1. The Budget Message of the President

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1. THE BUDGET MESSAGE OF THE PRESIDENT

To the Congress of the United States:

I am pleased to present the *Budget of the United States Government for Fiscal Year 1993.*

In the State of the Union message, which I delivered yesterday, I presented to the Congress and the Nation a comprehensive agenda for economic growth. I stated that we must not only get the economy moving again in the short term, but also set America firmly on the path toward long-term economic growth and competitiveness.

I emphasized in that message the importance of: stimulating the investment necessary to create jobs, addressing problems related to real estate and health care, improving America's capacity to compete in a global economy, eliminating unnecessary Federal regulation, and accomplishing these objectives in a way that brings the deficit under control. I outlined specific incentives for investment, savings, and homeownership; tax relief for families; investments in the future; and proposals for reform in areas ranging from health to education.

This document translates the agenda for growth into a set of specific budget and policy recommendations. These are summarized in the Introduction and presented in detail in the chapters and appendices which follow.

I have asked the Congress to lay aside partisanship and to join me in enacting this growth agenda promptly. To that end, I pledge my full cooperation.

GEORGE BUSH

THE WHITE HOUSE

January 29, 1992

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2. Director's Introduction (and Overview Tables)

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2. DIRECTOR'S INTRODUCTION (AND OVERVIEW TABLES)

HOPES, FEARS, AND FALLIBLE FORECASTS

A year ago, the Budget was published in a context of major uncertainty. Iraq's invasion of Kuwait had destabilized the Middle East. That caused obvious problems for the American economy, which was already experiencing sluggish growth. The allied military counter-offensive had begun. But the outcome was not yet clear. Understandably, the mood was somber.

In the intervening year, the international situation improved dramatically. Kuwait was liberated. A proud and grateful nation welcomed its returning troops with near-euphoric celebration. Comprehensive Mideast peace talks commenced. Imperial Communism and the Soviet Union were disbanded. And clearly, market-oriented democracy has been on the rise.

Yet, here at home, the euphoria of summer has been displaced by another winter's gloom. The domestic economy has not recovered in the manner that had been widely forecast. The economy turned up, as predicted, in the middle of the year. When the *Wall Street Journal* published its mid-year survey, 39 of 40 private sector forecasters predicted positive real GNP growth—an average of 2.4 percent—for the second half of 1991. Thirty-eight of 40 predicted positive growth for the first half of 1992. But the recovery faltered. Economists scurried to reestimate. The sputtering economy seemed to support the cautionary note in last year's Introduction: "macroeconomics is a highly fallible 'science'; macroeconomists are often closer to each other than to reality."

By several conventional statistical measures, the economy is not as weak as in some previous recessions. But confidence is remarkably low. And although the unemployment rate is not as high as in some earlier periods, its level is unacceptable.

Many current problems are different from those associated with traditional business cycles. In general, there has not been an excessive inventory build-up. Rather, it is the accumulation of public and private debt that has been viewed generally as excessive. The financial sector has been under unusual stress. The real estate sector has been depressed. Much of the service sector (as well as white collar employment within the manufacturing sector) is in the process of restructuring. Such problems have been felt across a wider geographic and socio-economic range than was characteristic of earlier "blue collar" (or "rust belt") recessions. A more generalized sense of worry has developed among "middle class" workers and families.

For these reasons, and for all the conventional reasons, the current context requires a strong program and prompt action to get the economy moving again. But the character of the underlying problems makes clear: There must be more than just a short-term program. What is required is a *comprehensive* program to address not only the short-term, but also the long.

The President has advanced such a comprehensive program—to renew confidence, and to secure American growth in a competitive global economy. This Budget reflects that program.

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THE PRESIDENT'S COMPREHENSIVE AGENDA FOR ECONOMIC GROWTH

In his *State of the Union Address,* the President has highlighted his agenda for growth.

Because unemployment remains high, the President has proposed a further extension of Unemployment Insurance Extended Benefits. But such benefits are obviously not a satisfactory substitute for a program to restore, expand, and secure jobs.

The President's agenda for job-creating growth is comprised of both short-term measures to get the economy moving and longer-term measures to secure American growth for the future.

The short-term agenda for growth includes the following:

(1) ***Executive Actions:*** **to strengthen economic activity in areas where the executive branch can proceed without depending upon Congressional action,**

- a *reduction of excessive personal income tax withholding* by an average of $345 per year (joint return) for those taxpayers who wish to have this burden reduced;
- continued *acceleration* of previously appropriated federal spending;
- prudent execution of measures to reduce the *"credit crunch"*;
- reinvigorated action to reduce the burden of *regulation*; and
- management of *monetary policy* (through the Federal Reserve) on a basis that yields both lower interest rates and low inflation;

(2) ***New Investment Incentives:*** **to stimulate job-creating investment** (see Chapter 22),

- a *capital gains* incentive that reduces the tax on long-term gains to 15.4 percent (also important for the long term);
- a new *15% Investment Tax Allowance;*
- simplified and liberalized treatment of depreciation under the *Alternative Minimum Tax;*

(3) ***New Real Estate Incentives:*** **to increase home sales and real estate values** (see Chapter 22),

- a new *$5,000 tax credit* for first-time home-buyers;
- a *modified "passive loss rule"* for active real estate investors;
- *penalty-free IRA withdrawal* for first-time home-buyers;
- extension of tax preferences for *mortgage revenue bonds* and *low-income housing;*
- allowance of deductions for losses on *personal residences*—
- all in addition to the favorable effects of a capital gains incentive.

This set of short-term initiatives unquestionably would help get the economy moving. But to strengthen growth for the intermediate and longer term, as well, a serious agenda must be more complex and comprehensive. The list of necessary initiatives is long, and its reach is broad. A narrower focus simply will not get the long-term job done.

The President's comprehensive agenda for growth involves both reform and restructuring. In addition to short-term measures, it includes such initiatives as the following:

(4) ***Investment in the Future:*** **to shift public expenditures toward investment in the future and to improve private productivity,**

- record investment in federal *research and development* ($76.6 billion) and in federal support of both basic research and applied civilian R&D (see Table 6–2 and Chapter 6)—along with permanent extension of the *R&D tax credit* (see Chapter 22);
- record investment in *Head Start* ($2.8 billion)—for the first time covering all participating eligible 4-year-olds;
- record investment in *children* (over $100 billion) and in *preventive* health (see Tables 5–3 and 5–1 and Chapter 5);
- record investment in Education generally, and in *Math and Science* Education (see Chapter 4);

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- record investment in combatting *crime* and *drug abuse* (see Chapter 9);
- record investment in infrastructure (see Chapter 7);
- *"Job Training 2000",* to improve the delivery and effectiveness of job training and vocational education programs (see Chapter 4);
- major expansion of *"Weed and Seed"* ($500 million—see Chapter 8) linking law enforcement and social services—and linking these, in turn, with:
- *Enterprise Zones*—to bring entrepreneurship and opportunity to areas of "hard core" distress (see Chapter 8);

(5) ***International Market Expansion:*** **to expand opportunities for American exports in a regime of free and fair trade,**

- *GATT* negotiations;
- negotiations to establish a *North American Free Trade Agreement;*
- the President's *Enterprise for the America's Initiative;* and
- continued *bilateral efforts* to open markets for U.S. exports.

(6) ***Pro-family Incentives:*** **to ease the financial burdens of raising a family and saving for the future** (see Chapter 22),

- a new *Flexible IRA*—with penalty-free withdrawal for medical and educational expenses (in addition to first-time purchase of a home), and with tax- free withdrawal after 7 years;
- tax deductibility of interest paid on *student loans*;
- an increase in the personal income tax exemption of *$500 per child* (i.e., $2,000 per year for a family with four children)—as well as:

(7) ***Health Reform:*** **to increase the affordability and security of health insurance for all, while making the high-quality American health system cost-effective and economically sustainable,**

- *The President's Plan for Comprehensive Health Reform* (outlined further below);

(8) ***Budget Discipline:*** **to bring the growth of the federal budget and deficit under control (and to reduce the drain on savings),**

- a *freeze* on federal domestic discretionary budget authority; and a cut in total discretionary budget authority;
- complete *elimination of 246 programs and over 4000 projects* whose funding is not sufficiently justified (see Chapter 16);
- a *freeze* on federal domestic government employment, and a cut of total federal personnel by nearly 4 percent (see Table 2–8).
- in response to changes in the external threat, an orderly and carefully-planned further reduction in defense spending of $50.4 billion by 1997—making the total real defense cut 29 percent since 1989.
- an *enforceable cap* on the growth of unfinanced "mandatory" spending (see below and Chapter 18);
- a cap on cumulative subsidies of *hidden liabilities* (see Chapter 18);
- extension and refinement of the *caps, accounting improvements,* and *pay-as-you-go discipline* of the Budget Enforcement Act (see Chapter 18);
- initiatives for Management Improvement (see Chapter 15);
- all in addition to the most important deficit-reduction measure: enactment of the rest of the President's agenda for growth.

Most of the elements of the President's growth agenda noted above are new. In addition, there are major reform proposals still before the Congress awaiting action. The fact that the Congress has not yet acted on these does not make them any less important for long-term growth. They are, indeed, essential.

Among the comprehensive reforms still awaiting Congressional action are those to reform education, modernize the financial services sector, increase productivity, and reduce energy vulnerability:

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(9) *America 2000:* to revolutionize American education, strengthen accountability, and improve performance—through a nation-wide reform movement and such federal programmatic initiatives as New American Schools and Educational Choice (see Chapter 4);

(10) *Financial Service Sector Reform:* including deposit insurance reform, interstate banking, and provisions for integrating financial services (see Chapter 12);

(11) *Legal Reform:* including tort reform, product liability reform, malpractice reform, and civil justice reform; and

(12) *The President's National Energy Strategy:* which received heightened, if fleeting, interest after the Iraqi invasion; and which, like the other major areas of unfinished business, continues to await Congressional action. For convenient reference, this outline of the President's Agenda for Growth is presented as Chart 2–1.

