
Office of Inspector General

***Federal Aviation Administration's
Financing and Cost Control***

Report Number: AV-1999-066

Date Issued: March 22, 1999





**U.S. Department of
Transportation**

Office of the Secretary
Of Transportation

Office of Inspector General

Memorandum

Subject: INFORMATION: Federal Aviation
Administration: Financing and Cost Control
AV-1999-066

Date: March 22, 1999

From: Kenneth M. Mead
Inspector General

Reply to JA-10 x60500
Attn of:

To: Federal Aviation Administrator

On March 9, 1999, at a hearing of the Subcommittee on Transportation and Related Agencies, Committee on Appropriations, U.S. House of Representatives, we provided testimony on financing and cost control issues facing the Federal Aviation Administration (FAA). A copy of our statement is attached for your information.

Specifically, our statement addressed (1) financing FAA, (2) operations costs and their implications for other critical agency functions, and (3) actions needed to improve fiscal management and accountability within the agency.

As you are aware, recent proposals have recommended alternative methods for financing FAA. These proposals include shielding the agency from discretionary caps and creating budgetary firewalls that guarantee floors for spending on FAA programs. We testified that FAA would be able to meet its annual budgetary requirements under these proposals, at least through Fiscal Year (FY) 2004, without user fees or a contribution from the General Fund if it has access to all the Aviation Trust Fund revenue, interest, and uncommitted carryover balance. However, without access to the uncommitted carryover balance or interest earned on the Trust Fund, FAA would not meet its budgetary requirements as early as FY 2000 because FAA's expenditures would exceed Trust Fund revenues by about \$1 billion.

We testified that regardless of the method and mix chosen by Congress to finance FAA, the agency must do more to control operations costs. Operations costs represent the largest portion of FAA's budget, growing at an average rate of 6.2 percent a year over the past 3 years. Operations costs will increase

further as a result of the new pay system for air traffic controllers which will require approximately \$1 billion in additional funding over 5 years beginning in FY 1999. These additional costs take into account productivity gains that FAA was able to quantify, such as savings from reducing the number of supervisors. However, other cost savings, such as reducing overtime by better matching controller staffing to air traffic patterns, have not yet been quantified.

In our opinion, it is important that FAA quantify, to the extent practical, productivity gains included in the new pay system in order to determine if the \$7.6 billion projected for operations in the outyears (FY 2004) will be sufficient or could potentially be reduced. Determining the extent and amount of offsetting productivity gains is even more important since similar pay systems may be developed in current negotiations with FAA's two other largest national unions.

We also testified that FAA faces significant risks in meeting operations cost increases while, at the same time and within the projected revenue base, funding other agency requirements such as its modernization program or airport capital improvements. Due to budget constraints and rising costs of operations, those programs have seen their funding levels either reduced or held relatively constant. For example, FAA's Operations account is projected to grow from 54 percent of FAA's total budget (for the period 1990 through 1999), to over 61 percent of FAA's total budget (for the period 2000 to 2004) at the expense of the Facilities and Equipment; Airport Improvement Program; and Research, Engineering, and Development accounts.

Rising costs of operations may be even greater than reported because activities normally related to operations are, in some cases, financed using Facilities and Equipment (F&E) funds. F&E funds are used to finance many operations-related activities, including salaries, employee relocations, and new system maintenance.

Lastly, we testified on the importance of FAA controlling costs to stay within budgets. Improvements in fiscal management and management accountability will help mitigate significant funding shortfalls, such as the approximately \$284 million operations funding shortfall FAA is currently facing. The funding shortfall in FY 1999 illustrates the potential impact that uncontained operations costs will have on other critical agency functions and missions. It further serves to illustrate the need for FAA to develop realistic cost projections and determine offsetting productivity gains in order to monitor and control costs against predetermined budgets.

Regardless of whether or not a cost-based user fee system is implemented, FAA must develop the fiscal and management tools it needs to operate like a business. These include good financial data and reports, a reliable cost accounting system, and performance-based human resource systems and policies. We recognized that FAA is well aware of these needs and is working hard to address them.

