



Department of Homeland Security Office of Inspector General

TSA's Role in General Aviation Security





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Preface

The Department of Homeland Security Office of Inspector General was established by the *Homeland Security Act of 2002* (Public Law 107-296) by amendment to the *Inspector General Act of 1978*. This is one of a series of audit, inspection, and special reports prepared as part of our oversight responsibilities to promote economy, efficiency, and effectiveness within the department.

In response to a congressional request from U.S. Representative Sheila Jackson Lee, chairwoman of the Subcommittee on Transportation Security and Infrastructure Protection, House Committee on Homeland Security, this report addresses the current general aviation security requirements, the threat environment, and the steps the Transportation Security Administration has taken in the past 3 years to strengthen general aviation security. It is based on interviews with employees and officials of relevant agencies and institutions, direct observations, and a review of applicable documents.

We trust this report will result in more effective, efficient, and economical operations. We express our appreciation to all who contributed to the preparation of this report.



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Abbreviations

AOPA	Aircraft Owners and Pilots Association
DCA	Washington Reagan National Airport
DPA	DuPage Airport
DHS	Department of Homeland Security
FAA	Federal Aviation Administration
FBO	fixed base operator
FRZ	Washington DC Metropolitan Area Flight Restricted Zone
GA	general aviation
GAO	Government Accountability Office
HAI	Helicopter Association International
IAH	George Bush Intercontinental Airport
LAX	Los Angeles International Airport
LASP	Large Aircraft Security Program
LGB	Long Beach Airport
OI	Office of Intelligence
OIG	Office of Inspector General
ORD	O'Hare International Airport
PCSSP	Private Charter Standard Security Program
SFRA	Special Flight Rules Area
TEB	Teterboro Airport
TFSSP	Twelve-Five Standard Security Program
TSA	Transportation Security Administration
TSNM	Office of Transportation Sector Network Management
TSI	Transportation Security Inspector
TSOC	Transportation Security Operations Center
VNY	Van Nuys Airport

OIG

*Department of Homeland Security
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Executive Summary

General aviation refers to all flights other than scheduled airline flights and military aviation. General aviation accounts for 77% of all flights in the United States and is a vital component of the national economy. It includes the very large air cargo transport sector, air medical-ambulance operations, flight schools, corporate aviation, and privately owned aircraft. General aviation activity frequently takes place alongside scheduled airline operations at large commercial airports, as well as at more than 5,000 public use airports, almost all of which serve general aviation exclusively.

This review was conducted at the request of Representative Sheila Jackson Lee, chairwoman of the Subcommittee on Transportation Security and Infrastructure Protection, House Committee on Homeland Security. Our objectives were to identify Transportation Security Administration security requirements for general aviation airports, threats to general aviation, measures taken to secure general aviation, steps nonfederal stakeholders have taken to enhance the security of general aviation, and any “incidents of concern” with security at general aviation airports. In addition, we evaluated allegations of security vulnerabilities at three Houston-area general aviation airports. These allegations were presented in an investigative report by a local television station.

We determined that general aviation presents only limited and mostly hypothetical threats to security. We also determined that the steps general aviation airport owners and managers have taken to enhance security are positive and effective. Transportation Security Administration guidelines, communication forums, and alert mechanisms, coupled with voluntary measures taken by the owners and operators of aircraft and facilities, provide baseline security for aircraft based at general aviation sites. Significant regulation of the industry would require considerable federal funding. We are not making any recommendations to the Transportation Security Administration regarding general aviation regulations. The Transportation Security Administration reviewed our report and submitted many helpful technical corrections, but chose not to submit formal comments that would have been appended to the report.

Background

Within the federal government, responsibility for general aviation (GA) security is shared by the Department of Homeland Security (DHS) Transportation Security Administration (TSA) and the Department of Transportation Federal Aviation Administration (FAA). TSA was established within the Department of Transportation shortly after the attacks of September 11, 2001, in accordance with the *Aviation and Transportation Security Act of 2001* (Public Law 107-71). This legislation gave TSA responsibility for security for all modes of transportation. In early 2003, TSA was moved from the Department of Transportation to the newly created DHS, while the FAA remained in the Department of Transportation and retained primary responsibility for GA safety. The FAA continues to oversee all aircraft manufacturing, operation, and maintenance, certifies pilots and airports, and regulates air traffic. TSA assumed operational responsibility for passenger and baggage screening and regulatory responsibility for air cargo and airport security.

Within TSA, the offices of Transportation Sector Network Management (TSNM) and Intelligence (OI), provide oversight, guidance, and information necessary for GA security. The extent to which GA operators employ TSA's voluntary guidance is not easily determined.

TSNM establishes policies designed to protect and secure U.S. intermodal transportation systems, the safe movement of passengers, and the free flow of commerce. TSNM's strategy calls for (1) completion of industry threat, vulnerability, and consequence assessments, (2) development of security standards, (3) assessment of operator security status vis-à-vis existing standards, (4) development of plans to close gaps in security standards, and (5) enhancement of systems of security.¹

OI is the only federal intelligence entity focused solely on security of the transportation sector. OI provides TSA, FAA, the rest of the transportation sector, and the broader intelligence and law enforcement community with analysis, warnings, and notifications on credible and imminent threats. To facilitate communication and coordination, OI has placed liaison officers in key intelligence community and law enforcement agencies across the federal government.

GA Defined

According to TSA, GA is a vital component of the aviation sector and the national economy and accounts for approximately 77% of

¹ http://www.tsa.gov/what_we_do/tsnm/index.shtm.

all flights in the United States.² GA encompasses a wide range of activities, such as pilot training, business and personal charter flights, emergency medical services, and sightseeing. Operations at the nation's 19,000 GA airports and helipads, only about a third of which are available for public use, range from short-distance flights in single-engine light aircraft to long-distance international flights in privately owned jets, and from emergency aero-medical helicopter operations to airship displays at sporting events. The sole common characteristic of GA operations is that flights are on demand, rather than routinely scheduled.

GA Risk Studies

Various government and industry studies have concluded that the risks associated with general aviation are relatively limited (see appendix D). In its November 2004 review, *General Aviation: Increased Federal Oversight Is Needed, but Continued Partnership with the Private Sector Is Critical to Long-Term Success* (GAO-05-144), the Government Accountability Office (GAO) concluded that "the small size, lack of fuel capacity, and minimal destructive power of most general aviation aircraft make them unattractive to terrorists, and thereby, reduce the possibility of threat associated with their misuse." GAO concluded that while the federal government provided guidance and some funding and enforced regulatory requirements, most of the responsibility for assessing and enhancing GA security fell on airport operators. GAO recommended that TSA develop a plan for implementing a risk management approach to strengthen GA security, and that the FAA establish a documented process to review and revalidate flight restrictions. TSA and FAA generally concurred with GAO's recommendations.

