U.S. Department
of  Transportation

**Federal Aviation**
**Administration**

# FEDERAL AVIATION ADMINISTRATION

# BUDGET IN BRIEF

# Fiscal Year 1999

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**FY 1999 President's Budget Request**

**(Dollars in Millions)**

R,E&D $290
3%

F&E $2,130
22%

AIP Grants $1,700
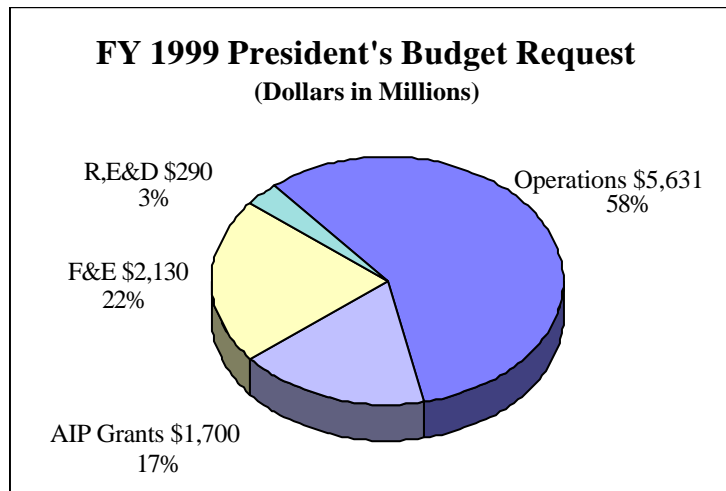17%

Operations $5,631
58%

**Figure 1**

The FY 1999 President's Budget request for the Federal Aviation Administration proposes funding through a Transportation Fund for America. This proposal highlights the Administration's priority to fund transportation programs and allows maintenance of transportation spending levels on a deficit neutral basis.

The FY 1999 request is for $9.75 billion, an increase of $640 million from the FY 1998 level. This funding level will allow 63 percent of the agency's programs to be funded from trust fund resources.

The budget proposes the collection of $93 million in user fees for services provided by the FAA, of which, $43 million is for FAA operations. The first $50 million of these fees is to be used for the Essential Air Service and rural airport improvements.

The distribution to the left reflects the budget resources proposed in the FY 1999 budget request as compared to FY 1998 levels.

**Summary of Funds**

(Dollars in Millions)

| Appropriation | FY 1998 | Change | FY 1999 Request |
|---|---|---|---|
| Operations | $5,336.5 | $294.6 | $5,631.1 |
| (General) | (3,350.9) | (177.2) | (3,528.1) |
| (Trust) | (1,901.6) | (158.4) | (2,060.0) |
| (User Fees) | (84.0) | (-41.0) | (43.0) |
| | | | |
| Grants-In-Aid-Airports | 1,700.0 | 0.0 | 1,700.0 |
| | | | |
| Facilities and Equipment | 1,875.5 | 254.5 | 2,130.0 |
| | | | |
| Research, Engineering, and Development | 199.2 | 90.8 | 290.0 |
| | | | |
| **Total** | **$9,111.2** | **$639.9** | **$9,751.1** |
| (General) | (3,350.9) | (177.2) | (3,528.1) |
| (Trust) | (5,676.3) | (503.7) | (6,180.0) |
| (User Fees) | (84.0) | (-41.0) | (43.0) |

**Table 1**

# OVERVIEW

In FY 1999, FAA will continue to focus on themes identified as the FAA strategic goals: Safety, Security, and System efficiency.

## Operations

In FY 1999, the Administration is seeking $5,631.1 million for FAA Operations, $294.6 million, or 5.5 percent, above the level for FY 1998, and 46,861 employees, 282, or .6% above that estimated for the end of FY 1998. The funding consists of $5,588 million in new budget authority and $43 million in user fees. As detailed in Table 2, savings of $20.5 million are proposed, primarily due to reductions for one time costs, management efficiencies, and streamlining. The savings are offset by increases of $315.1 million, most of which are non-discretionary increases associated with mandatory pay adjustments, inflationary growth, and with bringing new equipment on-line and making it operational. Other increases would fund growth in our controller, field maintenance, flight standards, and aircraft certification staffs.

**Table 2**

### Build-Up of the FY 1999 Operations Budget
### (Dollars in Millions)

FY 1998 Enacted ........................................................................................................................................$5,336.5

| Decreases | | Increases | |
|---|---|---|---|
| Cost Savings: | | Mandatory Adjustments | +222.2 |
| Termination of $80 Payments to OPM for Buyouts | -3.7 | NAS Handoff | +61.7 |
| OMEGA System Termination | -6.8 | Staffing Increases: | |
| | | Air Traffic Controllers (+185) | +5.2 |
| | | Field Maintenance Staff (+150) | +5.8 |
| | | Aviation Regulation and Certification Staff (+58) | +4.0 |
| Flight Standards 90 Day Study | -2.1 | Annualization of Contract Towers | +4.0 |
| One Time Costs: | | Vulnerability Studies | +2.0 |
| FSS Streamlining | -5.0 | Controller Training Contract | +2.0 |
| Other | -2.8 | Other | +8.2 |
| Total Savings | -20.5 | Total Increases | +315.1 |

FY 1999 Request ........................................................................................................................................$5,631.1

## Grants-In-Aid for Airports

The FY 1999 budget assumes $1,700 million, the same level as provided in FY 1998, for airport improvement projects to enhance capacity, improve safety and security, and mitigate noise. Airport grant funding will continue to be supplemented by the passenger facility charges (PFC's). At the end of calendar year 1997, 287 airports had been approved to collect PFC's totaling more than $1,145 million in FY 1999. Revenues from PFC's are an important source of capital for many airports.

Facilities and Equipment

The FY 1999 request for Facilities and Equipment (F&E) is $2,130 million, a 14 percent increase from the FY 1998 enacted level. Included in this request are capital needs contained in the FAA's Capital Investment Plan (CIP). The budget continues funding to support major systems such as the en route and terminal automation programs, next generation weather radar, the oceanic radar program, communications, and satellite navigation.

Research, Engineering, & Development

For Research, Engineering, and Development (R,E&D) the budget requests $290 million, a 46 percent increase from the FY 1998 enacted level. The RE&D budget focuses on increased initiatives in security technology, satellite navigation, aircraft safety technology, aging aircraft, and human factors research along with the ongoing development of safety and capacity programs.

Employment

The FY 1999 budget reflects a net increase of 360 employees from the FY 1998 estimate for all appropriations. Employment will be increased over the FY 1998 levels in several safety work forces. The budget proposes the hiring of an additional 185 controllers, 150 new field maintenance technicians, and 58 flight standards inspectors/certification/accident investigation personnel. These increases will allow these critical staffing areas to better meet current and anticipated growth in aviation activity and the expected increase in the number and complexity of our air traffic control systems.

Reform

In FY 1999, the FAA will continue efforts related to agency reform. Under previous legislation, considerable latitude was provided to allow the development of the agency's own personnel and acquisition systems and to make them more flexible, timely, and responsive to the needs of FAA and its customers. As a result, FAA now has a Federal Aviation Service separate from the U.S. Civil Service. The reformed personnel system is designed to require fewer resources, provide increased flexibility, incorporate state-of-the-art best practices, protect employee rights, and support enhanced productivity. Likewise, FAA substantially reformed its acquisition process to emphasize mission focus, reduce the time to acquire systems and services, field new technology faster, and get the right products to the field faster and at a lower cost to both government and industry. These reforms will continue to be refined and implemented in FY 1999.

Finance reform is essential to assure adequate, stable funding to meet our obligations in support of a safe, secure, and efficient aviation system. The Budget proposes that, beginning in the year 2000,

# OVERVIEW

current aviation excise taxes will be gradually replaced by more efficient, cost-based user fees that inspire improved system management and more accurately reflect system use. The Budget also assumes continued collection of fees for services provided to aircraft that neither take off or land in the United States (overflight fees). The FY 1999 budget assumes $93 million will be available from overflight fees, with $50 million for the payment for air carriers program managed by the Office of the Secretary of Transportation (OST) and the remaining $43 million to support FAA's Operations account.

Franchise Fund

The Administrative Services Franchise Fund was established by Public Law 104-205 to finance operations where the costs for goods and services provided are charged to internal and external users on a fee-for-service basis. This fund will improve organizational efficiency and provide better support to our customers for services including accounting, payroll, international training, travel, multi-media, and information technology services.

Airport and Airway Trust Fund

The Tax Equity and Fiscal Responsibility Act of 1982 (26 U. S. C. 9502), as amended by the Omnibus Budget Reconciliation Acts of 1990 (Public Law 101-508) and 1993 (Public Law 103-66) and the Small Business Job Protection Act of 1996 (P. L. 104-188), and the Taxpayers Relief Act of 1997 (Public Law 105-34) provides for the receipts received in the Treasury from the passenger ticket tax and certain other taxes paid by airport and airway users to be transferred to the Airport and Airway Trust Fund ( AATF).

The Taxpayers Relief Act of 1997 (P.L. 105-34), effective October 1, 1997, extends the aviation excise taxes for 10 years and includes the following key provisions: (1) retains existing freight weighbill, general aviation (GA) fuel/gas taxes, and $6 departure tax on domestic flights to and from Alaska and Hawaii; (2) converts the 10 percent ad valorem tax on domestic passenger tickets to a combination of ad valorem/flight segment tax over three years beginning October 1, 1997; (3) imposes a new 7.5 percent tax on payments to airlines for frequent flyer and similar awards by banks and credit card companies, merchants, frequent flyer program partners - other airlines, hotels, or rental car companies and other businesses; (4) increases the current $6 international departure tax to $12 per passenger and adds a $12 international arrival tax; (5) lowers tax rates on flights to certain rural airports to 7.5 percent without a flight segment component; and (6) transfers revenues from the 4.3 cents-per-gallon aviation fuel tax currently dedicated to reduce the national U.S. deficit from the General Fund to the AATF.

