Drone Usage in Agriculture

Roger McEowen (roger.mceowen@washburn.edu) – Washburn University School of Law
October 2025
Agricultural Law and Taxation Blog, by Roger McEowen: https://lawprofessors.typepad.com/agriculturallaw/

Introduction

The use of drones has become increasingly popular among farmers and ranchers. They can be used to scout crops and livestock as well as for other purposes that can aid profitability. Recently, the Federal Aviation Administration proposed a rule that would allow commercial drones to be flown beyond an operator's visual line of sight.

Proposed Rule

The Federal Aviation Administration (FAA) has proposed a new rule, titled "Normalizing Unmanned Aircraft Systems Beyond Visual Line of Sight Operations" (BVLOS), which would establish a standardized regulatory framework to allow routine commercial drone flights outside of the operator's visual line of sight.

> **Note:** The proposed rule can be found at 90 FR 53896 (Aug. 7, 2025). The public comment period closed on October 4, 2025. During this time, the FAA received nearly 2,000 public comments from various industry groups, civil liberties organizations and other stakeholders. The FAA is currently in the process of reviewing and responding to these comments. The Executive Order that directed the FAA to publish this rule set a deadline for the agency to publish a final BVLOS rule within 240 days of the proposed rule's publication. Given the proposed rule was published on August 7, 2025, the FAA is expected to publish the Final Rule sometime in the first quarter of 2026, likely by February or March 2026.

The proposed rule aims to replace the current process of obtaining individual waivers for most BVLOS operations with a scalable, performance and risk-based framework.

Key details of the proposed rule include:

- **Operational Altitude and Location:** BVLOS operations would generally occur at or below 400 feet above ground level, launching from pre-designated, access-controlled locations. Operators must receive FAA approval for their intended flight areas.

- **Aircraft Weight:** The rule would cover unmanned aircraft systems (UAS) weighing up to 1,320 pounds, including the payload.

- **Airworthiness Acceptance:** Drones would not require traditional FAA airworthiness certificates. Instead, the FAA would establish a process for accepting the airworthiness of an aircraft based on industry consensus standards.

- **Operational Pathways:**
  - **Permits** would be issued for lower-risk operations with limited fleet size, weight, and scope (e.g., agriculture, package delivery).
  - **Certificates** would be required for higher-risk operations, involving more thorough FAA review and oversight, including a mandatory Safety Management System (SMS) and training program.

- **Traffic Management:** Operators would be required to use or become an Automated Data Service Provider (ADSP) to support scalable BVLOS operations. ADSPs would provide services to ensure safe separation from other drones and manned aircraft. Drones must also have technologies that enable them to automatically detect and avoid other aircraft and must yield to all manned aircraft broadcasting their position using ADS-B (Automatic Dependent Surveillance–Broadcast).
- **Personnel Requirements:** Certified operators would be required to designate an Operations Supervisor and a Flight Coordinator to oversee safety and security.

Benefits for Farmers and Ranchers

The BVLOS rule is explicitly intended to expand drone use cases in sectors like agriculture and aerial surveying. For farmers and ranchers, the ability to fly drones beyond line of sight will bring significant improvements in efficiency and scope:

- **Coverage of Large Areas:** A typical farm or ranch is often hundreds or thousands of acres. Under current rules, surveying a large property requires the operator to constantly move to maintain visual contact. BVLOS permits would allow a single operator to launch a drone that can fly an entire field or ranch automatically, covering vast distances for:
  - **Crop Monitoring:** Rapidly surveying hundreds of acres to detect nutrient deficiencies, pests, and disease, leading to timely, site-specific treatment (precision agriculture).
  - **Livestock Management:** Quickly monitoring herds scattered over large, remote pastures, checking fence lines, and locating missing animals.
  - **Water Management:** Inspecting miles of irrigation systems, pipelines, or water sources for leaks or blockages.

- **Efficiency and Cost Savings:** Eliminating the need for constant on-site visual observers or manually piloted flights over long distances will drastically reduce the time and labor costs associated with drone operations.
- **Timely Operations:** Operations like targeted pesticide application or planting can be performed more quickly and precisely, optimizing the use of resources.

Conclusion

The FAA's proposed BVLOS rule marks a critical turning point for precision agriculture. By transitioning from restrictive individual waivers to a scalable, performance-based regulatory framework, the FAA is directly addressing the operational challenges faced by modern farmers and ranchers. The ability to utilize BVLOS permits and rely on sophisticated traffic management systems will allow operators to autonomously survey thousands of acres for crop health, livestock, and infrastructure, resulting in unprecedented gains in efficiency and cost savings. As the FAA works to finalize this rule in early 2026, the successful adoption of these BVLOS capabilities is set to become the essential operational backbone for maximizing profitability and optimizing resource use across the agricultural industry.