Figure 1. Photo of a Cessna 172 Skyhawk



Source: <http://en.wikipedia.org/wiki/Cessna>

In January 2008, the Congressional Research Service reported that typical GA aircraft are too light to use as a platform for conventional explosives. Moreover, heightened vigilance among airport operators and pilots would make it difficult to load the necessary quantity of explosives without detection. For example, the 1,300-pound device involved in the 1993 World Trade Center bombing would be beyond the carrying capability of most light GA aircraft, such as a Cessna 172 Skyhawk. The Skyhawk is one of the most common airplanes used by flight schools. The four-seat airplane can be used for primary and advanced flight training. In addition, it is a

² http://www.tsa.gov/what_we_do/tsnm/index.shtml.

practical rental aircraft for cross-country flights. However, its payload capacity is approximately 830 pounds, not including the weight of a pilot, passenger, or fuel. The report concluded that as a platform for conventional explosives, the threat posed by light GA aircraft is relatively small compared to the threat posed by trucks.³

In March 2008, the Aircraft Owners and Pilots Association (AOPA) report, *General Aviation Security*, noted that GAO had observed that although nuclear power facilities were not designed specifically to withstand a terrorist aviation attack, they are among the most hardened industrial facilities in the United States, as they were designed to withstand tornadoes, hurricanes, fires, floods, and earthquakes.⁴ The study concluded that most GA aircraft could not penetrate the concrete containment vessel of a nuclear power plant, release radiation through an explosion, or otherwise severely damage nuclear power plants.⁵

Houston in the Media

Following an investigative report aired by a Houston television station concerning security at three local airfields, Chairwoman Sheila Jackson Lee requested that we review general aviation security at these airfields, and also at others in several other metropolitan areas. We performed announced visits to the airports, interviewed owners, employees and stakeholders, and toured the facilities. In the investigative report “Is Houston a Sitting Duck for Terrorism?” reporters visited three GA airports near Houston, Texas: David Wayne Hooks Airport in Spring, Texas; Sugar Land Regional Airport in Sugar Land, Texas; and Lone Star Executive Airport in Conroe, Texas. The television reporters identified what they described as “security breaches” at all three airports. Specifically, the reporters were able to approach an airfield or aircraft without identifying themselves. At one airfield, the reporter noted that a fence enclosed only part of the airfield.

Results of Review

Houston Is Not a “Sitting Duck for Terrorism”

This review was initiated in part because of the television station’s allegations. We reviewed the allegations and determined that they were not compelling.

³ Congressional Research Service, *Securing General Aviation*, January 2008.

⁴ AOPA, *General Aviation Security Initiatives Since 9-11-2001*, March 5, 2008.

⁵ AOPA, March 2008.

In each instance, the allegation of weak security was based on reporters gaining access to airfields or aircraft. However, the reporters were unaware of some passive security and monitoring measures. For example, the airports had instituted security procedures, including 24-hour video surveillance, locking or disabling grounded planes, and controlling fuel access, which the television reporters did not test.

Combined, these airports service more than 440,000 aircraft takeoffs and landings per year, and each routinely operates 24 hours a day, 7 days a week. The volume of legitimate activity would appear to limit opportunities for unobserved loading or movement of aircraft. Moreover, the issues identified by the television reporters were not violations of GA guidelines or any federal aviation regulations.

David Wayne Hooks Airport

David Wayne Hooks Airport is the largest of the three airports featured in the news story. It is

privately owned and operated as a for-profit enterprise. According to airport personnel, the airport has two full-time security staff, an

FAA tower operator who provides visual surveillance, and 24-hour video surveillance. These security measures have effectively deterred even petty vandalism. The airport does not handle air cargo, and most planes are housed in hangars, locked, or disabled when not in use. The jet that the television reporters approached during the filming of their report could not have been moved from the ramp without security personnel noticing them tampering with the jet.

Figure 2. Houston Airports Visited

David Wayne Hooks Airport

Location: Spring, Texas

Specialty: Business and military aviation

Products and Services: Fueling, ground handling, passenger services, maintenance, aircraft sales and charter, 24-hour operations

Staff: 225 employees

Aircraft Movements: 275,000

Sugar Land Regional Airport

Location: Sugar Land, Texas

Specialty: Corporate business travel

Products and Services: Fueling, ground handling, crew services, maintenance, luxury terminal, U.S. Customs and Border Protection inspection

Staff: 29 municipal employees

Aircraft Movements: 85,000

Lone Star Executive Airport

Location: Conroe, Texas

Specialty: Private aircraft, military operations

Products and Services: Fuel, maintenance, flight training, aircraft rental, aircraft tie-down and hangar rentals, 24-hour operations

Staff: 135 employees, three full-service private companies, 13 additional aviation businesses

Aircraft Movements: 80,000

Figure 3. Aerial View of David Wayne Hooks Airport

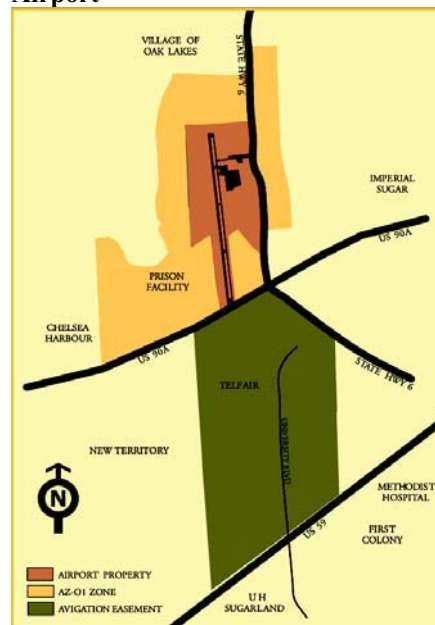


Source: www.hooksairport.com/cont.htm, 2004

Sugar Land Regional Airport

Sugar Land Regional Airport is smaller than Hooks, and has less acreage and fewer services, takeoffs, and landings. It is owned and operated by the municipal government. While the television reporters noted that the fence did not encircle the complex, creating a gap of several hundred feet, airport managers informed us that fencing existed mainly to direct vehicle and pedestrian traffic to desired gateways for safety reasons, not to prevent access. The perimeter sectors without fencing were in areas where visitors were not expected to approach, such as from the adjoining minimum-security prison, and from a swamp infested with venomous snakes and crocodiles. During our tour, a manager said that fencing to prevent entry was ineffective because anyone who wanted to sneak onto the field could scale a fence. Aviation officials explained that fencing was ineffective as a security barrier and that meaningful protection came from securing planes in hangars and engaging wheel and cabin locks on aircraft equipped with these secure devices. They further noted that while a reporter might be able to approach and even touch an aircraft at an airport, aircraft vulnerability does not depend on whether someone can touch a plane.

Figure 4. Diagram of Sugar Land Regional Airport



Source: www.flysgl.com/airportoverview, 2006

Lone Star Executive Airport

At Lone Star Executive Airport, television reporters were able to drive alongside a large, empty corporate jet on the tarmac. However, airport staff stated that they have 24-hour surveillance using infrared and motion sensor devices, and that security is enhanced because the Drug Enforcement Agency and Texas Department of Public Safety base their own flight operations from the airport. The airport regularly approaches people on the ramp, and had reported several security incidents—including one involving a news crew seeking unauthorized access—to TSA and the local police. Local police have a constant presence at the airport.

