

**Before the Committee on Appropriations  
Subcommittee on Transportation  
United States House of Representatives**

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**FAA's Fiscal Year 2003  
Budget Request**

**Statement of  
The Honorable Kenneth M. Mead  
Inspector General  
U.S. Department of Transportation**



Mr. Chairman and Members of the Subcommittee

We appreciate the opportunity to discuss the Federal Aviation Administration's (FAA) Fiscal Year (FY) 2003 budget request. FAA's budget request needs to be viewed in context of the extraordinary budgetary demands now being placed on all modes at the Department. Unanticipated costs for Amtrak, the Coast Guard, the Transportation Security Administration, Federal Highways and FAA could add between \$12 billion and \$16 billion to the Department's fiscal needs. Most of these additional outlays will come from the General Fund. A significant issue for this year's budget is that FAA will require a substantially larger contribution from the General Fund than it has in the past 5 years, due largely to growth in its operating costs and reductions in aviation Trust Fund revenues.

This last year, we have seen positive steps at FAA on a number of fronts. FAA has moved to improve air and ground communications with the Department of Defense in the aftermath of September 11. Progress has been made with Free Flight Phase 1 which introduced new automated controller tools as well as new information exchange systems that link FAA and airline operations centers. FAA also published a new blueprint—the Operational Evolution Plan—for enhancing capacity over the next decade.

Notwithstanding this, FAA faces a number of challenges in the coming year. These include reducing runway incursions and operational errors, improving oversight of air carrier maintenance, and controlling costs more effectively throughout the agency. Today, I would like to focus on these challenges in the areas of safety and finance.

**SAFETY.** With regard to aviation safety, we have seen progress this year in reducing runway incursions—down from a record high of 431 in 2000 to 383 in 2001, but the numbers are still much too high. On average, more than one runway incursion occurs every day, with an extremely close call occurring on average about one each week. Much of the decrease occurred after September 11, when air traffic levels, especially in general aviation, declined.

Operational errors, made by air traffic controllers, reached a record high of almost 1,200 incidents in FY 2001. Most operational errors occur in mid-air. We do not know how many were due to more rigorous reporting this past year, however, some were very serious. For example, from the end of April 2001 (when FAA began to identify the severity of each operational error) through January 2002, 52 of 796 operational errors were very serious.

FAA must also address this Committee's direction in the FY 2002 Conference Report to stop reducing the number of air traffic control supervisors. In 2001, FAA reduced the number of air traffic control supervisors by 115 by using the Controller-in-Charge Program. The Committee's position was that further expansion of the Controller-in-Charge Program was not appropriate given the high numbers of runway incursions and operational errors.

The Committee was also concerned, as we were, that FAA was allowing facilities to designate all controllers as Controllers-in-Charge, rather than ensuring that only the most qualified controllers are selected. FAA's own internal evaluation of the Controller-in-Charge Program in 2001 at 27 facilities found that 19, or 70 percent, had designated 100 percent of the air traffic controllers as "Controllers-in-Charge". These 19 facilities included large air traffic control towers, such as Atlanta Hartsfield, Dallas-Fort Worth, Washington Dulles, and Miami International.

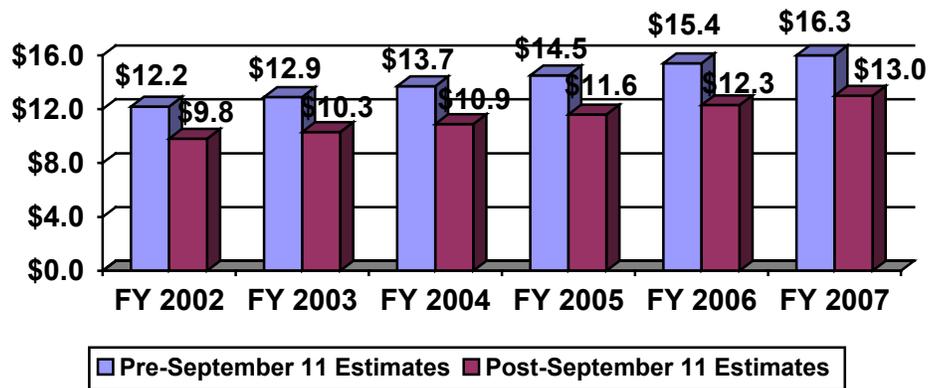
We performed two audits of aviation safety inspection programs and found that FAA is not ensuring airlines monitor their own maintenance programs and FAA has not finished implementation of its new Air Transportation Oversight System. However, it is important to note that FAA and the aviation industry rely on a series of overlapping controls to ensure aircraft maintenance is performed properly. For example, air carriers rely on FAA-approved maintenance procedures, qualified mechanics, and their own inspector workforce to inspect and approve the repairs performed.

Preliminary findings from investigations of the January 2000 crash of Alaska Airlines Flight 261 indicated that the crash may have been caused by an aircraft maintenance problem. FAA had not performed an inspection of Alaska Airlines' internal maintenance review program in 2 years, and was not routinely conducting comprehensive reviews of these systems at other carriers. In response to our audit report, FAA has agreed to perform more comprehensive annual inspections of air carriers' programs for monitoring maintenance, and better train inspectors on how to perform this function. The key now is to follow-through.

FAA's new Air Transportation Oversight System, implemented at Alaska Airlines and nine other major air carriers in 1998, was designed to catch systemic problems like the ones that existed at Alaska Airlines. However, FAA has not finished developing this important program and still needs to provide its inspectors with the training they need to properly implement the new system. When interviewed, 71 percent of inspectors said they had not had adequate training on the new system.

**FINANCE.** Since the attacks of September 11, there have been steep declines in airline revenues and a sharp reduction in the amount of tax revenues available to fund FAA and its programs. Projected revenue from aviation Trust Fund revenues for FY 2003 have dropped from an estimated \$12.9 billion prior to September 11 to about \$10.3 billion currently. *FAA's FY 2003 budget request of \$14 billion exceeds this revenue base by nearly \$3.7 billion. Assuming no increase in aviation taxes, this level of funding will be required from the General Fund because current revenue projections are significantly below pre-September 11 levels and are expected to remain lower into the out-years, as shown in the chart below.*

**Estimated Aviation Tax Revenues**  
(\$ in billions)



These additional requirements come at a time when the General Fund is already supporting vastly expanded fiscal needs throughout the Federal Government and underscore the urgency for FAA to begin operating more cost effectively, like any business. For FY 2003, FAA is requesting \$3.4 billion for the Airport Improvement Program (AIP), and \$3.0 billion for modernizing the air traffic control system (F&E). These amounts are consistent with the requirements of FAA's authorizing legislation, the Aviation Investment and Reform Act for the 21<sup>st</sup> Century (AIR-21). FAA is also requesting \$7.5 billion for operations. We have concerns regarding each of these accounts that FAA will need to address during FY 2003.

