



VIA EMAIL & FAX

November 5, 2014

Hon. Howard A. Shelanski
Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
725 17th Street, NW
Washington, DC 20503
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Re: EO 12866 Meeting Request Regarding RIN: 2120-AJ60; DOT/FAA "Operation and Certification of Small Unmanned Aircraft Systems" NPRM

Dear Administrator Shelanski:

It has come to the attention of the National Agricultural Aviation Association (NAAA) that the Office of Information and Regulatory Affairs (OIRA) is currently reviewing the Notice of Proposed Rulemaking (NPRM) "Operation and Certification of Small Unmanned Aircraft Systems" promulgated by the Federal Aviation Administration. Given the significant nature of this proposed rule and the impact it will have on the agricultural aviation industry, and general safety of the national airspace system, NAAA would like to request a meeting with you or your designee in accordance with Executive Order 12866.

Importance of Aerial Application Industry

The NAAA consists of more than 1,700 members in 46 states, and represents the interests of small business owners and pilots licensed as commercial applicators that use aircraft to enhance the production of food, fiber and bio-fuel; protect forestry; protect waterways and rangeland from invasive species; and control health-threatening pests. Aerial application is so important to agricultural, forestry and public health protection because it is by far the fastest method of application. Furthermore, when the presence of water, wet soil conditions, rolling terrain or dense plant foliage prevents the use of other methods of pesticide application, aerial application may be the only remaining method of treatment. Aerial application is also conducive to higher crop yields, as it is non-disruptive to the crop and causes no soil compaction. Applying crop protection products by air is an essential component of no-till or reduced tillage farming operations which limit storm water runoff and reduces soil erosion. These farming methods, through their preservation of organic matter and topsoil, help maintain productive soils and reduce greenhouse gas emissions through the sequestration of carbon. According to the USDA's Economic Research Service, there are a total of 408 million cropland acres in the U.S., of which NAAA estimates that 71 million acres of cropland are treated via aerial application in the U.S. each year. This does not include the aerielly treated pasture and rangeland of which there are 614 million total acres in the U.S. or the 671 million total forestry acres and 61 million total urban acres in the U.S.—a portion of which are treated by air.

According to NAAA data 18.75 percent of crop protection product applications made to commercial cropland are made aurally.

Because of the importance of the aerial application industry, it is vital a safe low-level airspace exists to ensure these pilots can continue to do their jobs safely. Ensuring safe low-level airspace includes minimizing obstructions which are difficult to be seen and identified by the pilots. In addition to aerial application operations, aircraft users of low-level airspace include: Emergency Medical Services (EMS), air tanker firefighting aircraft and their lead aircraft; power line and pipeline patrol aircraft; power line maintenance helicopters; fish and wildlife service aircraft; animal control aircraft (USDA-APHIS-ADC); military helicopter and fixed-wing operations; seismic operations (usually helicopters); livestock roundup (ranching or animal relocation); aircraft GIS mapping of cropland for noxious weed populations and the like; and others.

Safety Concerns Regarding Unmanned Aircraft Systems (UAS)

NAAA is concerned that the widespread use of UAS without proper safe integration, will result in conditions ripe for low-level aviation accidents, and believes these concerns need to be factored into OIRA's cost-benefit analysis.

UAS present a hazard to low-level pilots similar to that presented by birds and other low-level obstacles such as other aircraft and towers. According to a joint report by the FAA and the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS), between 1990 and 2012 over 131,000 wildlife strikes occurred with civil aircraft, 97 percent of which were the result of collisions with birds, with 25 producing fatalities. Accident records maintained by NAAA, as taken from NTSB accident reports, show there were 10 collisions between aircraft, in which at least one of the aircraft was an ag aircraft during the last 10 years (2004-2013) and since 2004 there have been 12 accidents between ag aircraft and towers, resulting in 7 fatalities.