CHART 2–1. THE PRESIDENT'S GROWTH AGENDA

Immediate Agenda:

(1) Executive Actions
- Withholding adjustment
- Regulatory relief
- Spending acceleration
- Monetary policy

(2) Investment Incentives
- Capital gains
- 15% Investment Tax Allowance
- Modified AMT

(3) Real Estate Incentives
- $5,000 tax credit (first home)
- Modified Passive Loss Rule
- Penalty-free IRA Withdrawal
- Mortgage revenue bonds
- Low-income housing credit
- Loss deduction for personal residences
- Capital gains

Intermediate and Long-Term Agenda:

(4) Investment in the Future
- R&D (record level)
- Infrastructure (record level)
- Head Start/Children (record level)
- Prevention (record level)
- Education (record level)
- Math & Science Initiative
- Anti-crime/drug abuse (record level)
- Job Training 2000
- Weed & Seed
- Enterprise Zones

(5) International Market Expansion
- GATT
- North American FTA
- Enterprise for the Americas
- Continued bilaterals

(6) Pro-family Incentives
- Flexible IRA
  —Penalty-free withdrawal for health/education/first home purchase
- Student loan interest deduction
- Personal exemption increase
- Health reform

(7) Comprehensive Health Reform
- The President's Plan
- Health Insurance Market Reform:
  —Pooling
  —Guaranteed issue/coverage
  —Health Insurance Networks
- Health Insurance Tax Credit/Deduction
- Cost-effectiveness/containment measures
- Coordinated care incentives
- Prevention

(8) Budget Discipline
- Orderly cut in Defense
- Domestic discretionary freeze
- Personnel freeze
- Program and project eliminations
- Mandatory cap and subsidy cap
- BEA extension
- Management initiatives

Unfinished Reform Agenda (still before the Congress):

(9) America 2000 (Education Reform)
- New American Schools
- Choice
- National Goals/America 2000 Communities

(10) Financial Sector Reform

(11) Legal Reform
- Tort reform
- Malpractice reform
- Civil justice reform

(12) National Energy Strategy

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OF DEBT AND DISCIPLINE—RESTRAINING DEFICIT GROWTH

Almost all would agree with the proposition that economic growth should be increased. Most would also agree with a second proposition: that growth of the federal deficit should *not* be increased—indeed, that deficit growth should be restrained and then reversed.

Fortunately, these two propositions need not be in conflict. A responsible growth program can have a powerfully favorable effect on the deficit. And a responsible deficit reduction program can have a favorable effect on growth. The two popular propositions can complement and reenforce each other.

That might be thought of as good news. It might suggest that if the political system were to reflect these two propositions, it would not only do what is popular, but also what is responsible.

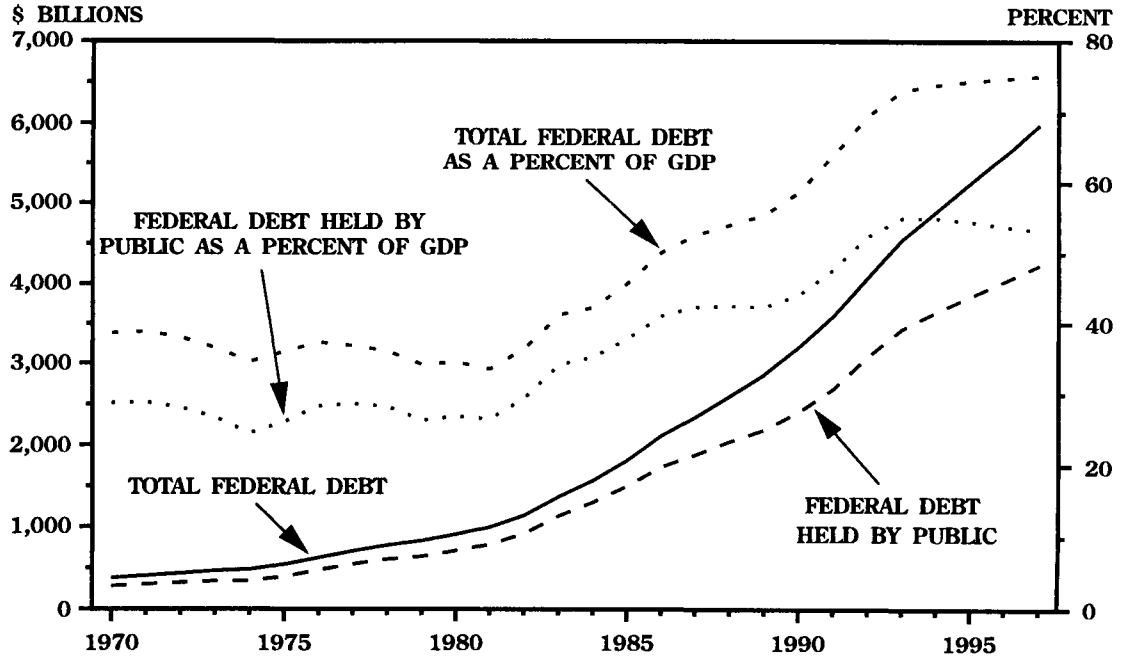
Unfortunately, however, the pleasant political complementarity of the two propositions depends on their being abstract. Regrettably, when it comes to particulars, only one of the propositions remains widely popular.

To cite the obvious as examples: A middle class tax cut is popular. But restraint on the growth of middle class entitlements is not. Investment in infrastructure is popular. Restraint on the growth of arguably "worthy" discretionary spending is not. Tax incentives to increase private savings are widely popular. The removal of broad-based tax preferences in order to increase public savings (i.e., to reduce deficits) is not.

Similarly, financing current expenditures with future payments (i.e., debt) is naturally much more popular than financing with current taxes or spending reduction. The taxpayers and consumers of the present are here and voting. Those of the future are not. (This lack of democratic representation, and the need to protect future rights, is the justification for a constitutional amendment requiring a balanced budget.)

The practical facts of political reality amount to a formula for rising deficits and rising debt. That, of course, is the observable pattern. (See Chart 2–2.)

Chart 2-2. NOMINAL DEBT & DEBT AS A PERCENT OF GDP



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While individuals and corporations have recently been strengthening their balance sheets, the Federal government has not. It is little wonder that, in observing the political dynamics of Washington, those in long-term financial markets have reflected concern about inadequate fiscal discipline.

The concern is legitimate.

With this concern in view, the President has proposed a budget that can fully accommodate his growth agenda—and that can be enacted in its entirety without abandoning the discipline of the Budget Enforcement Act. That is, the President's program does not require increasing any discretionary spending caps. It does not require transfers from one category of expenditure to another. And, if fully implemented, the President's program can meet the pay-as-you-go requirements without triggering a sequester. Indeed, it can exceed the pay-as-you-go requirements, and thereby contribute further to deficit reduction.

A summary of the pay-as-you-go accounting is at Table 2–1, with related detail at Tables 2–4 and 2–5. There will, as usual, be differences with respect to particular proposals reflected in these tables. But it is important to underline: *The President's strong and responsible agenda for growth can be fully enacted without abandoning the budget discipline of the Budget Enforcement Act.*

It is clear, however, that some in Congress do not wish to stay within the Budget Enforcement Act. Some wish to abandon its discipline entirely. Others wish to amend the Act in order to re-allocate defense savings for other purposes.

With these Congressional interests in view, the President's proposed defense savings are displayed at Table 2–2. The defense outlay savings are roughly sufficient to offset the President's proposed $500 per child increase in the personal exemption. Such an offset is not now possible under the Budget Enforcement Act; nor is it necessary under the President's program. But if the Congress were unwilling to accept fully the President's proposed pay-as-you-go financing of tax initiatives, the President would be prepared to consider modifying the Budget Enforcement Act to allow the projected defense outlay savings to offset the proposed increase in the personal exemption. This would be contingent, however, on the following:

- limitation of any defense savings to those that are consistent with national security interests;
- extension and refinement of the discipline of the current system of caps, mini-sequesters, and pay-as-you-go requirements;
- allocation of savings primarily to deficit-reduction and to families via tax reduction;
- corresponding downward adjustment of the total discretionary spending caps.

Even with adherence to the discipline of the Budget Enforcement Act, the near-term outlook for debt and deficits remains unattractive. (See Chart 2–3 and Table 2–3.)

There are three major reasons for this:

- ***Carryover.*** One major reason is the *carryover effect of rising debt,* the associated *interest burden,* and the coverage of *deposit insurance.* Chart 2–3 shows graphically that interest and deposit insurance alone are almost equal to the entire federal deficit. Indeed, if interest and deposit insurance were not included, the federal deficit would quickly turn to surplus. This, of course, is not meant as a policy suggestion! It is simply to underline again a point that is increasingly evident: continuing to build up excessive debt and hidden liabilities has substantial costs that carry forward to the future. And at some point, the future is now.
- ***Recession.*** A second major reason for the near-term deficit problem is the recession and the continuing *weakness of the economy.* Chart 2–4 shows the extent to which enactment of the President's growth agenda would improve the deficit outlook relative to the likely pattern if Congress were to follow a conventional "business-as-usual" approach. (The deficit effect of alternative economic assumptions is displayed at Table 3–2, Chapter 3.)