Our previous reports on FAA's efforts in personnel reform, financial reporting, and implementing a cost accounting system made specific recommendations addressing the issues we discussed in our testimony. These include (1) identifying the expected outcomes of new personnel reform initiatives and developing a means for measuring their results, and (2) developing a means for substantiating acquisition costs of real property and equipment to ensure a clean (unqualified) financial opinion. We believe the recommendations made in those reports appropriately address the concerns we raised in this testimony. Therefore, our testimony does not contain new recommendations.

If I can answer any question or be of further assistance, please feel free to contact me at (202) 366-1959 or my Deputy Inspector General, Raymond J. DeCarli at (202) 366-6767.

Attachment

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**Before the Subcommittee on
Transportation and Related Agencies,
Committee on Appropriations,
U.S. House of Representatives**

For Release on Delivery
Expected at
10:00 a.m. EST
Tuesday
March 9, 1999
Report Number: AV-1999-066

Federal Aviation Administration: Financing and Cost Control

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

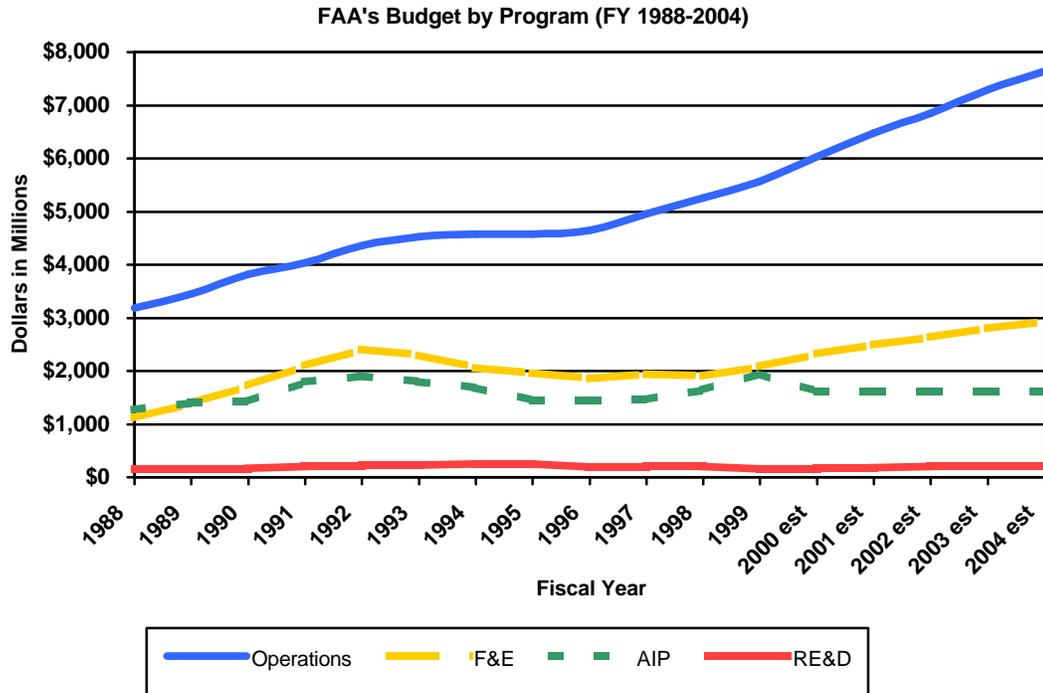


Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to testify today on financing and cost control issues within the Federal Aviation Administration (FAA). Various proposals have recommended a more stable source of funding for the agency by seeking alternative means or techniques of financing FAA. Regardless of the final policy decisions made on FAA's financing system, FAA must achieve cost control over its Operations and modernization budgets and hold managers accountable for achieving results.

FAA's budget has increased nearly 70 percent from Fiscal Year (FY) 1988 to 1999. Based on FAA's estimates, by the year 2004 these requirements will be over \$12 billion, or 27 percent greater than FY 1999. FAA's budget requirements continue to increase largely due to the rising costs in FAA's Operations account. This account represents 57 percent of FAA's FY 1999 budget and is expected to grow to nearly \$7.6 billion, or about 62 percent of FAA's budget, by FY 2004.