Figure 5. Aerial View of Lone Star Executive Airport



Source: www.mctx.org/air/location.html , 2005

General Aviation in Major Metropolitan Areas Presents Few Security Concerns

We also visited GA facilities in busy, heavily populated metropolitan areas where people might be at risk in the event of a GA terrorist attack. In addition to the Houston-area sites mentioned in the television report, we conducted site visits at George Bush Intercontinental Airport (IAH) in Houston; O'Hare International Airport (ORD) in Chicago, Illinois; DuPage Airport (DPA) in Carol Stream, Illinois; Los Angeles International (LAX), Long Beach (LGB), and Van Nuys Airports (VNY) in the greater Los Angeles, California, area; and Teterboro Airport (TEB) in Teterboro, New Jersey. We also visited Potomac Airfield in Fort Washington, Maryland.

Additional Houston-Area Site Visit

To determine whether GA might pose a threat at a major Houston-area airport, we visited IAH. IAH serves the greater Houston, Texas, area and is a connecting point for many commercial carriers. IAH is publicly owned and handles 2% transient GA and no local GA. We met with the TSA airport security manager, who stated that the airport security team consisted of the senior superintendent, operations supervisors, security coordinators, and officers who patrol the GA operations area. The airport security coordinators are responsible for key audits (accounting for all airport keys to the various facilities); listing emergency contact telephone numbers; and obtaining, issuing, and monitoring employee and contractor badges. The airport coordinators update the officers on regulations, threats, keys, and badges. IAH airport

officials do not get involved with GA except to ensure that the GA facilities follow proper safety and security regulations.

IAH has fixed base operators at the airport. A fixed base operator (FBO) is a retail facility that offers aircraft fuel, oil, and parking along with access to restrooms and telephones. Some FBOs sell additional aircraft services such as hangar (indoor) storage, maintenance, aircraft charter or rental, flight training, deicing, and ground services such as towing and baggage handling. FBOs also may offer services not directly related to aircraft, such as rental cars, lounges, and hotel reservations. IAH has two FBOs: Atlantic Aviation and Landmark Aviation. There is no flight school at IAH.

There have been no incidents of concern since an aviation accident in 1991 involving GA aircraft.

Chicago-Area Site Visits

ORD officials stressed that GA operations are a minor part of ORD's daily activities. Staff within the Department of Aviation for the City of Chicago operate the GA facility the same way they operate the commercial facility.

The airport staff works closely with the TSA federal security director in executing their Airport Security Plan. The purpose of the plan is to increase communication among airport tenants, the airport manager, and law enforcement; identify specific activities that should be reported; and increase awareness of security issues. The elements of a typical airport security plan might include a notification system to include an alerting roster of emergency personnel at the airport, identification of airport security personnel and their responsibilities, explanation of airport signage, the incorporation of new technology such as remote cameras and noise sensors, an explanation of the established routine patrols by local law enforcement, a description of an annual exercise at the airport, and ongoing assessments of potential threats to the airport.⁶

ORD typically handles 3% transient GA and has no local GA. Signature Flight Support is the only FBO at the airport, and there is no flight school.

There have been no incidents of concern.

⁶ nmshtd.state.nm.us/upload/images/Aviation/NM_GA_Artp_Safety_and_Security07.pdf.

DPA, approximately 30 miles west of ORD in Carol Stream, Illinois, is owned by the DuPage Airport Authority, an independent government body established by the State of Illinois. DPA handles 58% transient general aviation and 38% local general aviation. DPA has a 24-hour FAA air traffic control tower and more than 40 aviation and non-aviation support businesses. The airport has only one FBO and one flight school. The airport also has an onsite U.S. Customs and Border Protection office. There have been no incidents of concern at the airport.

Los Angeles-Area Site Visits

LAX is publicly owned by Los Angeles World Airports and operated by the City of Los Angeles. We observed minimal GA operations at LAX. Transient GA comprise 2% of the daily takeoffs and landings at LAX. There is no local GA. Landmark Aviation and Atlantic Aviation are the two FBOs at the airport. There are no flight schools at the airport, and there have been no incidents of concern.

VNY, also owned by Los Angeles World Airports and operated by the City of Los Angeles, is one of the world's busiest GA airports. VNY averages approximately 400,000 takeoffs and landings annually. More than 100 businesses are located on the 730-acre airport, including 6 major FBOs and 6 flight schools. Celebrities, politicians, and business executives use this airport because it offers them convenience and anonymity. There have been no incidents of concern at the airport.

LGB has 365,000 annual GA takeoffs and landings annually, including Life Flight donor organ and critical care patient delivery, law enforcement, and search and rescue flights. The city-owned airport services charter flights, private aviation planes, and flight schools. In addition, it is a center for law enforcement flights, a helicopter landing zone, advertising blimps, planes towing advertising banners, and similar functions.

At LGB, 90% of the traffic is GA. Local GA accounts for 51% of the GA traffic and transient GA accounts for 39%. Commercial flights are restricted to 66 takeoffs and landings per day. The airport has four shorter runways and one 10,000-foot runway used primarily for jets. LGB has five FBOs and one flight school. There have been no reportable incidents at the airport.

Teterboro Site Visit

TEB in Teterboro, New Jersey, is owned and operated by the Port Authority of New York and New Jersey, which also owns and operates LaGuardia and Kennedy airports. TEB, 12 miles west of Manhattan, is the second most active GA airport in the country. Airport personnel devote considerable security efforts toward protecting the many large private jets and dignitary movements. The airport is patrolled 24 hours a day. It has five FBOs and no flight school. Officials have not identified any major security threats, and there have been no security-related incidents of concern.

There have been two aviation accidents that illustrate the effect of GA aircraft impacting buildings.

In February 2005, a CL-600 Challenger corporate jet crashed into a warehouse while trying to take off from TEB (see figure 6). The plane, with 11 aboard, skidded across a busy highway during the morning rush hour, struck two cars, and then crashed into the building. No one was killed, though several persons were injured. Although the damage to the building was not substantial, it should be noted that the plane was not at full speed when it collided with the building. In addition, an aircraft this large could have carried a sizable load of explosives.

Figure 6. Photo of the CL-600 Challenger Crash Site



(Photo by Mario Tama/Getty Images)

Source: Jetairpollution.com, February 2005

In October 2006, a small GA aircraft piloted by New York Yankees pitcher Cory Lidle flew from TEB and collided with an apartment

building in New York City, as shown in figure 7. The crash caused a fire on the 40th floor of the building. Lidle and his flight instructor were killed, and two dozen people were injured, of whom 12 were residents of the building and the others were firefighters.