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Table 2–1. PAY-AS-YOU-GO PROPOSALS

(Savings, in billions of dollars)

		1992	1993	1994	1995	1996	1997	1992–97
(1)	Carryover pay-go balance	1.1	1.1	0.5	1.0	1.4	–0.9	4.2
(2)	Mandatory outlay proposals (except health reform and UI/EB)	0.5	3.4	5.3	5.9	9.9	9.8	34.9
(3)	Revenue proposals (except personal exemption)	–5.2	0.7	3.1	0.9	0.9	–1.1	–0.7
(4)	**Subtotal, before accruals and personal exemption**		**1.6***	**8.9**	**7.8**	**12.2**	**7.8**	**38.3**
(5)	Deposit insurance reforms [1]	0.7	1.8	0.5	4.4	5.4	3.4	16.2
(6)	PBGC reforms [1]	8.7	2.5	2.7	1.7	3.3	2.9	21.8
(7)	**Subtotal, before personal exemption and Extended benefits/Unemployment Insurance**	**5.7**	**9.6**	**12.1**	**13.9**	**20.9**	**14.1**	**76.3**
(8)	Unemployment Insurance/Extended Benefits	–2.2	–2.2	—	—	—	—	–4.4
(9)	Personal exemption.	—	–4.4	–4.6	–4.7	–5.0	–5.2	–23.9
(10)	**Total paygo scoring**	**3.5**	**3.0**	**7.5**	**9.1**	**15.9**	**8.9**	**48.0**

* Section 252(b) of the Balanced Budget and Emergency Deficit Control Act of 1985, as amended by the Budget Enforcement Act, requires the Office of Management and Budget to take into account the impact of all direct spending and revenue legislation enacted as of the end-of-session sequestration report for both the current year (FY 1992) and the budget year (FY 1993).

[1] Assumes enactment of previously proposed reforms that reduce the competitive disadvantages of depository institutions and limit deposit insurance coverage, and reforms that revise minimum funding requirements, improve bankruptcy recoveries, and change the guarantee limits of the PBGC. In addition, assumes that the savings from these reforms are accounted for utilizing the long-established principles of accrual accounting. PBGC savings are estimated by applying reforms to only single-employer pension plans of publicly-traded firms.

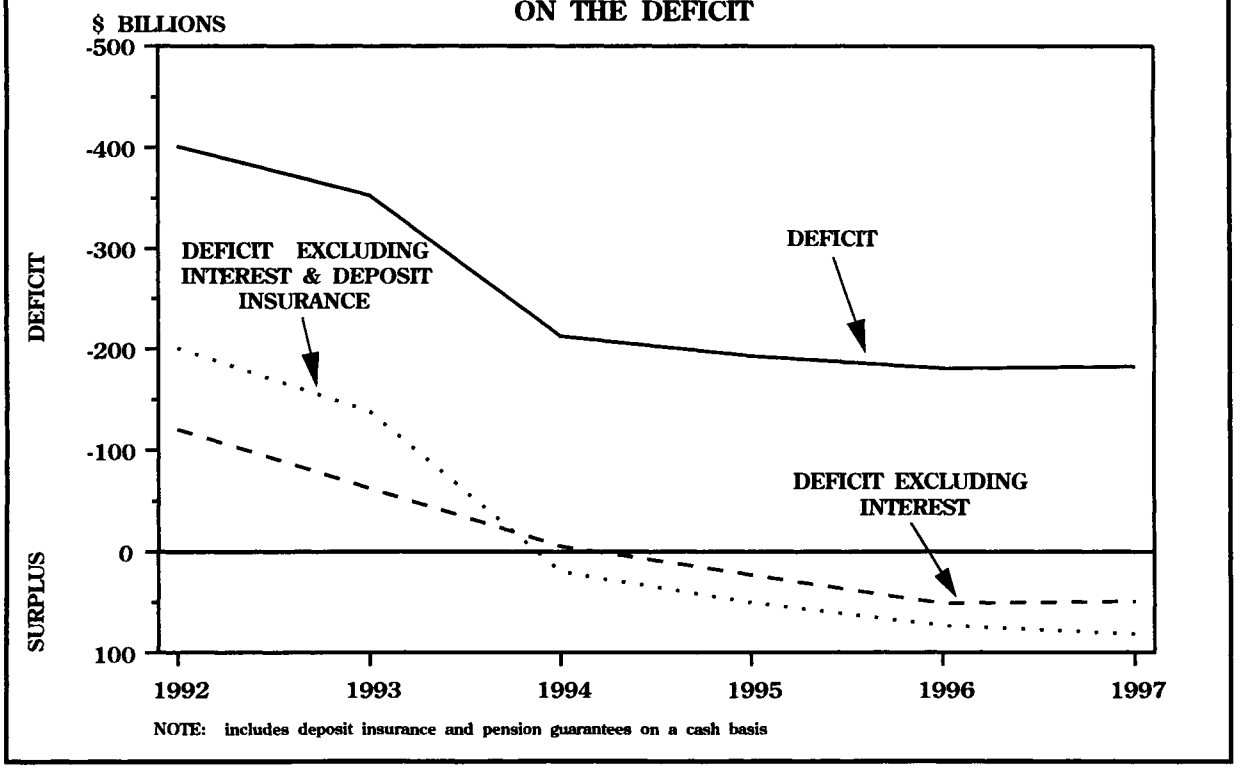
Table 2–2. BUDGET IMPACT OF PROPOSED DEFENSE SAVINGS AND INCREASES IN THE PERSONAL EXEMPTION

(In billions of dollars)

	1992	1993	1994	1995	1996	1997	1992–97
Department of Defense (Discretionary):							
Summit Baseline (extended):							
Budget Authority	278.2	278.6	279.0	281.5	283.4	288.2	1,688.9
Outlays	283.9	279.7	274.0	275.3	279.4	284.8	1,677.1
Inflation Adjustments							
Budget Authority	0.0	–2.3	–2.4	–2.4	–2.7	–2.8	–12.5
Outlays	0.0	–1.0	–1.7	–2.0	–2.4	–2.6	–9.7
Adjusted Baseline							
Budget Authority	278.2	276.3	276.6	279.1	280.7	285.4	1,676.4
Outlays	283.9	278.7	272.3	273.3	277.0	282.2	1,667.4
Proposed Defense Levels							
Budget Authority	271.6	268.4	268.6	270.7	271.3	275.5	1,626.0
Outlays	283.3	273.5	268.2	268.7	271.7	274.5	1,639.9
Proposed Defense Savings							
Budget Authority	–6.6	–7.9	–8.0	–8.4	–9.4	–10.0	–50.4
Outlays	–0.6	–5.2	–4.1	–4.6	–5.2	–7.7	–27.4
Increase in the Personal Exemption by $500 per child (effective Oct. 1, 1992):							
Revenues	—	–4.4	–4.6	–4.7	–5.0	–5.2	–23.9

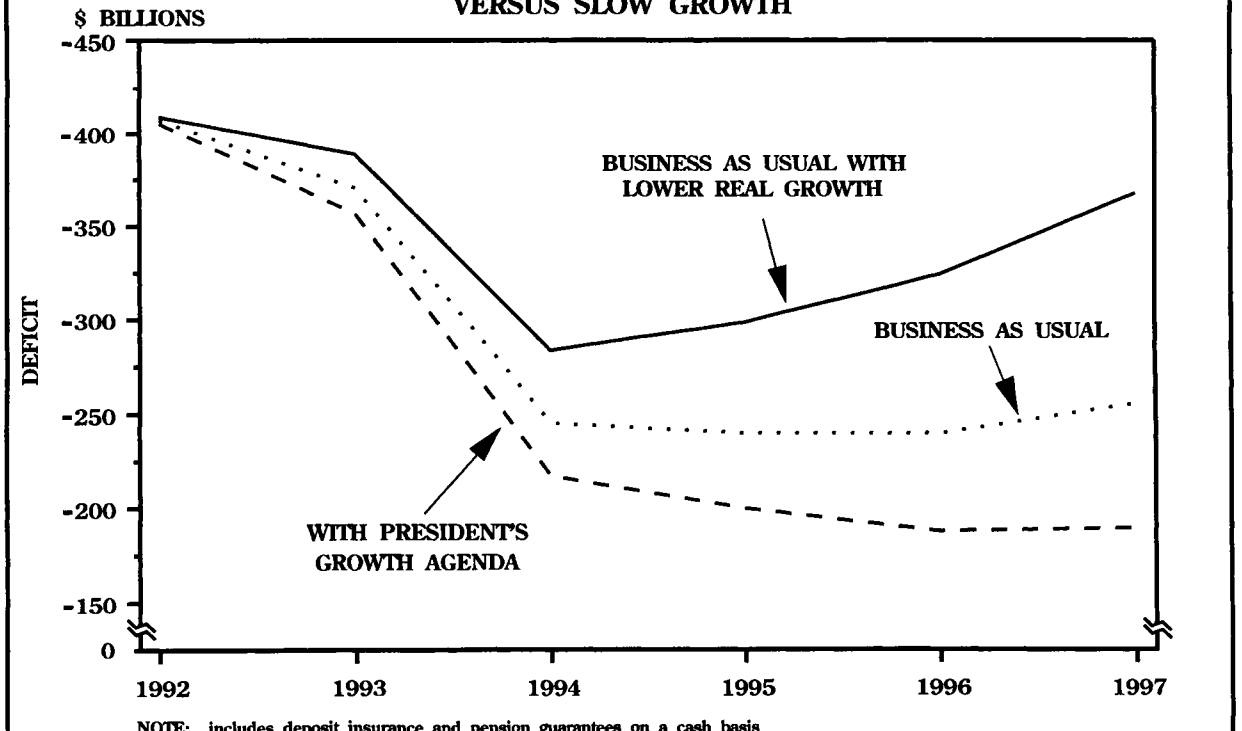
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Chart 2-3. THE IMPACT OF INTEREST AND DEPOSIT INSURANCE ON THE DEFICIT



