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THE CHANGING FACE OF GENERAL AVIATION SECURITY REGULATION: WHAT IS BEING DONE, WHAT NEEDS TO BE DONE, AND WHY DOES ANYTHING NEED TO BE DONE IN THE FIRST PLACE?

REBECCA TILLERY*

IN JANUARY 2002, a teenage flight student crashed a small airplane into a downtown Tampa skyscraper.¹ Then, in May 2005, a small airplane violated restricted airspace over Washington D.C. and flew within three miles of the White House, causing evacuations there and at the Capitol.² Just months later, a Connecticut man stole a plane from a nearby flight school and took it on a midnight joyride.³ Lastly, in October 2005, a private business jet was stolen from a Florida airport, only to land in Georgia 300 miles away, after the alleged thief had completed his late-night adventure.⁴ While none of these events have been linked to terrorism, they point to continuing security vulnerabilities at general aviation⁵ (“GA”) airports and showcase the relative ease in acquiring GA aircraft.

Other government and agency reports do however link GA and terrorism. Intelligence confirms that the September 11 (“9-11”) hijackers learned to fly at United States flight schools, a

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⁴ Id. at 10-11.

⁵ General Aviation is generally defined as the aviation operations not performed by scheduled commercial airlines, large air cargo companies, or the military. Id. at 2.

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large component of the GA industry, and considered using small planes to accomplish their mission.\(^6\) These vulnerabilities persist. In fact, an alarming Federal Bureau of Investigation ("FBI")/Department of Homeland Security ("DHS") report from February 2005 detailed particular vulnerabilities in what it called "the largely unregulated" area of GA.\(^7\)

So what is being done to improve GA security? A congressional watchdog agency found that since 9-11, the Transportation Security Administration ("TSA"), the agency responsible for all civil aviation security, "has taken limited action to improve general aviation security leaving [it] far more open and potentially vulnerable than commercial aviation."\(^8\) Current GA security policy focuses on providing general, voluntary guidelines and executing joint projects between the TSA and GA industry groups. These existing measures are woefully inadequate and must be built upon and expanded to truly protect this industry from those who wish to exploit it.

As 2005 drew to a close, however, GA finally attracted policymakers' attention, resulting in the introduction of two new bills that would substantially upgrade GA security measures. This Comment attempts to shed light on the issues that the legislative and administrative bodies should consider while trying to secure and regulate such a diverse industry. It questions whether either bill would be effective and proposes that a successful solution must create a risk-based system that is cognizant of the cost of securing an industry as complex and varied as GA.

Part I of this Comment provides a brief overview of the GA industry, in part, to illustrate the challenges in designing security programs. Part II takes an extensive look at security measures already in place and whether they are working. Part III demonstrates that, contrary to some beliefs, GA threatens our national security. Finally, Part IV explains how the GA security bills currently under consideration fall short of implementing a


risk-based, cost-efficient framework and suggests alternative security plans.

I. OVERVIEW OF THE GENERAL AVIATION INDUSTRY

GA is something with which many Americans will never come into contact, yet it accounts for three fourths of all aircraft that take off and land in the United States.\(^9\) Additionally, GA aircraft fly over 27 million hours each year, nearly two times the amount of commercial aviation flight hours.\(^10\) GA benefits those that use GA transportation services and also the economy in general. Estimates vary as to GA's contribution to the national economy, but some figures put the data as high as $100 billion per year and 1.3 million jobs.\(^11\) GA boosts businesses' efficiency with faster travel times and also provides public services, like transporting the sick and injured and monitoring fires and floods.\(^12\) GA provides necessary transportation to small communities that do not have access to commercial air carriers.\(^13\) In fact, more than 5,000 communities rely exclusively on GA for their air transportation needs, while scheduled airlines serve less than 500 communities.\(^14\) In other words, "[g]eneral aviation airplanes bring economic development to our rural communities and take corporations to places where they wouldn’t otherwise operate."\(^15\)

A. GENERAL AVIATION AIRCRAFT AND OPERATIONS

If asked to picture the typical GA aircraft, most people would probably think of a small, single-engine plane,\(^16\) but the 211,000 active GA aircraft include jets, helicopters, and experimental air-

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\(^11\) GENERAL AVIATION: STATUS, supra note 9, at 13.

\(^12\) Id.

\(^13\) Id.


\(^16\) And they usually would be correct since the single-engine piston airplane makes up 69% of the GA fleet. SECURING GENERAL AVIATION, supra note 3, at 4.
craft, along with those single-engine planes owned by recreational fliers and hobbyists.\footnote{Id.} GA aircraft can vary tremendously in size and weight (and therefore also in potential destructive power). For example, most single-engine planes weigh less than 5,000 pounds while large business jets can weigh as much as 100,000 pounds.\footnote{Id.} Although these large jets make up only about 4% of the GA fleet today, reports forecast that this segment of the industry will grow at a rapid pace of 6% each year for the next ten years.\footnote{Id. at 4-5.}

GA involves a diverse range of flight operations such as personal and family transportation, power line inspection and repair, training, medical supplies transportation, emergency services, agricultural aviation, and law enforcement.\footnote{General Aviation Security: Increased Federal Oversight, supra note 6, at 6-9.} The largest GA use category is personal flying.\footnote{Securing General Aviation, supra note 3, at 3. Personal flying is defined as flying for pleasure or personal transportation and not for business purposes. General Aviation Security: Increased Federal Oversight, supra note 6, at 6.} In fact, 41% of all GA hours flown are for personal flying.\footnote{Id.} Instructional flying is the next largest use category, amounting to 16.1% of GA hours flown.\footnote{Id.} Corporate and business flying combined is nearly one quarter of GA operations.\footnote{Id.} Corporate and business flying can account for anything from “small businesses flying cancelled checks or regional salesmen flying to customer sites in small single-engine aircraft, to companies ferrying crews to offshore oil rigs by helicopter, to operations of large corporate jets and professionally managed fractional-ownership fleets.”\footnote{Id.}

B. GENERAL AVIATION AIRPORTS

GA aircraft, flown by the 550,000 active GA pilots and instructors,\footnote{Id.} can take off and land at almost any airport, including

\begin{itemize}
  \item \textit{Id.}
  \item \textit{Id.}
  \item \textit{Id. at 4-5.}
  \item \textit{General Aviation Security: Increased Federal Oversight, supra note 6, at 6-9.}
  \item \textit{Securing General Aviation, supra note 3, at 3. Personal flying is defined as flying for pleasure or personal transportation and not for business purposes. General Aviation Security: Increased Federal Oversight, supra note 6, at 6.}
  \item \textit{Id.}
  \item \textit{Id.}
  \item Business flying is defined as the use of aircraft in connection with the pilot’s occupation or private business. Corporate flying, in contrast, is the use of aircraft owned or leased by a corporation or business and flown by a professional pilot. \textit{General Aviation Security: Increased Federal Oversight, supra note 6, at 7-8.}
  \item \textit{Securing General Aviation, supra note 3, at 3.}
  \item \textit{Id.}
  \item \textit{Id.}
  \item \textit{General Aviation Security: Increased Federal Oversight, supra note 6, at 10.}
\end{itemize}
many of the nation’s commercial service airports. But, about 14,000 private-use GA airports and 4,800 public-use GA airports also crisscross the nation. Public-use GA airports vary in size and complexity, from the small grass landing strips that serve remote areas to the busy urban airports that can accommodate large jets on an assortment of paved runways. Additionally, about 2,500 GA airports are part of the Federal Aviation Administration’s (“FAA”) National Plan of Integrated Airport Systems (“NPIAS”), which identifies airports that are significant to national air transportation and provides funding for infrastructure and safety development. Finally, 334 NPIAS GA airports are designated as reliever airports, intended to help relieve congestion at commercial airports by diverting GA traffic away from commercial airports.