Due to budget constraints and rising costs of operations, other programs have seen their funding levels either reduced or held relatively constant. For example, FAA's Facilities and Equipment (F&E) account has declined from 27 percent of FAA's total budget in FY 1992 to 21 percent in FY 1999.



In addition, FAA faces significant risks in meeting all operations cost increases within the projected revenue base. For example, FAA is currently facing a funding shortfall of approximately \$284 million in its FY 1999 Operations budget which will require cuts in both safety and non-safety programs.

An important message of our testimony today is that regardless of the financing alternatives adopted by Congress, a stable source of funding for FAA is only part of the solution. Over the years, we have reported on the need for FAA to strengthen controls over its operations and modernization costs, and develop human resource systems and policies that are based on accountability for achieving results. Our statement today will address:

- proposed changes in financing FAA activities and airport infrastructure needs;
- increases in operations costs that will need to be contained in order to fund other critical agency functions; and
- actions needed to improve fiscal management and accountability within the agency.

Proposed Changes in Financing FAA Activities and Airport Infrastructure Needs.

Recent proposals have recommended alternative methods for financing FAA by granting the agency more liberal budgetary treatment. These proposals include shielding the agency from discretionary caps and creating budgetary firewalls that guarantee floors for spending on FAA programs. This type of budgetary treatment would, in essence, allow FAA access to all revenue generated by the Airport and Airway Trust Fund, thus linking aviation revenue to aviation spending. Presumably, FAA would still be subject to the Appropriations process, but the dollars appropriated would not have to compete with funding demands for other agencies such as the Coast Guard or Amtrak.

Financing Proposals Could Meet FAA's Short Term Needs. We estimate that FAA would be able to meet its estimated annual budgetary requirements at least through FY 2004 without user fees or a contribution from the General Fund by having access to all Trust Fund revenue, interest, and the uncommitted carry over balance. This estimate is based on the Administration's proposed revenue and expenditures, which could change substantially during the agency's upcoming reauthorization cycle.

However, FAA may not be able to rely on the uncommitted Trust Fund balance¹ for future funding. For example, when the Federal Highway Administration (FHWA) received similar budgetary treatment under provisions of the Transportation Equity Act for the 21st Century (TEA-21)², Congress reduced the beginning balance in the Highway Trust Fund and restricted the agency from earning interest on the Fund. Without access to the uncommitted carryover balance, or interest earned on the Aviation Trust Fund, FAA would be unable to meet its budgetary requirements as early as FY 2000 because the agency's expenditures exceed projected revenue.

As shown in the following table, FAA projects that revenue generated through excise taxes will total \$52 billion in FYs 2000 through 2004³, while expenditures for the same period will total \$56.3 billion - a net shortfall of \$4.3 billion. This shortfall could be larger if Congress funds F&E or Airport Improvement Program (AIP) accounts at levels higher than budget estimates. We expect that during FAA's reauthorization cycle this year F&E and AIP funding levels will exceed the Administration's estimates. In that case, FAA would have to receive contributions from the General Fund, impose user fees, and/or request an increase in aviation excise taxes.

**Estimated Effect of Proposed Budgetary Treatment
FY 2000 Through FY 2004
(\$ in billions)**

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	Total
Excise Taxes	\$9.2	\$9.7	\$10.4	\$11.0	\$11.7	\$52.0
Operations	\$6.0	\$6.5	\$6.8	\$7.3	\$7.6	
F&E	\$2.3	\$2.5	\$2.6	\$2.8	\$2.9	
AIP	\$1.6	\$1.6	\$1.6	\$1.6	\$1.6	
RE&D	<u>\$0.2</u>	<u>\$0.2</u>	<u>\$0.2</u>	<u>\$0.2</u>	<u>\$0.2</u>	
Total						
Expenditures	\$10.1	\$10.8	\$11.2	\$11.9	\$12.3	\$56.3
Shortfall	(\$.9)	(\$1.1)	(\$.8)	(\$.9)	(\$.6)	(\$4.3)

Based on the Administration's proposed revenues and expenditure excluding user fees.

¹ FAA estimates that the Trust Fund will have an uncommitted carry over balance of \$6.7 billion at the close of FY 1999. This balance is largely a result of General Fund contributions to FAA's Budget and interest earned on the Trust Fund. Over the last 3 years, the General Fund has contributed an average of 31 percent of FAA's budget.