The FAA's three capital programs--Facilities & Equipment (F&E), Research, Engineering, & Development (R,E&D), and the Airport Improvement Program (AIP)--receive 100 percent of their funding from the AATF. In addition to funding the capital programs, the AATF pays a portion of the FAA's operating cost. In FY 1996, the AATF paid 64 percent of operating cost. By contrast, 47 percent of Operations was funded from the AATF in 1997. The Trust Fund also financed appropriations for the rental of FAA's Washington, D.C., headquarters, field space and related services, and funded the Essential Air Service
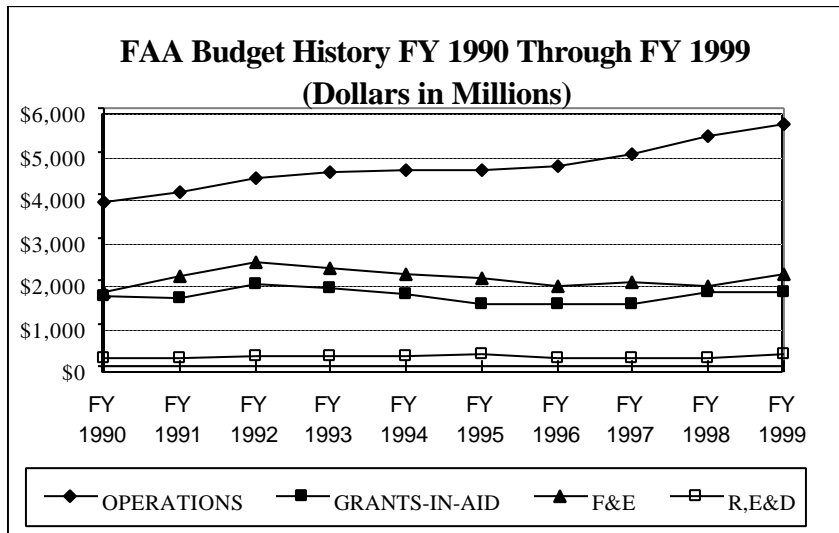
**FAA Budget History FY 1990 Through FY 1999**
**(Dollars in Millions)**

OPERATIONS — GRANTS-IN-AID — F&E — R,E&D

**Figure 2**

Program. In FY 1997, the AATF contributed $39.1 million and $25.9 million, respectively, to these programs. The AATF will not finance these programs after FY 1997.

In FY 1998, total tax receipts of approximately $8.0 billion are expected. An additional $.4 billion in interest will accrue to the trust fund cash balance for total cash income of $8.4 billion. The uncommitted balance in the trust fund, which was $1.4 billion at the end of FY 1997, is expected to be $3.8 billion by the end of FY 1998. Total revenues expected in FY 1999 are $10.6 billion, which includes $.6 billion in interest earned by the trust fund cash balance. By the end of FY 1999, the uncommitted balance in the trust fund is expected to increase to $8.3 billion.

# OVERVIEW

**Table 3**

## FAA Employment Levels
## End-of-Year Employment

| | FY 1997 Actual | FY 1998 Estimate | FY 1999 Request |
|---|---|---|---|
| *Direct* | *48,266* | *49,406* | *49,761* |
| | | | |
| *Operations (by Line of Business)* | *45,437* | *46,579* | *46,861* |
| **Air Traffic Service** | **35,019** | **35,939** | **36,163** |
| Controllers | 17,388 | 17,800 | 17,985 |
| Field Maintenance | 8,255 | 8,435 | 8,585 |
| Other | 9,376 | 9,704 | 9,593 |
| | | | |
| **Aviation Regulation & Certification** | **5,766** | **6,139** | **6,197** |
| Inspectors/Engineers/Pilots/NRS | 3,742 | 3,999 | 4,027 |
| Technical & Field Support | 796 | 888 | 896 |
| Other | 1,228 | 1,252 | 1,274 |
| | | | |
| **Civil Aviation Security** | **1,015** | **1,182** | **1,182** |
| **Airports** | **472** | **485** | **485** |
| **Research & Acquisitions** | **770** | **799** | **799** |
| **Commercial Space Transportation** | **34** | **34** | **34** |
| | | | |
| **Administration** | **1,815** | **1,426** | **1,426** |
| | | | |
| **Staff Offices** | **546** | **575** | **575** |
| | | | |
| *Facilities and Equipment* | *2,213* | *2,191* | *2,252* |
| *Research, Engineering, & Development* | *613* | *633* | *645* |
| *Aviation Insurance Revolving Fund* | *3* | *3* | *3* |
| | | | |
| *Reimbursable/Allocations* | *491* | *508* | *513* |
| Operations | 280 | 300 | 300 |
| Administrative Services Franchise Fund | 158 | 158 | 158 |
| Facilities and Equipment | 50 | 50 | 55 |
| Research, Engineering, & Development | 3 | 0 | 0 |
| | | | |
| *TOTAL END OF YEAR EMPLOYMENT* | *48,757* | *49,914* | *50,274* |

**FY 1999 President's Budget Request
by Major Object Class**
(Dollars in Millions)

Travel & Transportation
$132, 2%

Rent & Communications
$518, 9%

Payroll - $4,203
75%

Contracts/Other Svcs
$668, 12%

Equipment & Supplies
$110, 2%

**Figure 3**

**FY 1999 Budget and Staffing Request
by Line of Business**

Dollars in Million — End of Year Employment

$4,381 / 36,163
$636 / 6,197
$129 / 1,182
$50 / 485
$94 / 799
$6 / 34
$259 / 1,426
$76 / 575

ATS  AVR  ACS  ARP  ARA  AST  AAD  Staff

$ ◆ EOY

**Figure 4**

For FY 1999, the President's Budget requests $5,631.1 million for FAA Operations, $294.6 million more than provided for FY 1998. This increase recognizes the need to increase safety staffing and the need to bring on-line and make fully operational new safety and capacity air traffic equipment being delivered. This requested level of $5,631.1 million will be financed through $5,588 million in new budget authority and $43 million in new user fees.

In terms of safety staffing, the President's Budget for FY 1999 proposes to hire 185 new controllers, 58 new flight standards inspectors/certification/accident investigation personnel, and 150 new field maintenance technicians. These essential increases will allow these safety staffing areas to better meet the current and anticipated growth in aviation activity and the expected increase in the number and complexity of our air traffic control systems.

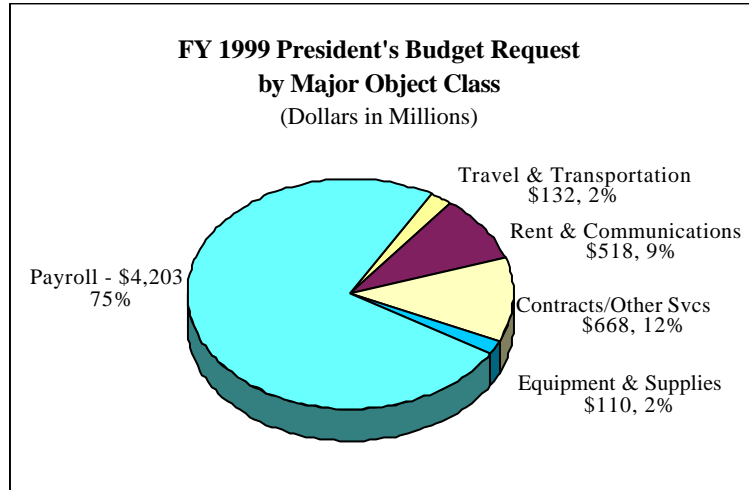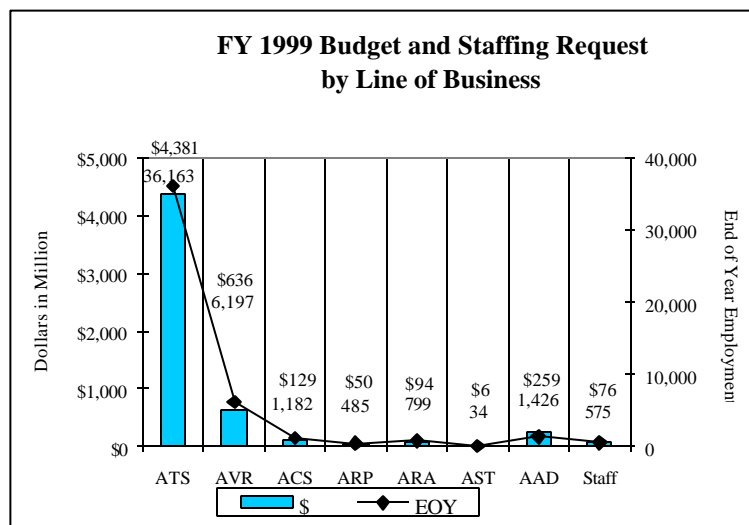The President's Budget also requests $61.7 million based on new requirements to make operational the new equipment now being delivered. These funds will cover such expenses as utilities, operation and maintenance, telecommunications, training, and spare parts. Without these essential funds, new equipment being developed and delivered could not become operational and would have to be warehoused with no benefit to either aviation users or the FAA.

# OPERATIONS

In addition, the President's Budget continues funding for proven Administration initiatives such as the highly successful contract tower program and proposes additional funding for technical training.

Detailed information in support of this budget request is presented by line of business.