The agricultural aviation industry places a great amount of importance on the ability to see and avoid obstructions and other aircraft in the airspace in which they operate. While this principal is the backbone of safety for our industry and all air traffic operating under visual flight rules (VFR), it can only be utilized effectively when other aircraft do their part in avoiding collisions. The necessary technology to allow UAS to "sense and avoid" other aircraft is currently in the nascent stages of development and is nowhere near commercial viability. Furthermore, the U.S. Government Accountability Office (GAO), an independent federal agency, determined in September, 2012 that no adequate technology currently exists that would allow UAS to adequately sense and avoid other aircraft. NAAA believes until this technology is developed, UAS operators should be required to post a Notice to Airmen (NOTAM) 48-72 hours prior to their operations. Such a requirement is already in place by the FAA for the Certificates of Waiver or Authorization granted for current limited commercial operations. UAS operators should also be required to have radios on the ground tuned to a locally defined frequency, allowing them to monitor air traffic in the area, and alert local manned and unmanned aircraft operators to their presence.

NAAA believes UAS should also be painted in colors which make them readily distinguishable from the background. Strobe lighting should be required on the UAS itself, and to assist with identification of UAS operating areas, on the UAS operator's ground vehicle. Automatic Dependent Surveillance-Broadcast (ADS-B) Out technology is a key component of the FAA's Next Generation Air Transport System (NextGen) that allows the identification of aircraft based on transponder and GPS signals, and allows nearby aircraft with the proper reading equipment to identify their exact location. Proven, economically viable ADS-B systems designed for UASs are currently on the market and should be a requirement for commercial UAS operations.

Training and Medical Requirements

NAAA believes that in order to ensure the continued safety of the NAS, UAS pilots should be required to meet the same medical qualifications of manned commercial pilots, including the requirement of a Class 2 medical certificate and have a commercial pilot's license. Operators should also be required to have a second, equally medically qualified observer to ensure the UAS is operating free of manned aircraft, and UAS should be required to land immediately if the observer or operator see a manned aircraft within two miles of the UAS. UAS operators should also have an explicit requirement that requires them to be attentive and free of distractions when operating a UAS. Unmanned aircraft also need to be equally fit for operation within the NAS by undergoing the same rigorous flight safety evaluations manned aircraft are required to pass. Furthermore, the training and licensing of UAS operators who intend to spray chemicals should be equally as stringent as that for aerial application pilots in terms of obtaining commercial pesticide licenses; ensuring compliance with state regulations, 14 CFR Part 137 regulations, and EPA regulations. Commercial UAS operators should also be required to carry liability insurance, and ensure their UAV is properly maintained. .

Security and "Lost Link" Concerns

In 2012 Professor Todd Humphreys of the University of Texas at Austin was able to successfully hack a UAS signal utilizing simple off the shelf components. By utilizing this signal "spoofing" technique, Humphreys was able to gain complete control of the aircraft and change its route. This experiment, along with others shows that the relatively simple ability to hack a UAS signal presents not only a safety concern, but also a national security concern as these aircraft can be rerouted to cause damage to structures, along with manned aircraft.

Neither technical nor regulatory guidance has yet been established regarding "lost link" occurrences—situations where the unmanned vehicle loses connection with its pilot. Many aircraft have no lost link procedure and simply continue flying until they run out of fuel or hit an obstacle. NAAA believes that a regulatory and technical framework needs to be established so that there is a consistent way to prevent collisions between manned and unmanned aircraft.

It is to discuss these and other safety concerns that NAAA is requesting a meeting under Executive Order 12866 with OIRA. Please feel free to contact Sterling Wiggins, Coordinator of Government and Public Relations, or myself with any questions you may have at 202-546-5722. I can also be reached via email at admoore@agaviation.org, and Sterling via swiggins@agaviation.org. Thank you, and we look forward to meeting with OIRA in the coming weeks.

Sincerely,

Andrew D. Moore
Executive Director