- ✓ ***Airport Improvement Program—Significant uncertainty exists about how airport funds will be spent.*** New security requirements could severely tax plans for use of airport improvement funds and passenger facility charges. For FY 2003, consistent with AIR-21, FAA has requested \$3.4 billion for airport grants. Also, airports can collect passenger facility charges. While final amounts for 2001 have not been determined, FAA is estimating that 2001

passenger facility charge collections will be between \$1.5 and \$1.8 billion. Although it is possible that these funds can be used to finance some of the new security requirements, the majority of the money has already been designated for other uses.

FAA will need to make tough decisions on which projects should be funded and whether security will take precedence over already planned capacity related projects. Although one of 14 major runway projects has been completed, 4 other airports have either revised their schedules or are reconsidering their plans. FAA has indicated that other projects could be affected if demands to fund security projects become too great.

However, before these decisions can be made, more information will be needed on what the security requirements will be, and how much they will cost. For example, while the Transportation Security Administration (TSA) will purchase and install new explosives detection devices, it is not budgeting funds to pay for any modifications that may be necessary to revamp airport terminals and/or baggage systems to accommodate this equipment. *FAA has previously estimated that this could cost as much as \$2.3 billion.* The basic issue here becomes how much of that cost will be covered by airport improvement funds and passenger facility charges.

- ✓ ***Facilities and Equipment—FAA must improve its management of major acquisitions and ensure that air traffic modernization efforts are delivered on time and within budget.*** FAA is requesting about \$3.0 billion for modernizing the National Airspace System through the Facilities and Equipment account. FAA has made progress with Free Flight Phase I but cost and schedule problems persist with major acquisitions. The Wide Area Augmentation System, or “WAAS” (an effort to move toward satellite-based navigation) and the Standard Terminal Automation Replacement System, or “STARS” (new controller displays and computer equipment for terminal facilities) have a combined value of about \$4.6 billion. These two efforts have combined cost growth of over \$2.7 billion and schedule slippage of up to 5 years.

Given the current budgetary environment, the time has come for FAA to take greater cost control measures. This is important because there are several billion-dollar acquisitions—including the En Route Automation Modernization effort (new hardware and software for facilities that control high altitude traffic) and the FAA Telecommunications Infrastructure initiative (a new ground communications network)—that are early in the acquisition cycle. There are immediate steps that FAA can take to operate in a more cost effective manner.

First, FAA needs to follow this Committee's directions to make greater use of Defense Contract Audit Agency (DCAA) audits. FAA issued about \$3 billion in cost-reimbursable contracts during FY 2001. Use of cost-reimbursable contracts is more risky because contractors generally have little incentive to control costs. Because of this, audits by DCAA determine whether costs claimed by contractors were incurred and allowable, and if FAA is getting what it paid for.

Although FAA has begun requesting more DCAA audits, we recently found that FAA exercised little oversight and lacked the basic information needed to properly pay and manage these more risky contracts. For 22 of the 32 contracts we reviewed, totaling \$2 billion, FAA did not obtain incurred-cost audits as required. When DCAA audits were performed, significant unallowable costs were identified. For example, two DCAA reports questioned about \$4 million of costs, including unsupported consultant fees and hospitality payments to foreign officials. Many more audits are needed to ensure contract costs are appropriate and allowable.

Second, FAA needs to complete a cost accounting system, and made good progress last year by implementing the cost accounting system in its largest line of business, Air Traffic Services. FAA still needs to implement the cost accounting system in its other four lines of business. FAA also is developing its Cru-X labor distribution system that it plans to use to account for and distribute Air Traffic Services labor costs of about \$2.8 billion annually. An effective cost accounting and labor distribution system will enable FAA to better manage and control costs.

Third, FAA is moving toward a performance-based organization, and is developing performance metrics. The metrics we have seen thus far are "outcome" based (i.e., airport efficiency rates and airport capacity levels). This is an important step in the right direction. However, like any business, FAA also needs to develop cost and schedule metrics for its multi-billion dollar modernization projects. That way, FAA will have a stronger base to control costs and schedules and bring about more accountability by measuring the performance of its acquisition efforts.

Finally, FAA must make decisions regarding how far it will pursue a number of new systems, including WAAS. FAA now expects to have WAAS operational in 2003 but it will provide less precision approach capability than initially promised. The issue is whether to pursue the technology beyond what will be deployed in 2003 to meet the more demanding "Category I approach" performance. The precise cost and timeframes of doing so are uncertain but it is clear that further development will have an upward influence on the cost and

schedule of the system. FAA's decision on further development of WAAS to meet Category I performance must also take into account its progress in developing the Local Area Augmentation System, a precision approach capability for airports.

With respect to STARS, the \$1.7 billion program has experienced delays of 5 years. The completion date for STARS has slipped from 2005 to 2008, and just recently to 2010. We recommended that FAA prepare a detailed cost and schedule estimate for deploying STARS and develop contingency plan in case of further delays. FAA has completed a detailed cost estimate through 2004 but has not provided estimates for the out years. While FAA acknowledged the need for a contingency plan, one was not provided.

- ✓ ***Operations—increased General Fund requirements underscore the need for FAA to control operating costs.*** The steep decline in aviation tax revenues will have significant implications for FAA's operations funding. AIR-21 gives priority to FAA's AIP and F&E accounts by requiring that revenue from the Trust Fund be allocated to those accounts before allocating any revenue to FAA's operating budget. If Congress follows AIR-21 requirements and funds FAA's AIP and F&E accounts at the authorized levels, there will be significantly less revenue left to fund FAA's operations because revenue from the Trust Fund is much lower this year than in prior years.

In the past, Congress has drawn on the General Fund or the uncommitted balance of the Aviation Trust Fund to bridge shortfalls. However, the shortfall in FY 2003 of \$3.7 billion will be more significant than in past years.

The increased General Fund requirements underscore the need to control FAA's operating costs. FAA's operating budget, which is 73 percent payroll costs, has increased from \$5.3 billion in 1998 to \$7.5 billion in FY 2003, an increase of over 40 percent. Much of this increase is a result of collective bargaining agreements negotiated under FAA's personnel reform legislation. The 1998 agreement with the National Air Traffic Controllers Association, for example, was a significant cost driver requiring nearly \$1 billion in additional funding over its 5-year life. In FY 2003, the current agreement will expire. A key issue for FAA will be to ensure that the new agreement is cost neutral.

There are also opportunities for FAA to operate more efficiently while maintaining safety and system efficiency. For example, we previously identified that FAA could save at least \$500 million over 7 years by consolidating automated flight service stations in conjunction with deployment of new flight service software.

We also identified that FAA could save over \$57 million annually by expanding the contract tower program to 71 visual flight rule towers still operated by FAA. Clearly, these actions are controversial among certain groups, however; given the current fiscal issues facing FAA, the agency needs to objectively consider these and other cost saving measures from a business perspective.

Mr. Chairman, let me conclude by saying that given the budgetary pressures that now exist throughout the Federal Government, options for meeting FAA's financial requirements are for the agency to operate within existing revenues or for revenue to be increased. Consumers already pay a significant amount in aviation taxes and fees. For example, on round-trip tickets costing between \$150 and \$300, passengers pay between \$31 and \$42 in taxes and passenger facility charges. These fees could be more if connecting flight are involved. Raising taxes even beyond the current level could have implications on the aviation industry's attempts to improve yields and return to profitability.