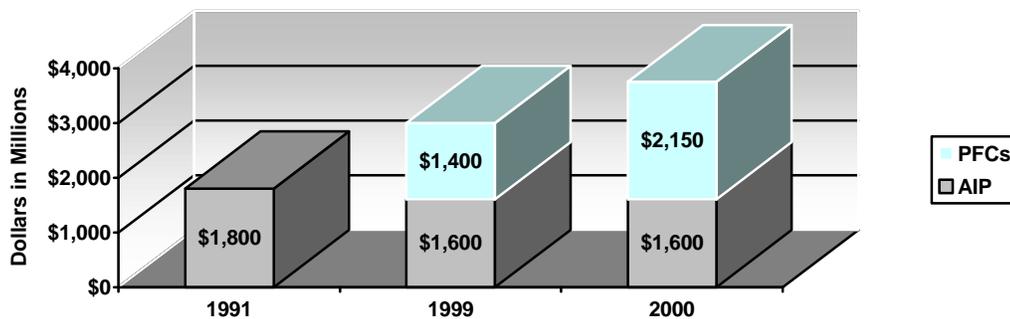
² Under provisions of TEA-21, FHWA is funded via the Highway Trust Fund with no contribution from the General Fund. The Federal Transit Administration (FTA), on the other hand, still relies on General Fund contribution.

³ Excise taxes, which consist of passenger ticket taxes, passenger flight segment taxes, international arrival/departure taxes, frequent flyer taxes, waybill freight and mail taxes, and various fuel taxes represent the majority of FAA's current revenues.

Funding Airport Infrastructure Needs. Another issue that will be addressed in FAA's Reauthorization Bill is the Administration's proposal to raise passenger facility charges (PFCs). Although not deposited in the Trust Fund, PFCs have increasingly represented a significant source of funding for airport improvements since being enacted in 1992. FAA estimates that for calendar years 1998 and 1999, PFC collections will be between \$1.3 and \$1.4 billion each year.

Under the Administration's proposed change, airports could raise the per passenger PFC rate from \$3 to \$5 and raise the corresponding cap per trip from \$12 to \$20. FAA estimates that the proposed change could result in PFC collections of about \$2.2 billion per year (an \$800 million increase over current PFC collections). However, it is unlikely that passengers will make a distinction between PFCs and excise taxes. Currently, passengers already pay an 8 percent ticket tax on the base price of a ticket and a \$2 tax per segment flown.

AIP and PFC Levels

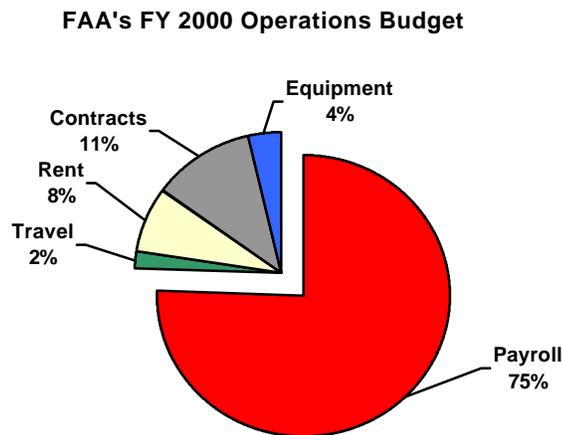


The President's Budget for FY 2000 also assumes collection of approximately \$7 billion in user fees with \$1.5 billion of these fees being collected in FY 2000. However, in our opinion, implementation of a cost-based user fee system by FY 2000 is highly optimistic. First, the proposed user fee system will require a sophisticated cost accounting system to be in place and operating. Second, the system must have accurate and complete underlying data. Third, the system must fairly allocate costs among users. FAA has much work to do to accomplish these tasks. FAA is in the process of developing the required cost accounting system but does not anticipate it to be fully operational in all lines of business until March 2001. Regardless of whether or not user fees are adopted, FAA needs a good cost accounting system to make sound management decisions such as identifying which systems are too expensive to operate.

Increases in Operations Costs Will Need to be Contained in Order to Fund Other Critical Functions.