## AIR TRAFFIC SERVICES -- $4,381 million

Air Traffic Services incorporates Air Traffic and Airway Facilities and is the operations and maintenance arm of the National Airspace System (NAS). Consisting of air traffic controllers, engineers and technicians, pilots and flight inspection personnel, business managers, and support staff, Air Traffic Services controls approximately 174,000 takeoffs and landings per day, provides 24 hours of air traffic control daily, operates and maintains 39,000 facilities and pieces of equipment, maintains 8,700 terminal instrument flight procedures and 9,000 airway segments, conducts over 11,000 flight inspections per year nationally and internationally, assigns and protects more than 40,000 aeronautical radio frequencies used in air traffic control, and directs the modernization of the NAS infrastructure.
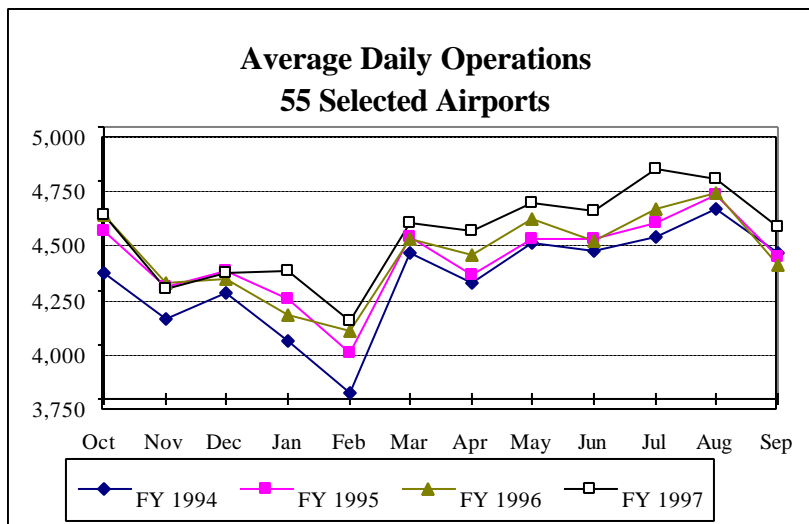


**Average Daily Operations
55 Selected Airports**

FY 1994    FY 1995    FY 1996    FY 1997

**Figure 5**

In FY 1999, the FAA will (1) increase its safety-critical controller and maintenance work forces by hiring an additional 185 new controllers and 150 field maintenance technicians; (2) continue its initiative to convert FAA low-activity Level I visual flight rule (VFR) towers to contract operation; and (3) bring on-line new safety and capacity air traffic control equipment.

**Average Daily Aircraft Handled
20 CONUS Centers**

Legend: FY 1994, FY 1995, FY 1996, FY 1997
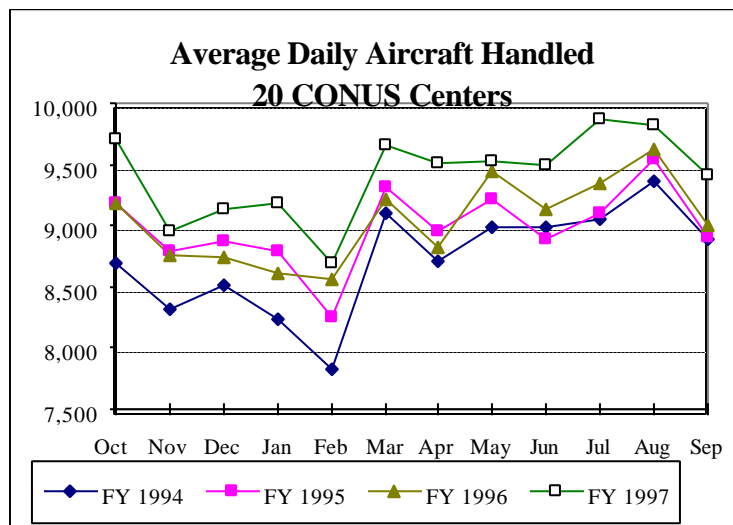
**Figure 6**

There are six major Air Traffic Services subactivities:

The Air Traffic subactivity is responsible for safe and efficient control of air traffic 365 days a year, 24 hours a day, through the operation of 480 towers, 27 terminal radar approach control, and 24 en route centers. In addition, Air Traffic maintains a network of flight service stations, which provide flight and weather information and record flight plans (mostly for general aviation pilots). For FY 1999, this subactivity requires $2,651 million.

The Air Traffic System Requirements Service (ARS) subactivity ensures that Air Traffic Services' operational needs of today and tomorrow are satisfied through the timely and cost effective delivery and sustainment of quality products and services that fulfill the FAA mission. This organization develops comprehensive NAS requirements and manages a disciplined process to fulfill the operational needs of the Air Traffic Service. For FY 1999, this subactivity requires $17 million dollars.

The NAS Logistics subactivity is responsible for depot and limited field maintenance; supply support for NAS equipment and agency aircraft; replenishment and repair of spares; procurement activities in the regions and at the Mike Monroney Aeronautical Center; the purchasing, leasing, and management of real estate including land, office space, and specialized facilities; and material and property management and administrative services to support the day-to-day operations of the agency. For FY 1999, this subactivity requires $192 million.

The purpose of the Systems Maintenance subactivity is to provide for the maintenance, repair, and engineering of over 39,000 facilities and equipment comprising the NAS, including air traffic control equipment, navigation and landing aids, flight service facilities, and support of FAA plant facilities. For FY 1999, this subactivity requires $1,087 million.

The Leased Telecommunications subactivity provides the critical Air Traffic Control telecommunications link in the process that begins with identification of a NAS requirement and ends with the commissioning and operation of a new NAS facility. It also provides FAA-wide telecommunication services. Because

# OPERATIONS

of the very nature of these activities, these expenditures are largely mandatory if the essential operational nature of the FAA is not to be impaired. For FY 1999, this subactivity requires $362 million.

The purpose of the <u>Flight Inspection and Procedures</u> subactivity is to promote and ensure aviation safety by providing in-flight investigation of air navigation aids and instrument flight procedures, developing and maintaining flight procedures, and conducting periodic flight checks of FAA facilities. For FY 1999, this subactivity requires $72 million.

## <u>AVIATION REGULATION AND CERTIFICATION -- $636 million</u>

The mission of the Regulation and Certification (AVR) organization is to promote aviation safety. To fulfill this mission, AVR:

- Establishes safety standards governing the design and manufacture of aircraft, engines, and other aeronautical products; operational maintenance and the training of aircraft, airmen and aviation mechanics; and medical qualification of airmen and air traffic controllers.

- Monitors safety performance by conducting safety inspections and surveillance, initiating enforcement actions where appropriate, and participating in accident investigations.

- Issues and maintains certificates for design and manufacturing of aircraft and aircraft parts; certificates and licenses for operators, air agencies, and airmen; medical certificates for airmen; aircraft registrations; and designee appointment and monitoring.

- Manages the FAA rulemaking program which is the primary means by which safety standards and policy are drafted, opened to public comment, and finalized.

- Conducts aviation safety education and research.

For FY 1999, AVR requests $636 million to meet existing and anticipated workload requirements. Included in the request is funding to support a staffing increase of 58 for safety critical staffing, accident investigation, and rulemaking. In addition, funding increases are requested for NAS Handoff requirements.

## <u>CIVIL AVIATION SECURITY -- $129 million</u>

Civil Aviation Security is responsible for the protection of the U.S. traveling public in commercial air transportation against terrorist and other criminal acts, and for determining on behalf of the U.S. Government that civil aviation is secure. This function is performed by ensuring that airports and air

carriers implement required security measures. Because terrorists seek to destroy public confidence in the safety of air travel and disrupt this vital segment of the U.S. and world economies, the continued growth of commercial air transportation depends on the success of aviation security. Protecting aviation's infrastructure--FAA facilities and equipment-- and the employees who run them, is also Security's responsibility. The Civil Aviation Security Program also assists in the interdiction of drugs and narcotics coming into the United States.

## ADMINISTRATION OF AIRPORTS -- $50 million

The Administration of Airports covers the identification, planning, development, capacity enhancements, and safety certification of the nation's system of public airports to serve the needs of civilian aviation in 50 states and territories.

## RESEARCH AND ACQUISITIONS -- $94 million

Research and Acquisitions integrates all the research, design, development, acquisition, and implementation of infrastructure improvements and modernization efforts for the NAS. It operates and maintains the William J. Hughes Technical Center in Atlantic City, New Jersey, and manages the FAA's corporate information technology resources.

## COMMERCIAL SPACE TRANSPORTATION -- $6 million

Commercial Space Transportation (AST) ensures safety in the commercial space transportation industry through its process of issuing launch licenses and launch site operator licenses and the development of the regulatory framework for the industry. In addition, AST promotes, encourages, and facilitates the development of the U.S. commercial space industry and, with the U.S. Trade Representative, plays a role in assuring fairness in international trade in space launches. For FY 1999, AST requires funding for mandatory pay and inflation increases over the FY 1998 funding level.

## ADMINISTRATION -- $259 million

The Administration line of business provides accounting, budget, management analysis, data systems, and human resource services. In addition, it is responsible for headquarters facility management, the Washington flight program (Hangar 6), and aircraft program policy and plans.

## STAFF OFFICES -- $76 million

These independent offices, reporting directly to the Administrator and Deputy Administrator, are responsible for establishing, directing, and evaluating agency programs and policy. Their services

include system safety, legal counsel, congressional liaison, public affairs, civil rights, policy, planning, international aviation, and the Administrator's and Deputy Administrator's executive staff.