## **Aviation Safety**

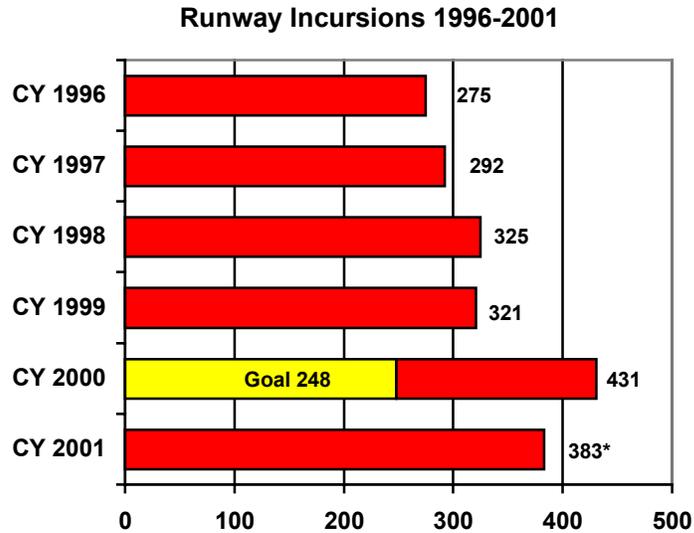
Before September 11, this past year was shaping up to be among the safest in U.S. aviation history. Before the terrorist attacks, we had not had a fatal accident involving a commercial aircraft. Since that time, we have had the crash of American Airlines Flight 587 in Queens, New York. The National Transportation Safety Board is determining the cause of the accident.

### **Runway Incursions**

This past year, FAA continued to focus on reducing runway incursions, incidents on the runway that can have very serious consequences. For example, FAA established a system to categorize each runway incursion by one of four levels of accident risk to focus on reducing the most serious incursions. In addition, FAA's full-time regional runway safety managers, appointed in October 2000, conducted approximately 100 safety evaluations of runways at specific airports. These initiatives are clearly steps in the right direction.

After a record high of 431 runway incursions in calendar year 2000, the number of runway incursions decreased to 383 in 2001, but the numbers are still much too high. On average, more than one runway incursion occurs every day. The most severe runway incursions, those runway incursions that barely avoid an accident, decreased from 67 in 2000 to 52 in 2001, but an average of one per week is still too many. While the numbers this past year have been encouraging, much of the

decrease in runway incursions occurred after September 11, when air traffic levels, especially in general aviation, declined.

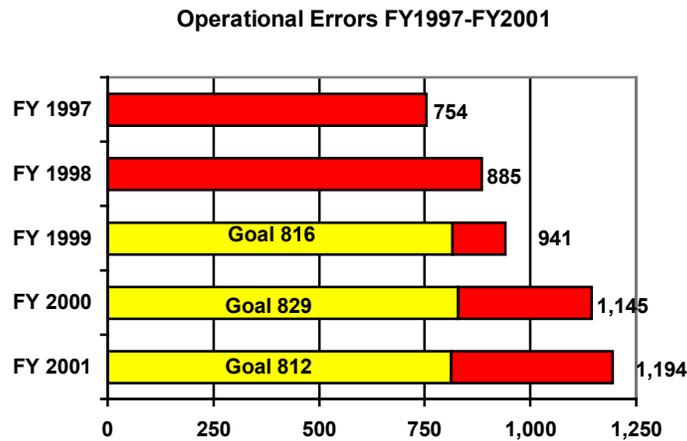


\* Starting in October 2000, FAA changed its goal to a fiscal year basis. FAA missed its goal for FY 2001 (no more than 243), by 67 percent, with 407.

To ensure that runway incursions continue to decrease when operations return to pre-September 11 levels, FAA needs to strengthen program accountability and expedite technologies to help pilots prevent runway incursions. FAA agreed with our recommendation made last June to strengthen program accountability and plans to implement a new oversight process by the end of June 2002 to ensure that various organizations complete runway incursion initiatives on time. FAA has not made a decision on our recommendation to expedite technologies such as the in-cockpit moving map displays and Automatic Dependent Surveillance Broadcast that have the most potential for reducing runway incursions.

**Operational Errors**

Operational errors, made by air traffic controllers, reached a record high of almost 1,200 incidents in FY 2001. Most operational errors occur in mid-air. We do not know how many were due to more rigorous reporting this past year, however, some were very serious. For example, from the end of April 2001 (when FAA began to identify the severity of each operational error) through January 2002, 52 of 796 operational errors were very serious. During the first 5 months of FY 2002, there were 413 operational errors, just barely below the 420 errors that occurred during the same period in FY 2001.



In April 2001, FAA and the National Air Traffic Controllers Association (NATCA) implemented our recommendation to identify the severity, or collision hazard, of each operational error to focus resources on preventing the most severe errors. FAA also established a full-time position to oversee regional efforts to reduce operational errors and issued guidance to improve regional operational

error reduction plans. While these are positive steps, FAA must continue to strengthen its national oversight.

### **Aviation Safety Inspection Programs**

We recently conducted two audits of aviation safety inspection programs and found that FAA was not holding carriers accountable for having effective systems in place to monitor and correct problems that could lead to unsafe conditions. Also, FAA had not completed implementation of its new inspection system that should identify weaknesses in air carrier systems. However, it is important to note that FAA and the aviation industry rely on a series of overlapping controls to ensure aircraft maintenance is performed properly. For example, air carriers rely on FAA-approved maintenance procedures, qualified mechanics, and their own inspector workforce to inspect and approve the repairs performed.

The January 2000 crash of Alaska Airlines Flight 261 focused attention on the potential impact of these oversight problems. Preliminary investigative results disclosed that the Alaska Airlines crash may have been caused by an aircraft maintenance problem. This maintenance problem was overlooked not only by the air carrier, in its internal maintenance monitoring system, but also by FAA, in its oversight of the carrier's maintenance programs.

FAA requires all air carriers to maintain internal systems, referred to as Continuing Analysis and Surveillance Systems (CASS), to monitor the quality of their maintenance work. FAA had not performed a review of Alaska Airlines internal maintenance review system in 2 years and was not conducting comprehensive reviews of these systems at other carriers. In some instances, FAA inspectors attended monthly maintenance meetings to meet annual CASS inspection requirements.

In other instances, when inspectors identified deficiencies in air carriers' maintenance systems, the problems were never corrected. For example, as far back as July 1998, FAA identified a pattern of problems related to one air carrier's use of improper aircraft repair procedures. These problems were not corrected and were identified again in FAA's July 2000 special inspection at the air carrier and cited again by FAA in October 2001.

In response to our audit report, FAA agreed to conduct comprehensive, annual inspections of air carrier internal maintenance review systems and develop a follow-up system to ensure that identified deficiencies are corrected. FAA also agreed to provide inspectors with better training and guidance for reviewing air carriers' internal maintenance review systems. The key now is to follow through.

