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# Highlights

Highlights of [GAO-08-511](#), a report to congressional requesters

## Why GAO Did This Study

Government and private-sector interest is growing in unmanned aircraft systems (UAS) for use in a variety of missions such as U.S. border protection, hurricane research, law enforcement, and real estate photography. However, UASs can fly only after the Federal Aviation Administration (FAA) conducts a case-by-case safety analysis. GAO's research questions included (1) What are the current and potential uses and benefits of UASs? (2) What challenges exist in operating UASs safely and routinely in the national airspace system? and (3) What is the federal government's response to these challenges? To address these questions, GAO reviewed the literature, interviewed agency officials and aviation stakeholders, and surveyed 23 UAS experts.

## What GAO Recommends

GAO suggests that Congress create an overarching body within FAA to coordinate UAS development and integration efforts. To realize public benefits from UASs as soon as possible, GAO recommends that FAA issue its program plan and analyze the data it has collected, and that the Department of Homeland Security (DHS) assess the security implications of routine UAS access to the airspace. Relevant agencies reviewed a draft of this report. The Department of Transportation agreed to consider its relevant recommendations. DHS agreed with its relevant recommendation.

To view the full product, including the scope and methodology, click on [GAO-08-511](#). For more information, contact Gerald L. Dillingham, (202) 512-2834 [dillingham@gao.gov](mailto:dillingham@gao.gov).

## UNMANNED AIRCRAFT SYSTEMS

### Federal Actions Needed to Ensure Safety and Expand Their Potential Uses within the National Airspace System

#### What GAO Found

UASs are currently being used by federal agencies for border security, science research, and other purposes. Local governments see potential uses in law enforcement or firefighting and the private sector sees potential uses, such as real estate photography. An industry survey states that UAS production could increase in the future to meet such government and private-sector uses. Experts predict that UASs could perform some manned aircraft missions with less noise and fewer emissions.

UASs pose technological, regulatory, workload, and coordination challenges that affect their ability to operate safely and routinely in the national airspace system. UASs cannot meet aviation safety requirements, such as seeing and avoiding other aircraft. UASs lack security protection—a potential challenge if UASs proliferate as expected after obtaining routine airspace access. The lack of FAA regulations for UASs limits their operation to case-by-case approvals by FAA. Anticipated increases in requests to operate UASs could pose a workload challenge for FAA. Coordinating multiple efforts to address these challenges is yet another challenge.

FAA and the Department of Defense (DOD) are addressing technological challenges. DHS has not addressed the national security implications of routine UAS access to the airspace. FAA estimates that completing UAS safety regulations will take 10 or more years, but has not yet issued its program plan to communicate the steps and time frames required for providing routine UAS access. FAA is working to allow small UASs to have airspace access and has designated specific airspace for UAS testing. It plans to use data from this testing and from DOD to develop regulations, but has not yet analyzed data that it has already collected. To address its workload challenge, FAA is using more automation. Aviation stakeholders and experts suggested that an overarching entity could help coordinate and expedite federal, academic, and private-sector efforts. In 2003, Congress created a similar entity in FAA to coordinate planning for the next generation air transportation system among multiple federal agencies and the private sector.

#### Predator B UASs Used for Border Security



Source: DHS.