

The FAA's proposed rule for safely normalizing Beyond Visual Line of Sight (BVLOS) drone operations includes detailed requirements for operations, aircraft manufacturing, keeping drones safely separated from other aircraft, operational authorizations and responsibility, security, information reporting and record keeping. Here are some highlights.

Operations

- The types of operations that would be enabled BVLOS: package delivery, agriculture, aerial surveying, civic interest – including public safety, recreation, and flight testing.
- Operations would occur at or below 400 feet above ground level, from pre-designated and access-controlled locations.
- All operators would need FAA approval for the area where they intend to fly. They would identify the boundaries and the approximate number of daily operations, as well as takeoff, landing and loading areas. They would ensure adequate communications coverage and procedures in cases where the communications with the drone are lost.

- Operators would have to be familiar with airspace and flight restrictions along their intended route of flight including reviewing Notices to Airmen (NOTAMs). Operators would also be required to identify and mitigate any hazards.
- The FAA would evaluate proposals to fly multiple drones on a case-by-case basis.





Safe Separation

- Operators would utilize entities called Automated Data Service Providers (ADSPs) to support scalable BVLOS operations. ADSPs could provide services to keep BVLOS drones safely separated from each other and manned aircraft. The FAA would approve and regulate these entities and require the services to conform to industry consensus standards following vetting and testing.
- A BVLOS operator could be its own data service provider or contract with another company.
- Drones also would have technologies that enable them to automatically detect and avoid other cooperating aircraft.
- Drones would yield to all manned aircraft broadcasting their position using ADS-B. Drones could not interfere with operations and traffic patterns at airports, heliports, seaplane bases, space launch and reentry sites or facilities where

electric Vertical Takeoff and Landing (eVTOL) aircraft take off or land.

Aircraft

- Certain aircraft could weigh up to 1,320 lbs. including everything they're carrying.
- They would not require traditional FAA
 airworthiness certificates. Rather, this rule
 would establish a process for accepting the
 airworthiness of an aircraft based on industry
 consensus standards. This would create a
 streamlined approval process that would reduce
 costs and speed up advancement.
- Manufacturers would develop and test aircraft to meet the consensus standards and develop operational limitations for them.
- The rule would require drones operated under Part 108 to have lighting and to broadcast Remote ID.



Security

The rule would require operators to address and manage security risks including:

- Developing and implementing physical security policies and processes to prevent unauthorized access to facilities and protect other controlled-access areas.
- Developing and implementing cybersecurity policies and processes to protect networks, devices, and data from unauthorized access.
 These policies would ensure

- integrity, accuracy, andreliability of operations.
- Preparing for, responding to, and mitigating the impact of cyber-attacks and collecting and analyzing data to measure the effectiveness of the cybersecurity policy and processes.
- Requiring drone
 manufacturers to protect
 aircraft from intentional
 electronic interference.
- The Transportation Security Administration (TSA) would require

- operations supervisors, flight coordinators, and other covered personnel to obtain up to a level 3 security threat assessment that may include a watchlist check, immigration check, and a fingerprint-based criminal history records check.
- TSA would also require permitted and certificated package delivery operators to obtain a limited security program from TSA.

Operational Authorizations: Permits and Certificates

The FAA is proposing two types of authorizations for BVLOS operations, depending on the scope.

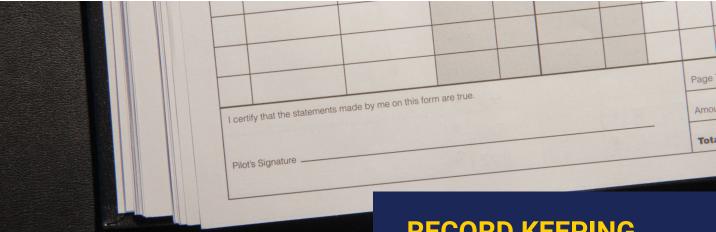
- Permits: Lower-risk operations that have limited fleet size, weight, and operational scope would require an FAA permit. The FAA could issue these promptly. Types of permitted operations include package delivery, agricultural, aerial surveying, civic interest, unmanned aircraft operations training, flight testing, demonstrations, and recreational operations.
- Certificates: Higher-risk operations due to aircraft size, weight, speed, or fleet size would require an operating certificate. The FAA would conduct thorough reviews of the proposed operations before issuing a certificate, provide more oversight of the operator and operations, and require operators to develop a safety management system (SMS) and training program.

Operational Responsibility for Certified Operators

The FAA proposes to require two positions: operations supervisor and flight coordinator.

- The operations supervisor would be responsible for overall safety and security. This would include ensuring operations meet all regulatory requirements and operating limitations that apply to the aircraft, and ensuring all personnel are properly trained and knowledgeable.
- Flight coordinators would directly oversee aircraft operations and intervene to ensure safe conditions, if necessary.
- Neither position would require holding an FAAissued airman or remote pilot certificate.





Operations Over People

- The rule would allow operations over people but not over large, open-air gatherings such as concerts, sporting events or crowded parks.
- The FAA proposes five categories of operations over people based on population density.
- Each density would have operational restrictions. The restrictions, technological, and operational mitigations would increase with the population density.

Reporting

Operators would report specific information to the FAA including:

- · Flight data including the total number of flight hours for each drone, and make, model and registration number.
- Unplanned or precautionary landings, loss of control or communication, and malfunctions that lead to flights into unauthorized areas.
- Failure of an automated data service.
- · Security breaches that result in loss of control of the drone.
- · Unauthorized access to the operator's facilities, networks or data.
- · Any operation that results in more than \$500 in damage to property.

RECORD KEEPING

Operators would maintain records of:

- · Each flight including its date, time, and duration; the aircraft registration number; the purpose of the operation; the flight path including destination, origin, and altitudes; the name of the designated operations personnel assigned to each flight; and landing locations
- Any mechanical issues
- Maintenance and alteration inspections
- Personnel training
- · Operations manual

Manufacturers would maintain records of:

- · Compliance information and testing data
- · Configuration control documentation
- · Continued operational safety data

ADSPs would maintain records of:

- · Compliance and test data
- · Software revisions