We also reviewed FAA's progress in implementing its new system for monitoring all aspects of air carrier operations, the Air Transportation Oversight System (ATOS). ATOS should help target inspector resources and alert FAA to instances where critical airline safety systems are not working as intended; however, the system needs considerable refinement. FAA needs to finish developing its process for analyzing ATOS data and train inspectors in evaluating airline systems using the new approach.

When interviewed, 71 percent of inspectors said they had not had adequate training and 83 percent of the lead inspectors said the ATOS data were not adequate. Analysis of inspection data is a critical element of the system; yet, FAA is still working to refine the data collection and analysis process. Without this valuable element, FAA cannot successfully target its inspections to areas of the greatest safety risks.

When fully implemented, this new system should allow FAA to more effectively use its inspector resources. Instead of random inspection activities focused only on identifying compliance with regulations, ATOS will rely on analysis of data collected during inspections to focus inspection activities on areas within the carriers' operations that pose the greatest safety risks. However, 3 years after FAA initiated ATOS, the new system is not completed at any of the 10 major air carriers and much work remains to implement the system.

Within the last year, FAA has taken steps to address problems in ATOS and has made incremental progress, such as hiring staff to analyze ATOS data. However, to get the system operating as intended, FAA must complete implementation of the new system, provide critical inspector training, improve national oversight of the ATOS program, and must fully integrate ATOS into its oversight of the remaining air carriers. We will be reporting more on ATOS later this month.

### **Internal Investigations**

In response to a congressional request, we examined FAA's internal investigation of allegations that a Flight Standards District Office<sup>1</sup> (FSDO) wrongfully targeted a pilot for regulatory enforcement. The pilot later perished in a general aviation accident. We found a lack of objectivity and an underlying bias in favor of FSDO personnel—against whom the allegations were made—which compromise the integrity of FAA's investigation. This was the third investigation we recently conducted involving fatal general aviation accidents and alleged improprieties on the part of FSDOs. In the two prior cases, we found FSDO management did not recognize, adequately investigate, or remedy key FSDO deficiencies.

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<sup>1</sup> A FSDO is an FAA field office conducting activities including general surveillance of operational safety, certification, accident prevention, investigation, and enforcement.

## **Financing FAA**

Since the attacks of September 11, there have been steep declines in airline revenues and a sharp reduction in the amount of tax revenues available to fund FAA and its programs. Projected revenue from aviation taxes for FY 2003 have dropped from an estimated \$12.9 billion prior to September 11 to about \$10.3 billion currently. *FAA's budget request of \$14 billion exceeds this revenue base by nearly \$3.7 billion. Assuming no increase in aviation taxes, this level of funding will be required from the General Fund well into the out-years.*

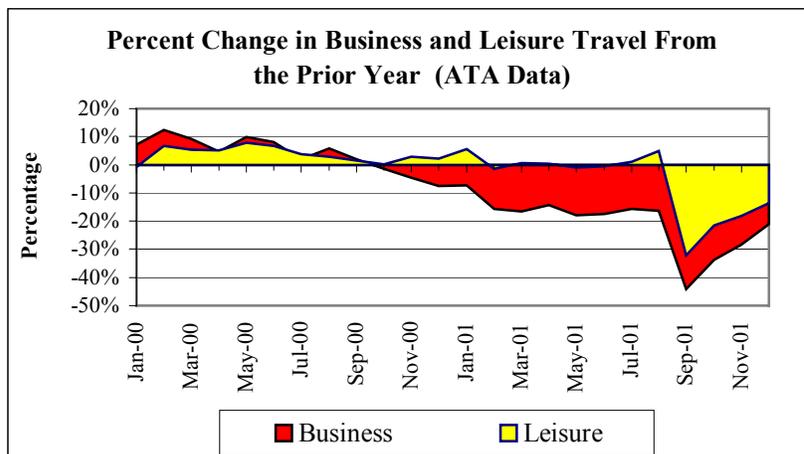
These additional requirements come at a time when the General Fund is already supporting vastly expanded fiscal needs throughout the Federal Government and underscore the urgency for FAA to begin operating more cost effectively, like any business. For FY 2003, FAA is requesting \$3.4 billion for the Airport Improvement Program, and \$3.0 billion for modernizing the air traffic control system, as required by AIR-21. FAA is also requesting \$7.5 billion for its operations. We have concerns regarding each of these accounts that FAA will need to address during FY 2003.

**AIRPORT IMPROVEMENT PROGRAM—FAA Must Aggressively  
Monitor Status of New Runways and Identify How Airport Funds Will Be  
Used in Light of New Security Requirements.**

Last year at this time, we were seeking solutions to the Nation's capacity and delay problems. Overall, air traffic is down, and the Department reported a significant reduction in the number of flight delays and cancellations in 2001. As we noted last August, these reductions were due to various factors including better weather conditions, no significant labor disruptions, FAA and airline efforts to improve communication and air traffic management, and more responsible scheduling by several of the major airlines. We found little evidence of diversion of hub traffic to medium sized airports with underutilized capacity.

So far, trends in 2002 point to further decreases, with January data showing a 28 and 61 percent decline in the number of arrival delays and cancellations, respectively. Attachment A contains vital statistics on delays, cancellations and the health of the industry. Air travel continues to be below last year's levels, with the major airlines reporting nearly a 17 percent reduction in the number of scheduled domestic flights in January 2002.

Moreover, as illustrated below, the number of business travelers (based on revenue passenger miles) decreased significantly faster than leisure travel during the first half of 2001, with large decreases in both categories after September 11. Overall, the Air Transport Association (ATA) reported that leisure and business travel dropped approximately 6 and 21 percent, respectively, in 2001. Preliminary passenger data from ATA indicate that January 2002 statistics show little or no improvement, with revenue passenger miles still down approximately 14 percent from the year before.



FAA projects that by 2004, passenger enplanements will return to pre-September 11<sup>th</sup> levels, and capacity will again be a concern. Being well positioned to respond to this demand relies on a combination of new runways, better air traffic technology, airline scheduling practices, and greater use of airports other than hubs. We are monitoring the construction progress for 14 major runway projects.

In December 2001, one of these airports was completed; however, others may experience shifts in their schedules.

While none of the runway projects have been cancelled, 2 airports have revised runway completion dates and 2 airports are reconsidering their plans. In addition, there are indications that a fifth airport may slip its date from 2005 to 2006 due to problems with a contract related to the runway construction. (See Attachment B for additional details on major runway projects.) FAA needs to continue to closely monitor progress with new runways by both visiting airports to verify information, including those airports that report they are on track, and reviewing runway project financial plans.

Close oversight is especially important now with the extraordinary demands that may be placed on airports to help fund the implementation of new security requirements. For example, while the Transportation Security Administration (TSA) will purchase and install new explosives detection devices, TSA is not budgeting funds to pay for any modifications that may be necessary to revamp airport terminals and/or baggage systems to accommodate this equipment. The cost to complete these modifications has not been determined; however, FAA has estimated that this process could cost as much as \$2.3 billion because some work is potentially necessary at 400 or more airports.