The myriad of GA categories illustrates how the 19,000 GA airports located across the country can differ in their proximity to urban areas, amount of activity, and types of operations they support. For example, Richard Lloyd Jones Airport (RVS), located five miles south of Tulsa, Oklahoma, was the eighth busiest GA airport in the nation in 2004, averaging 926 operations per day. The airport boasts a control tower manned sixteen hours each day, three asphalt runways, and 543 based aircraft (including twenty-one jets). In contrast, Harry Stern Airport (BWP) in Wahpeton, North Dakota has no control tower, one asphalt runway, one turf strip that is closed during the winter months, thirty-five based aircraft, and averages only twenty-seven

28 GENERAL AVIATION: STATUS, supra note 9, at 3.
29 GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 10. Private-use GA airports are owned by private parties and may only be used by the owner or with the owner’s permission. GENERAL AVIATION: STATUS, supra note 9, at 17.
30 GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 11.
31 GENERAL AVIATION: STATUS, supra note 9, at 15-16. For a GA airport to be part of the NPIAS, it must have at least ten based aircraft and fewer than 2,500 scheduled passenger boardings. Id. at 17.
32 Id. at 16.
operations per day.\textsuperscript{35} Interestingly, 6\% of its operations are made up of another category of GA use: air taxi business (that is, on-demand charter services).\textsuperscript{36}

C. \textbf{General Aviation Security Before 9-11}

GA has always been more free from regulation and oversight than commercial aviation, a fact valued by GA pilots.\textsuperscript{37} Prior to the 9-11 tragedies, the FAA was responsible for the security of GA.\textsuperscript{38} The FAA often worked with various agencies and GA industry members to determine which safety recommendations to implement and whether to execute the initiatives through laws and regulations, formal guidance, or voluntary programs.\textsuperscript{39} The FAA also determined the requirements for pilot certification but did not require background checks of anyone seeking a pilot license.\textsuperscript{40} In fact, most of the pre-9-11 FAA safety programs involved operational procedures such as takeoffs, landings, and flight patterns and were often intended to address the industry's biggest concern: the GA accident rate.\textsuperscript{41} For example, one broad pre-9-11 initiative was “Safer Skies,” developed with industry organizations and the FAA to improve the safety record of commercial aviation and GA.\textsuperscript{42} One of the specific goals of “Safer Skies” was to reduce the GA accident rate by 20\% before 2007.\textsuperscript{43}

Shortly after 9-11, on November 19, 2001, Congress enacted the Aviation and Transportation Security Act, which created the TSA within the Department of Transportation (“DOT”) and defined its primary responsibility as securing all modes of transportation, including aviation.\textsuperscript{44} The Homeland Security Act, passed on November 25, 2002, reorganized the TSA under the new


\textsuperscript{36} \textit{Id.}

\textsuperscript{37} \textbf{General Aviation: Status}, \textit{supra} note 9, at 8.

\textsuperscript{38} \textbf{General Aviation Security: Increased Federal Oversight}, \textit{supra} note 6, at 13.

\textsuperscript{39} \textbf{General Aviation: Status}, \textit{supra} note 9, at 5.

\textsuperscript{40} \textit{Id.}; \textbf{General Aviation Security: Increased Federal Oversight}, \textit{supra} note 6, at 25.

\textsuperscript{41} \textbf{General Aviation: Status}, \textit{supra} note 9, at 5. While the GA accident rate has been continually improving over the years, in 1998 it was still about twenty-four times higher than the accident rate of commercial aviation and accounted for 99\% of all accidents and 85\% of all fatal accidents. \textit{Id.}

\textsuperscript{42} \textit{Id.} at 8.

\textsuperscript{43} \textit{Id.}

\textsuperscript{44} \textbf{Aviation Security: Progress}, \textit{supra} note 1, at 1.
DHS, which assumed overall responsibility for aviation security. On the whole, the TSA has taken the lead in securing civil aviation.

GA has been described as a "major symbol of American innovation, prosperity, and pioneering spirit," yet it has been consistently overshadowed by commercial aviation with its overwhelming number of passengers. More recently, however, GA has found itself subject to increasing scrutiny as intelligence and congressional reports spotlight GA weaknesses and the potential for terrorist exploit. The concern has moved from if GA needs increased security regulation to how to create security plans that adequately address an industry composed of such a variety of aircraft, diversity of operations, and assortment of airports. Next, this Comment will turn to the security initiatives that have already taken up the challenge and find, for the most part, that they are not comprehensive or enforceable.

II. CURRENT GENERAL AVIATION SECURITY MEASURES

First, emphasis must be placed on the fact that, for a variety of reasons, GA currently faces very little regulation by any government entity. Reports from the General Accountability Office ("GAO") indicate that when the TSA assumed responsibilities from the FAA, many of these responsibilities did not apply to GA. In addition, allegedly the federal government is wary of regulating GA due to the competing needs of securing commercial aviation, combined with the vastness and diversity of the GA framework. Questions remain as to the extent of GA's risk of terrorist threat, making the use of limited resources to secure such a varied industry hard for the government to justify. Fur-

45 Id.
46 See GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 13. The FAA still has a security role, however, because of its sole authority to impose temporary flight restrictions and to disburse grants to fund safety and security enhancements at commercial and GA airports. Id. at 13-14.
48 The GAO is an independent, nonpartisan agency that works for Congress. It gathers information and issues more than a thousand reports each year to help Congress evaluate executive branch agencies. GAO, What is GAO?, http://www.gao.gov/about/what.html (last visited Mar. 22, 2006).
49 GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 14.
50 Id. at 1.
51 See infra Part III.
thermore, the Congressional Research Service\(^52\) ("CRS") reports that policymakers are under tremendous pressure from GA industry members, who argue that inflexible statutory regulations would put a huge burden on GA.\(^53\) Regardless of the exact reasons for the federal government’s hesitation, most of the responsibility for evaluating and improving GA security has unfortunately fallen on individual GA airport operators and managers.\(^54\)

Despite the lack of formal regulation, a variety of post-9-11 security initiatives, mostly voluntary in nature, have been put into place by federal legislation, federal agencies, public and private entity joint efforts, and nonfederal industry stakeholders. Legislative actions since 9-11 primarily concern vetting\(^55\) of flight school applicants and pilots.\(^56\) Post-9-11 regulatory actions focus on airport and airspace restrictions, mostly around Washington, D.C.\(^57\) The majority of the security plans implemented since 9-11 are in the form of general guidelines or cooperative arrangements between GA industry groups and the TSA.\(^58\) Lastly, aircraft owners and pilots, airport operators and managers, and state governments also employ their own security plans, many financed through their own budgets.\(^59\) Each of these categories of post-9-11 security programs will be addressed in turn, including their purported weaknesses.

### A. Legislative Actions

The TSA requires that all flight school employees undergo annual security awareness training.\(^60\) The training teaches employees how to recognize suspicious activities of flight school applicants or participants, the types of suspicious behavior that

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\(^52\) The Congressional Research Service is the public policy research arm of Congress. It is a legislative branch agency within the Library of Congress that provides Congress with analysis, research, and information services that are objective and nonpartisan. Congressional Research Service, About CRS, http://www.loc.gov/crsinfo/whatcrs.html#about (last visited Mar. 22, 2006).

\(^53\) SECURING GENERAL AVIATION, supra note 3, at 8.

\(^54\) GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 1.

\(^55\) Vetting is generally defined as the careful or critical examination of something or someone, often done prior to employment. Allwords.com, Definition of Vett, http://www.allwords.com/word-vetting.html (last visited Mar. 22, 2006).

\(^56\) SECURING GENERAL AVIATION, supra note 3, at 9.

\(^57\) Id.

\(^58\) Id.