Regardless of the method and mix chosen by Congress to finance FAA, it is critical that the agency do more to control the costs of its operations. Operations costs represent the largest portion of FAA's budget, growing at an average rate of 6.2 percent a year over the past 3 years. In comparison, the U.S. Coast Guard's operations budget has grown at an average rate of 3.2 percent during the same period.

Operations costs are primarily payroll driven, representing 75 percent of FAA's Operations budget. Since 1994, FAA's payroll costs have increased by 21 percent, although the number of on-board employees has increased by only 3 percent over the same period. This is primarily due to Government-wide cost-of-living increases and the high-grade levels of FAA's safety-related workforces. FAA estimates that for FY 2000, payroll costs will exceed \$4.5 billion, or approximately 9 percent more than FY 1999.



Operations costs will increase further as a result of a new pay system for air traffic controllers. The new system bases controller pay on the complexity of the operations they manage as well as the volume of air traffic they control. The new system should allow the agency to attract and retain qualified personnel at key locations. However, the costs associated with the new system will be significant. FAA estimates that the new pay system will require approximately \$1 billion in additional funding over 5 years beginning in FY 1999. These additional costs take into account productivity gains that FAA was able to quantify, such as savings from reducing the number of supervisors. However, other cost savings, such as reducing overtime by better matching controller staffing to air traffic patterns, have not yet been quantified.

In our opinion, it is important that FAA quantify, to the extent practical, productivity gains included in the new pay system in order to determine if the \$7.6 billion budgeted for operations in the outyears (FY 2004) will be sufficient or could potentially be reduced. Determining the extent and amount of offsetting productivity gains is even more important since similar pay systems may be developed in current negotiations with FAA's two other largest national unions.

Recognizing this fact, this Subcommittee directed FAA to submit a report by December 31, 1998, explaining in detail the dollar impact in FY 1999 and the programs and activities being reduced or deferred in FY 1999 to finance the new agreement. As of March 5, 1999, the report was in the final steps of executive review and had not yet been filed.

Payroll is not the only expense increasing FAA operations costs. For example, FAA estimates that National Air Space (NAS) Handoff requirements⁴ by FY 2000 will increase 67 percent over FY 1998 requirements because of variations in the type, number, and costs of new systems coming on-line. As more systems are commissioned, FAA will require more funding for NAS Handoff activities.

Rising Operations Costs Crowd Out Other Critical Agency Functions. FAA faces significant risks in meeting operations cost increases while, at the same time and within the projected revenue base, funding other agency requirements such as its modernization program or the AIP. Operations cost increases have already begun "crowding out" other critical agency functions.

For example, in the President's FY 2000 Budget, the Administration increased FAA's Operations budget for FYs 2000 through 2003 by \$1.1 billion over the President's FY 1999 Budget submission for that same period. The Operations budget was increased even though FAA's total budget for that period was reduced by over \$400 million. As illustrated in the table below, this increase was funded by reducing (or crowding out) F&E, AIP, and RE&D budgets for the period by \$900 million, \$400 million, and \$200 million, respectively.

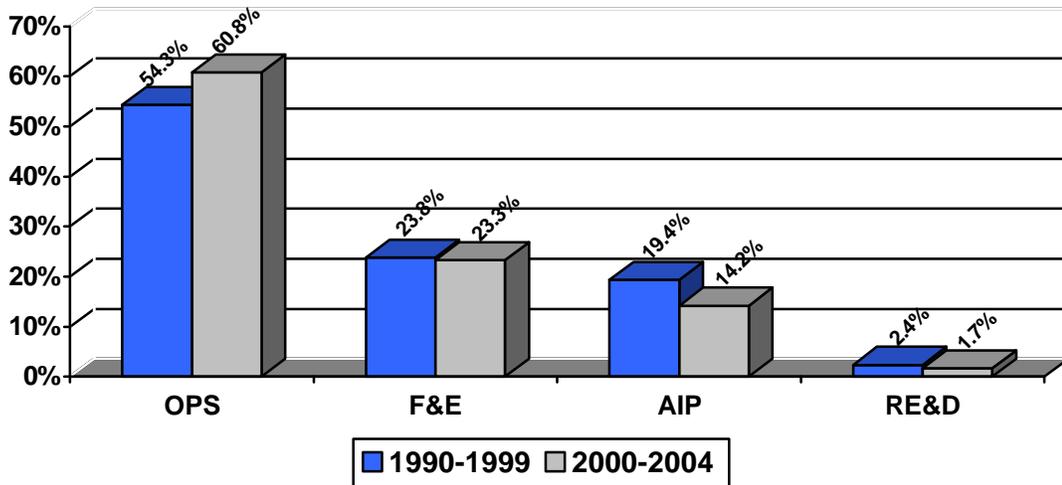
⁴ NAS Handoff costs are the costs of maintaining a system after it has been commissioned -- essentially handing off funding for the system from F&E to Operations. These costs are in addition to the operating and maintenance costs associated with existing systems that have not been replaced or phased out.