Questions persist as to where the money will come from to pay for security-related expenses. Airports have available to them two substantial funding sources that are typically used for airport development and improvements related to increasing capacity, but which could be used to pay for costs associated with airport security. Airports receive airport improvement funds provided by FAA's trust fund, and passenger facility charges, collected from taxes assessed on passenger tickets.

For FY 2003, FAA has requested \$3.4 billion for airports and this is the amount required by AIR-21. Although final figures for 2001 have not been determined, FA has estimated that airports will collect between \$1.5 billion and \$1.8 billion in passenger facility charges. FAA will need to approve how airports plan to use these funds. Careful analysis and planning will be necessary to determine which projects should be funded, and what amounts can be counted on for use toward the yet to be determined cost of new security requirements.

There are a lot of unknowns but it is important that a balance be maintained between funding security requirements and keeping important capacity projects on schedule. If the demand to use airport funds for security projects becomes too great, capacity projects could suffer serious delays. The basic issue becomes how much of the cost for security projects will be covered by airport improvement funds and passenger facility charges.

**Facilities and Equipment—FAA Must Improve Its Management of Major Acquisitions and Ensure That Air Traffic Modernization Efforts Are Delivered on Time and Within Budget.**

FAA is requesting about \$3 billion in FY 2003 to modernize the National Airspace System. FAA has made progress with a number of acquisitions, including Free Flight Phase 1, but must take more steps to better manage its acquisitions and control costs.

FAA issued about \$3 billion in cost-reimbursable contracts during FY 2001. Use of cost-reimbursable contracts is more risky for FAA because contractors generally have little incentive to control costs. Because of this, independent audits by the Defense Contract Audit Agency (DCAA) are to be made to determine whether costs claimed by contractors were incurred and allowable, and FAA is getting what it paid for.

Until 1996, funding for independent audits of contracts was included in the OIG budget. In 1996, FAA received 131 contract audit reports, which included 35 incurred-cost audits. After FAA took over responsibility for funding its contract audits, the number began to drop. By 1997, total audits dropped to 26 with no incurred-cost audits. In May 2000, the House Committee on Appropriations

Conference Report for the FY 2001 DOT Appropriations stated that the "... conferees did not transfer [audit] responsibility to the operating agencies for it to be neglected."

FAA began requesting more audits. Notwithstanding, we recently completed a review of FAA's oversight of cost-reimbursable contracts, and found that FAA exercised little oversight and lacked the basic information needed to properly pay and manage these more risky contracts. For 22 of the 32 contracts we reviewed, totaling \$2 billion, FAA did not obtain incurred-cost audits as required. When DCAA audits were performed, the reports identified significant unallowable costs. For example, two DCAA reports questioned about \$4 million of costs, including charges for unsupported consultant fees and hospitality payments to foreign officials. Many more audits are needed to ensure costs charged to FAA are appropriate and allowable.

FAA must do more to properly administer cost-reimbursable contracts. In addition to the lack of DCAA audits, we found that (1) over 1,400 contracts totaling \$6 billion were not closed timely, (2) contracting officers did not require contractors to submit final annual overhead rates and adjustment vouchers to determine appropriate payments, (3) often no evidence existed that contractors' accounting systems were adequate to properly account for cost-reimbursable

contracts, and (4) FAA searched for 6 months and could not locate 22 of the 54 contracts we selected for review.

FAA is developing a cost accounting system, and made good progress last year. FAA implemented the cost accounting system in its largest line of business, Air Traffic Services. FAA still needs to implement the cost accounting system in its other four lines of business. FAA also is developing its Cru-X labor distribution system that it plans to use to account for and distribute Air Traffic Services labor costs of about \$2.8 billion annually. But Cru-X has a serious flaw that must be corrected so that air traffic controllers cannot override the system's internal clock to record any start or stop work time. FAA needs effective cost accounting and labor distribution systems to better manage and control costs.

FAA is moving toward a performance-based organization, and is developing performance metrics. The metrics we have seen thus far are “outcome” based (i.e., airport efficiency rates and airport capacity levels). This is an important step in the right direction. However, like any business, FAA also needs to develop cost and schedule metrics to manage its multi-billion dollar modernization projects. This is especially important given that cost and schedule problems persist with major acquisitions. The following table shows cost growth and schedule slips over the years with five acquisitions:

- ✓ the Wide Area Augmentation System or WAAS (an effort to move to satellite-based navigation),
- ✓ the Standard Terminal Automation Replacement System, or STARS (new controller displays and computer equipment for terminal facilities),
- ✓ the Airport Surveillance Radar or ASR-11 (replaces aging analog radar at terminal facilities with digital radar),
- ✓ the Weather and Radar Processor or WARP (provides better weather products to air traffic control operations), and
- ✓ the Airport Movement Area Safety System, or AMASS (an aid for air traffic controllers to prevent runway accidents),

**Cost and Schedule Variances in Five Key FAA Modernization Programs**

Program	Estimated Program Cost (Dollars in Millions)		Implementation Schedule	
	Original	Current	Original	Current
WAAS	\$892.4	\$2,900.0 <sup>1</sup>	1998-2001	2003-TBD
STARS	\$940.2	\$1,690.2	1998-2005	2002-2010
ASR-11	\$752.9	\$916.2	2000-2005	2002-2008
WARP	\$126.4	\$155.4 <sup>2</sup>	1999-2000	2002-2002
AMASS	\$59.8	\$151.7	1994-1996	2001-2003

1: Costs are under review.

2: The current cost baseline is not realistic, and the schedule is at risk because it does not reflect the effort to resolve human factors, technical problems, and provide more timely weather updates to controllers.

- The *Wide Area Augmentation System (WAAS)* has a long history of cost increases, schedule slippages, and vexing technical problems. FAA is requesting \$110 million for FY 2003. The current cost estimate of \$2.9 billion is under review. WAAS was originally estimated to cost \$892 million and commence operations in 1998. FAA now expects to have WAAS operational in 2003 but this new satellite navigation system will provide less precision approach capability than initially promised. FAA must decide whether to stop WAAS development in 2003 or continue to refine the technology to meet more demanding precision approach capability known as a “Category I precision approach.”<sup>2</sup> In a separate effort, FAA is pursuing the Local Area Augmentation System specifically for precision approach capability and expects to field a production system in 2004.

FAA expects to make a decision this spring on how to proceed with WAAS. The benefits of WAAS have shifted over time (FAA will no longer realize cost savings from phasing out ground based systems) and general aviation users will be the principle beneficiary of WAAS. Large commercial carriers who have equipped aircraft with sophisticated avionics and/or flight management systems may find little benefit in equipping with WAAS.

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<sup>2</sup> Category I precision approaches provide for an approach to a height above touchdown of not less than 200 feet and visibility of ½ mile.

- FAA's *Standard Terminal Automation Replacement System (STARS)* is already 4 years late and is now estimated that it will cost approximately \$700 million over the original estimate of about \$1 billion. STARS will provide controllers in the terminal environment with color displays, processors, and computer software at 166 FAA facilities. FAA has spent over \$660 million on the STARS program but has only three early display configuration systems in operation, which provide new controller displays, but did not replace existing software. To put STARS spending in perspective, FAA has spent an average of \$8 million to \$9 million per month over the past 3 years on the STARS contract (i.e., the "burn rate") to develop, test, and deploy STARS.

