

**Report to Congress:  
Improving General Aviation Security**

**December 2001**

**Report of the Secretary of Transportation  
to the United States Congress  
Pursuant to  
Section 132 (b) of the Aviation and Transportation Security Act (PL 107-71)**

## IMPROVING GENERAL AVIATION SECURITY

**Scope of the Report.** Section 132(b) of the Aviation and Transportation Security Act (P.L. 107-71) requires a report to Congress “on airspace and other security measures that can be deployed, as necessary, to improve general aviation security.” This Report provides: an overview of general aviation; a summary of its potential vulnerabilities; and identification of the range and basic types of measures that may be taken to increase security in proportion to the assessed threat.

**Definition and Overview of General Aviation.** General aviation is typically described as all aviation other than scheduled commercial flights and military aviation. In conformity with this definition, and for purposes of this report, general aviation refers to flights operated under CFR 14, Part 91. General aviation aircraft span a broad range, from two-seat training airplanes to the most advanced long-range business jets; its operations include personal and recreational flying, traffic observation and news reporting, crop dusting, emergency medical evacuation, and business air travel.

There are over 200,000 such general aviation aircraft in the United States operating from over 18,000 airports, with an estimated 145 million passengers annually. General aviation’s role in the economic life of the nation is significant. More than 5,400 communities in the United States rely exclusively on general aviation for their air transportation needs. In parts of the country, perhaps most notably in Hawaii and Alaska, general aviation has unique characteristics and serves as an indispensable link to businesses, remote communities, and a thriving tourist industry.

In establishing an effective aviation security regime for the Nation, it is axiomatic that this vital national transportation asset must be protected, in a manner that recognizes the wide diversity and unique attributes of general aviation operations, user needs and aircraft types.

**Assessing Vulnerability.** There are two principal security objectives for general aviation:

- Protecting air passengers and aircraft from attack.
- Preventing aircraft from being used as weapons directed at sensitive targets on the ground.

The events of September 11 highlight potential vulnerabilities stemming from the willingness of certain terrorists to embrace suicide as part of their attack. As with commercial flights, general aviation must be protected from two types of threats: (1) the possibility of the aircraft being turned into a weapon, either by the authorized pilot or by someone who takes over the aircraft;

and (2) deliberate sabotage, including the potential that a bomb or explosive device might be placed on an aircraft.

Characteristically, the majority of general aviation aircraft have dramatically less mass than commercial airliners and all-cargo aircraft, making them relatively less suited for use as kinetic energy weapons or “guided missiles.” Like airliners and all-cargo aircraft, however, general aviation aircraft could be used to strike ground-based targets. Their load-carrying ability, even if limited, enables the delivery of explosives, compensating for their relative lack of kinetic energy or fuel.

The chief attribute of any airborne attack is its ability to reach targets that are not accessible to operatives on the ground, and to do so swiftly, thereby complicating the mission of the defenders. Given the ubiquity of general aviation aircraft and airports, such aircraft are never far from major urban centers, critical infrastructure and other targets.

**Security Methods.** The most effective method to protect against the security risk to general aviation is simply to ground all such aircraft, as was done for a period after September 11. This was a crude measure justified then by the unknown nature of the threat posed through general aviation. Shy of such an extreme measure, a range of actions may be deployed in response to specific levels of threat.

Methods used to increase general aviation security have, to date, mostly fallen into four areas: airspace and operational restrictions; intercept assets; increased scrutiny of pilots, crews, passengers and aircraft on the ground; and education efforts aimed at increasing security vigilance. The “tool box” of such countermeasures has included the following:

### **1. Airspace and operational restrictions**

- a. Ground all general aviation aircraft.
- b. Impose flight restrictions on classes of general aviation aircraft.
  - i. For example, allow only Instrument Flight Rules (IFR) flights to operate, and then only for aircraft equipped with transponders and filing a flight plan. *This allows only a small subset of general aviation aircraft to fly, but provides maximum visibility of such flights to air traffic control operators.*
  - ii. Allow Visual Flight Rules (VFR) flights, with or without flight restrictions.
  - iii. Disallow specific classes of aircraft based upon operational patterns or specific threat analysis. *The temporary ban on crop duster operations imposed shortly after the terrorist attack was an example.*
  - iv. Restrict some or all foreign-registered aircraft.
  - v. Restrict or suspend flight training.
  - vi. Impose specific security requirements based on aircraft weight.

- c. Impose flight restrictions in specified areas of the country.
- d. Limit access to metropolitan areas with “Enhanced Class B Airspace” for all or some subset of aircraft. *Note: regular Class B Airspace covers 30 large metropolitan areas.*
  - i. Limit access in a subset of high-risk municipal areas.
  - ii. Limit access within a given radius around a specific facility or location. *The temporary restrictions within 10-miles of nuclear facilities was an example.*
  - iii. Impose altitude or overflight restrictions.
  - iv. Provide geographic-based waivers or flight-specific waivers as exceptions to otherwise comprehensive restrictions.
- e. Impose flight restrictions relative to specific events.
  - i. Examples include football games, the World Series, and the Olympics. Options include all aircraft, with possible exceptions for certain types or individual aircraft by permit.

## **2. Intercept operations.**

- a. Since September 11, the Department of Defense has increased airborne flight monitoring assets and combat air patrols on an ongoing and random basis.
- b. FAA communicated directly to all pilots regarding ongoing intercept operations.

## **3. Scrutiny of pilots, crews, passengers and aircraft on the ground.**

- a. Overnight parking and perimeter security.
- b. Additional law enforcement or security presence at general aviation airports.
- c. Voluntary and/or mandatory credential checking for crews and passengers.
- d. Enhanced passenger wandng or screening.

## **4. Communication and education.**

- a. Expand use of Notice to Airmen tools.
- b. Communicate directly and regularly with airport operators, airmen and local law enforcement officers.
- c. Partner closely with industry associations regarding member communication and security.

In addition to measures such as these, which can be deployed singly or in appropriate combinations in response to varying threat levels, the Department of Transportation is currently exploring several additional tools to improve general aviation security. Examples of such methods include:

1. Use of biometric devices to verify and validate the identity of pilots and passengers.
2. **An** automated system that would allow qualified general aviation airport operators to obtain access to law enforcement “watch lists.”
3. Increased security awareness training for pilots, aircraft owners, airport operators and fixed based operators.

**Conclusion.** General aviation is a critical component of the Nation’s transportation system. We must continue to develop, assess and deploy measures that can effectively increase the security of general aviation without unduly restricting general aviation operations. Such measures can be deployed singly or in appropriate combination in response to varying threat levels.

The Department of Transportation proposes to provide Members of Congress with a classified briefing that elaborates and expands upon the core assessment provided in this report.