**Revised Proposed Funding Levels
For the Period FY 2000 Through 2003
(\$ in billions)**

FY 1999 President's Budget Proposal	FY	Operations	F&E	AIP	RE&D	TOTAL
	2000	\$5.9	\$2.4	\$1.7	\$0.3	\$10.3
	2001	\$6.2	\$2.6	\$1.7	\$0.3	\$10.8
	2002	\$6.5	\$2.9	\$1.7	\$0.2	\$11.3
	2003	\$6.8	\$3.2	\$1.7	\$0.2	\$11.9
		\$25.4	\$11.1	\$6.8	\$1.0	\$44.3
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FY 2000 President's Budget Proposal	FY	Operations	F&E	AIP	RE&D	TOTAL
	2000	\$6.0	\$2.3	\$1.6	\$0.2	\$10.1
	2001	\$6.4	\$2.5	\$1.6	\$0.2	\$10.7
	2002	\$6.8	\$2.6	\$1.6	\$0.2	\$11.2
	2003	\$7.3	\$2.8	\$1.6	\$0.2	\$11.9
		\$26.5	\$10.2	\$6.4	\$0.8	\$43.9
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DIFFERENCE		\$1.1	(\$.9)	(\$.4)	(\$.2)	(\$.4)

Operations costs will continue to crowd out other critical agency functions. As shown in the following graph, the Operations portion of FAA's total budget from 2000 through 2004 is forecast to grow at the expense of the F&E, AIP, and RE&D budgets.

Percentage of FAA's Total Budget by Appropriation



Rising costs of operations may be even greater than reported because activities normally related to operations are, in some cases, financed using F&E funds. F&E funds are used to finance many operations-related activities, including salaries, employee relocations, and new system maintenance. For example, maintenance costs for newly commissioned systems are charged to F&E for up to 1 year following the year of commissioning. Although FAA procedures permit this method of accounting, the method understates the true cost of operations.

Using F&E funds for these activities also influences the amount of funds available for new systems and equipment. For example, in FY 1999 the Department plans to pay for the Essential Air Service Program⁵ by reprogramming or switching \$50 million from F&E funds.

Furthermore, unexpected factors (such as schedule slippages and unanticipated cost increases in acquisitions) reduce F&E funds available for other NAS projects which in turn further delays FAA's overall modernization efforts. FAA's modernization program has historically experienced cost overruns and schedule delays of large proportions.

FAA has recently had some success in fielding new systems on schedule, such as the Display System Replacement. Further, new HOST computers have been delivered to 19 centers, and controllers at 10 of those centers are now using them to control air traffic on a full-time basis. However, recent acquisitions critical to FAA's NAS modernization efforts are experiencing problems with software development and human factors issues with associated schedule slippage and cost growth. These unanticipated costs must come from F&E funds initially targeted for other NAS projects.

