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Committee on Transportation and  
Infrastructure, House of Representatives

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**FEDERAL AVIATION  
ADMINISTRATION**

**Challenges Facing the  
Agency in Fiscal Year 2009  
and Beyond**

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Highlights of [GAO-08-460T](#), a testimony before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, House of Representatives

## Why GAO Did This Study

Fiscal year 2009 will be a critical year for the Federal Aviation Administration (FAA), with the pending selection of a new Administrator, the beginning of the 5-year term of the new Chief Operating Officer, and the continuing process of transforming the nation's current air traffic control system to the Next Generation Air Transportation System (NextGen)—a complicated effort to modernize the air traffic control system. In addition, FAA is currently operating under a temporary reauthorization. Without legislative action, both the excise taxes that fund the Airport and Airway Trust Fund (Trust Fund) and FAA's authority to spend from the Trust Fund will expire at the end of this month.

This statement is based on recent reports and discussions with selected senior FAA officials and representatives of aviation industry and stakeholder groups. This statement provides GAO's preliminary observations on some key aspects of the President's proposed budget for FAA for fiscal year 2009, and identifies some of the current and future challenges facing FAA and the Congress.

## What GAO Recommends

In prior reports, GAO has made recommendations to address a number of the management challenges presented in this statement. FAA has begun to address GAO's recommendations, although many have not yet been fully implemented.

To view the full product, including the scope and methodology, click on [GAO-08-460T](#). For more information, contact Gerald L. Dillingham, Ph.D., at (202) 512-2834 or [dillingham@gao.gov](mailto:dillingham@gao.gov).

# FEDERAL AVIATION ADMINISTRATION

## Challenges Facing the Agency in Fiscal Year 2009 and Beyond

### What GAO Found

Although the President's budget for FAA proposes major changes in the agency's funding, the current funding mechanisms—the Trust Fund and the General Fund of the U.S. Treasury—can potentially support FAA activities, including NextGen; however, timely reauthorization of the authorities to collect Trust Fund revenues and to spend from the Trust Fund is critical. The expiration of either or both of these authorities could have significant negative effects on FAA's ability to carry out its mission unless other revenue sources and spending authority are provided. FAA also has expressed concern that revenues from the current funding mechanisms depend heavily on factors, such as ticket prices, that are not connected to FAA's workload and costs. We believe that a better alignment of FAA's revenues and costs can address concerns about long-term revenue adequacy, equity, and efficiency as intended, but the ability of the proposed funding mechanisms to link revenues and costs depends critically on the soundness of FAA's cost allocation system in allocating costs to users.

FAA faces a number of challenges in ensuring the continued safe and efficient operation of the current National Airspace System. According to the Department of Transportation (DOT), delays and cancellations during the summer of 2007 exceeded those in the summer of 2006. In the near term, DOT and FAA are exploring various initiatives to relieve the stress on the system. But FAA also must continue to address safety issues, particularly in the area of runway safety. FAA is currently deploying a new radar-based ground surveillance system and has encouraged airport improvements, such as changes to runway layout, markings, signage, and lighting. Nonetheless, we recently recommended that FAA prepare a new national runway safety plan and address air traffic controller overtime and fatigue issues that may affect runway safety. We also have made recommendations concerning FAA's collection and analysis of data, which are key to the agency's implementation of a risk-based, system safety approach. Another challenge facing FAA will be its need to continue hiring and training thousands of air traffic controllers over the next decade to replace those who will retire and leave for other reasons, particularly given that controllers are retiring at a faster rate than FAA anticipated.

FAA also faces a number of management challenges associated with the early implementation of NextGen—an enormously complicated undertaking due to the technological complexities, numerous stakeholders, and broad scope of the effort. As FAA moves closer to undertaking a number of major NextGen system acquisitions, a critical component for keeping such acquisitions on track will be having the right skill set within the agency to successfully manage NextGen programs. Another challenge for FAA is developing a new plan for configuring facilities and airspace that will support NextGen. In addition, FAA continues to face challenges in meeting the research and development requirements of NextGen and in establishing credibility with stakeholders that the agency is fully committed to and capable of implementing NextGen.

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Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to participate in this hearing today to discuss the President's fiscal year 2009 budget proposal for the Federal Aviation Administration (FAA), which resubmits the administration's 2007 proposal to reauthorize FAA and change its financing structure. Fiscal year 2009 will be a critical year for FAA, with the pending selection of a new Administrator, the beginning of the 5-year term of the new Chief Operating Officer for the Air Traffic Organization (ATO), and the continuing process of transforming the nation's current air traffic control system to the Next Generation Air Transportation System (NextGen). My testimony today provides GAO's observations on some key aspects of FAA's proposed budget and identifies some of the current and future challenges facing FAA and Congress.

My statement is based on work that we conducted between January 2008 and February 2008, including our preliminary review of the President's proposed FAA budget for fiscal year 2009, reviews of other key FAA documents, discussions with selected senior FAA officials and representatives of aviation industry groups, updates of the results of prior GAO studies, and preliminary results of our ongoing work. All of our studies were conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. A list of related GAO products is included at the end of this statement.

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## Summary

Although the President's budget for FAA proposes major changes in the agency's funding, the current funding mechanisms—the Airport and Airway Trust Fund (Trust Fund) and the General Fund of the U.S. Treasury (General Fund)—can potentially provide sufficient resources to support FAA activities, including NextGen; however, timely reauthorization is critical. According to recent projections prepared by the Congressional Budget Office (CBO), revenues obtained from the existing funding mechanisms are projected to increase substantially and could support additional spending. However, without legislative action, both the excise taxes that fund the Trust Fund and FAA's authority to spend from the Trust Fund will expire at the end of this month. The expiration of either or both of these authorities could have significant negative effects on FAA's ability to carry out its mission unless other revenue sources and

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spending authority are provided. The President's budget also proposes changes to FAA's funding mechanisms that may be justified by factors other than the need for more revenues. For example, FAA has expressed concern that revenues from the current funding mechanisms depend heavily on factors, such as ticket prices, that are not connected to FAA's workload and costs to maintain, operate, and modernize the nation's air traffic control system. We believe that a better alignment of FAA's costs and revenues can address concerns, as suggested in the administration's reauthorization proposal, about long-term revenue adequacy, equity, and efficiency as intended. However, the ability of the proposed funding mechanisms to link costs and revenues depends critically on the soundness of FAA's cost allocation system in allocating costs to users. We found that the support for some of FAA's cost allocation methodology's underlying assumptions and methods is insufficient, leaving FAA unable to conclusively demonstrate the reasonableness of the resulting cost assignments. Another proposed change to FAA's budget would align the agency's budget accounts with its lines of business. We agree that such a restructuring is consistent with FAA's emphasis on aligning costs and revenues and could allow FAA to more specifically distinguish those funding options that better link costs and revenues; however, some FAA activities, such as safety, may not be clearly divisible into discrete categories. There could be some ambiguity in how safety activities are defined and in how their costs should be allocated between aviation users who benefit directly from a safe air traffic control system and the public that receives general safety benefits. The President's budget also proposes reductions in funding for the Airport Improvement Program (AIP) and changes in AIP allocations among airports. The proposed funding level of \$2.75 billion would reduce AIP grants, especially for smaller airports. Moreover, according to FAA, the agency's authority to extend grants to airports lapsed at the end of calendar year 2007. FAA states that while the Consolidated Appropriations Act, 2008,<sup>1</sup> extended the collection of airline ticket taxes to February 29, 2008, FAA cannot obligate funds for AIP after December 31, 2007. As a result, FAA has not made any grants this year. For airports, uncertainty over whether they will receive their AIP grant this year may delay or increase financing costs for projects intended to increase safety, ease congestion, or modernize their infrastructure or systems.