**Table 4**

# FY 1999 Budget Request
## Dollar Resources
### (Dollars in Millions)[1]

|  | FY 1997 Actual | FY 1998 Estimate | FY 1999 Request | Percent Change |
|---|---|---|---|---|
| *Air Traffic Services* | *$3,804* | *$4,153* | *$4,381* | *5.5%* |
| *Aviation Regulation and Certification* | *501* | *610* | *636* | *4.3%* |
| *Civil Aviation Security* | *115* | *97* | *129* | *32.9%* |
| *Airports* | *45* | *48* | *50* | *4.1%* |
| *Research & Acquisition* | *80* | *92* | *94* | *2.0%* |
| *Commercial Space Transportation* | *6* | *6* | *6* | *0.0%* |
| *Administration* | *334* | *256* | *259* | *1.2%* |
| **Staff Offices** | **69** | **73** | **76** | **3.9%** |
| **TOTAL OPERATIONS** | $4,953 | $5,337 | $5,631 | 5.5% |

Numbers may not add due to rounding

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[1] Amount shown for FY 1997 includes $12 million in overflight fees that were credited to the Operations account as offsetting collections.  Amounts shown for FY 1998 and FY 1999 include $84 million and $43 million in overflight fees, respectively.

**Table 5**

# FY 1999 Budget Request
## By Major Object Class
### (Dollars in Millions)

|  |  | FY 1997 Actual | FY 1998 Estimate | FY 1999 Request |
|---|---|---|---|---|
| 11.1 | Full-Time Permanent | $2,674 | $2,873 | $3,034 |
| 11.3 | Other Than Full-Time Permanent | 23 | 26 | 26 |
| 11.5 | Other Personnel Compensation | 260 | 352 | 381 |
| 11.8 | Special Personnel Services Payments | 0 | 1 | 1 |
| 11.9 | Total Personnel Compensation | $2,957 | $3,252 | $3,442 |
| 12.1 | Civilian Personnel Benefits | 748 | 721 | 760 |
| 13.0 | Benefits for Former Personnel | 1 | 1 | 1 |
| 21.0 | Travel and Transportation of Persons | 95 | 108 | 113 |
| 22.0 | Transportation of Things | 21 | 19 | 19 |
| 23.2 | Rental Payments | 27 | 27 | 29 |
| 23.3 | Communications Utilities and Miscellaneous | 354 | 466 | 489 |
| 24.0 | Printing and Reproduction | 7 | 6 | 6 |
| 25.0 | Other Services | 556 | 636 | 661 |
| 26.0 | Supplies and Materials | 91 | 79 | 84 |
| 31.0 | Equipment | 73 | 21 | 26 |
| 42.0 | Insurance Claims and Indemnities | 1 | 1 | 1 |
| 99.0 | Subtotal, Direct Obligations | $4,931 | $5,337 | $5,631 |

Numbers may not add due to rounding

# OPERATIONS

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**Airport Improvement Program
Funding History
(Dollars in Millions)**

| FY | | |
|---|---|---|
| FY 1993 | 1800 / 1900 | 2050 |
| FY 1994 | 1690 / 1890 | 2105 |
| FY 1995 | 1450 / 1690 | 2161 |
| FY 1996 | 1450 / 1500 | 2211 |
| FY 1997 | 1460 / 1350 | 2280 |
| FY 1998 | 1700 / 1000 | 2347 |
| FY 1999 | 1700 | |

$0    $500    $1,000    $1,500    $2,000    $2,500    $3,000

□ Total Authorized   ■ President's Budget   □ Congressional Action

**Figure 7**
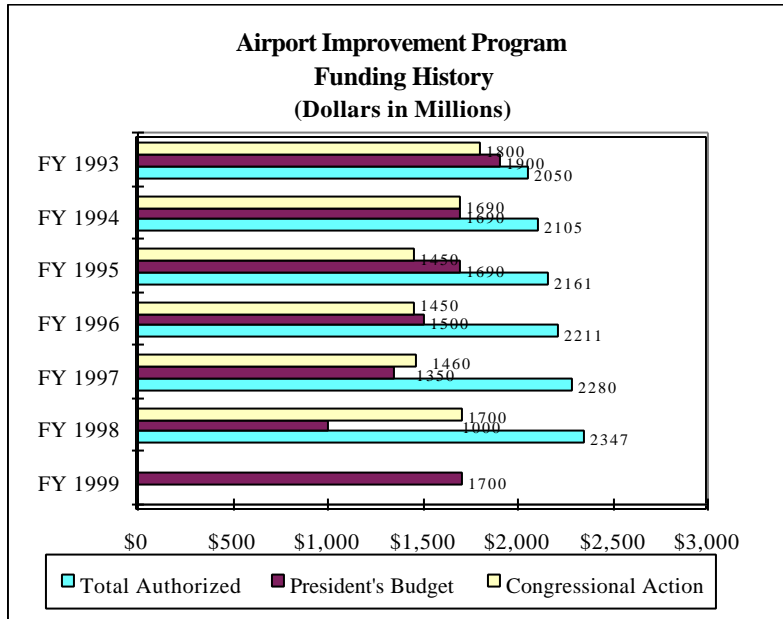
The FY 1999 request is for $1.7 billion for Airport Improvement grants to eligible airports to enhance capacity, emphasize safety and security needs, and mitigate noise. Airport funding is further augmented by continued implementation of PFC's. At the end of calendar year 1997, 287 airports were approved to collect PFC's totaling $17.1 billion over the next 40 years.

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**F&E Funding History Comparison
(Dollars in Millions)**

| FY | Values |
|---|---|
| FY 1990 | 1721, 1955, 2191 |
| FY 1991 | 2095, 2500, 2500 |
| FY 1992 | 2409, 2700, 3000 |
| FY 1993 | 2350, 2700, 2700 |
| FY 1994 | 2120, 2524, 2900 |
| FY 1995 | 2033, 2269, 2670 |
| FY 1996 | 1875, 1908, 2735 |
| FY 1997 | 1938, 1790, 2068 |
| FY 1998 | 1875, 1875, 2129 |
| FY 1999 | 2130 |

□ Total Authorized ■ President's Request □ Congressional Action

**Figure 8**

**FY 1999 President's Budget Request
by Budget Activity**

Non-ATC Facilities and Equipment 8%
Mission Support 13%
Personnel and Related Expenses 11%
Engineering, Development, Test and Evaluation 20%
Air Traffic Control Facilities and Equipment 48%

**Figure 9**

For FY 1999, $2.130 billion, a 14 percent increase ($255 million) from FY 1998 as enacted, is requested in the Facilities and Equipment (F&E) appropriation to fund planned facility improvements, equipment development and procurement, and the necessary technical support for systems installation. The funding requested for FY 1999 supports the FAA's comprehensive Capital Investment Plan (CIP) to modernize and improve the NAS to accommodate demands for aviation services, maximize operational efficiency, constrain costs, and replace or modernize aging facilities. The FAA is committed to fulfilling its mission in a safe, secure, and efficient cost-effective manner.
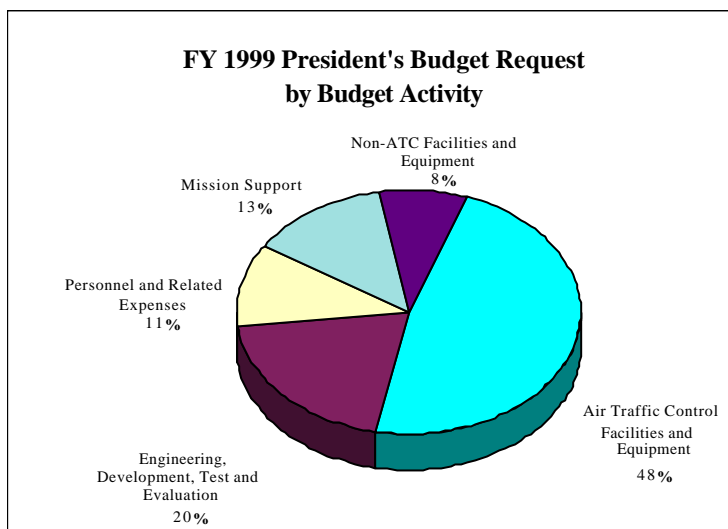
Major FY 1999 Programs
($ in Millions)

Standard Terminal Automation
 Replacement System...........................$210.0
Display System Replacement...............173.6
Explosive Detection Systems ...............100.0
Air Traffic Management.........................95.4
Terminal Air Traffic Control
 Facilities - Replace .................................82.3
Terminal Digital Radar (ASR-11)............76.1
ARTCC Building Improvements/
 Plant Improvements ...............................63.9

The F&E budget consists of five activities which fund the FAA's effort to modernize and improve air traffic control systems and facility improvements. Summaries of these activities follow.

# FACILITIES AND EQUIPMENT

## ENGINEERING, DEVELOPMENT, TEST, AND EVALUATION

To maintain an acceptable level of service in the face of the growing volume of traffic, a number of deficiencies in the current system must be addressed. In FY 1999, funding is requested to continue development of en route automation which will, over time, overcome these deficiencies and provide additional benefits to the users. For FY 1999, funding is requested for the standard terminal automation replacement system (STARS) to test and enhance commercial-off-the-shelf (COTS)/non-developmental item (NDI)-based automated radar terminal systems for initial use in terminal radar approach control facilities and to develop the final system capability. Also in FY 1999, funding is requested in budget activity one to continue the development, test, and fielding of the wide area augmentation system (WAAS) initial operating system, air traffic management development and deployment, and aeronautical data link applications.

## PROCUREMENT AND MODERNIZATION OF AIR TRAFFIC CONTROL FACILITIES AND EQUIPMENT

Initiatives in this activity will reduce delays and improve safety at congested airports. In addition, the FAA must invest in the necessary infrastructure to support local airport improvement projects to ensure that added demand for airspace and airport capacity is met efficiently. The funding requested for the display system replacement (DSR) will continue the production of state-of-the-art automation equipment that will provide en route controllers the capability to better handle the increases in air traffic volume. The Voice Switching and Control System (VSCS) will provide a voice communications system which performs the intercom, interphone, and air/ground voice connectivity and control functions needed for air traffic control operations and will reduce leased costs, increase modularity and growth capability, and increase controller productivity over current services. Of the amount requested in FY 1999, the majority will support installation of the VSCS Console Equipment into the DSR common consoles; and completing VSCS Training and Backup Switch (VTABS) activities (including development, factory, and operational test and evaluation, initial operational unit production, conducting early training, and incidental site preparation work). In FY 1999, three TRACONs (Potomac, Atlanta, and Northern California) will continue critical acquisition of equipment, construction and system engineering support to provide FAA and user benefits from consolidation and restructured airspace. In addition, activity two WAAS funding will support the continued development of standards, certification, facilities, and procedures for the operational use of the WAAS in the NAS. Work will continue on the development of WAAS precision approach procedures, including completing obstacle clearance surveys to enable Category I approaches.

