Small Unmanned Aircraft Systems Rules

<u>Summary of Small UAS Rule Requirements/Limitations</u>

The regulations found in 14 CFR Part 107 and the guidance in AC107-2 should be consulted to understand the full requirements to operate under the Small UAS Rule. The following list, however, provides an abbreviated summary highlighting some of the parameters:

- Unmanned aircraft must weigh less than 55 lbs. (25 kg)
- A person operating a small UAS must either hold a <u>remote pilot airman certificate</u> with a small UAS
 rating or be under the direct supervision of a person who holds a remote pilot certificate (remote
 pilot in command).
- The unmanned aircraft must remain within <u>visual line-of-sight</u> (VLOS) of the remote pilot in command and the person manipulating the flight controls of the small UAS (if different) or alternatively within VLOS of a separate visual observer.
- Small unmanned aircraft may not operate over any persons not directly participating in the flight operation.
- Flight operations must be during <u>daylight hours only</u>, or civil twilight (30 minutes before official sunrise to 30 minutes after official sunset) if appropriate anti-collision lighting is installed and operating on the aircraft.
- Must yield right of way to other aircraft.
- Maximum groundspeed of 100 mph (87 knots).
- Maximum altitude of 400 feet above ground level or, if higher than 400 feet AGL, remain within 400 feet of a structure.
- Minimum weather visibility of 3 miles from the ground control station.
- Operations in Class B, C, D and E airspace are allowed with the required permission from Air Traffic Control (ATC). Operations in Class G airspace are allowed without ATC permission.
- A person may not act as a remote pilot in command for more than one unmanned aircraft at one time.

Remote Pilot in Command Certification and Responsibilities

A remote Pilot in Command (PIC) must possess an FAA issued *remote pilot certificate* for flight operations under the Part 107 UAS rule. Typically, the PIC would be the person operating the aircraft, but the Part 107 rule does allow for operations by someone who would be under the direct supervision of a person that holds a remote pilot certificate. "Direct Supervision" requires that the PIC is able to immediately take direct control of the sUAS to quickly address a hazardous situation.

A medical certificate is not required for a remote pilot certificate. A person may not, however, participate in the operation of an sUAS if they know or have reason to know that they have a physical or mental condition that could interfere with the safe operation of the sUAS.

An FAA issued remote pilot certificate can be obtained in one of two ways. The applicant must be at least 16 years old.

- Take the aeronautical knowledge test must be completed once every 24 calendar-months.
 - Acquire the necessary knowledge to pass the test. Study material is available on the FAA UAS web page.

- Take the test at an official FAA testing center. In North Dakota, tests are given at three
 locations: Fargo Jet Center, University of North Dakota Aerospace Foundation (Grand
 Forks), Pietsch Aircraft Restoration & Repair (Minot). There is a \$150 fee for taking the
 test.
- If the test is successfully passed, complete an application for a remote pilot certificate (FAA Form 8710-13). The online process (https://iacra.faa.gov/iacra) is recommended, however, a paper application process is also available.
- After the online application is submitted there is a Transportation Security
 Administration (TSA) vetting process to complete a background security check of the
 applicant.
- Once the TSA vetting process is completed, a temporary certificate can be printed electronically and a permanent certificate will be received by mail.
- 2) If a person holds a part 61 (manned aircraft) pilot certificate and has completed a flight review within the previous 24 calendar-months they may complete an online course in-lieu of taking the aeronautical knowledge test.

Aircraft Requirements

Prior to every flight, the remote Pilot in Command is responsible for conducting a check of the sUAS and verifying that it is in a condition for safe flight operation. A preflight checklist for each specific aircraft type should be developed if not already provided by the manufacturer. Guidance for the preflight check is found in AC 107-2 section 7.3.4.

Accident Reporting

The remote PIC of the sUAS is required to report an accident to the FAA within 10 days if it meets either of the following thresholds:

- Serious injury to any person or any loss of consciousness. A serious injury is an injury that qualifies as Level 3 or higher on the Abbreviated Injury Scale.
- Damage to any property, other than the small unmanned aircraft, if the cost is greater than \$500 to repair or replace the property (whichever is lower).

Aaron Reinholz, Director of Research Operations Office 701-231-5338 aaron.reinholz@ndsu.edu

John Nowatzki, NDSU Extension Ag Machine Systems Specialist <u>John.Nowatzki@ndsu.edu</u> Office 701-231-8213/ Cell 701-261-9842

https://www.ag.ndsu.edu/agmachinery/uas