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<sup>1</sup>Pub. L. 110-161.

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FAA faces a number of challenges in ensuring the continued safe and efficient operation of the current National Airspace System (NAS). According to the Department of Transportation (DOT), delays and cancellations during the summer of 2007 exceeded those in the summer of 2006. In the near term, DOT and FAA are exploring various initiatives to relieve stress on the system. For example, in an effort to reduce congestion and delays at New York area airports, DOT and FAA formed an Aviation Rulemaking Committee which, among other things, identified 77 operational initiatives to identify strategies that could ease congestion and reduce delays in the New York region. FAA must also continue to address safety issues, particularly in the area of runway safety. FAA is currently deploying a new radar-based ground surveillance system and has encouraged airport improvements, such as changes to runway layout, markings, signage, and lighting. Nonetheless, we recently recommended that FAA prepare a new national runway safety plan and address air traffic controller overtime and fatigue issues that may affect runway safety. We have also made recommendations concerning FAA's collection and analysis of data, which are key to the agency's implementation of a risk-based, system safety approach. Another challenge facing FAA will be its need to continue hiring and training thousands of air traffic controllers over the next decade to replace those who will retire and leave for other reasons, particularly since controllers are retiring at a faster rate than FAA anticipated. Other immediate challenges FAA faces include maintaining existing infrastructure so that the current system continues to operate safely and reliably and keeping current system acquisitions on budget and on schedule.

FAA faces a number of management challenges associated with the early implementation of NextGen—an enormously complicated undertaking due to the technological complexities, numerous stakeholders, and broad scope of the effort. As FAA moves closer to undertaking a number of major NextGen system acquisitions, a critical component for keeping such acquisitions on track will be having the right skill set within the agency to successfully manage NextGen programs. NextGen means an increasing number of acquisitions and increasing complexity within those acquisitions. FAA faces a significant challenge in hiring and retaining an adequate acquisition workforce to handle the transition, particularly in attracting managers who understand how to apply a systems approach to managing acquisitions. A second challenge for FAA is developing a new configuration of facilities and airspace that will support NextGen. Until a plan for facilities consolidation or realignment has been developed, the configurations needed for NextGen may not be implemented and potential savings that could help offset the cost of NextGen may not be realized. A

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third challenge that continues to face FAA is the need to meet the research and development requirements of NextGen. Although a 2006 assessment of NextGen research and development requirements led to increased budget requests for research and development funding for FAA, there continue to be challenges in meeting identified research and development needs. For example, if not adequately addressed, the environmental impacts of aviation, particularly the noise that affects local communities and the emissions that contribute to global warming, will constrain efforts to build or expand the runways and airports needed to handle the added capacity envisioned for NextGen. Finally, FAA faces a challenge in establishing credibility with stakeholders that the agency is fully committed to and capable of implementing NextGen. Stakeholders are particularly concerned about the lack of a clearly defined and transparent governance structure in the FAA organizations that share responsibility for implementing NextGen. Stakeholders have expressed a belief that one organization or person should be responsible, and thus accountable, for NextGen.

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## The President's Budget Proposes a Number of Changes in Funding FAA Activities, FAA Accounts, and Airports

The President's budget proposes major changes in FAA's funding and budget accounts. According to FAA, these proposed changes<sup>2</sup> are intended to provide more stable and reliable mechanisms to pay for NextGen. FAA also says that the proposed changes would improve the long-term revenue adequacy, equity, and efficiency of its funding and over time better link revenues with the costs that users of the NAS impose on the system. If implemented, the changes would alter the basis for funding FAA, in part by recovering the costs of services provided by ATO in accordance with the cost assignments in a cost allocation study that FAA issued last year. These changes would redistribute the funding burden among user groups, increasing general aviation's proportion in accordance with the findings of FAA's cost allocation study.

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<sup>2</sup>These funding changes include (1) introducing user charges for commercial aircraft based on the cost of the air traffic control services they receive, (2) eliminating many current taxes, (3) substantially increasing the fuel taxes general aviation operators pay, (4) charging both commercial and general aviation a fuel tax to pay for airport capital improvements, the Essential Air Service program, and air traffic system research and development, (5) modifying FAA's budget accounts to align with FAA's activities or lines of business, and (6) linking the contribution to FAA's budget from the General Fund of the U.S. Treasury to the public benefits that FAA provides. These changes are proposed to begin in fiscal year 2010.

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The Current FAA Funding Mechanisms Can Potentially Provide Sufficient Resources to Support FAA Activities, Including NextGen, but Timely Reauthorization Is Needed

FAA's current funding mechanisms—an appropriation from Trust Fund revenues, which come from various excise taxes, combined with a General Fund appropriation—have been used to fund the agency's activities for many years. Trust Fund revenues fell during the early years of this decade as the demand for air travel fell. However, as the number of passengers has grown, revenues have also grown, starting in fiscal year 2004. FAA estimates that revenues will continue to increase if the current taxes remain in effect at their current rates. While retaining the basic structure for funding FAA, Congress has at times changed the mix of excise taxes and some of the tax rates. For example, when the taxes were reauthorized in 1997, Congress reduced the passenger ticket tax rate from 10 percent to 7.5 percent, but added the passenger segment tax.<sup>3</sup> Congress has also appropriated varying amounts of General Fund revenues for FAA during the past 25 years, ranging from 0 percent to 59 percent of FAA's budget and averaging around 20 percent since fiscal year 1997 (but less than 16 percent for fiscal year 2008).

As FAA embarks on air traffic control (ATC) modernization through NextGen, FAA plans to spend roughly \$5.4 billion over the next 5 years for NextGen, including both capital costs and development costs. But there is considerable uncertainty about how much NextGen will cost in the longer term. FAA estimates that the total federal cost for NextGen infrastructure through 2025 will range from \$15 billion to \$22 billion. Even if the cost should come in at the high end of the estimate, funding NextGen does not require that the current funding mechanisms be changed. According to recent CBO projections, revenues obtained from the existing funding mechanisms will increase substantially. Assuming that the General Fund provides about 16 percent of FAA's budget, CBO estimates that through 2018 the Trust Fund can support about \$20 billion in additional spending over the baseline spending levels CBO has calculated for FAA (the 2008 funding level, growing with inflation) provided that most of that spending occurs after 2010.<sup>4</sup> How far this money will go to fund modernization is

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<sup>3</sup>At that time, Congress also increased the international departure tax from \$6 to \$12 per person, applied this tax to international arrivals, and added the frequent flyer tax and the Hawaii/Alaska passenger taxes.

<sup>4</sup>With a larger General Fund contribution toward FAA's budget, the Trust Fund would be able to support a higher level of additional spending beyond the baseline level. For example, in testimony last year, using a fiscal year 2007 baseline in which General Fund revenues provided about 19 percent of FAA's budget, CBO estimated that the Trust Fund would be able to support about \$22 billion in additional spending over the fiscal year 2007 baseline level, provided most of the spending occurs after 2010.