Other programs funded in this activity include the modernization and improvement of existing buildings and plant equipment which house and support NAS navigation, communications, surveillance, and

visual/electronic landing systems. Also funded under this activity is the removal of leaking fuel storage tanks, site cleanup, and disposal of tanks, engine generators, and associated electrical equipment.

## PROCUREMENT AND MODERNIZATION OF NON-AIR TRAFFIC CONTROL FACILITIES AND EQUIPMENT

This activity includes general facility support requirements, which apply to a wide range of FAA installations. A national program has been established to ensure that all FAA facilities meet existing and future Federal, State, and local environmental regulations for the cleanup of hazardous substances resulting from FAA activities. Funds requested will assess the severity of the problem, and, if environmental damage has occurred, feasibility studies will be conducted to determine the extent of contamination and the best technology to be used for cleanup. In addition, the FY 1999 request will purchase and install FAA certified explosive detection systems and other advanced technology screening devices as recommended by the White House Commission on Aviation Safety and Security.

## FACILITIES AND EQUIPMENT MISSION SUPPORT

This activity includes system engineering and integration and transition engineering support contracts which provide technical and management support in all phases of CIP implementation schedules.

## PERSONNEL AND RELATED EXPENSES

Funding for all personnel compensation, benefits, travel, and related expenses associated with F&E programs are budgeted under one consolidated activity. These funds directly support FAA personnel who are primarily responsible for NAS equipment installation and implementation.

# FACILITIES AND EQUIPMENT

**Table 6**            **F&E Activities by Budget Line Item**

**(Dollars in Thousands)**

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| | | *ACTIVITY 1. Engineering, Development, Test and Evaluation* | | |
| | | *A. En Route Programs* | | |
| 1A01 | 1A01 | Aviation Weather Services Improvements | $23,000.0 | $26,300.0 |
| 1A02 | 1A02 | Oceanic Automation System | 32,000.0 | 13,700.0 |
| 1A04 | 1A03 | Next Generation Very High Frequency (VHF) Air/Ground (A/G) Communications System | 5,400.0 | 500.0 |
| 1A05 | 1A04 | Air Traffic Management (ATM) | 45,440.0 | 47,800.0 |
| | 1A05 | En Route Automation Program | 0.0 | 118,000.0 |
| 1A03 | 1A06 | Aeronautical Data Link (ADL) | 15,000.0 | 16,500.0 |
| 1A06 | | Weather and Radar Processor (WARP) | 24,400.0 | 0.0 |
| | | *Subtotal - En Route Programs* | **145,240.0** | **222,800.0** |
| | | *B. Terminal Programs* | | |
| 1B02 | 1B01 | Terminal Automation Program | 68,000.0 | 74,700.0 |
| 1B01 | | Terminal Digital Radar (ASR-11) | 35,800.0 | 0.0 |
| 1B03 | | Weather Systems Processor (WSP) | 5,200.0 | 0.0 |
| 1B04 | | Innovative Infrared Deicing | 970.0 | 0.0 |
| | | *Subtotal - Terminal Programs* | **109,970.0** | **74,700.0** |
| | | *D. Landing and Navigational Aids Programs* | | |
| 1D01 | 1D01 | Local Area Augmentation System (LAAS) | 6,500.0 | 6,500.0 |
| 1D02 | 1D02 | Wide Area Augmentation System (WAAS) For GPS | 152,830.0 | 101,500.0 |
| | | *Subtotal - Landing and Navigational Aids Programs* | **159,330.0** | **108,000.0** |
| | | *E. Research, Test and Evaluation Equipment and Facilities* | | |
| 1E04 | 1E01 | Independent Operational Test and Evaluation (IOT&E) Support | 3,200.0 | 3,500.0 |
| 1E01 | 1E02 | FAA Technical Center Facility - Technical Building Lease | 5,290.0 | 5,290.0 |
| 1E02 | 1E03 | NAS Improvement of System Support Laboratory | 2,000.0 | 2,000.0 |
| 1E03 | 1E04 | Technical Center Facilities | 7,000.0 | 7,000.0 |
| | | *Subtotal - Research, Test and Evaluation Equipment and Facs* | **17,490.0** | **17,790.0** |
| | | *Total Activity 1* | **$432,030.0** | **$423,290.0** |

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|

### ACTIVITY 2. Air Traffic Control Facilities and Equipment
#### A. En Route Programs

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 2A01 | 2A01 | Long Range Radar (LRR) Program - Replace/Establish | $6,600.0 | $5,700.0 |
| 2A02 | 2A02 | En Route Automation Program | 212,290.2 | 196,400.0 |
| 2A03 | 2A03 | Next Generation Weather Radar (NEXRAD) - Provide | 3,000.0 | 4,900.0 |
| 2A04 | 2A04 | Air Traffic Operations Management System (ATOMS) | 1,000.0 | 1,000.0 |
| 2A05 | 2A05 | Weather and Radar Processor (WARP) | 0.0 | 20,000.0 |
| 2A06 | 2A06 | Aeronautical Data Link (ADL) Applications | 0.0 | 600.0 |
| 2A07 | 2A07 | ARTCC Building Improvements/Plant Improvements | 96,851.2 | 63,931.6 |
| 2A08 | 2A08 | Voice Switching and Control System (VSCS) | 45,400.0 | 14,500.0 |
| 2A10 | 2A09 | Air Traffic Management (ATM) | 40,000.0 | 47,600.0 |
| 2A12 | 2A10 | Critical Communications Support | 3,000.0 | 2,400.0 |
| 2A13 | 2A11 | DOD Base Closure - Facility Transfer | 2,200.0 | 1,000.0 |
| 2A14 | 2A12 | Back-Up Emergency Communications (BUEC) - Interim | 8,500.0 | 8,500.0 |
| 2A15 | 2A13 | Air/Ground Communication Radio Frequency Interference (RFI) Elimination | 2,000.0 | 1,600.0 |
| 2A17 | 2A14 | ATC Beacon Interrogator (ATCBI) - Replace | 7,400.0 | 14,800.0 |
| 2A19 | 2A15 | Air Traffic Control En Route Radar Facilities | 6,748.3 | 5,300.0 |
| 2A20 | 2A16 | En Route Communications and Control Facilities Improvement | 918.3 | 3,126.7 |
| 2A09 | | Remote Communications Facilities (RCF) - Expand/Relocate | 3,140.0 | 0.0 |
| 2A11 | | Data Multiplexing Network (DMN) | 2,900.0 | 0.0 |
| 2A16 | | Volcano Monitoring | 2,000.0 | 0.0 |
| 2A18 | | Low Density Radio Communications Link (LDRCL) | 23,840.0 | 0.0 |
| 2A21 | | Omega Termination Costs | 6,700.0 | 0.0 |
| | | *Subtotal - En Route Programs* | **474,488.0** | **391,358.3** |

#### B. Terminal Programs

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 2B01 | 2B01 | Terminal Doppler Weather Radar (TDWR) - Provide | 2,300.0 | 4,300.0 |
| 2B02 | 2B02 | Terminal Automation Program | 36,500.0 | 135,300.0 |
| 2B18 | 2B03 | Aircraft Surface Detection Equipment (ASDE) | 7,500.0 | 5,600.0 |
| 2B20 | 2B04 | Airport Movement Area Safety System (AMASS) | 11,600.0 | 7,000.0 |
| 2B03 | 2B05 | Terminal Air Traffic Control Facilities - Replace | 67,000.0 | 82,300.0 |
| 2B04 | 2B06 | Airport Traffic Control Tower (ATCT)/Terminal Radar Approach Control (TRACON) Facilities - Improve | 0.0 | 22,722.3 |
| 2B05 | 2B07 | Terminal Voice Switch Replacement (TVSR) | 1,640.0 | 11,500.0 |
| 2B07 | 2B08 | NAS Facilities OSHA and Environmental Standards Compliance | 23,000.0 | 22,000.0 |
| 2B08 | 2B09 | Chicago TRACON | 4,700.0 | 500.0 |
| 2B09 | 2B10 | New Austin Airport at Bergstrom | 1,000.0 | 2,500.0 |

# FACILITIES AND EQUIPMENT

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 2B10 | 2B11 | Potomac TRACON | $27,600.0 | $11,900.0 |
| 2B12 | 2B12 | Northern California TRACON | 21,700.0 | 27,600.0 |
| 2B13 | 2B13 | Atlanta TRACON | 20,000.0 | 18,200.0 |
| | 2B14 | Emergency Transceivers - Replacement | 0.0 | 1,000.0 |
| 2B17 | 2B15 | Airport Surveillance Radar (ASR-9) | 23,700.0 | 6,300.0 |
| 2B15 | 2B16 | Voice Recorder Replacement Program (VRRP) | 3,000.0 | 3,000.0 |
| 2B16 | 2B17 | NAS Infrastructure Management System (NIMS) | 18,000.0 | 22,000.0 |
| | 2B18 | Terminal Facilities Integration | 0.0 | 5,600.0 |
| | 2B19 | Terminal Digital Radar (ASR-11) | 0.0 | 76,100.0 |
| | 2B20 | ASR - Weather System Processor (WSP) | 0.0 | 16,100.0 |
| | 2B21 | DOD/FAA Facilities Transfer | 0.0 | 3,600.0 |
| | 2B22 | Precision Runway Monitor | 0.0 | 3,300.0 |
| 2B19 | 2B23 | Terminal Radar (ASR) - Improve | 3,240.5 | 2,773.4 |
| 2B21 | 2B24 | Terminal Communications Improvements | 0.0 | 1,119.8 |
| 2B06 | | Radio Control Equipment (RCE) - Provide | 3,000.0 | 0.0 |
| 2B11 | | Denver TRACON | 1,200.0 | 0.0 |
| 2B14 | | Tower Automation Program | 0.0 | 0.0 |
| | | *Subtotal - Terminal Programs* | **276,680.5** | **492,315.5** |