The cost and schedule to complete full STARS remains at risk. Testing of STARS continues to identify critical problems (trouble reports). Currently, there are 739 open trouble reports, and the number of reports deemed "critical" has increased from 175 in September 2001 to 258 in March 2002. This puts the installation for the first site in November 2002 (Philadelphia) at risk because all critical trouble reports must first be corrected. Also, STARS is dependent on the new ASR-11 digital radar, which has experienced cost increases and schedule slips of its own. FAA has delayed its formal decision to place this radar in service until April 2003 because of delays in solving technical problems with the radar. FAA has now extended the STARS

deployment schedule by 2 years, through 2010, to align with the ASR-11 deployment schedule.

Over the past year, we have recommended that FAA identify all costs associated with deploying STARS including delivery, installation, and testing. These costs would include software development, additional contractor or personnel costs, and site specific infrastructure modifications. We also recommended that FAA to do a detailed cost and capability comparison to determine whether the existing terminal automation system (known as “Common ARTS”) should be used by FAA as a contingency plan in case of further delays to the STARS program. FAA has completed a detailed cost estimate through 2004 but has not provided estimates for the out years. While FAA acknowledged the need for a contingency plan, one was not provided.

- The *Weather and Radar Processor (WARP)* is expected to significantly improve the weather information on controller displays by providing accurate color graphics of weather on the same displays that controllers use to track aircraft, a capability that does not exist today. Since 1995, the estimated cost of the program has increased from \$227.8 million to \$276.8 million, or a 22 percent increase. The current plan is to begin using WARP on controller displays at the first site, the Dallas - Ft. Worth en route center, in July 2002, nearly a 3-year delay. Even with the cost increases and schedule delays, the

current cost baseline is not realistic and the schedule is at risk because it does not reflect the effort to resolve controller human factors and technical problems, fix high priority trouble reports, and provide more timely weather updates to controllers.

There are several projects that are early in the acquisition process that bear careful watching because of their complexity, importance, and potential for cost growth.

- The *En Route Automation Modernization (ERAM)* program replaces the en route computer hardware and software used to receive, process, and track high altitude air traffic (also known as the Host computer system). The Host mainframe computer was replaced to address Y2K and maintenance concerns but the software was not. ERAM is essential to ensure the maintainability of the Host computer and accommodate Free Flight technologies. FAA estimates the Host computer system will reach its end-of-service life in 2008 and that it will take approximately 7 years for a contractor to develop and deploy a replacement system. Costs are uncertain but could exceed \$1 billion. In June 2001, a General Services Administration judge upheld a contractor protest and ruled that FAA did not fully develop the program requirements before announcing its intent to award a single source contract. FAA intends to solicit vendor proposals by the end of March 2002. FAA has requested \$70.4 million

for ERAM in FY 2003 and total program costs to complete the project could exceed \$1 billion.

- FAA's *Telecommunication Infrastructure (FTI)* replaces ground-to-ground owned and leased communications networks. The FTI project was initially established to replace six FAA networks with one integrated digital communications network to better support modernization efforts. FAA has requested \$46.6 million for FY 2003 and estimates total project costs of \$1.9 billion over 10 years. The current cost estimate of \$1.9 billion may not be reflective of all the costs associated with the effort. In August 2001, we reported that the initial FTI design would significantly increase air traffic control systems vulnerability to unauthorized intrusion because critical systems would share the same network with administrative (such as accounting) systems with direct connections to the Internet. Based on our recommendations, FAA amended its FTI requirements in December 2001 to replace air traffic control networks only. FAA is currently evaluating revised proposals submitted by three vendor groups and now plans to award a contract by June 2002.
- *Sustain and Improve Long Range Radar.* In light of September 11<sup>th</sup>, FAA must now keep long range radar to help track aircraft (with or without transponders) and close gaps in radar coverage at a cost of billions of dollars.

Costs will be shared with the Department of Defense. The majority of these radars have been in operation for over 20 years with some approaching 40 years of service. These radars have outlived their planned service life and require immediate refurbishment or replacement. Currently, FAA and the Department of Defense do not have a detailed, agreed upon plan to address the requirements, cost, or schedule of this effort.

- *Modernizing the Nation's Facilities that Manage International Airspace.* The United States is responsible for providing air traffic control services to aircraft operating in large segments of airspace over the Pacific and Atlantic Oceans. In June 2001, FAA awarded a firm fixed price contract of \$217 million to Lockheed Martin for the Advanced Technologies and Oceanic Procedures (ATOP) effort to provide a new oceanic system at FAA's Anchorage, New York, and Oakland oceanic facilities. FAA has requested \$87.4 million for FY 2003 and intends to have new systems up and running in Oakland by April 2003. At this juncture, Lockheed Martin faces a challenge completing complex software development on time. The software delivery schedule has slipped up to 4 months because the contractor underestimated work needed to meet FAA requirements. Given the international dimensions of this effort, it is important that FAA keep this modernization effort on track.

A common thread that runs through many FAA reform efforts is to bring more accountability with respect to delivering modernization projects on time and within budget, providing more efficient services, and controlling costs. In the spring of 2000, the Wendell H. Ford Aviation Investment and Reform Act for the 21<sup>st</sup> Century established a Management Advisory Council (with a subcommittee to oversee air traffic services) and a Chief Operating Officer.

It has been 2 years now since the legislation, and a Management Advisory Council and an Air Traffic Control Subcommittee have been established. However, a Chief Operating Officer, responsible for negotiating a performance agreement with the FAA Administrator, has not been appointed. It is unclear if FAA will be able to fill this position prior to the end of the Administrator's term which expires this summer.

**Operations—FAA Must Identify Ways To Reduce Operating Costs in Light of Reduced Revenue.**

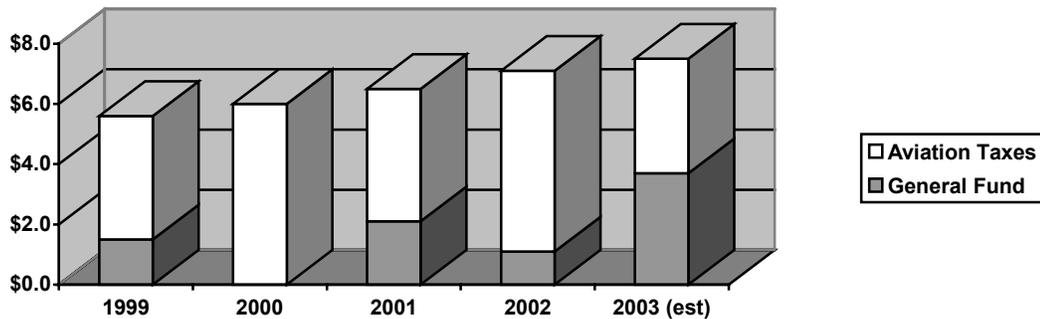
The steep decline in Trust Fund revenues will have significant implications for FAA's operations funding. AIR-21 gives priority to FAA's AIP and F&E accounts by requiring that revenue from the Trust Fund be allocated to those accounts before allocating any revenue to FAA's operating budget. If Congress follows AIR-21 requirements and funds FAA's AIP and F&E accounts at the

authorized levels, there will be significantly less revenue left to fund FAA's operations because revenue from the Trust Fund is much lower this year than in prior years.