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subject to a number of uncertainties—including the future cost of NextGen investments, the volume of air traffic, the future costs of operating the NAS, and the levels of future appropriations for the AIP, all of which may influence the funding that would be necessary to support FAA’s activities.<sup>5</sup>

An additional uncertainty results from the status of FAA’s reauthorization. Without legislative action, both the excise taxes that fund the Trust Fund and FAA’s authority to spend from the Trust Fund will expire on February 29, 2008. The expiration of either or both of these authorities could have significant negative effects on FAA’s ability to carry out its mission unless other revenue sources and spending authority are provided. FAA estimates that two previous lapses in taxing authority in 1996 and 1997 resulted in the Trust Fund not receiving about \$5 billion in revenue. If both authorities expire and no additional revenue sources are provided for which FAA would have authority to spend, the only funds available to FAA would be General Fund revenues appropriated for fiscal year 2008 for FAA’s Operations account that have not yet been spent. FAA estimates that it could maintain a scaled-down version of operations through early June using those funds. However, no expenditures could be made for other FAA programs because FAA’s other accounts—AIP; Facilities and Equipment (F&E); and Research, Engineering and Development (RE&D)—can be funded only by Trust Fund revenues. As a result, not only would these programs have to be shut down, but also no funds would be available to pay the salaries of about 4,000 FAA staff who administer these programs, unless legislation is passed allowing them to be paid with General Fund revenues. Extending FAA’s authority to spend from the Trust Fund would allow FAA to use the Trust Fund’s uncommitted balance, and interest earned on that balance, for both operations and other programs. However, because the uncommitted balance is relatively low by historical standards—about \$1.5 billion at the end of fiscal year 2007, down from over \$7 billion at the end of fiscal year 2001—even spending all of the uncommitted balance would have only a limited effect. FAA estimates that if it spends the uncommitted balance, it could maintain scaled-down

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<sup>5</sup>If the desired level of spending exceeded what was likely to be available from the Trust Fund at current tax rates, Congress could make further changes within the current funding structure that would provide FAA with additional revenue. For example, Congress could raise the rates on one or more of the current excise taxes or could provide more General Fund revenues for FAA, although the nation’s fiscal imbalance may make a larger contribution from this source difficult.



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operations and pay staff until August. In this situation, FAA has indicated it would give operations priority and seriously curtail other FAA programs.

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## Funding Changes in the President's Budget Are Intended to Address Concerns about Long-term Revenue Adequacy and the Equity and Efficiency of the Current Funding Mechanisms

Although the current funding mechanisms can continue to support FAA activities, factors other than the need for more revenues may justify a major change in FAA's funding structure.<sup>6</sup> FAA has expressed concern that revenues from the current funding structure depend heavily on factors, such as ticket prices, that are not connected to FAA's workload and costs to maintain, operate, and modernize the system. According to FAA, with the existing funding mechanisms, increases in the agency's workload may not over time be accompanied by revenue increases because users are not directly charged for the costs that they impose on FAA for their use of the NAS. Revenues collected from excise taxes are primarily dependent on the price of tickets and the number of passengers on planes, while workload is driven by flight control and safety activities. This disconnect raises three key concerns about the current funding structure—its long-term revenue adequacy, equity, and efficiency. Moreover, these three concerns are supported by long-term industry trends and FAA forecasts of long-term declines in inflation-adjusted air fares (despite recent increases in fares due to higher fuel prices), the growing use of smaller aircraft, and FAA's 2007 cost allocation study. Many of the changes proposed in the President's budget are intended to address these concerns by linking FAA's revenues more closely with its costs.

We believe that a better alignment of FAA's costs and revenues can address long-term revenue adequacy, equity, and efficiency concerns as intended, but the ability of the proposed funding structure to link revenues and costs depends critically on the soundness of FAA's cost allocation system in allocating costs to users. We have reported that the design of FAA's methodology is generally consistent with the principles and methods set forth in federal cost accounting standards.<sup>7</sup> However, as we also reported, the support for some of the methodology's underlying assumptions and methods is insufficient, leaving open the possibility that the study might assign costs to commercial, general aviation, and exempt

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<sup>6</sup>For a more complete discussion of options for funding FAA, see GAO, *Aviation Finance: Observations on Potential FAA Funding Options*, [GAO-06-973](#) (Washington, D.C.: Sept. 29, 2006).

<sup>7</sup>GAO, *Assigning Air Traffic Control Costs to Users: Elements of FAA's Methodology Are Generally Consistent with Standards but Certain Assumptions and Methods Need Additional Support*, [GAO-08-76](#) (Washington, D.C.: Oct. 19, 2007).

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users differently. Without better support, FAA is not able to conclusively demonstrate the reasonableness of the resulting cost assignments. We recommended several actions to FAA to provide additional support for the reasonableness of its methodology.<sup>8</sup>

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### Proposed Changes to Budget Accounts Would Have Advantages and Disadvantages while Proposed Approach to Determining General Fund Contribution Would Better Link that Amount to Public Benefits

The proposal to align FAA's budget accounts with FAA's lines of business would have advantages and disadvantages. Such a restructuring is consistent with FAA's emphasis on aligning costs and revenues and could allow FAA to more specifically distinguish those funding options that better link costs and revenues. For example, an ATO account dedicated to the operation, maintenance, and upgrade of the NAS could better enable the agency to charge for direct usage of the NAS. In addition, such an account structure could show the costs attributable to each line of business, thereby supporting the agency's internal financial management. However, some FAA activities may not be clearly divisible into discrete categories. For example, FAA proposes a new Safety and Operations account to include safety-related activities. However, there could be some ambiguity in how safety activities are defined and in how their costs should be allocated between aviation users who benefit directly from a safe ATC system and the public that receives general safety benefits.

Linking the General Fund contribution to FAA's budget with the public benefits that FAA provides, as is proposed, would explicitly recognize that users of the system are not the only beneficiaries of the system. Such an approach allows for a "bottom up" calculation of the General Fund contribution that is based on the different public benefits that FAA provides, such as safety and use of the NAS by federal agencies. Under the current approach, the General Fund contribution is based on how much money is anticipated to be left from Trust Fund revenues to fund the Operations account after Trust Fund revenues for that particular year have been allocated to fund the AIP, F&E, and RE&D accounts. An approach that links a General Fund contribution to public benefits is consistent with the principle of public finance that public benefits should come from the General Fund and not from user contributions. This estimate of public benefits should not, however, be viewed as a precise determination. Some aviation activities, such as safety, benefit both users and nonusers. Others, such as a national airport system that includes small airports receiving federal grants, could be seen as a benefit not only to the users of those

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<sup>8</sup>[GAO-08-76](#).

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airports, but also to the broader community or the broader public. Such a change in the method of determining the General Fund contribution could result in an increase or decrease in that contribution, which would then have implications for how aviation activities are funded.

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### Proposed Changes Would Reduce Grant Funding for Airport Development, but Would Allow Airports to Raise Charges

The President's budget proposal would reduce AIP funding and would change AIP allocations among airports. From 2001 through 2005, funding for the nation's 3,400 airports averaged about \$13 billion from all sources (in 2006 dollars), including about \$6.5 billion from bonds (issued by airport authorities and state or local governments), about \$3.6 billion from AIP grants, and (for commercial airports) about \$2.2 billion from passenger facility charges (PFC).<sup>9</sup> This level of funding is about \$1 billion short of airports' planned development costs, which total at least \$14 billion annually (in 2006 dollars) over the next 5 years. Of this \$1 billion annual difference between historic funding and planned development costs, larger airports account for about \$600 million annually, while smaller airports foresee a difference of about \$400 million annually.<sup>10</sup> The budget proposal would reduce AIP grant funding for fiscal year 2009 by \$765 million from current funding levels (about \$3.5 billion in fiscal years 2006, 2007, and 2008), to about \$2.75 billion. In addition, the administration's reauthorization proposal for FAA would allow commercial airports to increase their PFC charge from a maximum of \$4.50 to \$6 if they gave up certain AIP grant funds. According to our calculations, a \$6 PFC would have allowed larger airports to increase their PFC collections by about \$1.1 billion in 2007, while they would forgo about \$247 million in AIP funds under the proposal.<sup>11</sup> Conversely, smaller airports, which collect less in PFCs and are more reliant on AIP for funding, could have increased their PFC collections by about \$171 million in 2007, but would have to forgo about \$436 million in AIP funding under the proposal.