Figure 7. Photo of Belaire Condominium after being hit by the Lidle aircraft



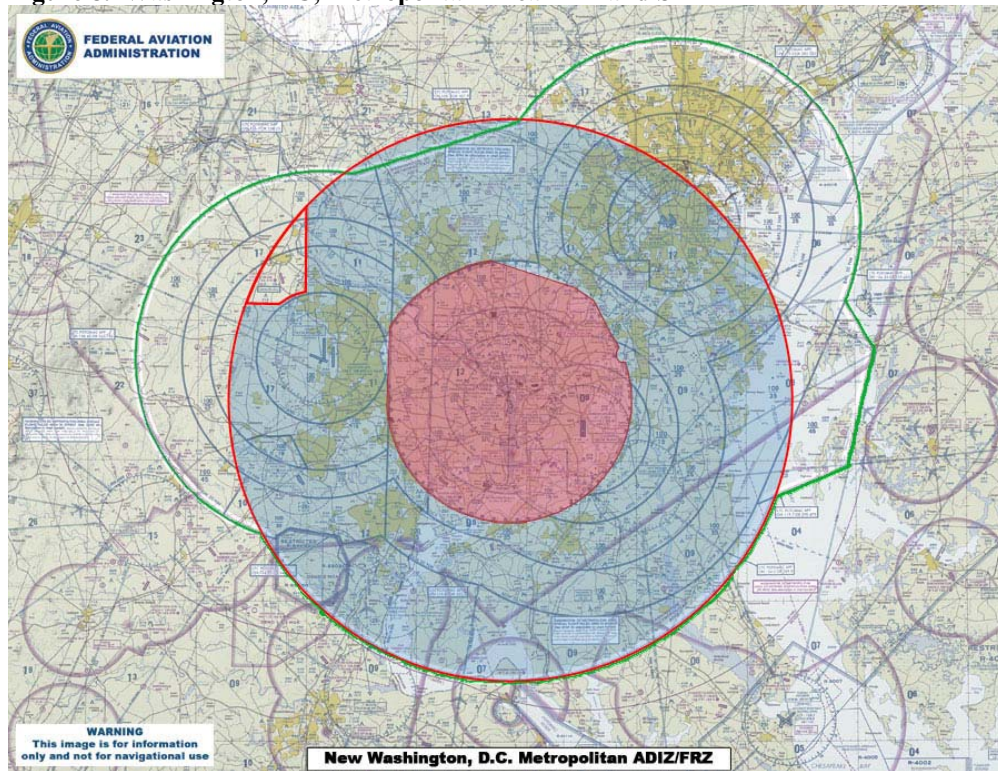
Source: http://en.wikipedia.org/wiki/2006_New_York_City_plane_crash

National Capital Region Site Visit

Privately owned Potomac Airfield is located in a residential neighborhood in Fort Washington, Maryland. It has one short runway that can accommodate only small aircraft. The airport handles 95% local and 5% transient GA. On average, the airport has 33 aircraft takeoffs and landings per day. There is a small flight school at the airport.

Potomac Airfield is one of three GA airports in the Washington, DC, Metropolitan Area Flight Restricted Zone (FRZ) (figure 8). The FRZ is contained within and forms the core of a larger, less restricted airspace known as the Special Flight Rules Area (SFRA). The Washington FRZ is roughly a 15-mile circle around Ronald Reagan Washington National Airport. The current shape and size of the Washington SFRA, roughly a 30-mile circle around Washington, DC, was redefined in 2007.

Figure 8. Washington, DC, Metropolitan Area FRZ and SFRA



Source: http://www.faa.gov/news/updates/adiz_frz/media/070727_New_ADIZ-FRZ.jpg

Private and commercial aircraft may enter the Washington SFRA after complying with FAA notices that require, among other things, that the pilot file a flight plan that describes the course, destination, and other details of the trip. The flight plan is filed with an FAA Flight Service Station, which is an air traffic facility that provides information and services to pilots before, during, and after flights, but unlike air traffic control, is not responsible for giving instructions or clearances or providing separation. The information is passed on to FAA air traffic control for subsequent observation of the aircraft.

Flights within the FRZ must follow more restrictive procedures. Flight within the FRZ is restricted to governmental, certain scheduled commercial, and a limited set of waived GA flights. TSA performs background checks on all pilots flying into the FRZ and then issues a personal identification number that authenticates the pilot's identity. Only then is the pilot permitted to fly to an airport in the FRZ. AOPA describes this as "a process which is both time-consuming and inconvenient for most pilots and extremely prohibitive for pilots outside the Washington, DC, metro area." Nonvetted pilots who penetrate the FRZ could face severe

penalties, including the loss of their pilot's certificate.⁷ These requirements have had a considerable effect on the Maryland GA airports referred to as the "Maryland Three" or "DC-3": College Park Airport in College Park, Washington Executive/Hyde Field in Clinton, and Potomac Airfield in Fort Washington.

TSA Security Requirements Include General Aviation

TSA scales its security strategy to the wide range of airfield environments and classes of operators and aircraft, rather than introducing overly broad regulations that are costly to implement. TSA works closely with the many associations of GA owners and operators to implement voluntary security measures based on threat analysis and risk management. In addition, TSA has introduced voluntary guidelines that are being used throughout the GA community, and has developed several programs targeted at the most vulnerable GA sectors, such as the Twelve-Five Standard Security Program that requires additional security for charter aircraft weighing between 12,500 and 103,309 pounds, and the Maryland-Three Program to reduce the perceived threats posed by GA airports in the vicinity of Washington, DC. TSA has also evaluated the effect of its security initiatives on the GA industry and, where applicable, its effect on modeling international industry best practices and security measures.⁸ A complete list of TSA's security requirements is provided in appendix B.

TSA Is Using a Threat-Based Approach to General Aviation Security

TSA analyzes credible intelligence information to determine and prioritize the existing threats. The Office of Intelligence, which has primary responsibility for assessing potential terrorist threats, has conducted an extensive evaluation of threats that would affect or involve the GA industry.⁹ OI has identified several organizations that have shown an interest in using GA to obtain flight training or to launch attacks, and OI continues to monitor reports of activity by these organizations. OI also assesses how aircraft, ranging from helicopters to large aircraft, might be used to launch an attack, including how a terrorist might gain access and what damage could be inflicted. In addition to foreign terrorist organizations, OI assesses the potential of less traditional threats, such as

⁷ www.AOPA.org, "Air Traffic Services Brief: Washington, DC, Flight Restricted Zone/'DC-3' Airports," November 6, 2007.

⁸ www.tsa.gov/what_we_do/tsnm/general_aviation/index.shtm.

⁹ TSA Office of Intelligence, *The Threat to General Aviation: 2007 Modal Assessment*.

narcotics traffickers and domestic terrorist groups targeting jets of specific corporations.

Although OI has identified potential threats, it has concluded that most GA aircraft are too light to inflict significant damage, and has not identified specific imminent threats from GA aircraft. OI has also concluded that there is no credible threat of crop-dusting aircraft being used to spread chemical or biological agents. However, OI noted that various intelligence sources have identified helicopters as aircraft of ongoing interest to terrorists. OI also stated that the potential for a terrorist group to use GA aircraft to conduct an attack remains a possibility that cannot be ignored.