NOTE: includes deposit insurance and pension guarantees on a cash basis

Chart 2-4. DEFICIT OUTLOOK: PRESIDENT'S GROWTH AGENDA VERSUS SLOW GROWTH



NOTE: includes deposit insurance and pension guarantees on a cash basis

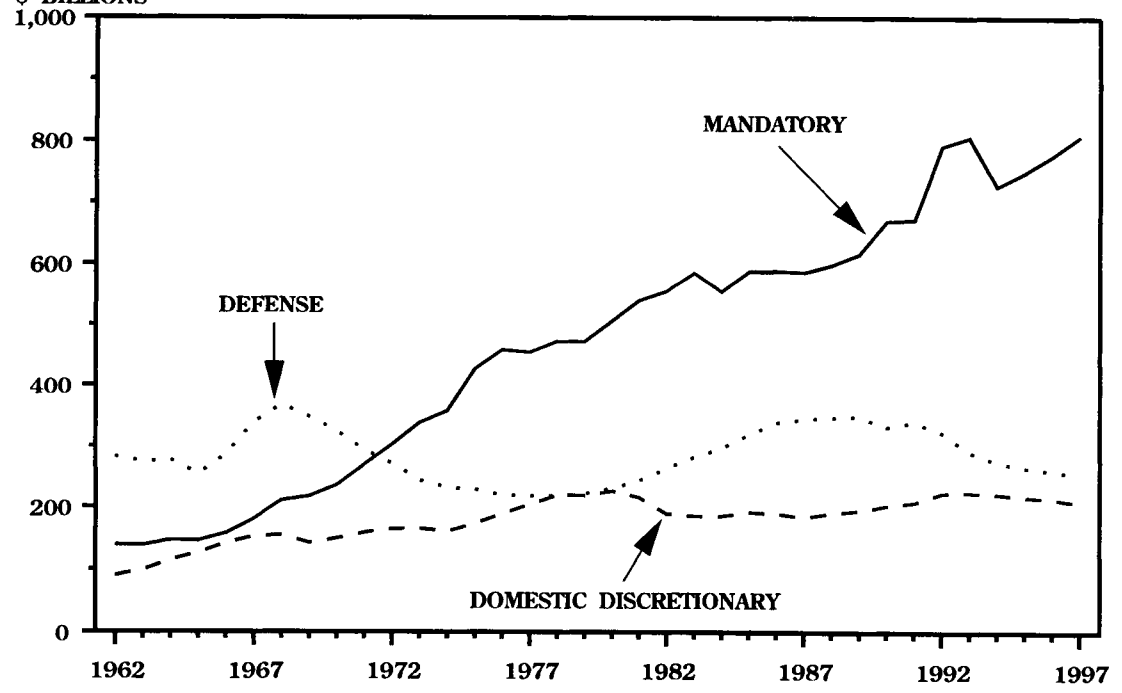
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- ***Mandatory Program Growth.*** A third major reason for both the near-term and the long-term deficit problem is the continuing unrestrained *growth of so-called mandatory programs.* These are programs that do not come up for annual review or decision by either the Congress or the President. They are not "discretionary" in that they do not require annual appropriation; and they are not available for vote or veto. They just keep on going and growing automatically. Sometimes referred to as "uncontrollable," these programs are clearly out of control.

  "Mandatory" programs for 1993 now amount to $766.8 billion in spending per year ($980.6 billion including interest). They are projected to grow at an average of 7.2 percent over the next five years (excluding deposit insurance). Mandatory programs now account for over half of the federal budget (64.4 percent including interest). By contrast, it is interesting to note that such programs amounted to only 23 percent of the budget in President Kennedy's day. (See Chart 2–5.)

Apart from returning to strong economic growth, slowing the growth of "mandatory" programs is the most important key to bringing the deficit under control. To illustrate this point, one might suppose that "mandatory" programs were allowed to grow only at the rate necessary to accommodate increases in the eligible population and increases in the CPI. (These are, perhaps, what many naturally assume to be the causes of mandatory program growth.) But if mandatory programs were to grow only for population and the CPI, there would be enormous *savings.* Indeed, the cumulative deficit savings (relative to business-as-usual) would amount to a *shocking total: almost $390 billion*!

Chart 2-5. "MANDATORY" PROGRAMS ARE TAKING OVER THE BUDGET
(OUTLAYS IN 1993 DOLLARS)



NOTE: includes deposit insurance and pension guarantees on a cash basis; excludes undistributed offsetting receipts

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Chart 2–6 shows graphically how much this seemingly rather modest proposal could do for deficit reduction. There is no realistic or responsible set of additional discretionary program reductions that is remotely close in its deficit-reduction potential. Chart 2–6 also suggests what is inescapably the case: the budget can be brought into balance in the intermediate term only by enacting *both* a growth agenda *and* restraint on the growth of "mandatory" programs.

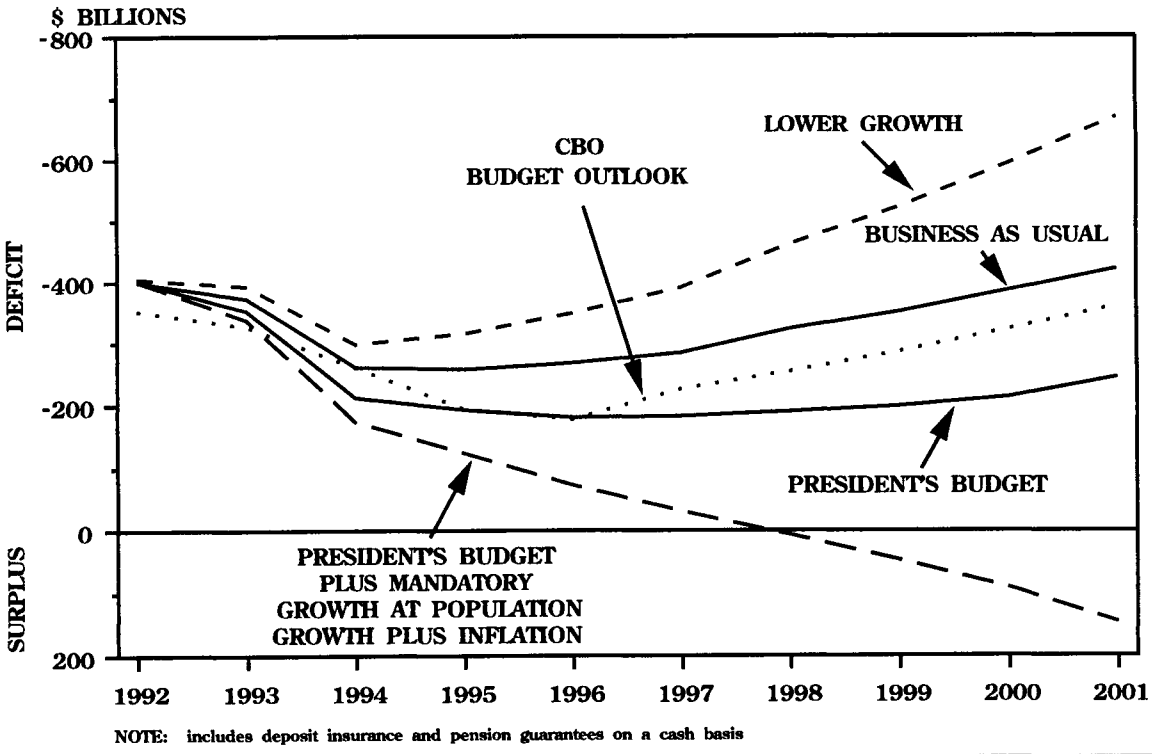
For this reason, the President's Budget goes beyond defense reductions and a domestic discretionary budget freeze. It also includes proposals to reduce the growth of mandatory spending by $68.4 billion by 1997. (See Table 2–4 for a summary of the proposed mandatory program changes.) This total does not include the very substantial additional savings that can and should be achieved with a serious approach to health reform (as discussed below).

In addition to specific proposed program changes, the Budget proposes to reduce the growth of hidden liabilities by capping cumulative total subsidies. (See Chapter 18.)

Further, the Budget proposes to remedy what is a fundamental flaw in the present system of budget discipline. The Administration supports an expanded and refined variation of the "entitlement cost cap" recently endorsed by the majority of the House Budget Committee. In order to give the Budget Committee's general concept focus and to move toward workable legislation, a more specific proposal is offered here:

- to cap "mandatory" program growth in aggregate;
- to set the cap at one growth rate prior to the enactment of comprehensive health reform, and at a lower growth rate following the enactment of comprehensive health reform;
- to set these growth rates at population–plus-CPI-plus an average of 2.5 percent and 1.6 percent, respectively;

Chart 2-6. ALTERNATIVE LONG-RANGE DEFICIT PROJECTIONS



NOTE: includes deposit insurance and pension guarantees on a cash basis

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- to require that any projected growth beyond the mandatory cap trigger the legislative reconciliation process to correct the excess spending growth; and
- as a fail-safe, to modify the pay-as-you-go system so that any uncorrected breach of the aggregate mandatory cap automatically triggers the sequester provisions for mandatory programs (while exempting Social Security from any such sequester).

If enacted, this addition would force legislative action on what is now "uncontrollable". It would slow the growth of the "mandatory" spending that is the largest part of the budgetary problem. This one procedural reform would go a long way toward remedying the most serious weakness in the discipline system of the current Budget Enforcement Act.

The existing Budget Enforcement Act system is really a combination of two systems. One is the old "Gramm-Rudman-Hollings" system, enacted in 1985. It was the principal disciplinary system for fiscal years 1986 through 1990. It returns to full force for application in 1994. But while that may be somewhat helpful, its earlier record does not offer great promise. The originally legislated Gramm-Rudman-Hollings deficit target for 1990 (its fifth year) was $36 billion. The actual result was $220 billion! It was this failure of the original Gramm-Rudman-Hollings system, in part, that necessitated the addition of a second system in 1990.

The second disciplinary system includes credit reform accounting, discretionary spending caps and associated mini-sequesters, and the pay-as-you-go system for new "mandatory" and revenue legislation. Each of these reforms has proved valuable and workable. All have been honored. But unfortunately, there is a vast area of spending they do not reach: *the entire inherited structure of automatic expenditure under pre-1990 law governing mandatory programs.*

This inherited structure is built into an explosively expanding spending "baseline." And although it amounts to more than half the budget, it is largely exempt from budgetary discipline. Hence: *the inescapable need for an enforceable cap on the growth of total mandatory spending.*

THE NEED FOR COMPREHENSIVE HEALTH REFORM

Individuals, families, businesses, and governments—all are increasingly strained to meet the growing burden of financing health (or more correctly, financing health care).