In addition, according to FAA, the agency currently is unable to obligate any AIP funds because its authority to extend grants to airports lapsed at

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<sup>9</sup> Airports also received funding from state and local grants and other sources.

<sup>10</sup> We follow conventions established in GAO's prior reports on airport finance in differentiating between larger airports (67 large- and medium-hub airports) and smaller airports (all other categories of commercial and general aviation airports).

<sup>11</sup> GAO, *Airport Finance: Observations on Planned Airport Development Costs and Funding Levels and the Administration's Proposed Changes in the Airport Improvement Program*, GAO-07-885 (Washington, D.C.: June 29, 2007).

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the end of calendar year 2007. FAA states that while the Consolidated Appropriations Act, 2008, extended the collection of airline ticket taxes to February 29, 2008, it did not address contracting authority for AIP funds. As a result, FAA has not made any grants this year. For airports, uncertainty over whether they will receive their AIP grant this year may delay or increase the financing costs for projects intended to increase safety, ease congestion, or modernize their infrastructure or systems. In addition, according to FAA, 28 airport sponsors expect to receive \$324 million in letter of intent (LOI) disbursements in fiscal year 2008.<sup>12</sup> Several airports have financed capital projects with bonds tied to their LOI disbursements and might need to obtain bridge loans to meet payment dates or could face heavy financial penalties for late payments if AIP grants are not made under the LOI. See appendix I for additional information about the effect of the President's proposed budget and reauthorization proposal on airports.

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## FAA Faces Challenges in Ensuring the Continued Safe and Efficient Operation of the Current National Airspace System

FAA faces significant challenges in keeping the nation's current airspace system running as efficiently as possible given increasing demand for air travel. System congestion, and the resulting flight delays and cancellations, are serious problems that have worsened in recent years. Some of FAA's current safety challenges include addressing runway safety; improving aviation safety data to provide an early warning of hazards that can lead to accidents; and hiring, training, and retaining thousands of air traffic controllers. FAA also faces challenges in maintaining its current facilities and in managing the costs and schedules of current system acquisitions.

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## FAA Faces Challenges in Addressing Increasing System Congestion, Delays, and Flight Cancellations

According to DOT, delays and cancellations during the summer of 2007 exceeded those in the summer of 2006. Delays of more than 15 minutes in on-time arrivals increased at 51 of the 55 airports tracked by DOT. Flight cancellations also rose at the 55 major airports during the first 9 months of 2007, increasing 38 percent over the same period in 2006.

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<sup>12</sup>The LOI program helps fund large-scale capacity projects at primary or reliever airports. LOIs state that FAA intends to obligate AIP discretionary and entitlement funds from future budgetary authority in an amount not greater than the federal government's share of allowable costs for that project. FAA issues an LOI to state that reimbursement will be made according to a given schedule as funds become available from Congress each year over the term of the LOI.

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The causes of increased delays and cancellations in the U.S. aviation system are many, but the system is clearly under stress. For example, of the 30 percent of flights delayed in the summer of 2007, approximately 28 percent were attributed to national aviation system delays, 32 percent were attributed to late aircraft arrivals, and 26 percent were attributed to air carrier delays. In the near term, DOT and FAA are exploring various initiatives to relieve stress on the system.<sup>13</sup> For example, in an effort to reduce congestion and delays at New York area airports, DOT and FAA formed an Aviation Rulemaking Committee that, among other things, identified 77 operational initiatives to identify strategies that could ease congestion and reduce delays. Some of these initiatives are underway and expected to be completed by the summer of 2008. Additionally, in an effort to reduce congestion in the New York region by the summer of 2008, FAA has announced measures to cap hourly operations at John F. Kennedy International Airport in New York. In January 2008, FAA proposed to amend its policy on airport rates and charges to allow airports to vary what airport users are charged based on the time of day, the volume of traffic, and airports' future investment needs.

While these initiatives may help to reduce some congestion before summer 2008, in the longer term, the aviation community agrees that major investment is required in the ATC system and in airport infrastructure to accommodate current and expected future demand for air travel. The key challenges in this area are managing a timely acquisition and implementation of NextGen and dealing effectively with the environmental concerns of communities that are adjacent to airports or under the flight paths of arriving and departing aircraft. These issues are discussed in greater detail later in this testimony.

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## FAA Must Address Increasing Runway Incursions

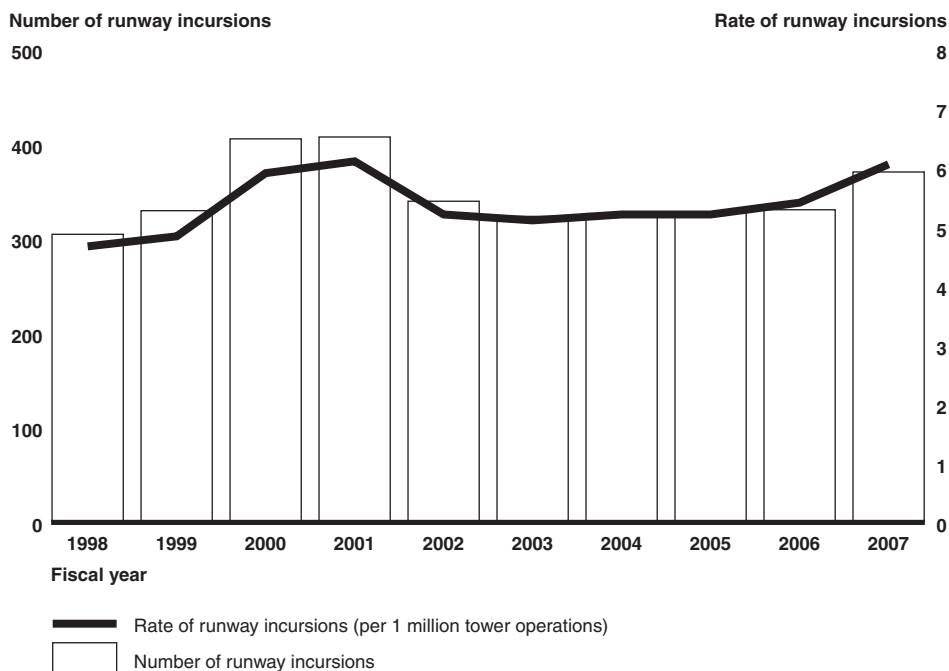
Runway incursions can be considered a precursor to aviation accidents and their number and rate have been increasing recently. Incursions occur when aircraft enter the runway without authorization; in the most serious instances, collisions between aircraft are narrowly avoided. On August 16, 2007, for example, at Los Angeles International Airport—one of the nation's busiest airports—two commercial aircraft carrying a total of 296 people came within 37 feet of colliding during a runway incursion. While

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<sup>13</sup>We are currently conducting a study examining FAA's efforts to reduce congestion through airspace redesign in the New York, New Jersey, and Philadelphia, Pennsylvania region.

the number and rate of incursions declined after reaching a peak in fiscal year 2001 and remained relatively constant for the next 5 years, the overall incursion rate increased during fiscal year 2007 and was nearly as high as the fiscal year 2001 peak. (See fig. 1.) In addition, serious incursions continue to occur—about 30 per year since fiscal year 2002—each involving the risk of a catastrophic runway collision occurring in the United States. Moreover, 10 serious incursions occurred in the first quarter of fiscal year 2008, significantly exceeding the 2 serious incursions that occurred during the same time period the previous year. This situation suggests that managing the occurrence of runway incursions and minimizing the risk of a catastrophic runway collision in the United States remains a significant safety challenge for FAA.