\(^59\) Id.

\(^60\) 49 C.F.R. § 1552.23 (2004).
must be investigated further, and what steps to take if they suspect terrorist intent. In addition, all United States flight schools must have an acting security manager to oversee the school’s completion of the mandated security programs. Furthermore, the TSA compels anyone who applies for flight training at United States flight schools, regardless of the applicant’s citizenship or the type of aircraft involved, to supply them with certain background information. The TSA also developed and codified the Alien Flight Training Program, governing extensive background checks of foreign candidates for United States flight training schools.

Despite these important new laws, a recent GAO report found limitations in the process used to conduct compliance inspections of flight training programs, particularly because the TSA has not developed any kind of schedule for conducting the inspections. Additionally, the report noted that the TSA has not calculated the resources necessary to monitor compliance with the new regulations regarding background checks for non-United States citizen flight school applicants.

The FAA remains involved in the ongoing legislative process to make pilot licenses more secure. Before 9-11, pilot licenses were large paper certificates, often carried in the pilot’s pockets, and usually tattered and faded from continued folding and unfolding. In July 2003, the FAA began issuing new credit card-sized, security-enhanced pilot licenses to active and new pilots. But because these new licenses still do not contain a photograph of the license-holder, current regulations require that pilots carry a government-issued photo ID and present it, along with their license, upon any request from law enforcement.

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62 Id.
63 49 C.F.R. § 1552.3 (2004).
65 Id. Non-U.S. citizens must provide the TSA with a complete set of fingerprints, biographical information, and training specifics such as the type of aircraft the candidate will learn to operate.
66 Id.; GA Security, GA Pilots Are Not a Threat, supra note 61.
67 Id. at 24.
68 GA Security, GA Pilots Are Not a Threat, supra note 61.
69 Securing General Aviation, supra note 3, at 26.
should soon change, however, because a new law requires the FAA to develop and issue new pilot licenses that include a photograph of the pilot and have the ability to incorporate biometric information. The FAA has not yet announced any specific plans to issue these new pilot licenses.

B. REGULATORY ACTIONS

1. Restrictions at Washington D.C. Airports

Immediately after 9-11, Ronald Reagan Washington National Airport (DCA) in Washington, D.C., was closed to all GA operations and remained that way long after the airport was re-opened to commercial flights. GA at DCA has always been an important part of the aviation industry, both economically and symbolically. For example, before 9-11 DCA averaged 660 GA flights per week, generating about $50 million per year in direct economic activity in the Washington, D.C., area. President Bush noted the important symbolic nature of DCA when, upon re-opening it to commercial flights, he stated, “This is the airport that brings our Nation’s leaders to Washington to do the people’s business . . . By opening this airport, we’re making yet another statement to the terrorists—You can’t win.” Still, DCA remained closed to all GA operations until October 2005, when, after years of intense pressure from the GA lobby, the TSA re-opened DCA to select GA operators under a stringent security plan. This interim final rule (to be re-examined one year from its implementation) applies to all forty-eight GA flights per day

71 Id.; SECURING GENERAL AVIATION, supra note 3, at 26.
72 SECURING GENERAL AVIATION, supra note 3, at 26; Editorial, Safer Skies? Not This Way, USA TODAY, June 7, 2005, at A12.
74 Id. at 113.
76 Hearing, supra note 15, at 4 (testimony of Rep. Eleanor Norton, Member, House Comm. on Transportation and Infrastructure).
into DCA. 79 But to fly into DCA, the operator must fit the TSA’s definition of a “corporate operator,” 80 a difficult task for most GA operators, who would have to be reimbursed any and all costs by the TSA. 81 Privately-owned planes, or even planes owned by a corporation but operated by private persons, are not eligible. 82 Industry groups, while elated at the re-opening, continue to stress that the majority of GA pilots and operations cannot fly into DCA with such arduous restrictions. 83 Policymakers generally seem to agree, and at least one alleged that the restrictions are preferential and that the TSA is “limiting access to National to mostly the largest and most influential general aviation operators and Fortune 500 companies.” 84

GA was also unable to fly into the three GA airports 85 located closest to the Washington, D.C. area, known as the “DC-3” airports, until February 2002, when they were partially re-opened. 86 But even if a GA pilot does have an aircraft based at one of the DC-3 airports, he or she must still undergo extensive clearing and vetting procedures because the DC-3 airports lie within the fifteen-mile flight restricted zone around Washington, D.C. 87 The pilot must have exemplary compliance records, undergo inconvenient background checks, 88 and re-

79 Press Release, supra note 75.
80 To be a GA corporate operator, the flight must include a paid flight crew, an operations manual, recurrent flight training, an on-board security officer, security screening at one of the twelve gateway airports, plus TSA approval at least twenty-four hours in advance for every flight crew member and passenger on board. Securing General Aviation, supra note 3, at 34.
81 Id.
85 College Park (CGS), Washington Executive/Hyde Field (W32), and Poto mac Airpark (VKX).
87 Id.
88 Id.
89 Pilots must physically go to the Baltimore FAA Flight Standards District Office for a records check and then to DCA to be fingerprinted. Id.
ceive special training on security procedures.\textsuperscript{89} Not surprisingly, in March 2004, only 300 pilots had been cleared to fly into the DC-3 airports.\textsuperscript{90}

The economic impact of these restrictions is felt particularly hard at the DC-3 airports. College Park Airport is the most important of the DC-3 airports because of its proximity to the Washington, D.C., subway system and its symbolic significance.\textsuperscript{91} Between 9-11 and March, 2004, the airport had a 92% drop in operations and saw its gross revenues go down 54% from 2000.\textsuperscript{92} In addition to the direct costs of restricting access at the DC-3 airports, there are innumerable negative effects felt by the industries related to air transport, such as hotel, restaurant, and field services.\textsuperscript{93} The federal government finally heeded the call for relief and allocated resources to compensate the DC-3 airports and associated businesses in its 2006 Transportation, Treasury, Judiciary, and Housing Urban Development spending bill.\textsuperscript{94}

2. Airspace Restrictions

As briefly referenced above,\textsuperscript{95} the FAA has issued scores of temporary flight restrictions\textsuperscript{96} ("TFRs") around the nation. TFRs are the source of a contentious and ongoing debate, fueled by their direct effect on freedom of movement and air commerce.\textsuperscript{97} Although a complete analysis of TFRs is beyond the scope of this paper, a precursory look is warranted. Before 9-11, TFRs were usually issued to protect airspace during events of

\textsuperscript{89} Letter from Andrew V. Cebula, Senior Vice President, AOPA, to the DOT (Sep. 28, 2005), available at http://www.aopa.org/whatsnew/newsitems/2005/050929dca-comments.pdf.
\textsuperscript{91} It is the nation’s oldest airport, built by the Wrights in 1909 to demonstrate the airport to the U.S. Army. Hearing, supra note 15, at 55 (statement of Phil Boyer, President, AOPA).
\textsuperscript{92} Id. at 54.
\textsuperscript{93} Id.
\textsuperscript{95} See supra text accompanying note 46.
\textsuperscript{96} TFRs are rules that restrict aircraft from operating within defined areas, on a temporary or permanent basis, in order to protect persons or property in the air or on the ground. General Aviation Security: Increased Federal Oversight, supra note 6, at 14.
\textsuperscript{97} Securing General Aviation, supra note 3, at 36.
limited duration. Since then, however, TFRs are increasingly being used for national security over important infrastructure and are growing in size, amount, and duration, resulting in many accidental violations. In fact, over 3,500 violations of the Washington, D.C., area flight restrictions have occurred since January 2003. According to FAA officials, TFR violations typically result in a fifteen- to ninety-day suspension of the pilot’s license. Apparently, the TFR breaches are most commonly caused by pilots not reading the flight area’s required “Notices to Airmen,” which warn of the establishment, condition, or change of a TFR.