In the past, Congress has drawn on the General Fund or the uncommitted balance of the Aviation Trust Fund to bridge shortfalls. However, the shortfall in FY 2003 will be more significant than in past years. As shown in the following graph, the General Fund contribution needed for FY 2003 will be the highest in 5 years.

### FAA Operations Funding Sources FY 1999 - FY 2003

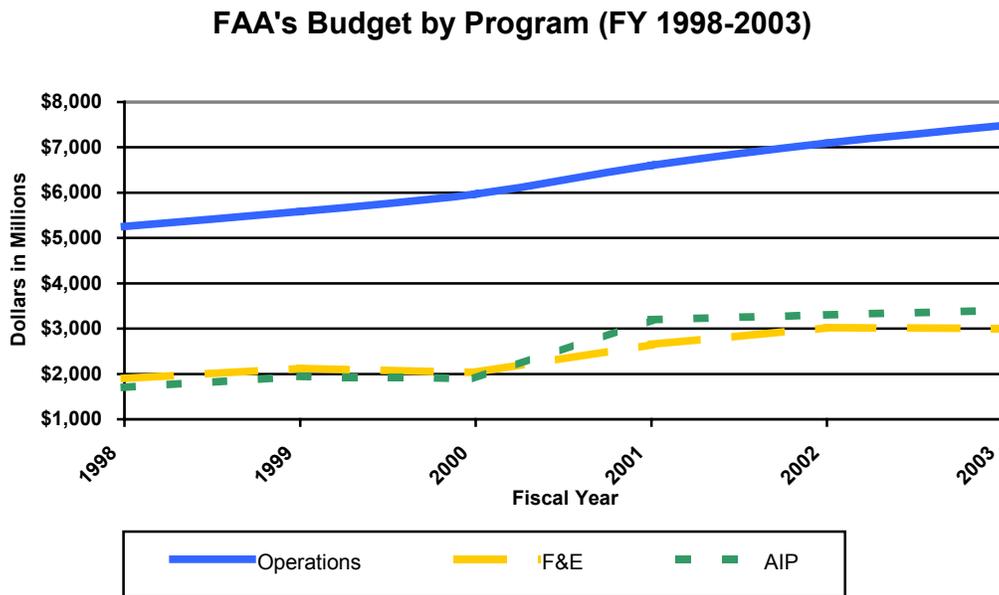
(\$ in billions)



The increased General Fund requirements underscore the need to control FAA's operating costs. FAA's operations account will have to compete with other critical Government programs for resources during a period when priority is being given

to the vastly higher and unanticipated security needs. The need for FAA to control its operating costs is now more critical than in the past.

FAA's operating budget, which is 73 percent payroll costs, has increased over the past 5 years at a significant rate. As shown in the following graph, FAA's operating budget has increased from \$5.3 billion in 1998 to \$7.5 billion in FY 2003 - significantly outpacing any increases in the agencies other accounts.



Much of the increase in operating costs is from salaries driven by collective bargaining agreements negotiated under FAA's personnel reform legislation. For example, the 1998 agreement with NATCA, which created the new pay system for controllers, was a significant cost driver requiring nearly \$1 billion in additional funding over its 5-year life. In FY 2003, the current agreement will expire, and

FAA and NATCA will have to enter into negotiations over a new agreement. A key issue for FAA in those negotiations will be to analyze proposals from a cost perspective to ensure that the new agreement is cost neutral and that any negotiated workplace changes produce anticipated cost savings.

There are opportunities that could help offset FAA's operating costs while maintaining safety and system efficiency. We previously identified several such cost-saving measures. For example, we identified that FAA could save at least \$500 million over 7 years by consolidating automated flight service stations in conjunction with deployment of new flight service software. We also identified that FAA could save over \$57 million annually by expanding the contract tower program to 71 visual flight rule towers still operated by FAA. Clearly, these actions are controversial among certain groups, however, given the current fiscal issues facing FAA, the agency needs to objectively consider these and other cost-saving measures from a business perspective.

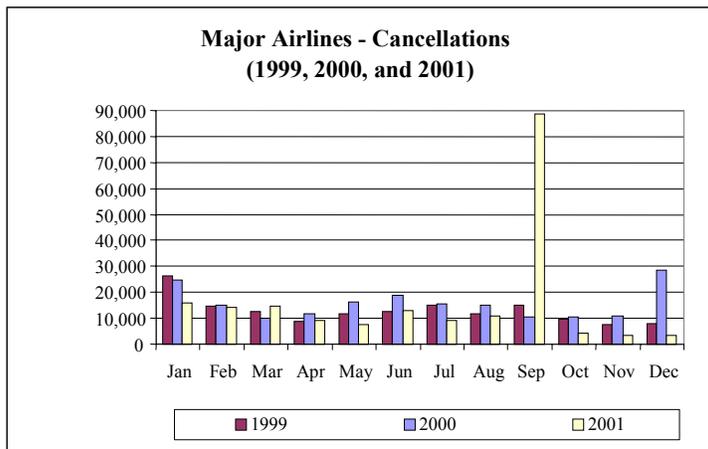
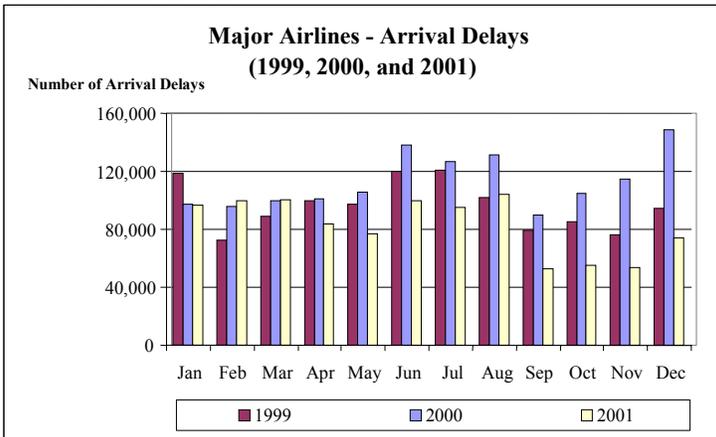
Mr. Chairman, let me conclude by saying that given the budgetary pressures that now exist throughout the Federal Government, options for meeting FAA's financial requirements are for the agency to operate within existing revenues or for revenue to be increased. Consumers already pay a significant amount in aviation taxes and fees.