**Figure 1: Number and Rate of Runway Incursions from Fiscal Year 1998 through Fiscal Year 2007**



Source: FAA.

To its credit, FAA has taken a range of actions to address runway safety and reduce the risk of collisions, including researching, testing, and deploying new technology such as the Airport Surface Detection Equipment, Model X (ASDE-X), which is a radar-based ground surveillance system. In addition, FAA has encouraged airport improvements, such as

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changes to runway layout, markings, signage, and lighting, and has provided training for pilots and air traffic controllers. Many of these actions were taken since the number and rate of incursions peaked in fiscal year 2001. However, as runway safety incidents declined, FAA's runway safety efforts waned, leading us to make several recommendations in November 2007.<sup>14</sup> We recommended that FAA prepare a new national runway safety plan, improve its runway incident data collection and analysis capabilities, and address air traffic controller overtime and fatigue issues that may affect runway safety.

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## FAA's Data Limitations Impede Safety Oversight

FAA's ability to identify and respond to trends and early warnings of safety problems and to manage risk is limited by incomplete and inaccurate data. Accurate, comprehensive data are particularly important for FAA as it moves away from an oversight approach that focuses on labor-intensive inspections to a system safety approach that is based on analyzing data to assess and prioritize risks. This change in oversight approach is a positive step; however, its effectiveness depends on having complete and accurate data and user-friendly databases. We have identified data limitations that affect FAA's ability to manage risk. For example, we identified problems with the completeness of FAA's safety inspection data; information on the performance of "designees," who include over 13,000 individuals and organizations that have been delegated to act on the agency's behalf; and data on air ambulance operations. We also identified problems with the completeness and usefulness of FAA's enforcement database. To address these issues, we have previously recommended that FAA improve the accuracy and completeness of its safety data and its analysis of those data.<sup>15</sup> To its credit, FAA has made progress in this area, but more work remains. For example, our recent review of runway safety identified additional problems with the completeness of information on runway incursions.

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<sup>14</sup>GAO, *Aviation Runway and Ramp Safety: Sustained Efforts to Address Leadership, Technology, and Other Challenges Needed to Reduce Accidents and Incidents*, [GAO-08-29](#) (Washington, D.C.: Nov. 20, 2007).

<sup>15</sup>See GAO, *Aviation Safety: Improved Data Collection Needed for Effective Oversight of Air Ambulance Industry*, [GAO-07-353](#) (Washington, D.C.: Feb. 21, 2007); *Aviation Safety: System Safety Approach Needs Further Integration into FAA's Oversight of Airlines*, [GAO-05-726](#) (Washington, D.C.: Sept. 28, 2005); *Aviation Safety: FAA Needs to Strengthen the Management of Its Designees Programs*, [GAO-05-40](#) (Washington, D.C.: Oct. 8, 2004); and *Aviation Safety: Better Management Controls are Needed to Improve FAA's Safety Enforcement and Compliance Efforts*, [GAO-04-646](#) (Washington, D.C.: July 6, 2004).

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FAA considers the integration and sharing of high-quality, relevant, and timely aviation safety information critical to its system safety approach, particularly if the air transportation system grows significantly and increases in complexity, as anticipated. To improve its access to data, FAA is in the early stages of developing the Aviation Safety Information Analysis and Sharing (ASIAS)—a capability to integrate aviation safety data that is distributed across the aviation industry into information on the operational performance and safety of the aviation system. During fiscal year 2007, FAA established memorandums of understanding with seven commercial airlines to obtain access to certain safety data. According to FAA, ASIAS currently can access about 20 government and industry systems including de-identified reports provided by several airlines. An enterprise architecture, or blueprint for the initiative, is expected in September 2008. However, it will be important for FAA to address the quality issues that we have identified with its various databases as it moves forward with linking them through ASIAS.

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### FAA Will Be Challenged to Continue Hiring and Training Thousands of Air Traffic Controllers

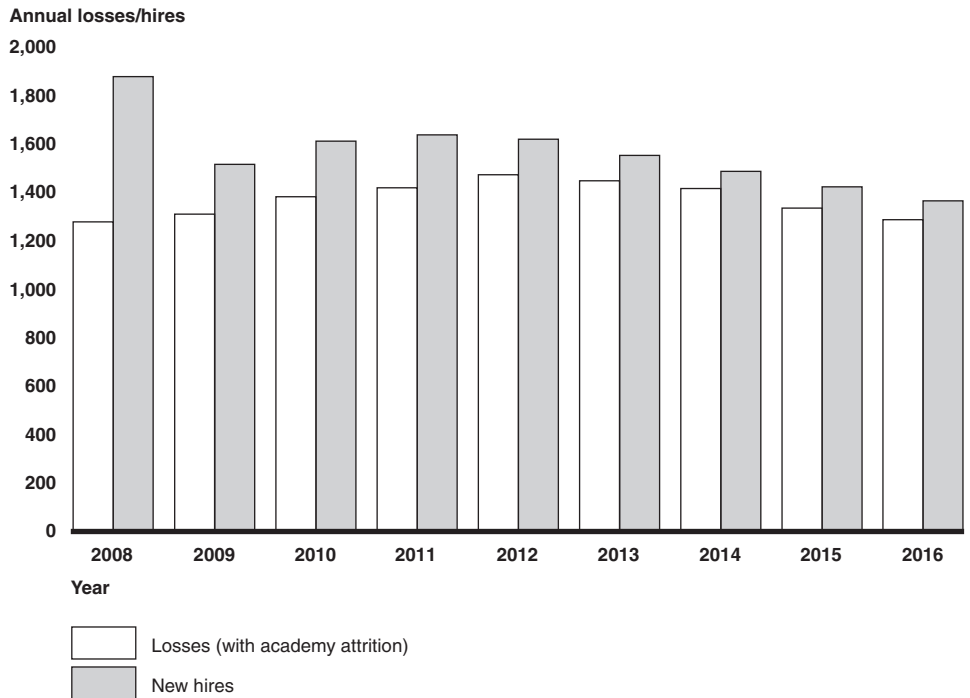
During the coming decade, FAA will be challenged to continue hiring and training thousands of air traffic controllers to replace those who will retire and leave for other reasons. FAA projects that about 72 percent of its controller workforce will become eligible for retirement by 2016 and that between 2007 and 2016 it will lose a total of 13,527 controllers through retirement and other reasons. To replace these controllers, FAA plans to hire about 15,900 new controllers from fiscal years 2007 through 2016.<sup>16</sup> In fiscal year 2007, FAA hired 1,815 controllers, bringing its total controller workforce to 14,874, or slightly more than its planned target of 14,807. FAA anticipates hiring 1,877 controllers in fiscal year 2008, which would bring the total number of air traffic controllers to 15,130. Figure 2 shows the estimated numbers of losses and planned hires for fiscal years 2008 through 2016.

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<sup>16</sup>Although air traffic is expected to increase significantly over the next decade, FAA expects that NextGen technologies and procedures will allow air traffic controllers to be more productive. Thus, FAA does not currently plan for any dramatic increases in overall controller staffing through 2016.



**Figure 2: FAA's Projected Air Traffic Controller Losses and Hiring, Fiscal Years 2008 - 2016**



Source: FAA.

Recent events may exacerbate the hiring situation. Data indicate that controllers are retiring at a faster rate than FAA anticipated. For fiscal year 2006, FAA estimated that 467 controllers would retire, but 583 actually retired—about 25 percent more than planned. For fiscal year 2007, FAA anticipated 700 controller retirements, while 828 controllers actually retired—an 18 percent increase over anticipated retirements. FAA incorporates each year's retirement numbers into its plans for future years, and has increased its hiring to compensate for greater than expected retirements. For example, in fiscal year 2008, FAA plans to hire 1,877 controllers, a significant increase over the planned 1,420 hires reflected previously in the Controller Workforce Plan, published in March 2007.<sup>17</sup> FAA recognizes that some of these increases in retirements may be attributed to recent labor disputes and disagreements over the contract

<sup>17</sup>According to the President's budget for fiscal year 2009, FAA plans to further increase its hiring of controllers in fiscal year 2009.

