U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER

ISSUED TO

Issued To: UNL Biological Systems Engineering
Responsible Party: Jacob Smith
Waiver Number: 107W-2019-02142

ADDRESS –

Address:
Room 232 Chase Hall
Lincoln, NE 68583

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 standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by 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 15, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from July 30, 2019, to July 29, 2021, and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

ERIC K LAUTENSCHLAGER

Digitally signed by ERIC K LAUTENSCHLAGER
Date: 2019.07.30 10:57:14 -04'00'

For Asia L. Hunter
Acting Manager, Emerging Technologies Team (AJV–115)

SPECIAL PROVISIONS ISSUED TO

UNL Biological Systems Engineering

General.

The FAA's Flight Standards Service has reviewed your application to ensure compliance with the requirements of 14 CFR § 107.200. The Administrator finds that the proposed sUAS 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 sUAS in the manner you described. Adherence to the provisions of this Waiver establishes the required level of safety within the national airspace system.

This Waiver may be canceled at any time by the Administrator, the person authorized to grant the Waiver, or the representative designated to monitor a specific operation. 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 may serve as justification for cancellation.

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

> **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 800 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 such requests.

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 (PIC), manipulator of the controls, and Visual Observers (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 are informed on the terms and provisions of this Waiver and the strict observance of the terms and provisions herein;
    b. Must ensure the remote PIC, manipulators of the controls, and VO are informed and familiar with part 107 regulations not waived; 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;

[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.

2. This Waiver must 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 accessable and available to the Remote Pilot in Command (Remote PIC) at the ground control station during sUAS 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 the Waiver holder's operations. 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 small unmanned aircraft (sUA) by registration number(s) used in the Waiver holder's operations. 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 pilots in command (PICs), persons manipulating the controls, visual observers (VO), and any persons whose involvement is necessary for safety of the sUAS 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 800 feet AGL, provided:

8. All operations under this Waiver must use one or more VO;

9. 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;

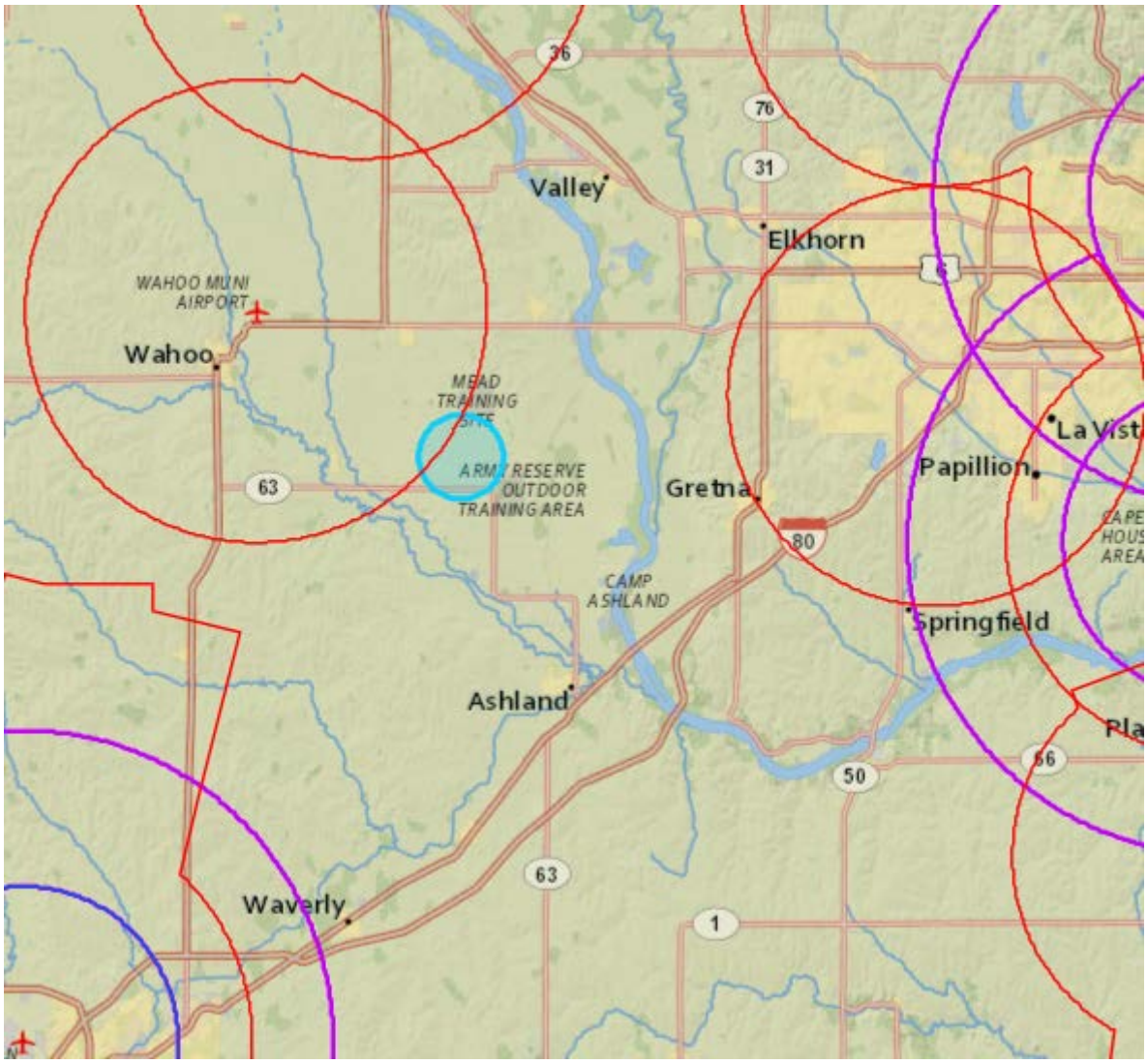
10. The Responsible Person listed on this Waiver must ensure the sUA is equipped with high visibility markings and/or lights visible during the daytime from a distance of no less than 3 statute miles;

11. Not less than 24 hours prior to conducting operations that are the subject of this Waiver, a Notice to Airmen (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;

12. 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;

13. ADS-B out (1090/978 MHz) may not be transmitted from the sUAS when operating pursuant to this Waiver;

14. 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

15. Operations conducted under this Waiver are limited to the area described in the waiver application, as follows:

    a. University of Nebraska Lincoln Eastern Nebraska Research and Extension Center near Mead, NE at a 2 nautical mile radius of a point at: 41-09-49.00 North / 96-26-60.00 West