Within the vast "mandatory" program structure, health is increasingly dominant in its influence upon spending growth. It is the most rapidly growing. It is about to surpass Social Security in scale. And federal spending on health is rising sharply both as a percent of the federal budget and as a percent of GDP. (See Chart 2–7.)

What is true for the federal budget is also true for the nation as a whole. U.S. national health expenditures per capita have been rising dramatically in real terms. (See Chart 2–8.) U.S. per capita health expenditures have grown out of line with other developed countries. (See Chart 2–9.) Total U.S. public and private spending on health is literally on an *unsustainable path*—threatening to consume an impossible proportion of Gross Domestic Product. Even assuming a slowing of the trend, health expenditures will soon exceed 15 percent of GDP—up from slightly over 5 percent in President Kennedy's day. (See Chart 2–10.)

The fact that the current financing trends are unsustainable is sufficient to necessitate reform. But in addition, there is a strong equity argument for reform.

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Chart 2-7. FEDERAL HEALTH OUTLAYS: GROWING RAPIDLY - BY SEVERAL MEASURES

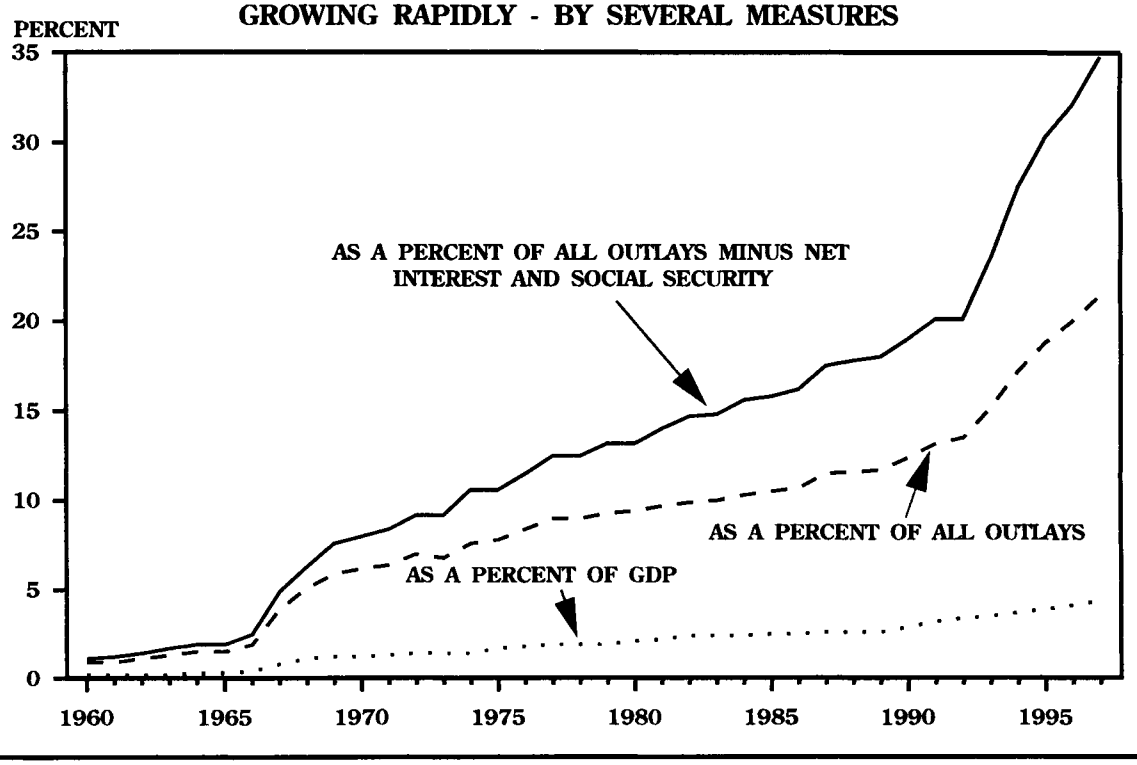
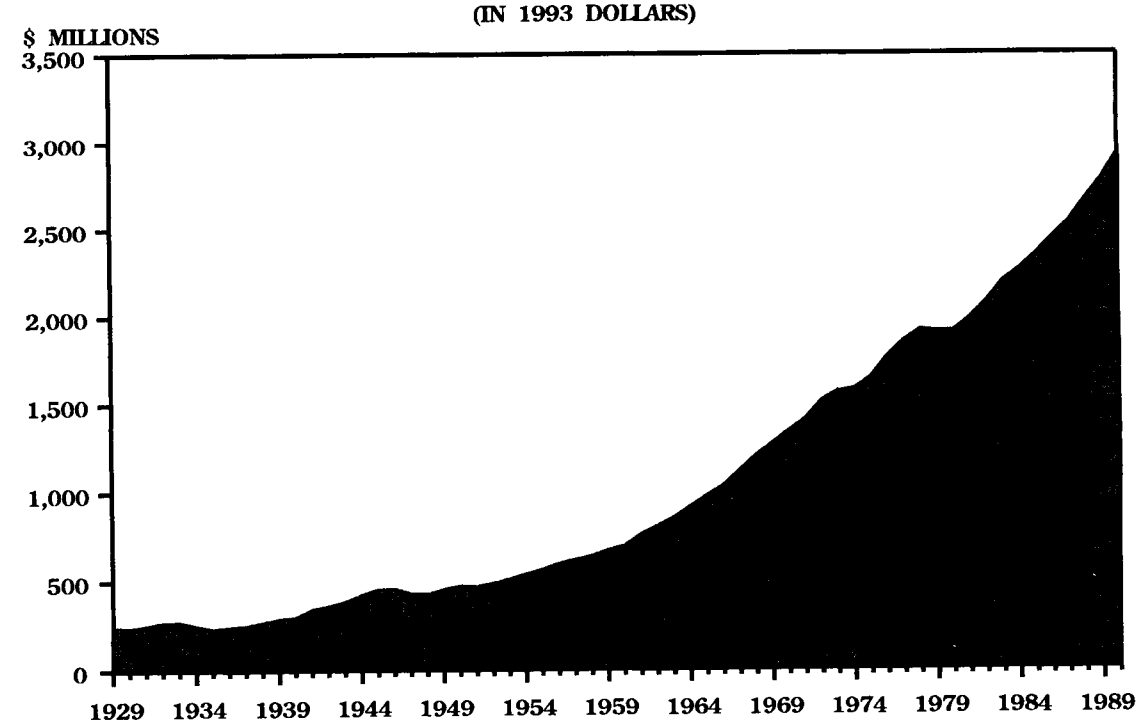


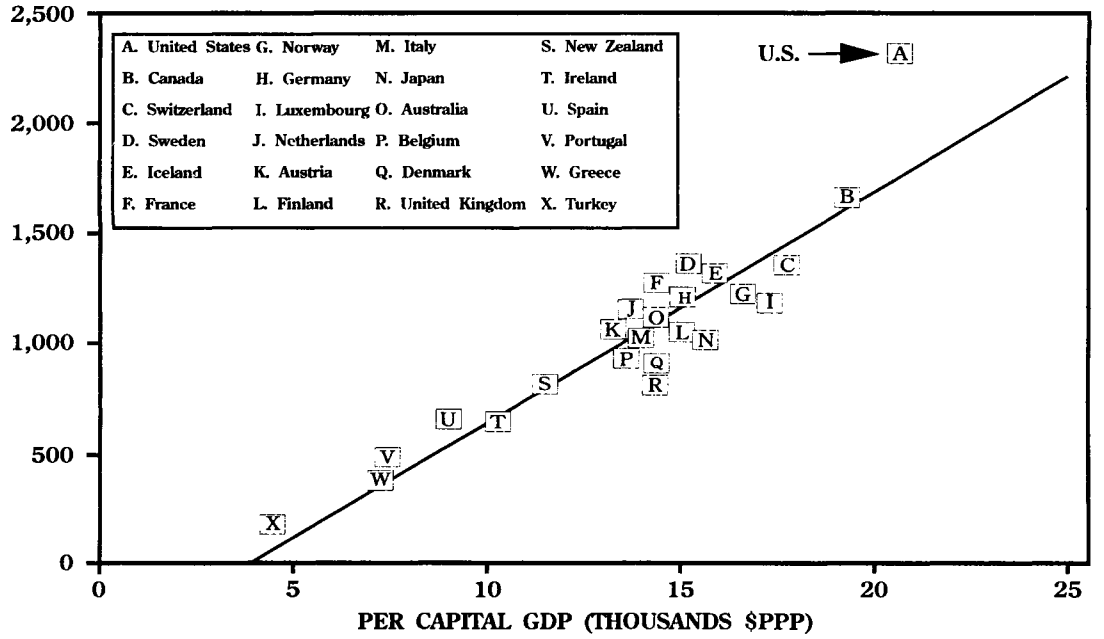
Chart 2-8. REAL PER CAPITA NATIONAL HEALTH EXPENDITURES (IN 1993 DOLLARS)