The alarming amount of TFR violations has made some question the effectiveness of TFRs’ deterrent effect and, to the outrage of GA industry members, has resulted in the Capitol Airspace Enforcement Act, a bill that would greatly increase the fines for pilots who breach the Washington, D.C. TFRs. GA industry groups also lament the economic loss and inconvenience resulting from the expansion of TFRs since 9-11. A study by the National Business Aviation Association estimated that between 9-11 and March 2004, TFRs caused the cancellation of 11,000 GA flights, the postponement of 74,000 GA flights, and the diverting of over 100,000 GA flights to more circuitous routes, resulting in a $1 billion loss to GA passengers and firms.

Others, however, have raised different concerns regarding TFRs, such as whether they could truly protect important structures in the event of a terrorist attack unless coupled with elaborate and expensive air defense capabilities. Lastly, the GAO has expressed its own trepidation about the lack of any written processes and policies to re-examine the necessity of a


99 Id. at 36.


101 General Aviation Security: Increased Federal Oversight, supra note 6, at 36-37.

102 Id. at 30, 36-37.

103 Errant pilots can now be fined anywhere from $10,000 to $100,000 for violating the fifteen-mile radius flight restricted zone around Washington D.C. Capitol Airspace Enforcement Act, H.R. 3465, 109th Cong. (1st Sess. 2005).

104 General Aviation Security: Increased Federal Oversight, supra note 6, at 37.

105 Securing General Aviation, supra note 3, at 39.
TFR.\textsuperscript{106} To be fair, the FAA claims that it occasionally reviews the continuing need for the existing flight restrictions that are in place for indefinite periods of time, such as those established for the Department of Defense and those surrounding the national capital region.\textsuperscript{107} However, creating written TFR reviewing procedures would help the FAA to work more openly with GA industry members in striking a balance between national security and air commerce concerns.

C. Joint Efforts by Public and Private Entities

Since 9-11, the TSA has focused its efforts on strengthening commercial aviation security and satisfying associated congressional mandates, unfortunately resulting in fewer resources available to improve GA security.\textsuperscript{108} Still, with assistance from private industry groups, the TSA has developed and published different forms of security guidance. Important to remember, however, is that TSA does not currently regulate GA airport security, the airport operator implements these guidelines at its sole discretion.\textsuperscript{109}

First, the General Aviation Airport Security Working Group\textsuperscript{110} ("Working Group") and the Aviation Security Advisory Committee\textsuperscript{111} ("ASAC") met together throughout the summer of 2003, reviewing possible GA airport security recommendations and evaluating each recommendation for effectiveness and appropriateness.\textsuperscript{112} The resulting report delivered to the TSA outlined their suggested security guidelines, which the TSA published in late 2003.\textsuperscript{113}

\begin{itemize}
  \item \textsuperscript{106} General Aviation Security: Increased Federal Oversight, supra note 6, at 39.
  \item \textsuperscript{107} Id. at 24.
  \item \textsuperscript{108} Id.
  \item \textsuperscript{109} Id. at 17.
  \item \textsuperscript{110} The Working Group has members from GA industry groups like AOPA, GAMA, and the Experimental Aircraft Association, to name a few. Id. at 42 n. 50.
  \item \textsuperscript{111} The ASAC is made up of a wide range of interested parties, including law enforcement and security experts, government agencies, airport operators, and victims of terrorist acts against aviation. General Aviation Security: Hearing Before the S. Comm. on Commerce, Science, and Transportation, 109th Cong. (2005) (statement of Andrew V. Cebula, Senior Vice President, AOPA) [hereinafter Hearing S. Comm.].
  \item \textsuperscript{112} General Aviation Security: Increased Federal Oversight, supra note 6, at 45.
\end{itemize}
Several months later the TSA published “Security Guidelines for General Aviation Airports”114 (“Security Guidelines”), again with the help of industry associations. The Security Guidelines include an airport characteristic tool to help GA airport operators assess their airport’s security weaknesses and implement the most appropriate security improvements.115 It also identifies several factors that could make an airport more or less vulnerable to terrorist exploit.116 By all accounts, industry groups, individual GA airports, and even state governments have been using the Security Guidelines to assess risk, develop security plans, and implement other programs.

Perhaps the two most touted joint-effort security programs are the Airport Watch Program and the TSA Access Certificate Program. The AOPA, in conjunction with the TSA, launched the Airport Watch Program in December 2002 with the goal of improving GA airport community awareness.117 Supported by a TSA-sponsored toll free hotline, the program provides warning signs, informational literature, and training videotapes to GA airports.118 The hotline began receiving calls in May 2004 regarding a variety of airports’ concerns of suspicious activities.119 Most recently, the 2006 DHS Act provides $275,000 to support the watch program.120 The TSA Access Certificate Program allows TSA-approved airport operators to operate internationally without the need of a waiver each time they enter the country.121 To get the TSA’s approval to participate in the certificate program, the airports must implement a set of security protocols developed by the National Business Aviation Association.122 Currently this program is still being tested and is therefore ap-

115 GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 17.
116 Security Guidelines, supra note 114, at 5-6. These factors include airport location, number of based aircraft, length of runways, and the number and type of operations. Id.
117 Securing General Aviation, supra note 3, at 22.
118 Id.
119 General Aviation Security: Increased Federal Oversight, supra note 6, at 5, 43.
120 Securing General Aviation, supra note 3, at 22.
121 Id. at 33.
122 Id.
plied only at three airports in the Northeast. But the TSA is evaluating its possible use as a national security standard for corporate and business operators. In recent months, the House Committee on Appropriations encouraged the TSA to continue and expand the certificate program during 2006.

D. Action by Non-Federal General Aviation Stakeholders

Perhaps the most extensive efforts toward securing GA have been made by the varying industry groups, individual state governments, and the GA airports themselves. Almost every GA industry association has developed best practices and security recommendations for its members. For example, even the National Agricultural Aircraft Association created a program to educate its members on security issues.

Many United States states have joined the effort to secure GA and have come up with a myriad of initiatives. Some states, such as New Jersey, implemented new requirements for security that now require all aircraft stored at GA airports to be secured with at least two locks. Other states provide direct funding for enhanced security at GA airports. For example, Tennessee distributed more than $1 million in federal grants to help fund its GA airports' installation of better security lighting, fencing, and gates. California is now providing the entire local match to a GA airport that receives an Airport Improvement Program ("AIP") grant for security projects. Lastly, some states, like Virginia, distribute security audit checklists and manuals to their GA airports to help them assess vulnerabilities and adapt security plans to their facilities.

Many individual GA airports across the country, often at their own initiative and cost, employ additional security measures and procedures. Examples include the addition of perimeter fenc-
ing, lighting, monitoring systems with live feed to local law enforcement, warning signs, and additional security guards.\textsuperscript{135}

While GA security regulation is mostly voluntary in nature and often plagued by loopholes, one could still conclude that GA is as secure as it needs to be. However, the next Part will address the magnitude of the potential threat confronting GA, first by examining and rejecting arguments that GA is not at risk and then explaining why GA is at risk.

III. ASSESSING THE THREAT TO THE SECURITY OF GENERAL AVIATION

Concerns linger about the potential for terrorist exploit of GA. Every policymaker and industry group seems to have a different opinion about exactly how risky GA truly is. This is due to the extreme diversity of GA aircraft, airports, and operations, as well as the conflicting interests espoused by involved parties. The GA industry members, concerned about revenues and public image, are quick to champion the security initiatives in place while insisting that GA is not attractive to terrorists.\textsuperscript{134} This can be a tough sell when the media continues to splash across the front page any small plane theft,\textsuperscript{135} high-profile airspace restriction violation,\textsuperscript{136} or congressional report alleging the vulnerabilities of GA. For example, a GAO report explicitly stated that since 9-11, the TSA has taken little action to enhance GA security, leaving GA far more exposed and vulnerable than commercial aviation.\textsuperscript{137} This Part will attempt to define and analyze the GA threat because "[b]efore security standards can be developed, there must be a clear picture of the problem."\textsuperscript{138}

\textsuperscript{135} \textit{General Aviation Security: Increased Federal Oversight}, supra note 6, at 42.