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that went into effect in 2006. In the fall of 2007, FAA began interviewing departing controllers to learn their reasons for leaving the workforce.

In addition to the hiring situation, FAA will be challenged to retain sufficient numbers of experienced controllers to handle a growing volume of traffic while also addressing the on-the-job training needs of a large number of inexperienced controllers. According to FAA, about one quarter of the controller workforce, including Academy students, had less than 5 years of experience at the end of fiscal year 2007. Because it can take up to 3 to 5 years for a controller to become certified, within a few years, trainees could constitute a larger portion of the controller workforce. Our analysis of FAA's hiring and retirement projections indicates that by 2010, up to 40 percent of the controller workforce will have less than 5 years of experience. This high percentage of newly hired controllers will continue for a number of years, making it important for FAA to carefully balance the ratio of trainees to certified controllers at each air traffic control facility. Additionally, more controllers are failing their developmental training, increasing from about 6 percent to about 9 percent of total hires from 2006 to 2007. Another training challenge, as the transition to NextGen moves forward, will be to train controllers on the current system and on new air traffic management procedures envisioned for the future, such as precise navigation procedures that minimize pilot-controller communication.

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## FAA Will Be Challenged to Maintain Current Facilities

FAA faces an immediate challenge in maintaining and repairing existing infrastructure so that the current system continues to operate safely and reliably. FAA is currently responsible for maintaining over 400 terminal facilities. While FAA has not assessed the physical condition of all of these facilities, the agency rated the average condition of 89 of them as "fair," with some rated "good" and others "very poor." Based on the assessment of these 89 facilities, FAA estimated that a one-time cost of repair to all of its terminal facilities would range between \$250 million and \$350 million. Two FAA employee unions, the National Air Traffic Controllers Association and the Professional Aviation Safety Specialists, contend that these facilities are deteriorating because of lack of maintenance and that working conditions are unsafe due to leaking roofs, deteriorating walls and ceilings, and obsolete air-conditioning systems. According to FAA officials, while some of these facilities can accommodate the new technologies and systems of NextGen, many of them are not consistent with the configurations that will be needed under NextGen. To the extent that NextGen technologies and systems have greater capabilities than the legacy systems now in use, fewer facilities will be needed to control

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airspace. As a result, the costs of repairing and maintaining the current number of facilities may be reduced. In the meantime, FAA will have to manage its given budgetary resources so that it can maintain legacy systems and legacy infrastructure while configuring the NAS to accommodate NextGen technologies and operations. The potential impact on the cost of NextGen in this circumstance is discussed later in this testimony.

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### FAA Must Be Able to Successfully Control Costs and Schedules for Current ATC Systems Acquisitions

A cost-effective and timely transition to NextGen depends in large part on FAA's ability to keep the current portfolio of ATC systems acquisitions within budget and on schedule. In 1995, we designated FAA's ATC modernization program a high-risk initiative because of its cost, complexity, and systemic management and acquisition problems. We have reported that, during the last few years, FAA has made significant progress in acquiring ATC systems within budget and schedule goals. These achievements came in part through implementing businesslike operations and procedures for acquiring and managing ATC systems. For example, FAA has introduced earned value management for all new major acquisitions as a way to prevent, detect, report, and correct problems in acquiring major systems.<sup>18</sup>

In 2003, as part of its efforts to operate in a more businesslike fashion, FAA established annual acquisition performance goals that called for a high percentage of its major acquisition programs to be within 10 percent of budget and on schedule. For fiscal years 2004 through 2006, FAA reported exceeding these annual goals. We recently examined how FAA was measuring its performance and reporting on its goals related to systems acquisitions. We found that because FAA measures progress related only to current program baselines and annual milestones, FAA's performance reporting could mask budget increases and schedule delays, possibly misleading stakeholders, including Congress, as to the agency's actual performance in acquiring ATC systems. In December 2007, we recommended that FAA identify or establish a vehicle for regularly reporting to Congress and the public on the agency's overall, long-term performance in acquiring ATC systems by providing original budget and schedule baselines for each rebaselined program and the reasons for the rebaselining. We also recommended that FAA report information on the

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<sup>18</sup>We are currently conducting an examination of FAA's implementation of earned value management.

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potential effects that any budget increases or schedule slippages could have on the overall transition to NextGen.<sup>19</sup>

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## FAA Faces a Number of Management Challenges as It Begins to Implement NextGen

The transformation of the NAS is one of the federal government's most complex undertakings. Although NextGen is a collaborative effort, the bulk of the responsibility for successful implementation and transition belongs to FAA. The agency therefore faces a number of management challenges as it begins implementing NextGen systems and procedures. These challenges include hiring and retaining the right skill set within FAA, developing a facility plan for NextGen, meeting the research and development needs of NextGen, and establishing credibility with stakeholders regarding the agency's NextGen efforts.

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## FAA Faces a Challenge in Hiring and Retaining Staff with the Right Skills to Manage the Implementation of NextGen

As FAA moves closer to undertaking a number of major NextGen system acquisitions, a critical component for keeping such acquisitions on track will be having the right skill set within the agency to successfully manage NextGen programs. In November 2006, we recommended that FAA examine its strengths and weaknesses with regard to the technical expertise and contract management expertise that will be required to define, implement, and integrate the numerous complex programs involved in the transition to NextGen.<sup>20</sup> In response to our recommendation, FAA contracted with the National Academy of Public Administration (NAPA) to conduct a workforce needs analysis. In December 2007, NAPA reported its findings and observations to FAA from the first phase of its study,<sup>21</sup> which focused on identifying the required workforce competencies and defining strategies for obtaining the necessary expertise. We consider this a necessary but not yet sufficient response to our recommendation. The challenge remains to compare FAA's existing and needed staff resources, determine what gaps exist, and fill those gaps with internal or external resources in a timely manner.

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<sup>19</sup>GAO, *Air Traffic Control: FAA Reports Progress in System Acquisitions, but Changes in Performance Measurement Could Improve Usefulness on Information*, [GAO-08-42](#) (Washington, D.C.: Dec. 18, 2007).

<sup>20</sup>GAO, *Next Generation Air Transportation System: Progress and Challenges Associated with the Transformation of the National Airspace System*, [GAO-07-25](#) (Washington, D.C.: Nov. 13, 2006).

<sup>21</sup>Phase II of the project began in January 2008 and involves additional data gathering, competency validation, and in-depth benchmarking. NAPA plans to issue a final report on September 30, 2008.

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More recently, FAA's Chief Acquisitions Officer, in discussing the challenges that the agency must manage in the transition to Next Gen, concurred with our assessment of FAA's hiring challenges. He stated that transitioning to NextGen means an increasing number of acquisitions and increasing complexity within those acquisitions, and that the agency faces a significant challenge in having an adequate acquisition workforce to handle the transition. The agency faces a particular challenge in attracting acquisitions managers who understand how to apply a systems approach to managing acquisitions.<sup>22</sup>

A number of FAA's acquisition staff have retired or left the agency to take positions in other organizations. In response, according to FAA, the agency has increased its recruiting efforts and is working to establish internships and university programs as means of developing qualified staff. Nonetheless, according to the Chief Acquisitions Officer, FAA was able to hire only enough acquisition staff in 2007 to replace those that had left. The challenge for FAA is to increase its hiring beyond one-for-one replacement to meet its growing human capital needs in this area, as well as to find ways to further streamline and automate its procurement process to increase staff productivity.