### C. Flight Service Programs

| | | | | |
|---|---|---|---|---|
| | 2C01 | Flight Service Station (FSS) Automation | 0.0 | 2,000.0 |
| 2C01 | 2C02 | Automated Surface Observing System (ASOS) | 24,850.0 | 9,900.0 |
| 2C02 | 2C03 | FSAS Operational and Supportability Implementation System (OASIS) | 3,900.0 | 25,500.0 |
| 2C04 | 2C04 | Flight Service Facilities Improvement | 1,418.5 | 1,364.4 |
| 2C03 | | Digital Altimeter Setting Indicators (DASI) - Replace | 1,600.0 | 0.0 |
| | | *Subtotal - Flight Service Programs* | **31,768.5** | **38,764.4** |

### D. Landing and Navigational Aids Programs

| | | | | |
|---|---|---|---|---|
| 2D01 | 2D01 | Very High Frequency (VHF) Omnidirectional Range (VOR) with Distance Measuring Equipment (DME) TACAN Network Plan | 2,445.0 | 1,000.0 |
| 2D02 | 2D02 | Instrument Landing System (ILS) - Establish/Upgrade | 3,000.0 | 8,000.0 |
| 2D03 | 2D03 | ILS - Replace Mark 1A, 1B, and 1C | 2,200.0 | 2,100.0 |
| 2D04 | 2D04 | Low Level Windshear Alert System (LLWAS) - Upgrade to Phase III | 4,300.0 | 3,000.0 |
| | 2D05 | Approach Lighting System Improvement Program (ALSIP) | 0.0 | 1,000.0 |
| 2D05 | 2D06 | Runway Visual Range (RVR) | 3,500.0 | 2,000.0 |
| 2D06 | 2D07 | Gulf of Mexico Offshore Program | 3,200.0 | 2,400.0 |

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| | 2D08 | Distance Measuring Equipment (DME) Sustain | 0.0 | $1,200.0 |
| 2D08 | 2D09 | Wide Area Augmentation System (WAAS) for GPS | 0.0 | 16,000.0 |
| 2D09 | 2D10 | Non-Directional Beacon (NDB) - Sustain | 1,400.0 | 1,000.0 |
| | 2D11 | Visual Navaids - Establish/Expand | 0.0 | 400.0 |
| 2D10 | 2D12 | Navigational and Landing Aids - Improve | 3,000.0 | 2,761.8 |
| 2D07 | | ILS - Replace Wilcox Category II/III | 2,745.0 | 0.0 |
| 2D11 | | Loran-C Upgrades | 3,000.0 | 0.0 |
| 2D12 | | Precision Approach Path Indicators (PAPI) | 3,500.0 | 0.0 |
| 2D13 | | Anemometers and Related Equipment - Juneau, AK | 3,500.0 | 0.0 |
| | | *Subtotal - Landing and Navigational Aids Programs* | **35,790.0** | **40,861.8** |

*E. Other ATC Facilities Programs*

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 2E01 | 2E01 | Alaskan NAS Interfacility Communications System (ANICS) | 8,600.0 | 3,500.0 |
| 2E02 | 2E02 | Fuel Storage Tank Replacement and Monitoring | 25,000.0 | 10,600.0 |
| 2E03 | 2E03 | FAA Buildings and Equipment - Improve/Modernize | 10,000.0 | 8,000.0 |
| 2E04 | 2E04 | Electrical Power Systems - Sustain/Support | 19,200.0 | 20,400.0 |
| 2E05 | 2E05 | Air Navigational Aids and ATC Facilities (Local Projects) | 2,000.0 | 2,000.0 |
| 2E09 | 2E06 | Computer Aided Engineering Graphics (CAEG) Replacement | 1,000.0 | 1,000.0 |
| 2E06 | 2E07 | Aircraft Related Equipment Program | 2,000.0 | 5,000.0 |
| 2E07 | | Aircraft Fleet Modernization | 2,701.0 | 0.0 |
| 2E08 | | Airport Cable Loop Systems - Sustained Support | 500.0 | 0.0 |
| | | *Subtotal - Other ATC Facilities Programs* | **71,001.0** | **50,500.0** |
| | | *Total Activity 2* | **889,728.0** | **1,013,800.0** |

*ACTIVITY 3. Non-ATC Facilities and Equipment*
*A. Support Equipment*

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 3A01 | 3A01 | NAS Management Automation Program (NASMAP) | 1,000.0 | 800.0 |
| 3A02 | 3A02 | Hazardous Materials Management | 7,000.0 | 17,000.0 |
| 3A03 | 3A03 | Aviation Safety Analysis System (ASAS) | 16,800.0 | 11,600.0 |
| 3A04 | 3A04 | Operational Data Management System (ODMS) | 1,000.0 | 1,200.0 |
| 3A05 | 3A05 | Logistics Support System and Facilities | 9,749.0 | 2,300.0 |
| 3A06 | 3A06 | Test Equipment - Maintenance Support for Replacement | 500.0 | 500.0 |
| 3A07 | 3A07 | Integrated Flight Quality Assurance | 3,000.0 | 3,000.0 |
| 3A08 | 3A08 | Safety Performance Analysis System (SPAS) | 4,100.0 | 3,500.0 |
| 3A10 | 3A09 | Performance Enhancement Systems (PENS) | 11,000.0 | 9,700.0 |
| 3A09 | 3A10 | National Aviation Safety Data Analysis Center (NASDAC) | 2,000.0 | 1,800.0 |
| | 3A11 | FAA Employee Housing - Provide | 0.0 | 8,000.0 |

# FACILITIES AND EQUIPMENT

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| | 3A12 | Facility Security Risk Management | 0.0 | $1,000.0 |
| | 3A13 | Information Security - NAS Information Coordination | 0.0 | 2,000.0 |
| | 3A14 | Explosive Detection Systems (EDS) | 0.0 | 100,000.0 |
| | | *Subtotal - Support Equipment* | **56,149.0** | **162,400.0** |

### B. Training Equipment and Facilities

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 3B01 | 3B01 | Distance Learning | 3,000.0 | 2,100.0 |
| 3B03 | 3B02 | National Airspace System (NAS) Training Facilities | 1,500.0 | 400.0 |
| 3B02 | 3B03 | Aeronautical Center Training and Support Facilities | 6,000.0 | 12,000.0 |
| 3B04 | | Display System Replacement (DSR) - Training Simulator | 4,000.0 | 0.0 |
| | | *Subtotal - Training, Equipment and Facilities* | **14,500.0** | **14,500.0** |
| | | *Total Activity 3* | **70,649.0** | **176,900.0** |

### ACTIVITY 4, Mission Support
### A. System Support and Services

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 4A01 | 4A01 | System Engineering and Development Support | 28,960.0 | 29,800.0 |
| 4A02 | 4A02 | Program Support Leases | 27,500.0 | 31,100.0 |
| 4A03 | 4A03 | Logistics Support Services (LSS) | 6,000.0 | 5,600.0 |
| 4A04 | 4A04 | Mike Monroney Aeronautical Center - Lease | 15,200.0 | 14,800.0 |
| 4A05 | 4A05 | In-Plant NAS Contract Support Services | 2,500.0 | 2,000.0 |
| 4A06 | 4A06 | Transition Engineering Support | 44,800.0 | 41,800.0 |
| 4A07 | 4A07 | Frequency and Spectrum Engineering - Provide | 1,500.0 | 2,700.0 |
| 4A08 | 4A08 | Permanent Change-of-Station (PCS) Moves | 3,800.0 | 3,500.0 |
| 4A09 | 4A09 | FAA Corporate Systems Architecture | 3,500.0 | 4,500.0 |
| 4A10 | 4A10 | Technical Services Support Contract (TSSC) | 54,700.0 | 51,000.0 |
| 4A11 | 4A11 | Resource Tracking Program (RTP) | 500.0 | 1,000.0 |
| 4A12 | 4A12 | Center For Advanced Aviation System Development | 57,000.0 | 57,000.0 |
| 4A13 | 4A13 | FY 2000 Date Change Program | 18,000.0 | 36,000.0 |
| | | *Total Activity 4* | **263,960.0** | **280,800.0** |

| FY 1998 Enacted | FY 1999 Request | TITLE | FY1998 Enacted | FY 1999 Request |
|---|---|---|---|---|
| 5ALL | 5ALL | Personnel and Related Expenses | **219,110.0** | **235,210.0** |