\textsuperscript{136} NBC4.com, \textit{supra} note 2.

\textsuperscript{137} \textit{Aviation Security: Efforts}, \textit{supra} note 8, at 24.

A substantial body of commentary claims GA is not at risk for use by terrorists for a variety of reasons. First, GA aircraft have never been used in a known terrorist attack anywhere in the world. Agencies sometimes seem to concur, such as when former TSA administrator Admiral James Loy told the House Aviation Sub-Committee in October 2003 that the highly emotional period right after the 9-11 attacks led to security officials overstating the threat posed by GA. Then, another former TSA administrator stated in March 2004 that the agency was “not aware of any specific information regarding terrorist plans to use general aviation or charter aircraft to strike targets in the Washington metropolitan region.” Furthermore, and as noted above, the majority of GA aircraft flown are small, single-engine planes. The most popular GA aircraft, the Cessna 172, weighs only about 2,400 pounds, less than a Honda Civic, and can carry only about fifty-six gallons of fuel. In contrast, a typical Boeing 767 weighs 400,000 pounds and carries 25,000 gallons of fuel. Many believe that the low weight, fuel, and load-carrying capacity of most GA aircraft would not allow them to inflict significant damage. For these reasons, industry and TSA officials have clearly opined that the small size and lack of destructive power of most GA aircraft make them unappealing to terrorists. Even obtaining a GA aircraft seems relatively difficult, as data shows that historically only about a dozen GA aircraft are stolen per year. The International Civil Aviation Organization pointed out that for GA to be a threat, an aircraft must be fueled up and ready to fly, the target must be reasonably close, the reasons for using the aircraft must be specific, and

139 AOPA, General Aviation and Homeland Security, supra note 134.
141 Hearing, supra note 15, at 112 (statement of David M. Stone, Acting Administrator, TSA).
142 In the United States alone there are over 25,000 registered Cessna 172s. Hearing S. Comm., supra note 111.
143 Id.; AOPA, General Aviation and Homeland Security, supra note 134.
144 AOPA, General Aviation and Homeland Security, supra note 134.
146 GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 15-16.
147 AOPA, General Aviation and Homeland Security, supra note 134.
the person must be able to operate it under the circumstances.\textsuperscript{148} Therefore many variables must be in place before GA could ever be used as a weapon. In addition, a large number of GA aircraft are located at rural GA airports, miles from any large city or potential target.\textsuperscript{149} Lastly, the inherent nature of most GA operations is less risky.\textsuperscript{150} Unlike the scheduled commercial aviation flights, business aviation passengers are on board only by the invitation of others, who know the passengers and why they are on board.\textsuperscript{151} And, the typical GA airport is often characterized as a “small neighborhood,” where people at the airport know each other, and suspicious activity is quickly noticed.\textsuperscript{152}

\section*{B. Why General Aviation Is At Risk For Terrorist Exploit}

Counterarguments abound to the points raised above. First, as referenced previously, the GA fleet includes a growing population of turbojets. Therefore, the arguments by industry officials that GA aircraft can do little harm apply only to the smaller aircraft that, admittedly, make up most of the GA fleet. But, in assessing GA vulnerabilities, one cannot overlook that larger planes are kept in the unregulated and often loosely secured GA airports across our nation. These larger jets have significantly larger payload and fuel capacities that directly affect the degree of physical damage they could cause to intended targets.\textsuperscript{153} As the Congressional Research Service noted in one of its reports, “Due to the size and speed of some of these aircraft, particularly mid-sized and large business jets, they could inflict significant damage on buildings and critical infrastructure if used in a suicide attack.”\textsuperscript{154}

But the industry’s position that most GA aircraft could never carry enough explosives to do any real damage assumes that ter-

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{149} For example, Harry Stern Airport, the facility mentioned in Part I, above, is located fifty-seven miles south of the nearest big city, Fargo, North Dakota. The closest symbolic target would probably be Mount Rushmore, over 500 miles away, in the Black Hills of South Dakota.
\item \textsuperscript{150} \textit{Hearing}, supra note 15, at 15 (testimony of Shelley A. Longmuir, President and Chief Executive Officer, National Business Aviation Association).
\item \textsuperscript{151} \textit{Id}.
\item \textsuperscript{152} AOPA, \textit{General Aviation and Homeland Security}, supra note 134.
\item \textsuperscript{153} \textit{Securing General Aviation}, supra note 3, at 16.
\item \textsuperscript{154} \textit{Id}.
\end{itemize}
\end{footnotesize}
rorists will use conventional explosives. Smaller aircraft can pose a considerable threat if used as a platform for chemical or biological attacks. Indeed, the slow speed and low altitude of most GA aircraft flights may actually be an advantage for this kind of attack, as compared to larger, faster aircraft. Also, while operators of business jets may often know all of the on-board passengers, operators of charter jets and services, an integral part of the GA sector, will rarely know their on-board passengers.

Despite the arguments raised above that GA is not at risk for terrorist exploit, there is still a loud voice in the aviation industry that continues to warn of the vulnerabilities of GA. This ever-increasing group believes that the main threat comes from terrorists using GA aircraft to attack vital areas or infrastructure. There is also the concern that terrorists could exploit GA to learn information about or to access the U.S. airspace system. Most of the data in this area stress two particular GA industry weaknesses: accessing and flying GA aircraft, and the vulnerabilities caused by the emphasis placed on securing commercial aviation. Each limitation will be addressed in the following two subsections.

1. Accessing and Flying General Aviation Aircraft

There is no doubt that the majority of GA aircraft are readily available, are relatively inexpensive, and require less skill and training to pilot than larger aircraft. In fact, the former Acting Administrator of the TSA alluded to GA vulnerabilities in testimony that referenced the ease with which GA aircraft can be bought, accessed, and piloted. These unfortunate facts have also been illustrated in a string of thefts and crashes of small aircraft that expose both the industry's and the govern-

155 Id. at 14.
156 Id.
157 Id. at 8.
158 Id.
159 Hearing, supra note 15, at 113 (statement of David M. Stone, Acting Administrator, TSA).
160 Id. at 24 (testimony of David M. Stone, Acting Administrator, TSA).
161 In January 2002, a Florida teenage flight student crashed a Cessna airplane into a Tampa skyscraper. AVIATION SECURITY: PROGRESS, supra note 1, at 14. Then, in May 2005, a small plane violated restricted airspace over Washington, D.C. and flew within three miles of the White House. NBC4.com, supra note 2. Concerns spread again in October 2005 when a private jet was stolen from a Florida airport. SECURING GENERAL AVIATION, supra note 3, at 11.
ment's inability to secure GA aircraft. While the actual number of GA aircraft stolen each year is low, another tragedy only takes one plane, one opportunity, and one security slip-up.

Known terrorist groups seem to understand the ease with which one can attain a small aircraft. Historical intelligence indicates that terrorists have expressed interest in using GA aircraft to conduct attacks. For example, the Central Intelligence Agency ("CIA") reported that the 9-11 hijackers considered using crop dusters, a type of GA aircraft, to spread biological or chemical agents such as anthrax. Additionally, the CIA found that one of the 9-11 masterminds originally wanted to use small aircraft filled with explosives to accomplish their plan. Moreover, in May 2003, the DHS issued a security advisory that al-Qaeda had been planning to crash a small GA-type aircraft loaded with explosives into the United States Consulate in Pakistan. Finally, an FBI/DHS report dated February 25, 2005 stated that al-Qaeda has considered using helicopters instead of recruiting operatives for fixed-wing aircraft operations because of the helicopters' agility and ability to fly at low altitudes without attracting much attention.