SOURCE: Health Care Financing Administration, Office of the Actuary

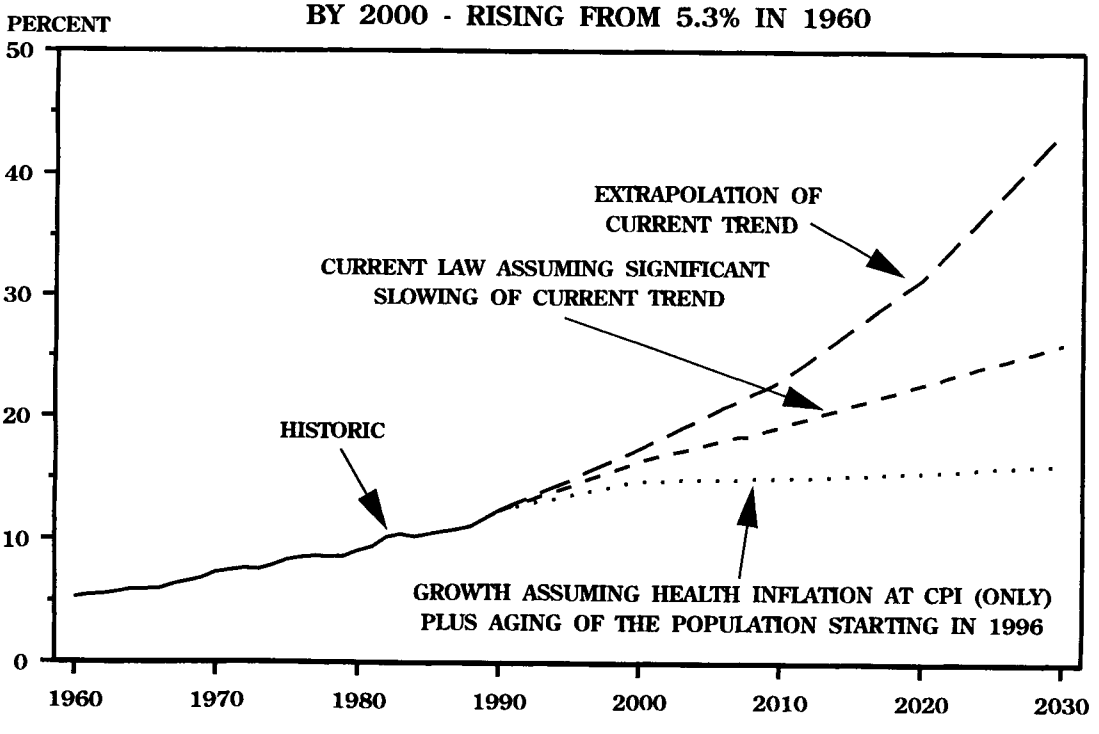
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Chart 2-9. HEALTH SPENDING AND WEALTH IN OECD COUNTRIES, 1989



Sources: Exhibit 3 in Schieber, et al., Health Affairs, Page 26 (Fall 1991).
Note: PPP = purchasing power parity. PCH=per capita health spending. PCGDP = per capita gross domestic product. PCH = -419 + 0.107 X PCGDP. Both the constant term and the regression coefficient are statistically significant at the .01 level. R^2 = .85 (adjusted correlation coefficient squared).

Chart 2-10. HEALTH SPENDING IS PROJECTED TO REACH 16.4% OF GDP BY 2000 - RISING FROM 5.3% IN 1960



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Notwithstanding the enormous national health expenditure, millions of Americans have inadequate or insecure health insurance coverage. For many middle-income Americans there are reasons to worry that insurance may become unaffordable or unavailable. And for millions of poor and working poor Americans, basic health insurance is already unaffordable. Further, to the extent that federal health expenditures are thought of as filling the financing gap for the needy, there is a basic misconception. In reality, most of the growth in federal health spending has gone to the non-poor. (See Chart 2–11.)

With both the cost and "access" problems in view, the President directed the Secretary of Health and Human Services, Dr. Louis Sullivan, to lead the development of a comprehensive approach to health reform. The President determined that several principles should be applied in this effort.

The approach to reform should:

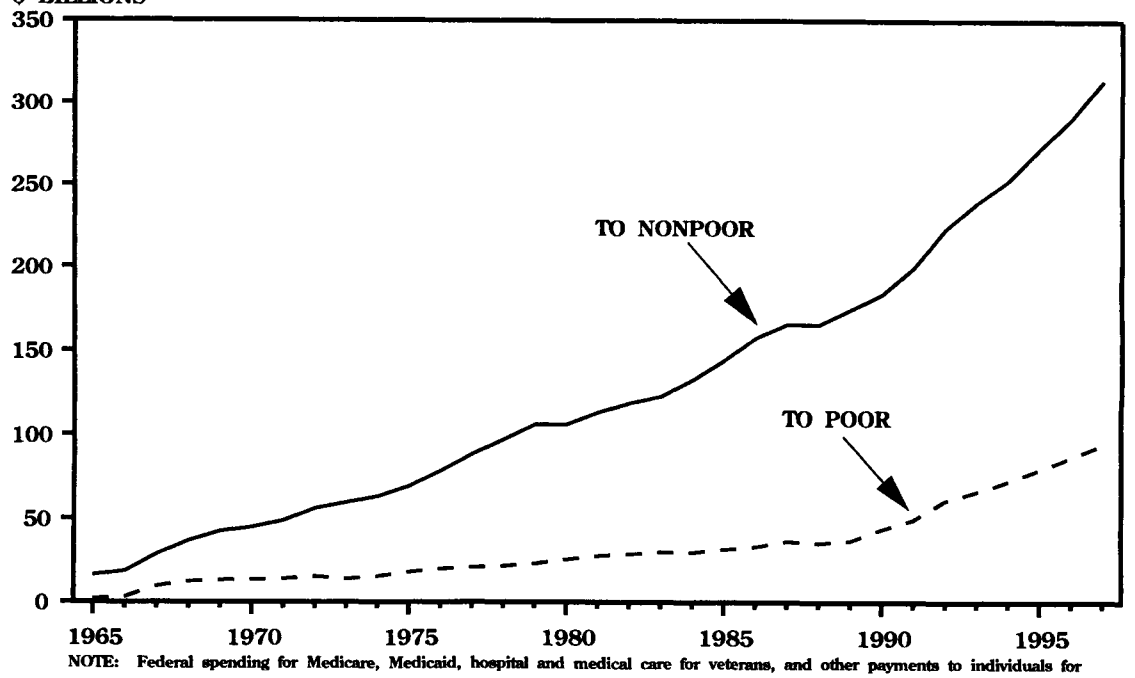
- build on the strengths of the high-quality American health system;
- assure access to basic health insurance coverage for Americans and increase the affordability of such coverage;
- strengthen incentives for cost control and consumer choice;
- emphasize prevention;
- reduce abuse and wasteful excess;
- meet the requirements of fiscal responsibility and budget discipline.

The approach *should not:*

- lead to comprehensive governmental price controls and rationing by government;
- create new spending mandates for states and employers;
- require a net increase in taxes; or
- threaten older Americans with the prospect of either benefit cuts or premium increases.

These tests cannot be met by either "Canadian-style" or "Play-or-Pay" approaches to reform. Such approaches necessarily involve comprehensive governmental price controls, governmental rationing, or major tax increases. Over time, they threaten to degenerate and require a combination of these undesirable characteristics.

Chart 2-11. FEDERAL HEALTH SPENDING
(OUTLAYS AND TAX EXPENDITURES IN 1993 DOLLARS)



NOTE: Federal spending for Medicare, Medicaid, hospital and medical care for veterans, and other payments to individuals for health purposes; and tax expenditures for employment-provided health plans and for deductions of health expenses. Spending share to poor reflects percent of recipients with money incomes below poverty thresholds.
SOURCE: Census Bureau publication on receipt of noncash benefits

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By contrast, the President's Plan meets the tests of a responsible approach—without forcing either a major tax increase or a government take-over of the health sector. It gives far greater emphasis to individual *choice* and to incentives for more *cost-effective delivery* of high-quality American health care.

The details of the President's Plan will be released in early February.

RESTRUCTURING AND REFORM— LOOKING BEYOND THE MOMENT

At the moment, the number one concern for most Americans is to get the economy moving again. Understandably, this is the immediate priority. Hence, the President's call for prompt Congressional action on his Agenda for Growth.

Among other major issues of current concern, perhaps the highest priority is to reduce the burden of rising health costs. Hence, the President's Plan for comprehensive health reform.

These two areas of concern have received the most attention in the discussion above—as they have in decisions about the allocation (and reallocation) of budgetary resources. It is likely that they will also be the predominant focus of near-term Congressional interest. The American political system is better designed than any to reflect the public's concerns of the moment.

This is thoroughly appropriate. If the political system acts responsibly in these areas of current concern, it will not only make the economic lives of most Americans better in the near term. It will also go a long way toward relieving the current sense of uncertainty and insecurity—the sense of worry noted at the start of this Introduction.

But a President's Budget must not only address concerns of the moment. It must also look toward the future.

Whether explicitly or implicitly, a budget inescapably addresses the future. In responding to current concerns, for example, a budget might allow debt to rise (as a percent of GDP) without attention to future returns. If there were no such attention to future returns, that would be an important (although regrettable) value statement. It would implicitly weigh the interests of future generations less heavily than the interests of the present. The President's Budget rejects such a perspective. As each of the President's previous Budgets has done, this Budget explicitly treats both:

- *Hidden Liabilities* (see Chapters 12 through 14); and
- *Investment in the Future* (see Chapters 4 through 11).

In assessing a budget's relationship to the future, one must also look beyond the balance sheet and numbers. Numbers can be misleading. This is true not simply because specific numbers can be wrong (as has been amply demonstrated). It is also true because even their relative proportions can be a poor guide to returns on investment.

Small investments can have large future returns. One might consider, for example, this Budget's investments in high performance computing, materials processing, biotechnology, and a host of other generic areas of research and development. (See Chapter 6.) Several of these have enormous and exciting potential to increase radically both American productivity and the quality of life.

Conversely, the mere fact that an area of investment is large and increasing does not necessarily mean that its return will be high. Education, for example, is an area of investment that should have high future returns. But the history of the past several decades shows that a rise in investment can be accompanied by a decline in performance. In such cases, clearly, one must look beyond the numbers to the associated policies for reform and restructuring. (See Chapter 4.)

As a general matter, particular budget proposals are given greater meaning by reference to the larger policies with which they are associated. The chapters which follow, therefore, attempt to frame the President's budgetary proposals in their larger policy context. They are presented in relation to

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longer-term themes that comprise an agenda for restructuring and reform.