Risk Reduction Steps Have Strengthened General Aviation Security

Based on threat assessments conducted by OI and other federal intelligence agencies, as well as the heightened awareness of aviation vulnerabilities since September 11, 2001, TSA has identified practical, targeted measures to lessen risks in the aviation sector.¹⁰

TSA requires GA facilities that train pilots to conduct name checks for non-U.S. citizens seeking flight training. TSA has the authority to direct the FAA to immediately suspend, revoke, or refuse to issue licenses to pilots who pose a national security threat. TSA requires screening for GA aircraft operators who request access to restricted airspace, such as airspace in high-risk urban areas or near key infrastructure. TSA also conducts routine inspections of flight school providers, operators of heavy aircraft, and private charter operations.

The Aviation Security Advisory Committee reviewed GA airport security and concluded that nonfederal stakeholders have taken extensive voluntary measures to limit security vulnerabilities.¹¹ Measures range from pilot awareness programs and guidelines for flight schools to assisting airports in developing security plans and assisting businesses in identifying inappropriate airplane purchase offers. GA operators also may implement TSA guidelines that provide owners, operators, sponsors, and other entities responsible for oversight of GA airports with a set of federally endorsed security enhancements and a method for determining when and where these enhancements may be appropriate. Examples include

¹⁰ Aviation Security Advisory Committee Report of the Aviation Security Advisory Committee Working Group on General Aviation Airports Security, http://www.tsa.gov/assets/pdf/ASAC_Working_Group_11-2003.pdf.

¹¹ Ibid.

securing aircraft against unauthorized access, verifying identity of all passengers, and documenting that all baggage and cargo is known to the occupants of the aircraft. TSA has established strong lines of communication and working partnerships with industry stakeholders, which in turn enable the GA industry to obtain, assess, and provide security programs and policies to address security vulnerabilities. Industry stakeholders told us that areas for improved communication remain, and cited the recent release of Security Directive 8F. Little information about the directive is available as a result of the directive's classification as sensitive security information. Because of this classification, information about the directive is not available to many of the affected owners, operators, or their employees. Another result of the classification of the directive is that there was no public comment period for the proposed rulemaking.

Appendix C describes the actions that nonfederal stakeholders have taken.

TSA Has a Record-Keeping Process for “Incidents of Concern”

Although security experts throughout the federal government and the GA industry have concluded that risks inherent in GA are limited, TSA and the industry have introduced numerous targeted security measures to reduce the industry's vulnerabilities. They have also introduced procedures for documenting and responding immediately to potential security incidents. Specifically, TSA coordinated with AOPA to establish the General Aviation Hotline and the Airport Watch Program.

The hotline, developed in partnership with the National Response Center at TSA and in coordination with AOPA, is a centralized reporting system for GA pilots, airport operators, and maintenance technicians to report suspicious activity at their airfield. The hotline was developed to complement the AOPA Airport Watch Program. For each program, incidents are reported to TSA's Transportation Security Operations Center (TSOC), where reported incidents are logged into a database. After an analyst evaluates the information, TSOC may contact the appropriate authorities to alert them to potential danger.

Our review of incidents reported to TSA indicates that the GA industry is using the GA Hotline and Airport Watch Program appropriately, but that incidents that might represent a security threat are rare.

One recent incident that could have had security implications, but did not, took place on April 22, 2008. It involved a private charter aircraft with one passenger flying to the United States from abroad. The aircraft arrived in the United States without having previously filed an

International Airspace Waiver with TSA and FAA.¹² The aircraft departed from Germany, made a refueling stop in Iceland, and continued on to Chicago. Federal officials met the flight. The pilot was notified that he had not filed an International Airspace Waiver with the FAA. A TSA transportation security inspector placed a ground hold on the aircraft until the proper paperwork was filed and clearances obtained. TSA told us that the incident was detected through the Automated Detection and Processing Terminal (ADAPT).

General Aviation Operations Present a Limited Threat to Security; However, Steady Vigilance Must Be Maintained

The current status of GA operations does not present a serious homeland security vulnerability requiring TSA to increase regulatory oversight of the industry. According to OI, there is no specific, credible information of ongoing plots to use GA in an attack in the near future. Other government agencies, including GAO and the Congressional Research Service, have examined catastrophic scenarios and have concluded that the GA industry does not represent a serious vulnerability (see appendix D).

In addition, TSA has worked cooperatively with the industry to establish guidelines and voluntary measures designed to target the most serious vulnerabilities, including screening pilots and restricting access to airspace over urban areas and key infrastructure (see appendixes B and C). TSA is creating new regulations but has been cautious to balance potential costs—and the GA industry’s established history of implementing security improvements voluntarily—against the benefits of a regulatory regime. For these reasons, we conclude that TSA’s response to threats in the GA sector has been appropriate, and we are making no recommendations for additional measures in this review. Nonetheless, TSA and the GA industry must continue to be vigilant.

¹² TSA and FAA use waiver requests to conduct background checks on crewmembers and passengers on flights for which waivers of flight restrictions have been sought from the FAA. In cases such as this one, the flight restriction in question pertains to international flights to the United States.

Appendix A

Purpose, Scope, and Methodology

At the request of Chairwoman Sheila Jackson Lee, Subcommittee on Transportation Security and Infrastructure Protection, House Committee on Homeland Security, we reviewed TSA regulations governing GA security. Our objectives were to identify (1) current TSA security requirements for GA airports; (2) current threats to GA, whether TSA has identified those threats, and how those threats leave GA airports vulnerable; (3) steps TSA has taken to strengthen GA security and challenges TSA faces; (4) steps nonfederal stakeholders have taken to enhance GA security and other actions they can take; and (5) any record of “incidents of concern” with security at GA airports.

Our scope was limited to TSA and GA airports. We examined airport tenants such as flight schools and FBOs, which provide hangar space, maintenance, and fuel to aircraft. We visited a sample of GA facilities of varying sizes and in locations near and away from major population centers. Our review included airports in California, Texas, Illinois, New Jersey, and the National Capital Region. The four sites visited in Texas included the three identified in the television reports that prompted the chairwoman’s letter.

We reviewed relevant documentation such as legislation, reports, current TSA regulations, published guidelines, policies, and procedures. We interviewed TSA and private sector personnel who have a stake in GA security. We also gathered information from GA advocates and stakeholders affiliated with the Aviation Security Advisory Committee working group, which developed guidelines for security enhancements at GA facilities. We relied on sources of evidence from state and local law enforcement officials.

We assessed the effectiveness of TSA’s current GA security requirements at the sites we visited. During these visits, we examined airport security policies, procedures, and practices. Finally, to respond to Chairwoman Jackson Lee’s inquiry regarding “incidents of concern,” we examined TSA’s record of reported incidents and records from airport owners or managers. After conducting our review and establishing that TSA and the industry are making a concerted effort to collaborate and ensure that the industry is secure, we have determined that we have no recommendations for TSA.

Our fieldwork was performed between April 2008 and September 2008. This review was conducted under the authority of the *Inspector General Act of 1978*, as amended, and according to the *Quality Standards for Inspections* issued by the President’s Council on Integrity and Efficiency.