Moreover, some of the 9-11 hijackers learned to fly at local flight schools around the nation. This fact puts a great deal of added pressure on GA airports because they are the main source for instructional flying. For example, Richard Lloyd Jones Airport, referenced above in Part I, includes six flight schools alone.

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162 GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 16.
163 Id.
164 Id.
165 The confidential report was distributed to counterterrorism and aviation officials and first reported in the New York Times. Lichtblau, supra note 7.
166 Id.
167 Nearly 70% of the nation's commercial aviation pilots start their career and training in GA. Hearing, supra note 15, at 46 (statement of Edward M. Bolen, President, GAMA).
2. The Effects of Stringent Commercial Aviation Security

Terrorists have demonstrated their ability to adopt new and creative methods of attack.\textsuperscript{169} Indeed, the 9-11 Commission specifically found that one of the contributing factors to the 9-11 attacks was the failure of imagination among industry officials.\textsuperscript{170} These allegations could explain why the Secretary of Homeland Security acknowledged that the Department, along with the CIA, FBI, and other agencies, have no knowledge about the time, place, and methods of possible terrorist attacks related to GA.\textsuperscript{171} Just this past year, the FBI and other security experts warned that as commercial aviation security improves, terrorists may find smaller planes a more appealing mode of attack.\textsuperscript{172} The February 2005 FBI/DHS report also raised this concern, stating that "[a]s security measures improve at large commercial airports, terrorists may choose to rent or steal general aviation aircraft housed at small airports with little or no security."\textsuperscript{173} While terrorists could switch to a new method of attack not involving airplanes, there is evidence that known terrorist groups seem to have a "fixation" on using aircraft to attack United States interests.\textsuperscript{174} Federal agencies have noted that "[t]he public fear resulting from a[n] . . . aircraft bombing also serves as a powerful motivator for groups seeking to further their causes."\textsuperscript{175} The fear is that as commercial aircraft become less accessible, terrorists will revise their attack schemes to utilize the more accessible GA aircraft.

No one can know if, when, and how terrorists will strike again. But, the information available suggests that GA aircraft, loosely housed at GA airports, should be strongly considered as potential weapons. As commercial aviation security increases each year and no formal steps are taken to protect GA, the accessibility gap only widens between the two, resulting in GA becoming a better option to those who wish to harm the country. As detailed in the next Part, the proposed GA security bills currently

\textsuperscript{169} Hearing, supra note 15, at 113 (statement of David M. Stone, Acting Administrator, TSA).


\textsuperscript{171} GENERAL AVIATION SECURITY: INCREASED FEDERAL OVERSIGHT, supra note 6, at 15.

\textsuperscript{172} Safer Skies? Not This Way, supra note 72.

\textsuperscript{173} Lichtblau, supra note 7.

\textsuperscript{174}_SECURING GENERAL AVIATION, supra note 3, at 12.

\textsuperscript{175} Lichtblau, supra note 7.
before Congress will unfortunately do little to create a feasible or effective security framework.

IV. THE FUTURE OF GENERAL AVIATION SECURITY REGULATION

A plethora of options are available to increase GA security. But, many alternatives are not economically sound, realistic, or even necessary, especially at smaller GA airports located far from major urban areas. Other security options, such as increasing airspace restrictions, will most likely inflame the GA industry groups due to their negative impact on air commerce. Therefore, every security plan must be analyzed in a risk management framework that assesses the threat and vulnerability of all of the different segments of the GA industry. This framework must also consider the costs of any regulation, including both the direct costs of implementation and oversight and the indirect costs associated with the interference with air commerce and freedom of movement. This kind of system should result in an effective and balanced security structure that can generally appease all affected parties. Lastly, when evaluating and comparing security initiatives, one must note that even the best laid plans cannot stop all terrorist attacks. But, security initiatives can be put in place to deter would-be terrorists. This Part analyzes different security initiatives either in progress or proposed and suggests more comprehensive alternatives.

A. The Transportation Security Administration's Plan

At the individual airport level, the TSA is developing a Transportation Risk Assessment and Vulnerability Evaluation Tool to address the needs of high-risk GA airports. This tool, it is thought, will help indicate which GA airports are nationally critical, allowing the TSA to conduct on-site inspections at those facilities. While the TSA has never examined the systematic threat potential of GA as a whole, the TSA is working on a

176 Securing General Aviation, supra note 3, at 17.
177 General Aviation Security: Increased Federal Oversight, supra note 6, at 18.
178 Id.
179 Id. at 3-4. This will soon be changing, though, as conference report language in the 2006 DHS Appropriations Act requires the DHS, in coordination with the DOT, to study the "vulnerability posed to high-risk areas and facilities from general aviation aircraft that could be stolen or used as a weapon against those areas." H.R. Rep. No. 109-241, at 34 (2005) (Conf. Rep.). The analyses
Vulnerability Identification Self-Assessment Tool ("VISAT") to assist GA airport operators in creating a comprehensive security baseline for their facilities. The TSA intends to use this baseline data submitted by the airports to conduct a systematic analysis of vulnerabilities at GA airports nationwide. Finally, the TSA will establish minimum security standards, check the adequacy of security regulations already in place, and in general help everyone better utilize limited resources.

While this strategy appeals to common-sense logic and seems cost-effective, the plan has an inherent weakness. The usefulness of the compiled data only directly relates to the quantity and quality of data that the GA airports actually submit. This could be a significant problem because GA airports are not required to use any of the TSA-created tools. Additionally, the GAO has criticized the TSA's plan for not including any specific milestones for executing these tools. Without these targets, the TSA cannot keep track of the plan's progress, hold anyone accountable for non-compliance, or start looking for other ways to gather the necessary data to rid the security baseline of vulnerabilities. Also, estimates of the resources needed to successfully implement the agency's approach do not exist, resulting in an inability to allocate resources to the areas of greatest need. While the TSA is resolving issues related to its in-progress plan, a few proposed bills have surfaced that purport to further GA security.

B. General Aviation Security Act of 2005

The proposed General Aviation Security Act of 2005, introduced in July 2005 by Representative Sweeney, does not provide an appropriate security framework and imposes prohibitive costs on all GA airports without regard to their particular risk potential. This bill requires all GA airports, including private-use air-

\[\text{should identify vulnerabilities at GA airports, the adequacy of existing security measures, and any necessary additional security measures. Id.}\]

\[\text{Id. at 18.}\]

\[\text{Id.}\]

\[\text{Id. at 4, 18.}\]

\[\text{Id.}\]

ports, to be fenced, all aircraft to be double-locked with an internal and external lock, and all hangars to be locked when not in use.\footnote{188} Furthermore, all GA airports will have to register with the DHS and submit to local law-enforcement agencies and the DHS a written security plan to be updated every three years.\footnote{189} Additionally, at public-use GA airports, a written log of every transient aircraft for the past five years must be maintained, access to aircraft keys must be restricted, and those renting aircraft must present a government-issued ID in addition to a pilot license.\footnote{190} Airports must also post airport security warning signs and advisories, create an emergency locator map and provide copies to emergency response agencies and local law enforcement, and familiarize local law enforcement with the airport and consult with them in the airport’s development of security procedures.\footnote{191} Lastly, GA pilots will be required to verify the identity of all passengers on board.\footnote{192} The bill has been referred to the Homeland Security Committee, and no hearings have been held.