Thus, for example:

- **Increasing Investment vs. Consumption.** The Budget includes thousands of recommendations for discretionary funding of specific projects—in areas ranging from high-technology R&D to low-technology infrastructure. Although the projects have specific merit, their funding should be understood as part of a larger pattern: *an intended shift (at the margin) away from current consumption, toward investment in the future.* (See Chapters 4 through 11.)

- **Limiting Future Liabilities.** The Budget includes mandatory caps, subsidy caps, accounting reforms, and other such arcane technical modifications to the Budget Enforcement Act. These should be understood as part of the *larger effort to limit the future burden of debt and hidden liabilities.* (See Chapters 12, 13, and 18.)

- **Encouraging Entrepreneurship.** The Budget includes proposals for tax incentives to increase investment in capital assets, R&D, and Enterprise Zones. These should be understood not merely as short-term economic stimuli. They are also part of a *longer-term effort to reinvigorate American risk-taking, pioneering, and the entrepreneurial spirit.*

- **Using States as Laboratories.** The Budget includes seemingly technical proposals to consolidate federal grants to States and to facilitate the use of waivers. These should be seen as part of a larger effort to *take greater advantage of the innovative power of the American federal system by using "States as Laboratories."* (See Chapters 19 and 20.)

- **Fostering Personal Responsibility.** The Budget includes increased investment in crime prevention, drug-abuse prevention, incentives for savings, homeownership, and preventive health. This should be seen in conjunction with a related effort *to strengthen the values and habits of personal responsibility.* (See Chapters 5, 8, 9, 22, and the President's Plan for comprehensive health reform.)

- **Increasing Choice and Competition in Service Delivery.** The Budget includes measures to encourage States to adopt educational funding systems that allow funds to "follow the child" in accordance with parental choice. Similarly, the Budget increases investment in housing vouchers and child care certificates. And the President's Plan for health reform proposes a major shift toward transferrable tax credits for basic health insurance. All such measures should be understood as means to *increase individual and family choice.* They are also necessary to provide bottom-up competitive pressure for innovation and reform. They thus help in the *larger effort to accelerate the cost-effective restructuring of large-scale, bureaucratic service systems. These service systems (as in health and education) are now often inefficient or ineffective—and, in many cases, in need of radical, longer-term reform.*

While the American political system is unrivaled in its sensitivity to current interests, it is often less-than-exemplary in its attention to the longer term. So, one can be relatively confident that the short-term economic agenda will command intense attention. But it may be somewhat more difficult to sustain a focus on the long-term agenda of restructuring and reform.

It is important to emphasize, however, that America's economic difficulties are not merely a function of a cyclical short-term downturn. *Many problems would have demanded attention with or without a recession.* The most important of these, perhaps, is the need to increase America's long-term productivity growth. This is a key to future economic growth, to the capacity to support an improving quality of life, and to American competitiveness in a global economy.

But substantial improvement in productivity will not come quickly or easily. It will demand more than just a tax incentive here or a bridge there. It demands action on the full agenda for restructuring and reform: investing in the future; limiting future liabilities; encouraging entrepreneurship; using States as laboratories; increasing choice, competition, and cost-effectiveness in the delivery

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of services; and fostering personal responsibility.

The Budget includes important initiatives in all these areas of reform. They are rooted in policies which seek to remedy current weaknesses by building on traditional American strengths and values. They look not only toward economic recovery for the short-term, but toward a responsible basis for confidence in the future.

RICHARD DARMAN
DIRECTOR,
OFFICE OF MANAGEMENT AND BUDGET

Additional Tables Attached:

Table 2–3:	Outlays, Revenues, and Deficits (Excluding Comprehensive Health Reform)	p. 25
Table 2–4:	Mandatory Outlay Proposals (Excluding Comprehensive Health Reform)	p. 26
Table 2–5:	Revenue Proposals (Excluding Comprehensive Health Reform)	p. 28
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Table 2–3. OUTLAYS, REVENUES, AND DEFICITS (Excluding Comprehensive Health Reform)

(In billions of dollars)

Categories	1991 Actual	1992 Budget	1993 Budget	1994 Budget	1995 Budget	1996 Budget	1997 Budget
Outlays							
Discretionary:							
Domestic	195.4	216.2	224.7	229.3	232.2	236.9	236.8
Defense:							
Department of Defense	309.0	300.4	278.7	270.2	269.6	271.8	274.4
Other Defense	10.7	12.5	12.9	13.4	13.9	14.7	15.3
Total Defense	319.7	312.9	291.6	283.7	283.5	286.5	289.8
International	19.7	20.1	20.6	21.4	21.3	21.5	21.2
Total Discretionary	534.8	549.2	537.0	534.3	537.0	544.8	547.8
Mandatory:							
Deposit insurance	66.3	80.1	75.7	-25.0	-27.2	-21.7	-32.2
Federal retirement	75.8	78.3	81.1	85.6	88.7	91.2	96.4
Means-tested entitlements	62.6	74.8	77.4	82.5	87.5	89.4	95.5
Medicaid	52.5	72.5	84.5	98.2	113.7	131.1	150.7
Medicare	102.0	116.0	126.5	140.1	156.0	176.2	197.7
Social Security	266.8	284.3	299.7	315.1	330.8	347.4	364.8
Unemployment insurance	25.3	32.0	25.6	25.0	24.7	24.3	24.6
Other	-57.7	-10.9	-4.6	-12.0	-17.8	-28.2	-24.9
Subtotal Mandatory	593.7	727.2	765.9	709.5	756.3	809.6	872.6
Net Interest*	194.5	198.8	213.8	231.0	242.2	253.0	263.2
Total Outlays	1,323.0	1,475.1	1,516.7	1,474.8	1,535.5	1,607.5	1,683.6
Revenues	1,054.3	1,075.7	1,164.8	1,263.4	1,343.5	1,427.5	1,501.8
Deficit	-268.7	-399.4	-351.9	-211.4	-192.1	-180.0	-181.8
Deficit/Surplus (excluding interest)	-74.2	-200.6	-138.1	+19.6	+50.1	+73.0	+81.4
Deficit/Surplus (excluding deposit insurance & interest)	-7.9	-120.5	-62.4	-5.5	+22.9	+51.3	+49.3
Memorandum							
Deficit on an accrual basis	-268.7	-365.2	-332.7	-242.8	-217.8	-193.7	-203.3
Social Security (included above):							
Operating Surplus	53.5	50.2	63.4	75.9	86.9	101.1	115.0
Interest	20.2	23.9	27.0	31.1	35.7	41.1	47.4
Total	73.7	74.1	90.4	107.0	122.6	142.2	162.4

*Slight variation from estimates printed in appendices due to a late correction in the rate of redemption of State and local governments' holdings of Treasury Securities.

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Table 2–4. MANDATORY OUTLAY PROPOSALS (Excluding Comprehensive Health Reform)

(In millions of dollars)

	1992	1993	1994	1995	1996	1997	1992–97
Agriculture:							
Commodity Credit Corporation: reduce subsidies to those with off-farm income over $100,000	-5	-65	-150	-150	-150	-150	-670
Food stamps: effect of increased child support enforcement (net)	0	0	0	-5	-30	-33	-68
Agriculture marketing service: user fees	0	-7	-10	-10	-10	-10	-47
Child nutrition: more equitable distribution of school lunch subsidies	-1	6	5	2	-5	-18	-11
Cooperative State Research Service: eliminate Morrill-Nelson funds	0	-3	-3	-3	-3	-3	-15
Commerce:							
Patent and Trademark Office: extend user fee surcharges	0	0	0	0	-107	-107	-214
Corps of Engineers:							
Expand existing user fees for day use of developed recreational sites	-10	-20	-20	-20	-20	-20	-110
Education:							
Guaranteed student loans:							
Extend the current law elimination of the statute of limitations on collecting defaulted loans	-266	0	0	0	0	0	-266
Net cost from GSL loan limit increase and other policy changes	0	3	121	208	255	277	864
Energy:							
Power marketing reform: recover the Federal Government's financing costs by changing PMA debt repayment practices	0	-399	-432	-453	-458	-454	-2,196
Alaska Power Administration: pay-as-you-go effect of asset sale	0	0	10	11	11	10	42
HHS:							
Family support program:							
Improve the child support enforcement system	0	-134	-149	-164	-181	-186	-814
Raise the asset limit to $10,000 for families already on AFDC and allow families on AFDC to exclude some income and resources needed to meet the objectives of a "self-support" plan at State option (includes Medicaid and food stamp effects)	0	6	26	71	72	74	249
Limit AFDC emergency assistance to statutory limit provided in one 30-day period every 12 months	0	-39	-40	-41	-41	-42	-203
Medicaid: enhance medical support for children	0	-5	-10	-10	-15	-15	-55
Medicare:							
Place hospital update on calendar year basis	0	-630	-1,050	-1,160	-1,210	-1,330	-5,380
Limit Federal subsidy to 25% of SMI program costs for high income persons ($100K single/$125K couple)	-59	-313	-427	-580	-757	-963	-3,099
Establish a single fee for supervisory anesthesia services	0	-100	-140	-200	-230	-250	-920
Authorize HHS Secretary to adjust DME reimbursements to reflect market factors	0	-20	-80	-110	-130	-140	-480
Reform payment of laboratory services by lowering cap from 88% to 76% of the median and update, as needed to reflect market factors	0	-310	-560	-770	-1,020	-1,320	-3,980
SSI: recover overpayments by withholding other Social Security payments	0	-34	-25	-24	-23	-23	-129

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Table 2–4. MANDATORY OUTLAYS PROPOSALS (Excluding Comprehensive Health Reform)—Continued

(In millions of dollars)