Appendix B

Current TSA GA Security Requirements

The following requirements have been established by TSA as noted by the Transportation Sector Network Management, Office of General Aviation, and as reported by AOPA.¹³ Although the scope of the review did not require that we evaluate each TSA GA security requirement, we believe that current TSA GA requirements represent a good strategic approach.

Airspace Waivers

According to TSA records, the Office of Airspace Waivers manages the process and assists with the review of GA aircraft operators who ask to enter restricted airspace. Each waiver applicant is required to provide his or her last and first names, Social Security number, and date and place of birth. This information allows the Office of Airspace Waivers to vet the applicants for subsequent approval or denial to fly into restricted airspace. Applications must be filed for aircraft operating into, out of, within, and flying over the United States. The process also includes an evaluation of the aircraft, crew, passengers, and purpose of the flight. The application is then adjudicated and recommended for approval or denial to the FAA, Office of Air Traffic Services. The FAA shares the responsibility for managing the waivers with TSA. The FAA asserts the safety provisions, while TSA manages the security portion of the process. Airspace waivers help to mitigate the threat of an airborne attack.

Flight School Security Regulations

The Interim Final Rule at 49 CFR 1522.23(d), *Flight Training for Aliens and Other Designated Individuals: Security Awareness Training for Flight School Employees*, requires flight schools to ensure that all of their flight, ground, and chief instructors, as well as administrative personnel who have direct contact with students, receive both initial and recurrent security awareness training. Flight schools may choose to use the TSA security awareness program or develop their own. If a flight school chooses to develop its own program, the program must adhere to the standards in the rule.

Current Security Programs

Secure Fixed Base Operator Program

The TSA Secure Fixed Base Operator Program was launched on December 31, 2007, with industry partner Signature Flight Support, at Anchorage, Alaska, and Shannon, Ireland. This public-private partnership

¹³ AOPA, *General Aviation Security Initiatives Since 9-11-2001*, March 5, 2008.

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Current TSA GA Security Requirements

program allows FBOs to check passenger and crew identification against manifests or, as of May 18, 2009, the Electronic Advance Passenger Information System. The latter is a U.S. Customs and Border Protection web-based application that collects electronic traveler manifest information from commercial carriers for international flights arriving in or departing from the United States. The system then passes manifests to Customs and Border Protection through the Advance Passenger Information System. According to a TSA official, “working in close coordination with industry partners, TSA believes that this security initiative will provide additional security for flights inbound to the United States. The broader application of such programs will provide robust security while maintaining operational flexibility for general aviation operators.”

Twelve-Five Standard Security Program

The Twelve-Five Standard Security Program (TFSSP) requires that certain aircraft operators using aircraft with a maximum takeoff weight of 12,500 pounds or more execute a security program. Operators were required to be in compliance with the program effective April 1, 2003.

Private Charter Standard Security Program

The Private Charter Standard Security Program (PCSSP) requires operators to execute a security program, but adds additional requirements for aircraft operators who use aircraft with a maximum takeoff weight of more than 100,309 pounds or with a seating configuration for 61 or more passengers. Operators were required to be in compliance with the program effective April 1, 2003.

This program subjects operators of large charter aircraft to the same processes that are associated with commercial passenger aviation, including passenger screening through metal detection devices, x ray systems for carry-on and checked luggage, and a certified passenger and baggage screening workforce.¹⁴

Large Aircraft Security Program

TSA has issued a Notice of Proposed Rulemaking that seeks to amend the TFSSP and PCSSP and apply new security requirements to all aircraft weighing more than 12,500 pounds. In addition, TSA proposes that airports serving large aircraft should adopt mandatory security requirements. Among the requirements in the proposal, the major

¹⁴ <http://www.nbaa.org/ops/security/programs/pcssp/> (URL as of January 14, 2009).

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Current TSA GA Security Requirements

provisions for aircraft operators include criminal history record checks and security threat assessments for flight crew, checking passenger names against the TSA's No-Fly and Selectee lists, developing a security program, and biennial auditing of the security program. Additionally, the proposal would require approximately 320 airports designated by the Department of Transportation as "reliever" airports, and airports that regularly serve scheduled or public charter operations in large aircraft, to adopt a "partial" airport security program that would include specific training, record retention, personnel, and notification requirements.

The GA industry asked TSA to extend the period for public comment on the agency's Large Aircraft Security Program (LASP) proposal by 60 days. As a result of the extension, the new deadline for public comment was February 27, 2009. LASP would require U.S. operators of aircraft exceeding 12,500 pounds takeoff weight to implement a security program much like that for charter operators of large aircraft, described above in the section on the PCSSP. The proposed LASP rule would add requirements for large aircraft operators and some airports receiving those aircraft. In addition, large aircraft operators would be required to submit to compliance audits of their security programs using TSA-approved auditors and to verify that their passengers are not on the No Fly or Selectee portions of the consolidated terrorist watch list maintained by the federal government through the use of a TSA-approved watch list provider.¹⁵

Many GA organizations vigorously oppose LASP. Melding the TFSSP into the much more elaborate PCSSP would push existing security efforts for the largest charter flights down to many smaller aircraft involved in corporate and private aviation

Rules for the Aviation Community

Washington Reagan National Airport Access Standard Security Program

TSA Interim Final Rule, 49 CFR (Parts 1520, 1540, and 1562), developed in coordination with other DHS agencies and the Department of Defense, takes into consideration the special security needs of Washington Reagan National Airport (DCA). Under the TSA security plan, 48 GA flights per day are allowed in and out of Washington Reagan National Airport. All GA aircraft are required to meet the security measures set forth in the Washington Reagan National Airport Access Standard Security Program. To meet security measures, TSA is to conduct a series of steps, which include an inspection of crew, passengers, accessible and checked property, and the aircraft. Passenger and crew manifests are to be

¹⁵ Transportation Sector Network Management, Office of General Aviation, March 2008.

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Current TSA GA Security Requirements

submitted 24 hours in advance of each flight. TSA is to execute enhanced background checks for all passengers and fingerprint-based criminal history records check for flight crew. There is to be an armed security officer on board each flight. All Washington Reagan National Airport Access Standard Security Program flights must depart from an approved gateway airport (an airport authorized by TSA to “send” GA flights to DCA). According to TSA, there are 21 approved gateway airports.

Maryland-Three Program

The Maryland-Three Program allows properly vetted private pilots to fly to, from, or between the three GA airports within the National Capital Region. These airports are College Park Airport, Potomac Airfield, and Hyde Executive Field, and all are located within the Washington, DC Metropolitan FRZ.

GA Community Several Security Advisories

According to TSA officials, TSA has provided the GA community advisories to execute security requirements. TSA encourages GA aircraft and airport owners and operators to consider securing unattended aircraft to prevent unauthorized use and verify the identification of crew and passengers prior to departure. TSA also advises the GA community to verify that baggage and cargo are known to the persons on board. Where identification systems exist, TSA requests the GA community to encourage employees to wear proper identification and challenge persons not wearing proper identification. At one GA facility in Chicago, airport security officials punish employees who do not properly display their airport identification. The penalties range from a verbal warning to dismissal. It is also stressed that they be aware of and report persons whose identification appears altered or inconsistent.