| | | *TOTAL* | **$1,875,477.0** | **$2,130,000.0** |

**R,E&D Funding History Comparison (Dollars in Millions)**

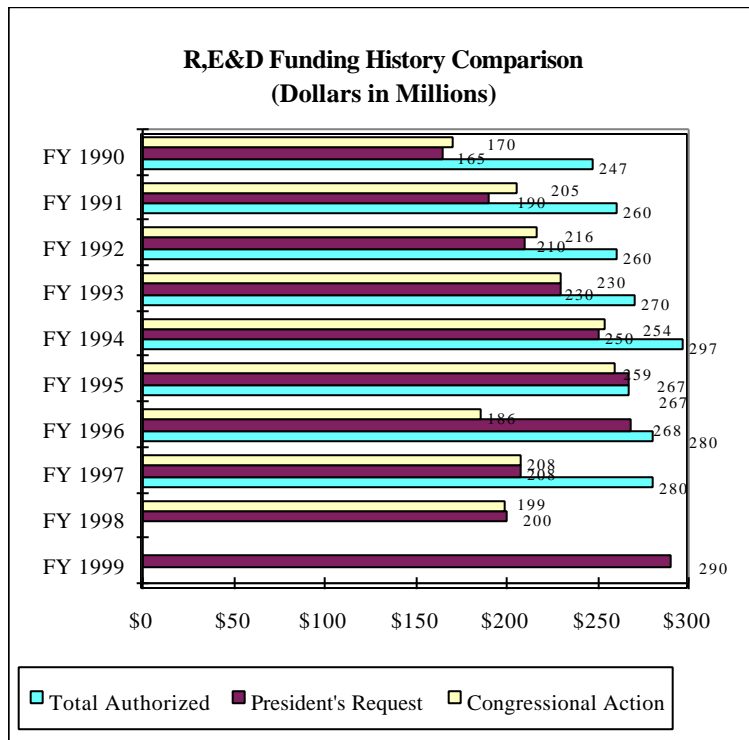Figure 10



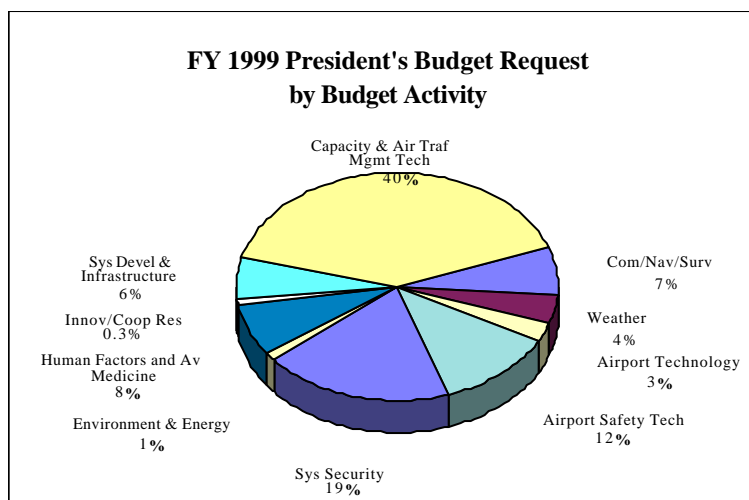**FY 1999 President's Budget Request by Budget Activity**

Figure 11

For FY 1999, $290 million is requested to support the R,E&D program. This request represents a 46 percent increase from the FY 1998 enacted level of $199.2 million. The FY 1999 request includes $90 million for the Flight 2000 program. This program is a joint demonstration program designed to facilitate implementation of free flight in Alaska and Hawaii airspace. The remaining $200 million is for all other R,E&D activities. However, the FAA will be able to increase funding for Capacity and Air Traffic Management Technology and System Security Programs. The FY 1999 request will allow the FAA to continue funding the FAA-Boeing partnership for runway research.

The FAA R,E&D program has made significant contributions that assure the safety, capacity, and cost effectiveness of the air transportation system to meet increasing demands and user requirements. The RE&D program has made significant contributions to the development of effective standards, regulations, and guidance materials necessary to support the agency's regulatory mission. The following activities are examples of future benefits that will be attained from a continued investment in FAA R,E&D programs.

# RESEARCH, ENGINEERING, AND DEVELOPMENT

- Implementation of new Air Traffic Management concepts that allow users greater flexibility in how they operate their aircraft in a free flight environment with accompanying decreases in their operating costs.

- Improved and additional weather products that allow more effective utilization of airspace, improve flight planning, and enhance situational awareness.

- Research and development of Explosives Weapons Detection activities, including the development of initiatives to increase detection activities at the nation's airport facilities.

- Research products in weather, aircraft safety technology, and human factors that will enable all the aviation community to move ahead towards the objective of "zero accidents".

**Table 7**

**Research, Engineering and Development
Summary of Request by Activity/Program
(Dollars in Thousands)**

| | Program Area/Program | FY 1998 Enacted | FY 1999 Request |
|---|---|---|---|
| 1 | *System Development and Infrastructure* | *$14,654* | *$16,768* |
| | a. System Planning and Resource Management | 1,164 | 2,148 |
| | b. Technical Laboratory Facility | 8,046 | 9,730 |
| | c. Center for Advanced Aviation System Development | 5,444 | 4,890 |
| 2 | *Capacity & Air Traffic Management Technology* | *21,258* | *116,703* |
| | a. Traffic Flow Management | 2,986 | 3,287 |
| | b. Oceanic Automation Program | 4,202 | 3,237 |
| | c. Runway Incursion Reduction | 6,000 | 3,168 |
| | d. System Capacity, Planning and Improvements | 4,000 | 4,044 |
| | e. Cockpit Technology | 4,070 | 1,642 |
| | f. General Aviation and Vertical Flight Technology Program | 0 | 2,902 |
| | g. Flight 2000 | 0 | 90,000 |
| | h. Operations Concept Validation | 0 | 6,818 |
| | i. Software Engineering R&D | 0 | 1,605 |
| 3 | *Communication, Navigation, and Surveillance* | *18,103* | *19,154* |
| | a. Communication | 4,706 | 5,869 |
| | b. Navigation | 13,397 | 8,995 |
| | c. Surveillance | 0 | 4,290 |
| 4 | *Weather* | *15,300* | *12,284* |
| | a. Weather Program | 15,300 | 12,284 |
| 5 | *Airport Technology* | *5,000* | *7,383* |
| | a. Airport Technology | 5,000 | 7,383 |
| 6 | *Aircraft Safety Technology* | *49,202* | *34,886* |
| | a. Fire Research and Safety | 6,993 | 4,750 |
| | b. Advanced Materials/Structural Safety | 3,065 | 1,734 |
| | c. Propulsion and Fuel Systems | 5,000 | 2,831 |
| | d. Flight Safety/Atmospheric Hazards Research | 2,063 | 2,619 |
| | e. Aging Aircraft | 21,540 | 14,694 |
| | f. Aircraft Catastrophic Failure Prevention Research | 4,000 | 1,787 |
| | g. Aviation Safety Risk Analysis | 6,451 | 6,471 |
| 7 | *System Security Technology* | *44,225* | *54,872* |
| | a. Explosives and Weapons Detection | 34,200 | 39,545 |
| | b. Airport Security Technology Integration | 2,485 | 5,396 |
| | c. Aviation Security Human Factors | 5,540 | 5,282 |
| | d. Aircraft Hardening | 2,000 | 4,649 |
| 8 | *Human Factors (HF) and Aviation Medicine* | *26,550* | *22,229* |
| | a. Flight Deck/Maintenance/System Integration Human Factors | 12,550 | 9,903 |
| | b. Air Traffic Control/Airway Facilities Human Factors | 10,000 | 8,297 |
| | c. Aeromedical Research | 4,000 | 4,029 |
| 9 | *Environment and Energy* | *2,891* | *3,391* |
| | a. Environment and Energy | 2,891 | 3,391 |
| 10 | *Innovative/Cooperative Research* | *2,000* | *2,330* |
| | a. Innovative/Cooperative Research | 2,000 | 2,330 |
| | **TOTAL, R,E&D** | **$199,183** | **$290,000** |

# RESEARCH, ENGINEERING, AND DEVELOPMENT

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## Operations Appropriation and Trust Fund Share
### (Dollars in Millions)



| FY | Trust Appropriation | Trust Authorization | Budget Authority |
|----|--------------------|--------------------|------------------|
| FY 1990 | 807 | 2057 | 3824 |
| FY 1991 | 2003 | 2003 | 4037 |
| FY 1992 | 2110 | 2142 | 4360 |
| FY 1993 | 2279 | 2309 | 4538 |
| FY 1994 | 2295 | 1987 | 4580 |
| FY 1995 | 2450 | 1871 | 4583 |
| FY 1996 | 2223 | 1785 | 4643 |
| FY 1997 | 1700 | 1803 | 4953 |
| FY 1998 | 1902 | 1887 | 5337 |
| FY 1999 | 2060 | 2060 | 5631 1 |