This proposed bill is the exact sort of “one size fits all approach . . . [that] is not only unworkable but unwise.”\footnote{193} The bill is not even remotely risk-based and makes no effort to assess actual threats and vulnerabilities to GA and address them. Rather, the bill “would be ridiculously expensive, is unnecessary, and ignores the guiding principle of making investments in security based on risk.”\footnote{194}

Specifically, the most expensive and unnecessary part of the bill is the mandatory fencing of all GA airports. The TSA has cautioned that physical barriers like fencing will not prevent determined trespassers from gaining access.\footnote{195} In fact, the TSA noted that excessive spending on fencing could be detrimental to...
overall by taking needed resources and opportunities away from improving other security aspects.\textsuperscript{196}

Additionally, the requirement of keeping a log of all transient aircraft over the past five years is practically unworkable at a tremendous number of small, rural GA airports. Many of these facilities, such as Harry Stern Airport, described in Part I above, are unattended, with few transient operations per day. To require these airports to keep a log of transient activities would almost certainly require a constant attendant at enormous cost. Furthermore, many airports such as Harry Stern Airport are located in rural areas, far from urban cities where dense populations, critical infrastructure, and symbolic buildings attract potential terrorists. Therefore, the concern about transient aircraft is misplaced and unnecessary at a large number of GA airports.

C. STRENGTHEN AVIATION SECURITY ACT

Another bill was recently proposed that affects GA security. The Strengthen Aviation Security Act,\textsuperscript{197} introduced by Representative Markey in May 2005, would require airport operators to develop specific vulnerability assessments for every GA airport and develop a plan for addressing the identified weaknesses within one year.\textsuperscript{198} Also, background checks and terrorist database screening would be required for anyone with access to GA aircraft.\textsuperscript{199} The intent seems to be for the screening to apply to airport workers and pilots.\textsuperscript{200} Additionally, the bill mandates all GA aircraft to be secured by visible immobilizing devices, such as prop locks.\textsuperscript{201}

Similar to the General Aviation Security Act, this bill does not address the diversity of GA airports and aircraft in prescribing these broad-based and inconvenient security measures. In particular, the requirements for vetting and background checks on any GA airport worker or pilot are costly and an unnecessary intrusion into people’s privacy.\textsuperscript{202} Plus, at small, rural GA airports where pilots, ramp workers, and others that frequent the

\textsuperscript{196} Id.
\textsuperscript{198} Id. § 10(b)(1)-(2).
\textsuperscript{199} Id. § 10(c)(2).
\textsuperscript{200} SECURING GENERAL AVIATION, supra note 3, at 41.
\textsuperscript{201} H.R. 2649 § 10(c)(1).
\textsuperscript{202} SECURING GENERAL AVIATION, supra note 3, at 28.
airport are all known to each other, the requirement becomes cost-prohibitive and excessive.  

D. OTHER OPTIONS?

GA needs cost-effective security programs that deal with the particular degree and type of risk at specific GA airports. In addition, any security requirements put into place must have the cooperation and concurrence of GA industry groups in order to effectively implement and communicate the program to the thousands of GA airport owners, pilots, and other affected parties. None of the proposed bills or future programs described have managed to incorporate the diversity of the GA industry, while keeping the focus on cost-effectiveness and risk-based assessments. Therefore, this subpart will first explain a better general approach for GA security programs and then describe potential new security measures.

1. A Better Approach to General Aviation Security Programs

Overall, security mandates must be designed either for specific GA airports or specific categories of GA airports. The critical first step in designing these security plans is to identify risks for different GA airports. The most cost-effective solution is to use the TSA’s VISAT, referenced above, that is still under production. The GA VISAT is “designed to be a self-guided, computer-based assessment tool designed to assess risk and mitigation at GA airports.”  

While it has been criticized by some for its lack of differentiation between GA and the air carrier environment,  

a comprehensive, standardized tool like the VISAT is necessary to start the process. But to effectively gather security data from the individual GA airports, there must be a preliminary mandate requiring all GA airports to utilize the VISAT and submit their assessments. If some feel uneasy about this preliminary requirement, options exist to tie in state or federal funding with the submission of VISAT data. Somehow, GA airports must understand that completing and sending their VISAT results is imperative.

Because developing plans for categories of GA airports will probably be more cost-efficient than developing a plan for every

205 Id. at 28-29.
204 Id. at 20.
individual GA airport, a system must be formulated to categorize GA airports based on their risk level. A similar program has been implemented for commercial airports, but the characteristics of GA airports are so much more diverse than those of commercial airports that a successful categorization system must consider a wide array of possible risk factors, many of which are site-specific.\textsuperscript{206}

Once these categories of GA airports have been identified, different security programs can be designed with varying security requirements. Various combinations of security measures can include assorted methods of surveying and monitoring GA airports, ensuring access controls, and implementing physical security measures to protect GA aircraft.\textsuperscript{207} For example, GA airports placed into a high-risk category may be required to have all their employees with access to aircraft operations areas wear identification badges, install keypad locks to control access to aircraft, hire full time security monitoring, or use hangars to store aircraft.\textsuperscript{208} For those GA airports that have been designated as low-risk, less expensive and less stringent requirements can be instituted, such as ensuring the use of cabin or ignition locks or immobilizing devices to secure the aircraft. Locking aircraft may seem like a common-sense measure that is probably already being done, but the October 2005 theft of a business jet indicates otherwise: the jet, which does not need a key to start, was left unlocked.\textsuperscript{209} The CRS agrees, stating that “[p]ropeller locks and throttle locks may provide relative low cost, relatively effective deterrents to unauthorized use and theft of aircraft.”\textsuperscript{210} Also, less risky GA airports can be required to install remotely monitored security systems instead of full time on-site security.\textsuperscript{211}

Any monitoring, access controls, or physical security measures must be implemented with a diverse set of legitimate airfield uses in mind.\textsuperscript{212} For example, many GA airports have a large percentage of their operations made up of transient air traffic. Therefore, any access control measures put into place must still

\textsuperscript{206} Secure General Aviation, supra note 3, at 19.

\textsuperscript{207} Id. at 20.

\textsuperscript{208} Using a hangar is one of the most effective ways to secure aircraft. Security Guidelines, supra note 114, at 11.

\textsuperscript{209} Secure General Aviation, supra note 3, at 31.

\textsuperscript{210} Id.

\textsuperscript{211} Id. at 21.

\textsuperscript{212} Id. at 25.
adequately accommodate transient users. Possibilities include giving transient users the code to keypad locks, while changing the code often enough to prevent unauthorized access.\textsuperscript{214}

Even after the designing and implementing of all these categories and programs, the concern remains that GA airport operators could have difficulty in independently financing any newly required security enhancements.\textsuperscript{214} For example, while the TSA and industry officials agree that hangars are the safest way to protect GA aircraft, they are also the most expensive access-control measure. Federal funding might also be a challenge because GA airports' needs must compete with the needs of commercial airports for security funding.\textsuperscript{215} Currently, about 3,000 GA airports are eligible to receive FAA AIP grants, which can be used for security purposes if federal regulation requires the improvements or equipment, or, according to the FAA, if the TSA determines an airport-specific need for security enhancements.\textsuperscript{216} This program is inherently limited, though, because the airport must be part of the NPIAS to be eligible for the AIP grants.\textsuperscript{217} Additionally, according to the GAO, GA airports received $561 million in AIP grants in 2002, of which only about 0.6% was awarded for security projects.\textsuperscript{218}

There is still hope, however, as language in the Century of Aviation Reauthorization Act provides greater flexibility in allocating federal AIP grants for hangar construction at GA airports.\textsuperscript{219} The Act also assures long term lease agreements between airport operators and aircraft owners who build hangars with their own resources.\textsuperscript{220} Other options are also worth exploring to find more federal funding for GA airports. For example, the GAO suggests looking to the State Homeland Security Grant Program, the Urban Areas Security Initiative, and the Aviation Security Capital Fund.\textsuperscript{221}

\textsuperscript{213} Id.
\textsuperscript{214} \textit{General Aviation Security: Increased Federal Oversight, supra note 6,} at 39.
\textsuperscript{215} Id.
\textsuperscript{216} Id.
\textsuperscript{217} See supra note 31 and accompanying text.
\textsuperscript{218} \textit{General Aviation Security: Increased Federal Oversight, supra note 6,} at 39-40.
\textsuperscript{220} Id. at § 165.
\textsuperscript{221} \textit{General Aviation Security: Increased Federal Oversight, supra note 6,} at 40.
2. Possible Additions to General Aviation Security Plans

Two specific security measures not addressed in any legislation are Behavior Pattern Recognition ("BPR") techniques and threat information dissemination. BPR techniques could provide an economical and effective boost to GA airport security and programs already in place. Enhancing the threat communication process is imperative to any industry, but particularly for GA, where the best defense can be at the ground level using the eyes and ears of GA airport operators.

