GAO Highlights

Transforming Aviation

FAA Planning Efforts Should Address How Drones Will Communicate with and Avoid Other Aircraft

GAO-26-107648 February 2026

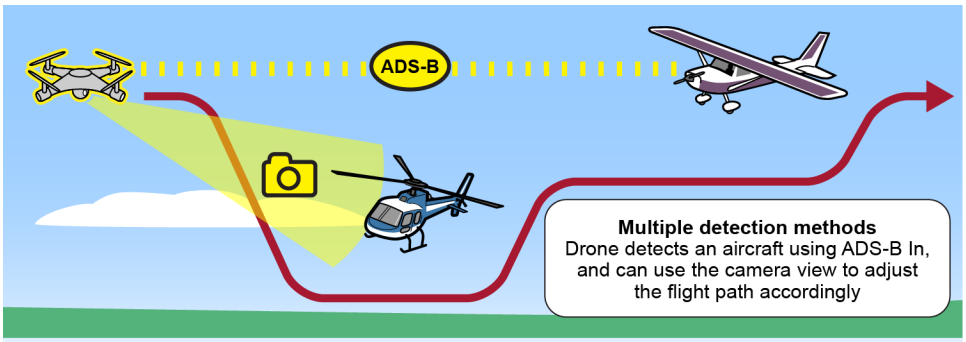
A report to congressional committees

For more information, contact: collinsd@gao.gov

What GAO Found

The Federal Aviation Administration (FAA) is working to further enable drone operations such as drone delivery. Currently, drone operators must obtain a waiver or exemption from FAA to fly beyond their visual line of sight and show, among other things, how they will detect and avoid other aircraft. Existing technologies that can be used for that purpose include those that use GPS, sensors, or radar. Specifically, drones can use Automatic Dependent Surveillance-Broadcast (ADS-B) to detect and avoid manned aircraft that use ADS-B to broadcast their position information using GPS. Camera or acoustic sensors, or ground radar, can also be used to detect aircraft that are not broadcasting. FAA-approved waivers have mostly relied on ADS-B, which drone stakeholders said is more effective than sensors or radar. Some stakeholders said that using other technologies with ADS-B could be a safer option but presents challenges such as increased weight, affecting safety.

Drone Receiving an Automatic Dependent Surveillance-Broadcast (ADS-B) Signal and Using a Camera to Detect Aircraft



Source: GAO analysis of Department of Transportation information; GAO (illustration). | GAO-26-107648

FAA envisions a future National Airspace System (NAS) that is information-centric, where all airspace users, including drones, share location information electronically. According to FAA, limitations with existing technologies require the development of a new technology that, unlike ADS-B, enables two-way communication between drones and other aircraft. FAA officials said it intends to develop performance-based standards and safety requirements for industry to use in developing that technology. In August 2025, FAA proposed new regulations that would require drones flying beyond visual line of sight of the operator to detect and avoid other aircraft. However, FAA has not identified specific actions such as clear roles or technical milestones timelines, which could help FAA and industry move toward two-way communication between drones and other aircraft. Congress tasked FAA with the responsibility to develop an information-centric NAS and develop an integrated plan for the future NAS by May 2027. Developing specific actions could build upon FAA's drone integration efforts and help ensure safety for all airspace users in the future NAS.

Why GAO Did This Study

Drones are the fastest-growing segment of U.S. aviation, according to FAA. In 2025, FAA forecasted that the commercial drone fleet would exceed one million by the end of 2025 and grow to 1.18 million by 2029. Operators are starting to use drones for activities including package delivery and public safety. With increasing drone activity, there are growing concerns about potential collisions between drones and other aircraft.

The FAA Reauthorization Act of 2024 requires GAO to review technologies for drones to detect and avoid manned aircraft at low altitudes. This report examines technologies available for drones to detect and avoid manned aircraft, stakeholder perspectives on these technologies; and FAA's plans for drone operations in an information-centric NAS.

GAO reviewed FAA documents related to integrating drones into the national airspace, including documents related to detect and avoid technology. GAO interviewed FAA and 24 stakeholders from industry and government. GAO focused on small drones (defined as those weighing less than 55 pounds) because they fly at low altitude and provisions for this review in the FAA Reauthorization Act of 2024 specified that GAO focus on low-altitude airspace.

What GAO Recommends

GAO is making one recommendation to FAA to develop and begin implementing specific actions, including establishing clear federal and nonfederal roles and technical milestones, to ensure that drones can communicate with and detect and avoid other aircraft within an information-centric NAS. The Department of Transportation concurred with this recommendation.