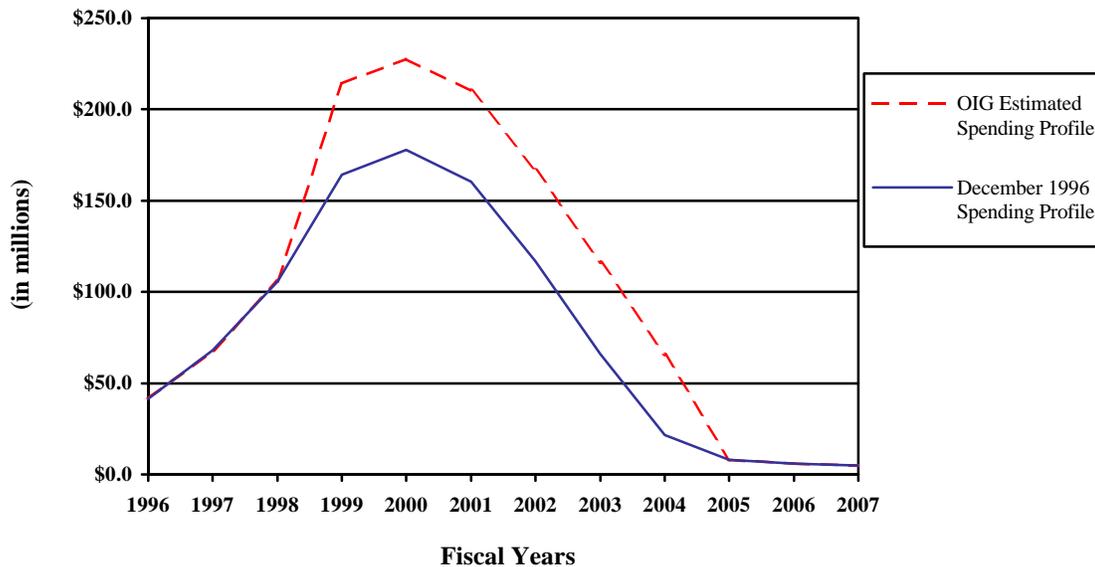
- Wide Area Augmentation System (WAAS)⁶ Lifecycle costs identified by FAA for WAAS have grown from \$1.4 billion in 1994 to more than \$3 billion as of the end of February 1999. On January 5, 1999, FAA also revised the implementation schedule for WAAS to allow more time to complete development of a critical software safety package that monitors, corrects, and verifies the performance of WAAS. As a result, the commissioning date for Phase I WAAS has been rescheduled from July 1999 to September 2000, a 14 month slip. Resolution of the software issues and its final schedule will likely result in additional program cost growth.

⁵ The Essential Air Service Program provides Government subsidized airline service to rural and isolated communities. Funding for the Program has historically been made through General Fund contributions.

⁶ WAAS is a program to augment the Department of Defense's Global Positioning System to provide the capability to navigate in the enroute environment and allow precision approaches to some airports in the continental United States.

- Standard Terminal Automation Replacement System (STARS)⁷ Based on preliminary estimates, we project that deployment of full STARS could be delayed as much as 30 months in order to resolve all known and anticipated human factors changes. Further, as the following graph depicts, program costs could increase by at least \$290 million to address changing requirements, potentially increasing the total program cost to \$1.23 billion.

STARS Spending Profile
With Estimated Additional Funding Requirements



Actions Needed to Improve Fiscal Management and Accountability.

It is important that FAA control costs to stay within budgets that are not expected to keep pace with the growth in operations costs. Improvements in fiscal management and management accountability will help mitigate significant funding shortfalls. For example, FAA is currently facing a funding shortfall of approximately \$284 million⁸ in its FY 1999 Operations budget. Most of this shortfall (\$204 million) is in Air Traffic Services resulting, in part, from the new controller pay system that FAA did not budget for and increases in NAS Handoff requirements. FAA proposes transferring \$17 million to Air Traffic Services from

⁷ STARS will replace controller and maintenance workstations with color displays as well as computer software and processors at over 170 terminal air traffic control facilities.

⁸ The amount by which FAA requirements exceeded enacted amounts.

the Regulation and Certification, Security, and Airports lines of business which already face funding shortfalls of their own.

Air Traffic Services is proposing to absorb its shortfall primarily through reductions in system support and redundancy activities (such as reducing leased telecommunications and reducing maintenance technician training). FAA believes these reductions will not affect safety; however, the reductions may affect system reliability and performance.

Aviation Regulation and Certification, facing more than a \$30 million shortfall, plans to reduce employment levels including safety inspectors, delay some certification work activities, and reduce technical training. Likewise, Civil Aviation Security, with more than a \$10 million shortfall, will delay hiring and defer implementation of the airport vulnerability assessment program.

