes prior to schedule proposed operations and provide the following:
 - a. Authorization/Waiver number, name and phone number of PIC
 - b. Schedule of flight (time and duration)
 - c. Location
 - d. Altitude
 - e. Lost Link Procedure
21. UAS PIC should monitor as necessary the RDR RAPCON frequency 132.3.
22. PIC shall notify RDR RAPCON immediately upon completion of UAS flight operations.
23. RDR RAPCON may disapprove, terminate, restrict or delay UAS flight operations under their airspace area of jurisdiction at any time.

Emergency/Contingency Procedures

24. Lost Link: In the event of a Lost Link, the UAS pilot shall immediately notify RDR RAPCON at 701-747-6544. The UAS Lost Link Profile will remain at or below the ATC authorized altitudes and within the ATC authorized operating area and land.
25. Fly Away Procedures: In the event of a fly away, the UAS pilot shall immediately notify RDR RAPCON at 701-747-6544 and state the following:
 - a. UA Altitude
 - b. UA last known location
 - c. Direction of flight/heading
 - d. Fuel on board/battery time
 - e. Pilots intentions
 - f. Termination of flight/emergency condition
26. If the UAS loses communications or loses its GPS signal, the PIC must immediately notify RDR RAPCON at 701-747-6544. Upon ATC authorization, the UAS will return to Lost Link home point and land.
27. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

47°51'39.00"N 97°21'47.00"W 47°51'39.00"N 97°20'24.00"W 47°47'53.00"N 97°20'6.00"W
47°44'57.00"N 97°13'53.00"W 47°43'51.00"N 97°13'53.00"W 47°42'33.00"N 97°24'7.00"W
47°48'32.00"N 97°24'7.00"W

This is a detailed aeronautical chart of the Grand Forks, North Dakota area. The chart includes the following information:

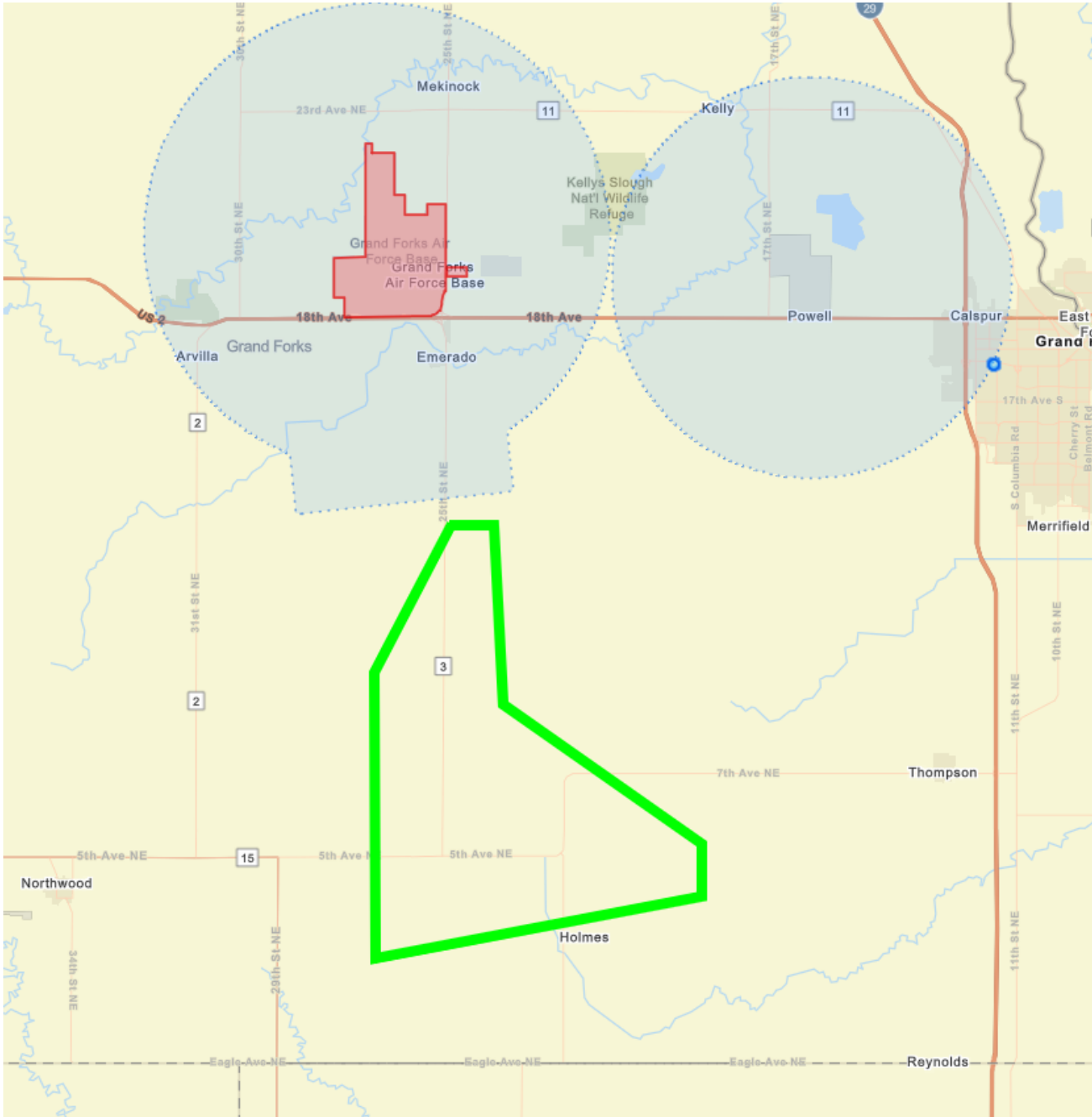
- Airports:**
 - Grand Forks AFB (RDR) CT-124.9 ★ ATIS 273.45
 - Grand Forks Intl (GFK) CT-118.4 ★ ATIS-119.4
 - FROKJER (Pvt) 953 - 20
 - KNUTSON (Pvt) 880 - 34 122.8
 - GENSRICH (Pvt) 1021 - 26 122.8
 - CENTRAL VALLEY AVIATION (Pvt)
- Communication:**
 - Arvilla: 141.8, 1476 (417)
 - Emerado: 111.2 (235), 111.9 (259)
 - Thompson: 114.5 (304)
 - Northwood: 1320 (225)
 - Holmes: 1239 (233)
 - Reynolds: 1234 (220)
 - Hatton: 1234 (220)
- Navigation and Obstacles:**
 - Obstacle 1050 (206) near Mekinock
 - Obstacle 1158 (330) near Kelly
 - Obstacle 1238 near Thompson
 - Obstacle 1145 (304) near Thompson
 - Obstacle 1239 (233) near Holmes
 - Obstacle 1234 (220) near Reynolds
 - Obstacle 1222 (322) near farm
- Other Features:**
 - Kellys Slough National Wildlife Refuge
 - Grand Forks Intl (GFK) AOE
 - Grand Forks Intl (GFK) RP 9R, 17R, 27R, 35R
 - Grand Forks Intl (GFK) 160°
 - Grand Forks Intl (GFK) 230°
 - Grand Forks Intl (GFK) 270°
 - Grand Forks Intl (GFK) 215°
 - Grand Forks Intl (GFK) 210°
 - Grand Forks Intl (GFK) 205°
 - Grand Forks Intl (GFK) 200°
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 - Grand Forks Intl (GFK) 20°
 - Grand Forks Intl (GFK) 15°
 - Grand Forks Intl (GFK) 10°
 - Grand Forks Intl (GFK) 5°
 - Grand Forks Intl (GFK) 0°

Attachment 2

Operating Area: Class E and G airspace within the depicted polygon and defined by coordinates:

47°51'39.00"N 97°21'47.00"W 47°51'39.00"N 97°20'24.00"W 47°47'53.00"N 97°20'6.00"W
 47°44'57.00"N 97°13'53.00"W 47°43'51.00"N 97°13'53.00"W 47°42'33.00"N 97°24'7.00"W
 47°48'32.00"N 97°24'7.00"W

Operating Altitude: At or Below 1200 feet AGL



Attachment 3

Operating Area: Class E and G airspace within the depicted polygon and defined by coordinates:

47°51'39.00"N 97°21'47.00"W 47°51'39.00"N 97°20'24.00"W 47°47'53.00"N 97°20'6.00"W
 47°44'57.00"N 97°13'53.00"W 47°43'51.00"N 97°13'53.00"W 47°42'33.00"N 97°24'7.00"W
 47°48'32.00"N 97°24'7.00"W

Operating Altitude: At or Below 1200 feet AGL