TSA stresses to the GA community that it must direct increased vigilance to unknown pilots or clients for aircraft or helicopter rental or charters, as well as to unknown service and delivery personnel. TSA emphasizes that the GA community must be aware of and report the following: individuals impersonating pilots, security personnel, emergency medical technicians, or other uniformed airport personnel using vehicles to gain access to aviation facilities or aircraft; aircraft with unusual or unauthorized modifications; persons loitering in the vicinity of aircraft or air operations areas, persons loading unusual or unauthorized payload onto aircraft, or persons who exhibit odd behavior.

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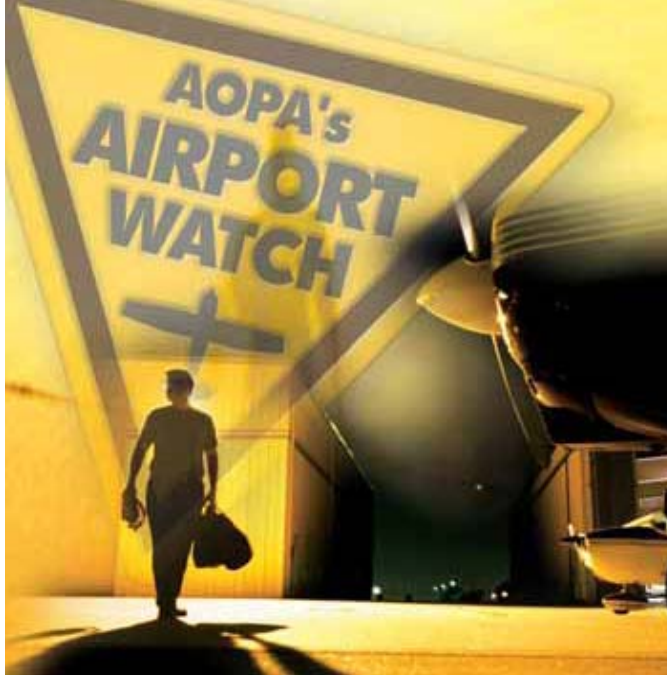
Current TSA GA Security Requirements

Security Initiatives

General Aviation Hotline and Airport Watch

TSA has developed and implemented a GA Hotline, 866-GA-SECURE (1-866-427-3287), in partnership with the National Response Center. The hotline serves as a centralized reporting system for GA pilots, airport operators, and maintenance technicians to report suspicious activity at their airfield.

Figure 9. Aircraft Owners and Operators Association Airport Watch



Source: Airport Watch Brochure, www.aopa.org/airportwatch/brochure.pdf, 1995–2008, Aircraft Owners and Pilots Association.

The hotline was developed in coordination with AOPA to complement the AOPA Airport Watch program “Lock Up, Look Out” (Figure 9). According to an AOPA official, this program enlists the support of approximately 550,000 GA pilots to watch for and report suspicious activities that might have security implications. According to an AOPA official, AOPA has distributed Airport Watch materials to 5,400 public-use GA airports, several pilot groups, and thousands of individual pilots. The program provides special materials, including a video to train pilots to be alert for suspicious people or activities on the airport.

Airport Security Guidelines

In April 2003, TSA requested that the Aviation Security Advisory Committee Working Group establish a working group consisting of GA

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Current TSA GA Security Requirements

industry associations, airport operators, and state and federal government representatives to develop guidelines for security enhancements at GA airports nationwide. This list of recommended guidelines or best practices was designed to establish nonregulatory standards for GA airport security. Their primary purpose is to help prevent the unauthorized use of a GA aircraft in an act of terrorism against the United States.

Members of the working group reviewed numerous GA airport security recommendations and industry best practices. The result of this effort was the *Report of the Aviation Security Advisory Committee Working Group on Aviation Airports Security*, available at http://www.tsa.gov/assets/pdf/ASAC_Working_Group_11-2003.pdf.

On November 17, 2003, the Aviation Security Advisory Committee formally transmitted the report's recommendations to TSA. TSA used this report as a baseline from which to create the "Security Guidelines for General Aviation Airports." These federally endorsed guidelines are used to enhance security at GA facilities throughout the Nation by addressing aviation security concepts, technology, and enhancements.

TSA Access Certification

TSA launched a pilot project in cooperation with the National Business Aviation Association at Teterboro Airport and Morristown Municipal Airport in New Jersey and White Plains Airport in New York. The initiative was to provide a "proof of concept" to validate a National Business Aviation Association-proposed security protocol, which led to the TSA Access Certification and a corporate waiver for certain types of operations, such as international flights to and from the United States. Phase I of the pilot program was completed on June 30, 2003. Phase II was completed on December 31, 2003.

Recommended Security Action Items for Fixed Base Operators

These Security Action Items were created for FBOs. Most of these measures complement the guidance in the May 2004 *Security Guidelines for General Aviation Airports*. TSA has confirmed the value of these measures during discussions, outreach sessions, and security reviews with partners representing FBOs. The security action items are presented in six categories: (1) general security measures, (2) FBO security coordinator, (3) FBO training outline, (4) aircraft security, (5) transient pilots, and (6) reporting suspicious activity.

Appendix C

Actions Nonfederal Stakeholders Have Taken

The following actions taken by nonfederal stakeholders are summarized from the Aviation Security Advisory Committee Working Group 2003 report.¹⁶

Aircraft Owners and Pilots Association

AOPA developed a nationwide aviation watch system, the Airport Watch Program, which allows the Nation's 550,000 pilots to use a TSA-supported centralized toll-free hotline to report and act on information provided by GA pilots and other individuals at airports. The Airport Watch Program includes warning signs for airports, informational literature, and a training videotape to educate pilots and airport employees about ways to enhance the security of their airports and aircraft.

Airports and Airport Tenants

Many airports and individual airport tenants have already implemented security enhancements in addition to the aforementioned Airport Watch Program. Such initiatives include installing alarm systems; controlling access; and monitoring and improving gates, fencing, and lighting. Some airports are also experimenting with new technologies in security monitoring, surveillance, and access control, including Wi-Fi—wireless fidelity communications—and sophisticated target acquisition software programs.

American Association of Airport Executives

The American Association of Airport Executives, General Aviation Airport Security Task Force, delivered a set of eight recommendations to TSA in June 2002. The recommendations were developed by establishing categories of airports based on runway length and number of based aircraft. Recommendations included establishing a threat communication system, developing a new pilot license, securing aircraft, and expanding the FAA contract tower program.

Experimental Aircraft Association

The Experimental Aircraft Association mobilized its network of nearly 1,000 chapters nationwide to improve security at many of the Nation's airports through increased knowledge and vigilance. Airport Watch distributed videotapes and other educational materials concerning security practices and airspace restrictions nationwide. In addition, updated Notices to Airmen are provided near-real-time to pilots via the association's website

¹⁶ http://www.tsa.gov/assets/pdf/ASAC_Working_Group_11-2003.pdf.

