



Proposed Rules for Small, Unmanned Aircraft Systems

By Thomas Lehigh and Matthew Hersey

On Feb. 15, the Federal Aviation Administration (FAA) proposed regulations addressing the operation of unmanned aircraft systems (UAS), certification of their operators, registration, and display of registration markings. These regulations would eliminate the need for an airworthiness certification and prohibit UAS from posing a danger to the National Airspace System. This article summarizes the new rules for small UAS proposed by the Department of Transportation (DOT) and the FAA.

The FAA has approved the use of UAS on a case-by-case basis. Businesses are required to apply for a special permit directly from the FAA, and governmental agencies are required to apply for a Certificate of Waiver or Authorization (COA) from the FAA. About 28 companies have been granted this special permit, and approximately 600 COAs have been approved by the FAA.

UAS often have a camera mounted to the body; this camera provides an important utility for both businesses and public entities. They may also be mounted with telecommunications equipment to temporarily enhance and extend communications signals. It is expected that as operational costs drop and technology advances, UAS will have a transformative impact on the fields of urban infrastructure management, farming, and disaster response. The FAA outlines the following possible uses for UAS:

- Crop monitoring/inspection
- Research and development
- Educational/academic uses

- Power-line/pipeline inspection in hilly or mountainous terrain
- Antenna inspections
- Aiding certain rescue operations, such as locating avalanche victims
- Bridge inspections
- Aerial photography
- Wildlife nesting-area evaluations

Proposed Regulations

The FAA has authority to regulate UAS. *See* 49 U.S.C. § 40103(b) (1) and (2) and 49 U.S.C. § 44701(a) (5). This rule-making was promulgated under the authority described in the FAA Modernization and Reform Act of 2012 (Public Law 112-95). Section 333 of Public Law 112-95 directs the Secretary of Transportation to determine whether “certain unmanned aircraft systems may operate safely in the national airspace system.” If the secretary determines, pursuant to Section 333, that certain unmanned aircraft systems may operate safely in the national airspace system, then the secretary must “establish requirements for the safe operation of such aircraft systems in the national airspace system.” The proposed UAS rule regulates nongovernmental users and nonrecreational activities.

The FAA defines a series of baseline limitations for UAS:

- Maximum weight must be less than 55 pounds
- Maximum air speed is 100 mph (87 knots)
- Maximum altitude is 500 feet above ground level
- Minimum weather visibility is 3 miles from the control station



The operator, or a visual observer, must have visual line of sight to the aircraft at all times. The visual observer may communicate with the operator via radio. However, the operator must at all times be able to have visual line of sight. Visual line of sight is defined as meaning human eyesight unaided by devices except corrective lenses. This also applies to the use of “see and avoid” first-person cameras, which may be used but only as long as visual line of sight is maintained. The UAS may never be allowed to fly over people on the ground except for those directly involved in the use of the aircraft. The operator and visual observer must follow all alcohol and drug prohibitions and should not operate the aircraft if they become aware of any physical or mental condition that would impair their ability to safely pilot the aircraft. The operator must inspect the aircraft prior to usage and may not fly more than one UAS at a time. UAS may only operate in the daylight hours defined as official sunrise to official sunset, local time.

Operators of UAS must be at least 17 and pass an aeronautical knowledge test at an FAA-approved knowledge testing center. They must then submit to a vetting process by the Transportation Security Administration and take a recurrent aeronautical knowledge test every 24 months. Operators must conduct a preflight inspection before every flight to ensure that the aircraft is safe and report to the FAA any accidents that result in injury or property damage within 10 days. They must also agree to submit the UAS to the FAA, upon request, for inspection or testing. The UAS must have the same markings required of all aircraft, though they may be reduced in size to fit the aircraft.

UAS Presidential Memorandum

Prior to the release of the proposed rules, the president issued a memorandum directing that all UAS operations comply with U.S. law

regarding privacy, civil rights, and civil liberties. The memorandum is significant, as it delineates the White House’s expectations for the government’s current and future UAS use and how the UAS-collected data across the nation will ultimately be authorized. The president ordered that all governmental use of UAS must follow the Privacy Act of 1974 (5 U.S.C. § 552a). This contemplates that all personally identifiable information (PII) will be used transparently, follow proper accountability procedures, and should not violate privacy laws.

The memorandum directs that by June 23, a stakeholder engagement process should be used to develop a framework for the commercial use of UAS. The Commerce Department will lead the new multistakeholder engagement process across agencies and the private sector to develop and publish UAS-related privacy best practices. The agencies must formulate appropriate UAS policies and procedures and reexamine them every three years. Agencies have 180 days to report on this initial implementation. Such reports must be published in one year.

The proposed regulations are an important step in advancing the commercial use and safety of UAS. ☉

Thomas Lehrich is chair of the Federal Bar Association’s Transportation and Transportation Security Law Section. He is the deputy inspector general and counsel for the Architect of the Capitol. Lehrich spent 10 years at the U.S. Department of Transportation serving as the chief counsel to the DOT inspector general and held senior legal posts with the Transportation Security Administration and the Federal Maritime Commission. Matthew Hersey is a student at Georgetown University in the School of Continuing Studies. © 2015 Thomas Lehrich. All rights reserved.