First, BPR techniques, used at many airports around the world, help individuals notice and examine deviations from normal behavioral patterns. Those trained in the techniques analyze passengers for suspicious behaviors, such as "wearing heavy clothing on a hot day or loitering in a terminal with no luggage." Basically, the BPR training gives individuals objective ways of analyzing behavior and discerning what is suspicious. Rafi Ron, the former security director at Ben-Gurion Airport in Israel, developed the BPR plan used at Logan International Airport in Boston, Massachusetts, and has described the technique as "a methodology for identifying suspicious people that you want to pay more attention to." One of the main advantages of using BPR techniques when dealing with terrorism is how the training can "push the detection ring to the outer perimeter of a protected target." For example, when Mr. Ron trained Statue of Liberty employees in BPR techniques, he provided two levels of preparation. He organized an awareness program that trained all employees in observational skills but also provided law enforcement-level training (involving more complex techniques) for the police officers assigned to the facility. The BPR techniques are not without their critics, however. The Massachusetts chapter of the American Civil Liberties Union ("ACLU") has filed a lawsuit against BPR techniques in use at

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222 SECURING GENERAL AVIATION, supra note 3, at 24.
225 Id.
226 Id.
227 Id.
228 For example, the police officers were taught interviewing techniques like "targeted conversation." Id.
Logan International Airport, claiming that they encourage ethnic and racial profiling. But some have suggested that implementing BPR techniques would actually result in less racial profiling because it would increase the number of trained observers reporting truly suspicious behavior rather than unintentionally relying on racial or ethnic stereotyping.

Despite the alleged constitutional problems, the TSA recently created its own BPR program known as “Screening Passengers by Observational Techniques,” or SPOT. The TSA introduced the program in Boston in 2002 and expanded it to Maine in 2004. The agency will not divulge the current number of airports participating in the SPOT program but have indicated that some airports across the country use SPOT full time, while many others have used it on a trial basis. The TSA will decide whether to put SPOT into practice at all airports by the end of 2006.

Whether the TSA has considered SPOT for GA airports is unclear, but legislation providing specific training in BPR techniques to the GA airport employees who often associate with pilots, crew, and passengers could maximize threat detection efforts. More intense BPR training that goes beyond observational skills, such as that provided to law enforcement at the Statue of Liberty, could be implemented at high-risk GA airports. In addition to enhancing overall threat detection, BPR techniques could also improve intelligence tracking at the law-enforcement level to help identify patterns indicating possible terrorist activity. Overall, it would be a relatively low-cost approach to improving GA airport security by involving more GA employees in the threat-detection process.


\[232\] Id.

\[233\] Id.

\[234\] Id.

\[235\] It has been suggested that local law-enforcement agencies or even criminal-justice programs at nearby community colleges could provide the BPR training. Olislagers, supra note 205, at 61.

\[236\] Securing General Aviation, supra note 3, at 24.

\[237\] See id. at 17.
In addition, the distribution of accurate, timely information about potential threats to GA must be an integral part of any security program. Although the TSA currently works through the GA industry associations to communicate threat information, the GAO found that the dissemination of this type of critical information is poor.\textsuperscript{238} The TSA sporadically issues security advisories that are typically general in nature.\textsuperscript{239} For risk communication to be effective, it must convey the nature of the threat, when and where it is likely to occur, over what time period it is likely to occur, and guidance on actions to be taken.\textsuperscript{240} According to these risk communication principles, if the public does not have ample threat information, they might ignore the threat or act inappropriately, possibly even compromising the public safety.\textsuperscript{241}

The GAO also reported that the TSA’s lack of good risk communication could be the result of the TSA having to receive threat information, often classified, from other federal agencies.\textsuperscript{242} The TSA claims that accumulating specific threat intelligence is difficult because the threat posed by a terrorist group changes as the terrorist group itself changes.\textsuperscript{243} Different hierarchical structures, objectives, and capabilities within any given terrorist group will vary the extent of the potential threat.\textsuperscript{244} Targets can also change when the security of the target varies.\textsuperscript{245} Although the TSA has managed to communicate classified threat information to some GA industry groups, the agency is still not able to fully ensure that the GA airport operators with “need to know” status have the clearance to receive classified threat information.\textsuperscript{246} Furthermore, because GA operators are flung among a diverse spectrum of airports that have never been subject to much federal regulation, the contact information for the owners or operators of airports may not be current or easily accessible. In fact, neither the FAA nor the TSA keep any updated database of GA airport operators.\textsuperscript{247}

\textsuperscript{238} \textit{General Aviation Security: Increased Federal Oversight}, supra note 6, at 19.
\textsuperscript{239} \textit{Id.} at 4, 19.
\textsuperscript{240} \textit{Id.} at 15.
\textsuperscript{241} \textit{Id.} at 22.
\textsuperscript{242} \textit{Id.}
\textsuperscript{243} \textit{Id.}
\textsuperscript{244} \textit{Id.}
\textsuperscript{245} \textit{Id.}
\textsuperscript{246} \textit{Id.} at 23.
\textsuperscript{247} \textit{Id.} at 22.
Therefore, any security initiative plan must contain a specific outline of how the TSA is to attain threat information and most effectively deliver it. Building an accurate and up-to-date contact database of GA airport operators and owners is crucial and could also assist the TSA in determining which airport operators can receive classified information. Once the TSA has completed threat assessments using its Transportation Risk Assessment and Vulnerability Evaluation Tool, the Agency will have a better idea of the exact dangers facing GA and consequently will be able to communicate more helpful and specific threat information to GA airport managers.\textsuperscript{248} Moreover, after the security baselines have been submitted by GA airports using the VISAT, the TSA can identify the facilities whose contact information they most need and the airport officials that could get clearance to receive classified information.\textsuperscript{249} Intelligence about possible threats is only helpful if it says what it needs to say and gets to those who most need to hear it.

V. CONCLUSION

The time has come for policymakers to pair with industry officials and remedy the GA security situation, rather than continuing to talk over each other and ignoring each other’s goals and objectives. They must ask and answer difficult questions, such as what specific threats exist, where they are most likely to be acted upon, and how to guard against them without imposing burdensome, ill-fitting requirements onto the shoulders of individual GA airports. They must reach a compromise between requiring all GA airports, regardless of their individual characteristics, to install expensive fencing, and continuing to lackadaisically assume that GA can secure, enforce, and defend itself without any mandated programs. The starting points are requiring the GA airports to assess threat and risk levels, using that data to design various security programs based on levels of potential for terrorist exploit, and engaging the industry groups to help implement and tweak this framework. Security is the responsibility of every American, and cooperation and communication is the key to ensuring the safety of GA for years to come.

\textsuperscript{248} See id. at 23.

\textsuperscript{249} Id.