The funding shortfall in FY 1999 illustrates the potential impact that uncontained operations costs will have on other critical agency functions and missions. It further serves to illustrate the need for FAA to develop realistic cost projections and determine offsetting productivity gains in order to monitor and control costs against predetermined budgets. FAA is well aware of these problems and is working hard toward correcting them. However, FAA will need some basic tools.

First, FAA needs good financial data and reports. Since 1992, we have been unable to provide an unqualified opinion on FAA's financial statements because of serious weaknesses in the agency's accounting systems. For example, FAA has been unable to provide supporting cost documentation to substantiate the \$2.1 billion recorded in the work-in-process account for air traffic control modernization. We were also unable to substantiate the acquisitions costs of real property (land and buildings) reported at \$2.5 billion.

In addition, FAA recognizes the reported \$4.1 billion acquisition value for its equipment is materially understated. We have preliminarily identified that the value for five of the most costly equipment systems currently in operation needs to be increased by at least \$1 billion. The total understatement for all equipment could be as much as \$10 billion. When FAA is able to correct these accounting system weaknesses, we will be able to render an opinion on FAA's financial statements.

More importantly, FAA will need accurate financial data to support the agency's proposed cost-based user fee system. We want to emphasize that FAA is working hard to correct this problem.

Second, FAA needs a reliable cost accounting system. Regardless of whether or not a cost-based user fee system is implemented, FAA needs a cost accounting system to make sound financial and managerial decisions. For instance, a reliable cost accounting system will enable FAA to determine which systems are too expensive to maintain and which programs are too labor intensive to be cost effective. Further, a cost accounting system will help FAA identify where its costs are so the agency can manage its programs more efficiently. However, FAA has experienced schedule slippages and shifting requirements in trying to develop and deploy a new cost accounting system.

The original schedule for the system called for full implementation by October 1, 1998. FAA later revised its implementation goals into two stages – an initial system by December 31, 1998 and a fully operational system by March 31, 1999. A newly revised schedule now estimates that the system will not be fully implemented in all lines of business until March 2001. However, even if FAA is successful in meeting this date, the cost accounting system will not provide accurate information for sound decision making until the underlying financial data are correct.

Third, FAA needs human resource systems and policies that are based on accountability for performance. Personnel reform granted the agency flexibility in creating a new human resource system unique to the agency's needs. FAA has used this flexibility and developed new compensation systems but the effectiveness of these programs now depends on improving organizational and individual performance and accountability (key tenets of reform).

Regardless of the financing alternatives adopted by Congress, a stable source of funding for FAA is only part of the solution. Ultimately, FAA must spend and manage whatever resources it receives more efficiently than it has in the past. For example, according to FAA's preliminary disposition of modernization projects for capitalization, FAA identified more than \$2.5 billion in modernization projects that have been terminated without even being deployed since the onset of the modernization program in 1982. This represents nearly 10 percent of the \$25 billion appropriated by Congress through FY 1998 for FAA's modernization efforts.

Recent audits of FAA programs, such as permanent change of station moves, familiarization flights, employee buyouts, labor agreements, and personnel reform have also recommended ways to strengthen management accountability and effective decision making. Without improvements in fiscal management and management accountability for controlling costs, FAA's budget requests will grow larger. FAA must develop the fiscal and management tools it needs to operate like a business. These include:

Good financial data and reports for

- ensuring a clean (unqualified) financial opinion, and
- developing a means for substantiating acquisition costs of real property and equipment.

A reliable cost accounting system for

- determining which systems are too expensive to operate or which programs are too labor intensive to be cost effective, and
- identifying and measuring costs in both Operations and F&E accounts so sound financial decisions can be made that either control or reduce operations costs.

Implementing performance based human resource systems and policies for

- quantifying productivity gains associated with new pay systems to determine if outyear Operations budgets are sufficient or can be reduced, and
- identifying the expected outcomes of new personnel reform initiatives and developing a means for measuring their results.

Mr. Chairman, that concludes my statement. I would be happy to answer any questions from the Subcommittee.