■ Trust Appropriation   ■ Trust Authorization   □ Budget Authority
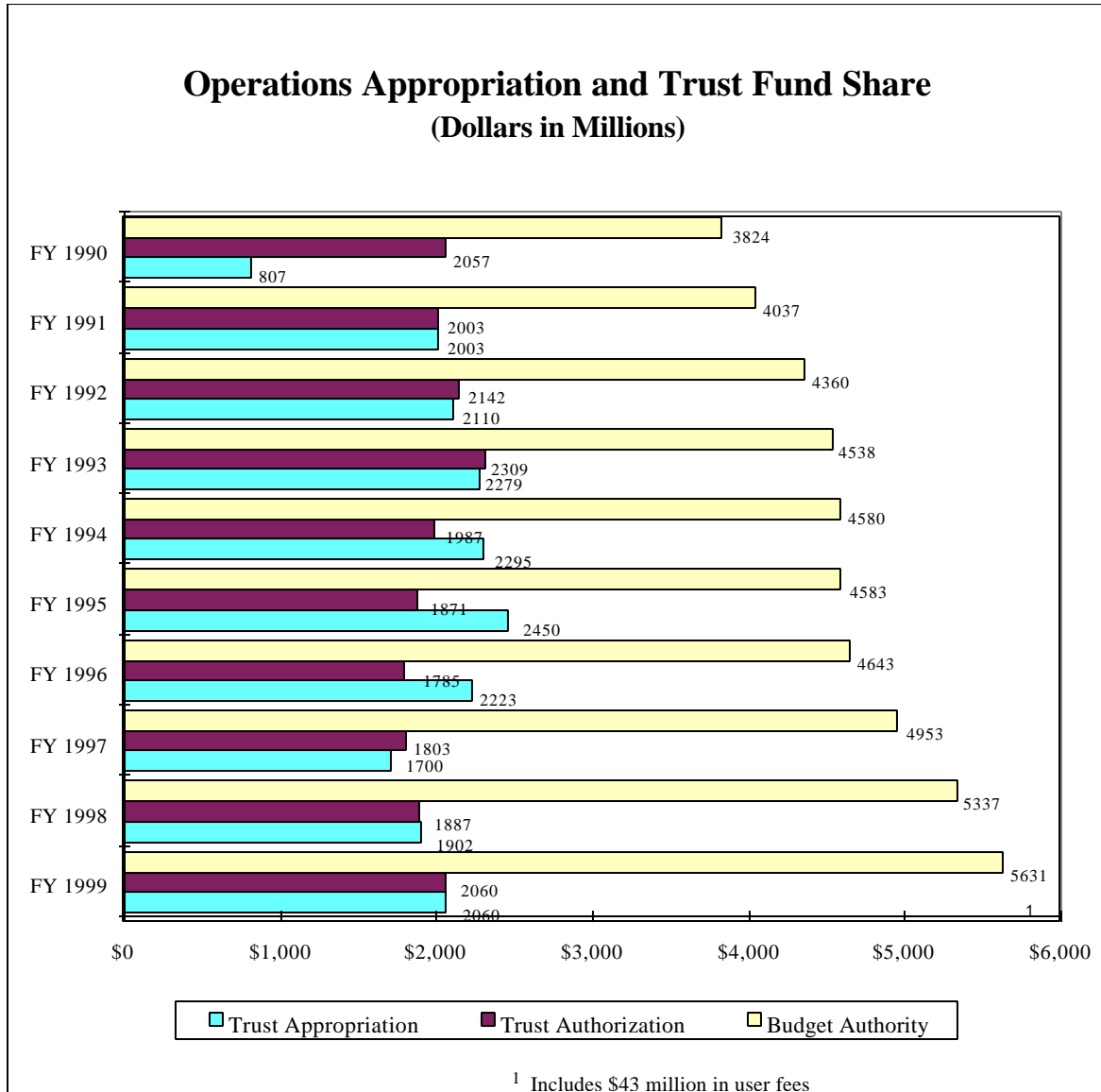
[1] Includes $43 million in user fees

**Figure 12**

# AIRPORT AND AIRWAY TRUST FUND

**Table 8**

## Airport and Airway Trust Fund
## Amounts Available for Appropriation
### (Dollars in Millions)

| | FY 1997 Actual | FY 1998 Estimate | FY 1999 Estimate |
|---|---|---|---|
| Balance, Start of Year | $2,356 | $1,484 | $4,201 |
| **Receipts**: | | | |
| Tax Revenues | 4,007 | 7,975 | 10,038 |
| Interest | 481 | 418 | 584 |
| Total Receipts | 4,488 | 8,393 | 10,622 |
| Total: Balances and Collections | 6,844 | 9,877 | 14,823 |
| **Appropriations:** | | | |
| Trust Fund Share of FAA Operations | -1,700 | -1,902 | -2,060 |
| Grants-in-Aid for Airports Obligation Limitation | -1,460 | -1,700 | -1,700 |
| Facilities and Equipment | -1,938 | -1,875 | -2,130 |
| Research, Engineering, and Development | -208 | -199 | -290 |
| Trust Fund Share of Rental Payments | -39 | 0 | 0 |
| Payments to Air Carriers (Trust Fund) | -26 | 0 | 0 |
| Subtotal Appropriation | -5,371 | -5,676 | -6,180 |
| Unobligated Balance Returned to Receipts [2] | 11 | 0 | 0 |
| Total Balance, End of Year | $1,484 | $4,201 | $8,643 |

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[2] The authority to obligate these balances expired at the end of FY 1997

**Table 8 (cont'd)**

## Airport and Airway Trust Fund
## Amounts Available for Appropriation
## (Dollars in Millions)[3]

| | FY 1997 Actual | FY 1998 Estimate | FY 1999 Estimate |
|---|---|---|---|
| **Unexpended Balance, Start of Year:** | | | |
| Uninvested Balance | $10 | $82 | 0 |
| Par Value | 7,682 | 6,360 | 9,348 |
| Total Balance, Start of Year | $7,692 | $6,442 | $9,348 |
| **Cash Income During the Year** | | | |
| **Government Receipts:** | | | |
| Passenger Ticket Tax | 3,389 | 5,476 | 5,836 |
| Passenger Flight Segment Tax | 0 | 523 | 1,314 |
| Waybill Tax | 331 | 355 | 532 |
| Fuel Tax | 128 | 707 | 1,030 |
| International Departure/Arrival Tax | 194 | 775 | 1,188 |
| Rural Airports Tax | 0 | 46 | 62 |
| Frequent Flyer Tax | 0 | 135 | 138 |
| Refund of Taxes | -35 | -42 | -62 |
| **Intragovernmental Transactions:** | | | |
| Interest, Airport and Airway Trust Fund | 481 | 418 | 584 |
| **Offsetting Collections:** | | | |
| Facilities and Equipment | 14 | 75 | 75 |
| Research, Engineering, and Development | 6 | 15 | 15 |
| Total Cash Income | 4,508 | 8,483 | 10,712 |
| **Cash Outgo During Year:** | | | |
| Trust Fund Share of FAA Operations | -1,661 | -1,941 | -2,060 |
| Grants-in-Aid for Airports | -1,489 | -1,554 | -1,636 |
| Facilities and Equipment | -2,310 | -1,763 | -1,787 |
| Facilities and Equipment Offsetting Collections | -14 | -75 | -75 |
| Research, Engineering, and Development | -218 | -219 | -273 |
| Research, Engineering, and Development Offsetting Collections | -6 | -15 | -15 |
| Trust Fund Share of Rental Payments | -39 | 0 | 0 |
| Payments to Air Carriers (Trust Fund) | -21 | -10 | 0 |
| Total Cash Outgo | -5,758 | -5,577 | -5,846 |
| **Unexpended Balance, End of Year:** | | | |
| Uninvested Balance | 82 | 0 | 0 |
| Par Value | 6,360 | 9,348 | 14,214 |
| Total Balance, End of Year | 6,442 | 9,348 | 14,214 |
| Obligated Balance | -4,380 | -4,648 | -5,025 |
| Unobligated Balance | -708 | -864 | -911 |
| Total Commitments | -5,088 | -5,512 | -5,936 |
| Uncommitted Balance, End of Year | $1,354 | $3,836 | $8,278 |

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[3] This table corrects erroneous balances shown in Budget Appendix for FY 1999

# FISCAL YEAR 1998 FUNDING

**Table 9**

## Amounts Available in FY 1998
**(Dollars in Millions)**

| | FY 1998 President's Budget | FY 1998 Enacted | Difference |
|---|---|---|---|
| **Budget Authority** | | | |
| Operations | $5,386.1 | $5,336.5 | $-49.6 |
| (General) | (1,611.1) | (3,350.9) | (1,739.8) |
| (Trust) | (3,425.0) | (1,901.6) | (-1,523.4) |
| (User fees) | (350.0) | (84.0) | (-266.0) |
| | | | |
| Grants-in-Aid to Airports Obligation Limitation | 1,000.0 | 1,700.0 | 700.0 |
| Facilities and Equipment | 1,875.0 | 1,875.5 | 0.5 |
| Research, Engineering, and Development | 200.0 | 199.2 | -0.8 |
| | | | |
| **Total Amounts Available** | **$8,461.1** | **$9,111.2** | **$650.1** |
| | | | |
| | | | |
| **Full Time Equivalents** | **50,224** | **50,089** | **-135** |
| | | | |
| **Direct** | **49,664** | **49,582** | **-82** |
| Operations | 46,760 | 46,678 | -82 |
| Facilities and Equipment | 2,212 | 2,212 | 0 |
| Research, Engineering, and Development | 689 | 689 | 0 |
| Aviation Insurance Revolving Fund | 3 | 3 | 0 |
| | | | |
| **Reimbursable** | **560** | **507** | **-53** |
| Operations | 353 | 300 | -53 |
| Franchise Fund | 152 | 152 | 0 |
| Facilities and Equipment | 55 | 55 | 0 |
| Research, Engineering, and Development | 0 | 0 | 0 |

**Table 10**

## Summary of Outlays
**(Dollars in Millions)[1]**

| Appropriation | FY 1997 Actual | FY 1998 Estimate | FY 1999 Estimate |
|---|---|---|---|
| Operations | $4,803 | $5,436 | $5,596 |
| (General) | (3,130) | (3,421) | (3,488) |
| (Trust) | (1,661) | (1,941) | (2,060) |
| (User Fees) | (12) | (74) | (48) |
| Facilities and Equipment | 2,310 | 1,763 | 1,787 |
| Research, Engineering, and Development | 218 | 219 | 273 |
| Grants-in-Aid to Airports | 1,489 | 1,554 | 1,636 |
| National Civil Aviation Review Commission | 1 | 1 | 0 |
| Miscellaneous Expired Accounts | * | 1 | 0 |
| Aviation Insurance Revolving Fund | -3 | -4 | -4 |
| Administrative Services Franchise Fund | -3 | 1 | 0 |
| TOTAL Outlays | $8,815 | $8,970 | $9,288 |
| (General) | (3,137) | (3,493) | (3,532) |
| (Trust) | (5,678) | (5,477) | (5,756) |
| Proprietary Receipts: | | | |
| Miscellaneous Recoveries & Receipts | * | -1 | -1 |

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[1] Asterisks denote amounts of less then $1 million