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### FAA Will Be Challenged to Develop a Facility Plan That Takes Maximum Advantage of NextGen Technologies

To fully realize all of NextGen's capabilities, a new configuration of facilities and airspace will be required that is consistent with NextGen. A provision in the administration's reauthorization proposal directs the Secretary of Transportation to establish a working group on facilities consolidation to develop and report its recommendations to Congress before any facilities or services are realigned or consolidated. However, FAA has not yet developed or presented a comprehensive facilities consolidation plan. According to an FAA official, the agency plans to report on the cost implications of reconfiguring its facilities in 2009. Until a plan for facilities consolidation or realignment has been developed, the configurations needed for NextGen cannot be implemented and potential savings that could help offset the cost of NextGen will not be realized. Some FAA officials have said that planned facility maintenance and construction based on the current ATC system are significant cost drivers that could, without reconfiguration, increase the cost of NextGen.

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<sup>22</sup>Many of the NextGen systems will not be stand-alone systems, but rather interdependent systems that will require skills in managing systems integration.

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## FAA Faces Challenges in Meeting the Research and Development Needs of NextGen

Applied research and development is critical for the transition to NextGen because it will help to reduce risk by better defining and demonstrating new capabilities, setting parameters for the certification of new systems, and informing decisions about the later transfer of systems to industry for deployment into the NAS. In my testimony before this Subcommittee last February, I noted that there was some uncertainty over which entities would fund and conduct the research and development needed to transition to NextGen. Although FAA and the Joint Planning and Development Office (JPDO) have taken steps to address these issues, some uncertainty still remains. In the past, a significant portion of aeronautics research and development, including intermediate technology development, was performed by NASA. FAA has determined that research gaps now exist as a result of both the administration's cuts to aeronautical research funding and the expanded requirements for NextGen. While NASA still plans to focus some of its research on NextGen needs, the agency is moving toward a focus on fundamental research and away from developmental work and demonstration projects. According to an FAA official, FAA and JPDO are currently developing a written agreement that will address NextGen's most pressing needs in fundamental research.

In 2006, officials from FAA and JPDO initiated an assessment of NextGen research and development requirements. Although this initial assessment led to increased budget requests for FAA to help lessen the research and development gaps, there continue to be challenges in filling identified research and development needs. For example, if not adequately addressed, the environmental impacts of aviation, particularly the noise that affects local communities and the emissions that contribute to global warming, will constrain efforts to build or expand the runways and airports needed to handle the added capacity envisioned for NextGen.<sup>23</sup> In an effort to move noise and emissions reduction technologies beyond NASA's research stage, the administration's proposal contains a provision that would create the Continuous Lower Energy, Emissions and Noise (CLEEN) program. The CLEEN initiative would create a program for the development, maturation, and certification of airframe technologies for

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<sup>23</sup>GAO recently testified on aviation and the environment. See GAO, *Aviation and the Environment: Impact of Aviation Noise on Communities Presents Challenges for Airport Operations and Future Growth of the National Airspace System*, [GAO-08-216T](#) (Washington, D.C.: Oct. 24, 2007). We will soon issue a report examining FAA's and NASA's research and development plans for aviation noise reduction.

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aircraft over the next 10 years to reduce aviation noise and emissions.<sup>24</sup> According to FAA, the program is intended to accelerate near-term technology maturation and to provide an incentive for manufacturers to equip aircraft with noise reduction technologies. FAA's budget request for fiscal year 2009 includes provisions requesting an increase in research and development funding to support the integration and implementation of NextGen programs and the CLEEN initiative.

In spite of these developments, it is still unclear how NextGen's developmental research needs will be addressed. Some observers believe that FAA has neither the research and development infrastructure nor the funding to address the developmental research needs for NextGen. According to a draft report by an advisory committee to FAA—the Research, Engineering and Development Advisory Committee—FAA would need at least \$100 million annually in increased funding to perform this research and development work. Moreover, establishing the infrastructure within FAA could delay the implementation of NextGen by 5 years. Unless NextGen's developmental research needs are met, technology transfers to industry for further development will also delay the implementation of NextGen, including capabilities aimed at increasing the safety, efficiency, and capacity of the system.

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### FAA Faces a Challenge in Assuring Stakeholders That It Is Fully Committed to NextGen

Some industry stakeholders believe that FAA may not be fully committed to NextGen, in part because FAA has stopped some past modernization efforts. An example that is often cited is a partnership between FAA and a major airline to develop a datalink communications system that transmitted e-mail-like messages between controllers and pilots. The airline invested in this technology by equipping some of its aircraft, but, according to FAA, the agency and the airline subsequently agreed to cancel the program.

In addition, some stakeholders have expressed a number of concerns about how NextGen is currently being implemented. First, some stakeholders are concerned about whether there is a clearly defined and transparent governance structure in the FAA organizations that share responsibility for implementing NextGen. These stakeholders have expressed a belief that one organization or person should be responsible

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<sup>24</sup>A similar provision is in the Senate bill for FAA reauthorization. As of the date of this publication, the House and Senate are discussing the reauthorization bills.

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and, thus, accountable for NextGen. Second, some stakeholders are concerned that NextGen efforts are not proceeding as quickly as needed. These stakeholders note that existing technologies could be implemented more quickly and more strategically than FAA's current plans allow. For example, the technologies for more precise navigation are available and in use by some airlines at some airports. However, because FAA has not developed all of the necessary implementation procedures for some critical city-pairs, some airlines cannot take full strategic advantage of these technologies. Third, some stakeholders have noted that some FAA implementation priorities will reduce costs immediately for FAA, but require airlines to make costly investments that will not begin to yield a return for them until 2020. Some stakeholders have suggested that returns on investment to industry can be accelerated if a regional implementation approach is used. To gain credibility and buy-in with stakeholders, FAA will have to address stakeholders' concerns about NextGen governance, implementing technologies more quickly, and structuring the required industry investments so as to yield returns on investment more quickly.

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## Concluding Observations

FAA faces numerous challenges in 2009 and beyond to maintain the safety and efficiency of the current system and to successfully manage the implementation of NextGen—one of the federal government's most complex undertakings. Maintaining one of the safest systems in the world is complicated by the steadily increasing demands placed on the system while FAA's facilities and current technologies continue to age. As you consider the President's budget for fiscal year 2009, it is important to remember that a timely reauthorization is critical to ensuring the continuity of FAA's current programs and the agency's continuing progress toward NextGen.

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Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions from you or other Members of the Subcommittee.

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## GAO Contact and Staff Acknowledgments

For further information on this statement, please contact Gerald L. Dillingham, Ph.D., at (202) 512-2834 or [dillinghamg@gao.gov](mailto:dillinghamg@gao.gov). Individuals making key contributions to this report include Faye Morrison (Assistant Director), Paul Aussendorf, Jay Cherlow, Elizabeth Eisenstadt, Carol Henn, Bert Japikse, Edward Laughlin, Maureen Luna-Long, Maren McAvoy, Edmond Menoche, Richard Scott, Teresa Spisak, and Maria Wallace.



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# Appendix I: Additional Information on How Proposed Budget Changes Might Affect FAA's Ability to Fund Airports and Other Capital Projects

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The President's budget and reauthorization proposal contain reductions in funding for the Airport Improvement Program (AIP), changes in AIP allocations among airports, and an increase in the cap on the Passenger Facility Charge (PFC) program for commercial airport development projects.<sup>1</sup> Airports are an integral part of the nation's transportation system, and maintaining their safety and efficiency is an important Federal Aviation Administration (FAA) responsibility. To this end, FAA administers the AIP, which in fiscal year 2007 provided \$3.5 billion in federal grants for development projects at the entire range of the nation's 3,400 airports—from small general aviation airports to the very largest that handle several million passengers per year. In addition, FAA administers the PFC program, which provided an estimated \$2.7 billion during 2007.