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Actions Nonfederal Stakeholders Have Taken

and direct e-mail, to warn of security-sensitive areas and airport closures. The Experimental Aircraft Association has led the development of new sport pilot and light sport aircraft regulations, which will help to improve security by registering with the FAA an estimated 10,000 to 15,000 previously unregistered ultralight training aircraft and certifying a similar number of ultralight pilots and instructors who heretofore had not been part of the FAA certification process.

General Aviation Coalition (no longer active)

In December 2001, the General Aviation Coalition issued a series of 12 recommendations for GA security. The government and the GA community have implemented many of them.

General Aviation Manufacturers Association

The General Aviation Manufacturers Association, in conjunction with the U.S. Department of the Treasury, is working to help aircraft sellers identify unusual financial transactions that could indicate attempts to launder money via the purchase of aircraft, or otherwise suspicious customer behavior. The publication titled “Guidelines for Establishing Anti-Money Laundering Procedures and Practices Related to the Purchase of General Aviation Aircraft” was developed in consultation with manufacturers, aviation finance companies, used aircraft brokers, and fractional ownership companies.

Helicopter Association International

The Helicopter Association International (HAI) significantly enhanced its efforts to keep members informed of developing security issues. HAI made changes to its website by including a separate, clearly marked “Security Issues” link on its homepage, links to the FAA’s Notices to Airmen website, other pages that have graphical depictions of Temporary Flight Restrictions, and links to various federal agency organizational charts and new, pertinent rules and regulations. HAI has coordinated a number of issues with security officials, including alternate means of compliance with the Twelve-Five Rule for firefighting and offshore operations, discrete transponder codes for electronic news-gathering helicopters that allow certain operations within the FRZ and waivers for flying over sporting events, utility patrol requirements, and heliport security.¹⁷ Additionally, HAI is developing a Call-When-Needed program to provide a nationwide resource of prevetted pilots and prescreened

¹⁷ Transponders produce a response when they receive a radio-frequency interrogation. In aviation, aircraft have transponders to assist in identifying them on radar and on other aircrafts’ collision avoidance systems.

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Actions Nonfederal Stakeholders Have Taken

aircraft with a broad range of capabilities that can respond to natural disasters or security-related events.

National Agricultural Aircraft Association

The National Agricultural Aircraft Association has produced an educational program called the Professional Aerial Applicators Support System that includes a new educational portion every year, specifically addressing security of aerial application or crop-dusting operations. The Professional Aerial Applicators Support System program annually reaches roughly 2,000 people. It is presented at state and regional agricultural aviation association meetings throughout the country. In addition, National Agricultural Aircraft Association members have undergone several industry-wide Federal Bureau of Investigations background investigations since September 11, 2001.

National Air Transportation Association

On September 24, 2001, the National Air Transportation Association issued a series of recommended security procedures for all aviation businesses through its Business Aviation Security Task Force. The recommendations focused on immediate steps that should be taken, as well as longer term actions. Examples included improving signage, appointing a single manager responsible for security at each location, developing a security mission statement, verifying identification, and seeking local law enforcement assistance to develop security plans. In addition, an advisory poster was created and distributed free to all National Air Transportation Association members.

National Association of Flight Instructors

The National Association of Flight Instructors, an affiliate of the Experimental Aircraft Association, has developed a series of security recommendations and best practices for flight schools and flight instructors that have been distributed widely throughout the flight training community. Currently, the National Association of Flight Instructors is working in cooperation with TSA to develop training materials and distribution methods to support flight school security awareness training.

National Association of State Aviation Officials

In December 2002, the National Association of State Aviation Officials submitted to federal and state authorities a document outlining GA security recommendations, which included securing unattended aircraft, developing a security plan, and establishing a means to report suspicious

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Actions Nonfederal Stakeholders Have Taken

activity. In addition, it recommends that airports establish a public awareness campaign, perform regular inspection of airport property, and control movement of persons and vehicles in the aircraft operating area. The state aviation officials suggested that federal authorities implement a new pilot ID, establish a government watch list to verify the identity of persons requesting flight lessons, implement a process for categorizing airports, and ensure adequate federal funding for airport security.

National Business Aviation Association

TSA launched a pilot project in cooperation with the National Business Aviation Association at Teterboro Airport in New Jersey. TSA has expanded the project to include Part 91 operators—operations involving small noncommercial aircraft—based at Morristown, New Jersey, and White Plains, New York. This initiative is proceeding as a proof of concept validating a National Business Aviation Association proposed security protocol for Part 91 operators who can apply for a TSA Access Certificate. The TSA Access Certificate allows operators to operate internationally without the need for a waiver. TSA is also considering granting access for TSA Access Certificate holders to designate temporary flight restrictions.

United States Parachute Association

The United States Parachute Association disseminated detailed security recommendations to its 219 skydiving clubs and centers across the United States, most of them based on GA airports. Skydive operators and their customers are often in airports during days and hours when others are not, and can enhance any airport watch program. Other recommendations were aimed at ensuring security of jump aircraft during operations as well as when aircraft are idle.

Appendix D

General Aviation Intelligence Assessments

The following GA intelligence assessments have examined the magnitude of destruction that terrorists could accomplish.

Government Accountability Office

In September 2004, a GAO report stated that “nuclear power facilities are among the most hardened industrial facilities in the United States. They are massive structures with thick exterior walls and interior barriers of reinforced concrete designed to withstand tornadoes (and projectiles propelled by tornadoes), hurricanes, fires, floods, and earthquakes.” While most facilities were not designed around the notion that terrorists might deliberately crash an aircraft into them, most were designed to withstand an accident involving an aircraft.

Aircraft Owners and Pilots Association

An AOPA-commissioned report revealed that a GA aircraft could not penetrate the concrete containment vessel of a nuclear power plant. Nor would an explosives-laden GA aircraft likely cause the release of radiation. A small aircraft attack on any auxiliary plant buildings would not cause a safety failure, and a GA aircraft could not ignite the zirconium cladding on spent nuclear fuel. In short, GA aircraft are not a threat to nuclear power plants.

Congressional Research Service

In its December 2005 report and most recently updated January 2008 report on *Securing General Aviation*, the Congressional Research Service stated that “the limited capabilities of the typical GA aircraft to carry conventional explosives, noting that even the 1,300-pound device involved in the February 1993 World Trade Center bombing would be beyond the carrying capability of a light GA aircraft. Thus, at least with regard to being used as a platform for conventional explosives, the threat posed by light GA aircraft is relatively small compared to trucks which have significantly larger payload capacities.... Executing an attack that involves loading a GA aircraft with a large quantity of explosives may be difficult without raising some suspicion at the airport, at least domestically where airport operators and pilots have been instructed to be vigilant for unusual activities.”

According to the Congressional Research Service, “Improving upon GA security without unduly impeding air commerce or limiting the freedom of movement by air remains a significant challenge. However, policymakers have received mixed signals about the relative security risk posed by GA

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General Aviation Intelligence Assessments

due to its diversity and a general lack of detailed information regarding the threat and vulnerability of various GA operations.”¹⁸

¹⁸ Congressional Research Service, *Securing General Aviation*, January 2008.

Appendix E
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Appendix F
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