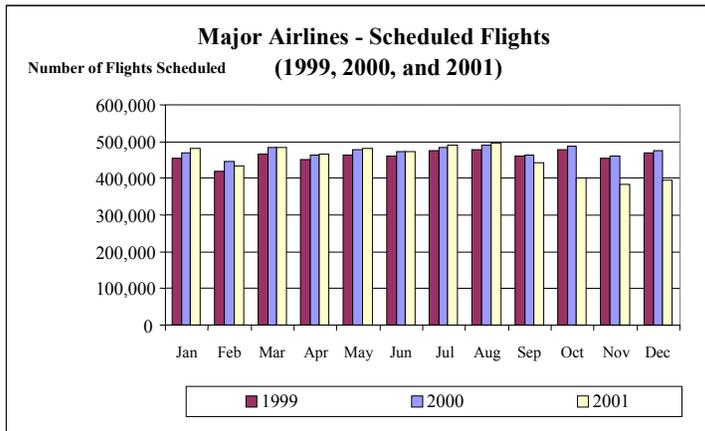
For example, on round-trip tickets costing between \$150 and \$300, passengers pay between \$31 and \$42 in taxes and passenger facility charges. For connecting flights, the taxes on the \$150 to \$300 tickets would be \$51 to \$62. Raising taxes even beyond the current level could have implications on the aviation industry's attempts to improve yields and return to profitability.

That concludes my statement, Mr. Chairman, I would be happy to address any questions you or other members of the Subcommittee might have.

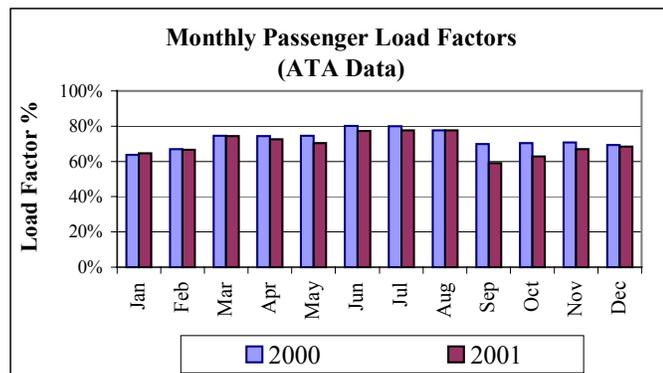
**Statistics on Delays, Cancellations, and Financial Health of the Industry**

We reported that delays and cancellations had fallen during the first half of 2001 compared to those of the prior 2 years. At that time, we noted that these reductions were due to various factors, including better weather conditions, no significant labor disruptions, FAA and airline efforts to improve communication and air traffic management, and voluntary schedule adjustments by several of the major airlines. The slowing economy, combined with September 11, however, only served to accelerate the decline--as illustrated by the following figures and related statistics.





- During 2001, 22 percent of flights scheduled by the 9 major airlines<sup>3</sup> were delayed, canceled, or diverted, affecting an estimated 102 million passengers. In comparison, 27 percent of scheduled flights in 2000 were similarly impacted, affecting an estimated 163 million passengers.
- Arrival delays decreased nearly 27 percent (1,355,176 to 991,401) between 2000 and 2001. While cancellations increased about 4 percent in 2001, nearly half of all the cancelled flights (88,545) occurred in September.<sup>4</sup> If September's figures are excluded from the calculation, cancellations would have dropped 40 percent (176,952 to 105,782) for the remaining 11 months of the year.
- Not only were there fewer delays, but those occurring were shorter in duration. Of those flights arriving late, the average delay was about 49 minutes in 2001—a decline of over 3 minutes from the average in 2000.
- We found that the number of vacant seats has increased from last year. The average load factor (number of passenger seats filled) was down during 2001 for all months except January—as illustrated in the chart. Overall, the major airlines reported an average load factor of 70.3 percent in 2001—2.5 points lower than the overall average in 2000.



<sup>3</sup> Includes Trans World Airlines, which was purchased by American Airlines in 2001.

<sup>4</sup> Many of these cancellations occurred as a result of the September 11<sup>th</sup> terrorist attacks and the resulting shutdown of the National Aviation System.

**Attachment B**  
**1 of 2**

**Status of 14 Major Runway Projects as of February 2002**

(Information Provided by FAA and Airports)

<b>Airport</b>	<b>Estimated Completion Date</b>	<b>Phase(s)</b>	<b>Cost Estimate (Millions)*</b>	<b>Challenges to Timely Completion (as provided by the airport)</b>
<i>Detroit</i>	<i>2001</i>	<i>Commissioned December 11, 2001</i>	<i>\$231</i>	✓ <i>None. Runway completed.</i>
Miami	2003	Construction	\$206	✓ None cited.
Orlando	2003	Construction	\$203	✓ None cited.
Houston	2003**	Construction	\$260	✓ Construction difficulties associated with a landfill.
Denver	2003	Construction	\$162	✓ Obtaining FAA funding approval for paving and lighting project components. ✓ FAA follow-through on commitments to fund, design, and install NAVAIDs.
Minneapolis	2004***	Construction	\$510	✓ Cooperation between Federal and state permitting and approval agencies. ✓ Construction weather delays. ✓ Contractor ability to carry large bonds and complete existing contracts on time after unexpected accidents, labor actions, work force problems, and material shortages. ✓ Financial status of hub air carrier.
Charlotte	2004	Land Acquisition	\$187	✓ Obtaining sufficient Federal funding to retire debt from runway land acquisition. ✓ Financial status of hub air carrier.
Atlanta	2005	Construction	\$1,200	✓ Obtaining fill material for the runway. ✓ Local authorities' relocation of existing road, utilities, and NAVAIDs. ✓ FAA funding and installation of NAVAIDs. ✓ FHWA and Georgia DOT design concurrence on runway support structures for the runway portion that extends over I-285.
Boston	2005	Environmental	\$102	✓ Public and political opposition, including lawsuits from opposing groups and organizations. ✓ Lengthy EIS process.
Cincinnati	2005	Environmental	\$240	✓ Beginning construction by March 2002. ✓ Timely land acquisition.

\* Estimates were provided by airport authorities.

\*\* Houston has slipped the runway completion date from April to October 2003 because of construction difficulties associated with a landfill.

\*\*\* Minneapolis has slipped its completion date by a year from 2003 to 2004 because of the economic impacts of September 11.

**Status of 14 Major Runway Projects as of February 2002 (continued)**  
***Information Provided by FAA and Airports***

<b>Airport</b>	<b>Estimated Completion Date</b>	<b>Phase(s)</b>	<b>Cost Estimate (Millions)</b>	<b>Challenges to Timely Completion (as provided by the airport)</b>
St. Louis	2006	Construction	\$1,100	✓ None cited.
Seattle	2006	Environmental and Construction	\$773	<ul style="list-style-type: none"> <li>✓ U.S. Army Corps of Engineers permit for wetland fills.</li> <li>✓ Pending citizen lawsuits.</li> <li>✓ Competing demands on FAA funding, equipment, and personnel.</li> </ul>
Dulles	2007	Planning	\$252	✓ None cited.
Dallas/ Fort Worth	Unknown****	Planning	\$350-450	✓ Timely completion of the EIS and adoption of a rigorous project schedule.

\*\*\*\* Last year, Dallas Ft.-Worth had an estimated date of 2007, but now the date is unknown because of uncertainty regarding the runway configuration that would be best.