Last year, we reported that the funding level for airports is about \$1 billion less annually than planned development costs. Over the next 5 years, planned airport development costs total at least \$14 billion annually (in 2006 dollars).<sup>2</sup> From 2001 through 2005, airports' historical funding averaged about \$13 billion per year (also in 2006 dollars) from all sources. This amount covers all types of projects, including those not eligible for federal grants. The primary source of this funding was bonds, which averaged almost \$6.5 billion per year, followed by federal grants, PFCs, and state and local grants (which averaged \$3.6 billion, \$2.2 billion, and \$700 million per year, respectively). Of this \$1 billion annual difference between historic funding and planned development costs, larger airports account for about \$600 million annually, while smaller airports foresee a difference of about \$400 million annually.<sup>3</sup>

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<sup>1</sup>PFCs are fees airports can charge passengers to fund FAA-approved projects. These are generally capped at \$4.50 per passenger.

<sup>2</sup>This estimate is a combination of FAA's estimate of \$8.2 billion in AIP grant-eligible projects and \$5.8 billion from the Airport Council International's estimate of projects not eligible for AIP. FAA's estimate is based on airport master plans that FAA planners have reviewed and entered into a database of all national system airports. The Airport Council International also estimates airports' planned development, based on a survey of the 100 largest airports and includes all projects regardless of grant eligibility. Conversely, airports received an average of about \$13 billion a year for planned capital development. See GAO, *Airport Finance: Observations on Planned Airport Development Costs and Funding Levels and the Administration's Proposed Changes in the Airport Improvement Program*, [GAO-07-885](#) (Washington, D.C.: June 29, 2007).

<sup>3</sup>We follow conventions established in GAO's prior reports on airport finance in differentiating between the 67 larger airports (large- and medium-hub airports) and smaller airports (all other categories of commercial and general aviation airports).

The President's budget and reauthorization proposal for AIP would decrease potential funding for all airports and shift more funding from airport entitlements to funds under FAA's discretion. The President's budget reduces AIP funding to \$2.75 billion from its past level of \$3.5 billion in fiscal years 2006, 2007, and 2008. Table 1 compares AIP funding allocations at \$2.75 billion to the current funding level of \$3.5 billion. To make more discretionary grants available, the administration's reauthorization proposal would also remove the funding trigger in current law that doubles the amount of entitlement funds airports receive if the overall AIP funding level is above \$3.2 billion. According to FAA officials, their objective is to increase the amount of discretionary grants for airports so that higher-priority projects can be funded.

**Table 1: Estimated AIP Distribution under Alternative Funding Levels and Allocations**

(in millions)

	<b>\$2,750 (proposed FY 2009) Administration's reauthorization proposal*</b>	<b>\$3,500 (actual FY 2006) Current funding allocations</b>
Primary airport entitlements <sup>a</sup>	\$629	\$864
Other entitlements	709	816
Carryover entitlements <sup>b</sup>	432	432
Small airport fund	0	428
Discretionary and set aside grants <sup>c</sup>	866	845
<b>TOTAL AIP funds available for grants<sup>d</sup></b>	<b>\$2,636</b>	<b>\$3,386</b>

Source: FAA.

\*Assumes that fiscal year 2009 funding is allocated according to the same reauthorization formulas as proposed in 2007.

<sup>a</sup>Includes entitlements for nonprimary, cargo, and Alaskan airports.

<sup>b</sup>Funds that some airports can claim to use in the fiscal year in which the amount was apportioned and 2 fiscal years immediately after that year.

<sup>c</sup>Funds that are available for use on AIP-eligible projects at FAA's discretion. This includes funds set aside for such things as noise planning and programming, reliever airports and capacity, safety, security, and noise projects. It also includes discretionary grants that can be used for any AIP eligible project at any airport.

<sup>d</sup>The funding available for grants after the 2006 rescission and deductions for airport research, other programs, and administrative costs.

For smaller airports, the effect of the administration's proposal is greater because they are more dependent on AIP than other funding sources. At a funding level of \$2.75 billion, the proposal would reduce entitlements and

other funding dedicated to small airports by \$436 million (see table 2). At a funding level of \$3.5 billion in AIP funding, smaller airports would lose \$75 million in entitlements and other dedicated funds under FAA's proposal, but discretionary funds would increase by \$282 million, making it less certain how smaller airports would fare overall.

**Table 2: Effect of Proposed AIP Reauthorization Formula on Smaller Airports Assuming New Budget Level**

(dollars in millions)

<b>Funding categories</b>	<b>Current law at \$3.5 billion</b>	<b>Proposed law at \$2.75 billion</b>	<b>Difference from current</b>	<b>Proposed law at \$3.5 billion</b>	<b>Difference from current</b>
Entitlements	\$1,680	\$1,244	-436	\$1,605	-75
Discretionary	510	519	+9	792	+282

Source: GAO analysis of FAA data.

The administration's reauthorization proposal would also allow airports to increase their PFC to a maximum of \$6 and allow airports to use their PFC collections for any airport projects while forgoing their entitlement funds. Based on calculations we did last year, a \$6 PFC could have generated an additional \$1.1 billion for larger airports in 2007, exceeding the \$247 million in entitlements that FAA estimates they would forgo under their reauthorization proposal (see table 3).<sup>4</sup> However, smaller airports (small and non-hub) would not benefit as much from this ability to increase PFCs because they collect less in PFCs and are more reliant on AIP for funding. A change to a \$6 PFC could yield as much as an additional \$171 million for smaller airports if they all imposed a \$6 PFC. On a net basis, this relatively small increase in PFCs would not compensate smaller airports for the \$436 million reduction in AIP funding at a \$2.75 billion funding level.

<sup>4</sup>This calculation assumes that the increased PFC would not affect passenger demand for air travel. GAO has previously calculated that a PFC increase could reduce passenger demand, which would reduce the PFC revenue collected at the higher rate. Our previous work suggests the revenue reduction due to demand effects would likely be small. See GAO, *Passenger Facility Charges: Program Implementation and the Potential Effects of Proposed Changes*, GAO/RCED-99-138 (Washington, D.C.: May 19, 1999).

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**Table 3: Projected PFC Collections with a \$6 PFC (dollars in millions)**

<b>Airport size</b>	<b>2007 PFC collections (estimated)</b>	<b>If all primary airports had a \$6 PFC<sup>a</sup></b>	<b>Increase over 2007 collections</b>
Large hub	\$1,869	\$2,696	\$827
Medium hub	486	782	295
<b>Subtotal</b>	<b>2,356</b>	<b>3,479</b>	<b>1,123</b>
Small hub	184	303	119
Non hub	71	123	52
<b>Subtotal</b>	<b>255</b>	<b>426</b>	<b>171</b>
<b>Total</b>	<b>\$2,611</b>	<b>\$3,905</b>	<b>\$1,294</b>

Source: GAO analysis of FAA data.

<sup>a</sup>There are currently 382 primary airports eligible to apply for a PFC.

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# Related GAO Products

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*Air Traffic Control: FAA Reports Progress in System Acquisitions, but Changes in Performance Measurement Could Improve Usefulness of Information.* [GAO-08-42](#). Washington, D.C.: December 18, 2007.

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*Passenger Facility Charges: Program Implementation and the Potential Effects of Proposed Changes.* [GAO/RCED-99-138](#). Washington, D.C.: May 19, 1999.

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