	1992	1993	1994	1995	1996	1997	1992–97
Interior:							
Arctic National Wildlife Refuge (ANWR): oil and gas exploration rights	0	0	-2,561	-1	-1,531	-1	-4,094
State of Alaska's share of ANWR oil and gas exploration rights	0	0	1,280	*	765	*	2,045
Coastal communities impact assistance: Outer Continental Shelf (OCS) revenue sharing	0	0	26	37	52	66	181
Justice:							
Civil liberties public education fund: request additional funds required for additional eligible recipients	0	250	0	0	0	0	250
Labor:							
Trade adjustment assistance: consolidated with EDWAA	0	-116	-193	-199	-198	-196	-902
Unemployment insurance extended benefits: expand and extend to December 31, 1992	2,203	2,220	0	0	0	0	4,423
Treasury:							
IRS: uniform application to all taxpayers of 45 day processing rule	-21	-310	-335	-361	-391	-422	-1,840
Veterans:							
Home loans: consider government losses on resale when deciding whether to purchase foreclosed property or pay lenders the guaranty claim, and require veterans who are second and subsequent users to pay a 2.5% fee and 10% downpayment	0	-660	-124	-125	-124	-130	-1,163
Medical cost recoveries: extend sunset on authority to recover costs from health insurers of service-connected veterans for treatment of non-service connected conditions	0	0	-225	-255	-274	-280	-1,034
Pensions: extend eligibility verification with IRS match, reduce benefits to veterans receiving medicaid-covered nursing home care, and other provisions	0	-161	-181	-202	-226	-250	-1,020
Readjustment benefit: provide eligibility for vocational rehabilitation to veterans rated 30% disabled or greater, and restore 9:1 service members' benefit/contribution ratio for contributions to GI bill	0	-43	-49	-59	-56	-60	-267
Federal Communications Commission:							
Spectrum auction	0	0	0	-1,253	-1,665	-833	-3,751
Farm Credit System Financial Assistance Corporation:							
Accelerate system repayments of FAC (bailout) debt	0	-212	0	0	0	0	-212
Office of Personnel Management:							
Civil service retirement: permanently extend elimination of lump-sum option	0	0	0	0	-2,144	-2,926	-5,070
Federal employee health benefits:							
Apply Medicare Part B payment limits to all FEHBP enrollees age 65 and older (not just FEHBP/Medicare dual enrollees)	0	-85	-40	-75	-85	-95	-380
Cross-cutting:							
Credit collection reforms	-96	0	0	0	0	0	-96
Subtotal, mandatory proposals (except deposit insurance and PBGC)	1,745	-1,181	-5,336	-5,901	-9,929	-9,830	-30,432
Deposit insurance: expanded powers, interstate banking, and account limitations (accrual basis)	-700	-1,800	-500	-4,400	-5,400	-3,400	-16,200
PBGC: improved funding and changes to bankruptcy status (accrual basis)	-8,700	-2,500	-2,700	-1,700	-3,300	-2,900	-21,800
Subtotal, deposit insurance and PBGC (accrual basis)	-9,400	-4,300	-3,200	-6,100	-8,700	-6,300	-38,000
Total, mandatory proposals (accrual basis)	-7,655	-5,481	-8,536	-12,001	-18,629	-16,130	-68,432

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Table 2–5. REVENUE PROPOSALS (Excluding Comprehensive Health Reform)

(In millions of dollars. See Table 2–1 for pay-as-you-go totals that meet the Budget Enforcement Act requirements.)

	1992	1993	1994	1995	1996	1997	1992–97
Jobs and Investments:							
Enhance long-term investment: capital gains	600	3,800	2,100	300	300	-200	6,900
Provide passive loss relief for real estate	-130	-418	-396	-449	-516	-592	-2,501
Adopt investment tax allowance	-6,055	-1,580	3,529	941	810	623	-1,732
Simplify and enhance AMT depreciation	-204	-376	-354	-261	-179	-123	-1,497
Extend R&E tax credit	-183	-823	-1,353	-1,577	-1,804	-2,104	-7,844
Extend R&E allocation rules	-155	-482	-278	—	—	—	-915
Extend low-income housing tax credit	-37	-167	-312	-390	-416	-417	-1,739
Extend targeted jobs tax credit	-56	-154	-161	-92	-48	-26	-537
Extend business energy tax credits	-*	-42	-27	-7	3	3	-70
Extend first-time farmer bonds	-*	-*	-*	-*	-*	-*	-1
Establish enterprise zones	—	-50	-160	-310	-520	-750	-1,790
Facilitate real estate investments by pension funds and others	-*	-*	-*	-*	-*	-*	-*
Repeal luxury tax on airplanes and boats and repeal diesel fuel exemption [1]	-7	15	14	12	8	7	49
Families, Health, Education and Savings:							
Permit deduction of interest on student loans	-58	-443	-655	-721	-796	-882	-3,555
Establish flexible IRA accounts	112	481	68	-371	-989	-2,096	-2,795
Promote retirement saving and simplify taxation of pension distributions	82	28	5	279	365	389	1,148
Waive penalty for withdrawals from IRAs for medical and educational expenses	-22	-118	-123	-126	-128	-131	-648
Extend health insurance deduction for self-employed	-57	-246	-261	—	—	—	-564
Extend HI coverage to State and local employees [1]	344	1,567	1,545	1,548	1,544	1,543	8,091
Double and restore adoption deduction	-*	-3	-3	-3	-3	-3	-15
Expand public transit exclusion	-7	-12	-13	-14	-15	-17	-78
Homebuyers:							
Provide credit to first-time homebuyers	-201	-2,067	-2,535	-637	167	110	-5,163
Allow deduction for loss on sale of principal residence	-41	-412	-392	-372	-354	-336	-1,907
Waive penalty for withdrawals from IRAs for first-time homebuyers	-5	-79	-97	-117	-125	-92	-515
Extend mortgage revenue bonds	-1	-20	-62	-82	-77	-73	-315
Other:							
Support revenue neutral tax simplification	—	—	—	—	—	—	—
Revise rules for charitable contributions	-37	108	116	125	144	166	622
Conform book and tax accounting for securities inventories	245	597	753	773	798	826	3,992
Disallow interest deductions on corporate-owned life insurance loans	121	269	386	521	591	650	2,538
Prohibit double dipping by thrifts receiving Federal financial assistance	350	417	57	4	-40	143	931
Equalize tax treatment of large credit unions and thrifts	103	177	187	197	208	219	1,091
Modify taxation of annuities without life contingencies	42	156	239	318	409	512	1,676
Expand communications excise tax [1]	15	82	86	91	96	102	472
Extend orphan drug tax credit	-2	-12	-13	-14	-15	-16	-72
Establish FCC non-application processing fees	—	71	71	71	71	71	355
Extend abandoned mine reclamation fees	—	—	—	—	228	251	479
Increase employee contributions to CSRS	—	448	1,053	1,216	1,219	1,209	5,145
Conform definition of compensation under Railroad Retirement Tax Act to that of social security	—	13	17	17	17	17	81
Implement Uruguay Round	—	-4	21	13	-50	-86	-106
Total effect of proposals (excluding personal exemption)	-5,244	721	3,052	883	903	-1,103	-789
Personal exemption ($500 per child)	—	-4,356	-4,553	-4,740	-4,993	-5,176	-23,819
Grand total	-5,244	-3,635	-1,501	-3,857	-4,090	-6,279	-24,608

* $500 thousand or less.
[1] Net of income tax offsets.

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Table 2–6. PROPOSED SPENDING BY AGENCY (Excluding Comprehensive Health Reform)

(In billions of dollars)

Agency	1992[1]				1993			
	Discretionary		Mandatory Outlays	Total Outlays	Discretionary		Mandatory Outlays	Total Outlays
	BA	Outlays			BA	Outlays		
Cabinet Agencies:								
Agriculture	14.9	14.0	47.8	61.8	14.4	14.4	45.0	59.4
Commerce	3.0	3.0	-0.1	2.9	2.9	3.0	-0.1	2.9
Defense-Military	282.0	300.5	-5.8	294.7	267.9	278.7	-0.8	277.9
Education	22.6	20.9	5.6	26.5	24.3	22.6	7.8	30.4
Energy	18.9	17.8	-1.9	16.0	19.4	18.4	-1.9	16.5
Health & Human Services	29.9	30.3	513.8	544.1	29.3	30.8	554.4	585.2
Housing & Urban Development	24.7	22.9	1.3	24.2	23.7	25.5	2.7	28.1
Interior	7.1	7.2	*	7.2	6.5	6.7	*	6.7
Justice	8.8	8.3	1.1	9.4	9.7	9.3	1.1	10.4
Labor	9.4	9.5	34.7	44.2	9.4	9.5	28.3	37.8
State	4.3	4.2	0.3	4.5	5.0	4.8	0.4	5.2
Transportation	14.2	33.1	0.3	33.4	12.8	34.2	0.3	34.5
Treasury	9.6	9.6	2.1	11.6	10.2	10.2	2.7	12.9
Veterans Affairs	15.6	15.2	18.4	33.6	16.3	16.1	18.1	34.1
Major Agencies:								
Corps of Engineers	3.6	3.4	*	3.4	3.5	3.5	*	3.5
Deposit Insurance	*	0.1	80.1	80.2	*	0.1	75.7	75.8
Environmental Protection Agency	6.7	6.1	-0.1	5.9	7.0	6.4	-0.2	6.2
General Services Administration	0.4	0.6	-0.2	0.4	0.5	1.4	-0.2	1.2
National Aeronautics and Space Administration	14.3	13.8	*	13.8	15.0	14.1	*	14.1
Office of Personnel Management	0.1	0.2	35.9	36.1	*	0.1	37.5	37.6
Small Business Administration	0.8	0.7	-0.2	0.5	0.5	0.6	-0.3	0.3
Other Agencies:								
Executive Office of the President	0.2	0.2	*	0.2	0.3	0.3	*	0.3
Foreign Assistance and related programs	26.7	12.9	-0.7	12.2	13.7	12.7	-0.7	12.0
Judicial Branch	2.2	2.2	0.2	2.4	2.6	2.6	0.2	2.8
Legislative Branch	2.4	2.4	0.4	2.8	2.5	2.5	0.3	2.8
Other Independent Agencies	11.2	10.3	33.0	43.3	10.7	10.7	35.9	46.6
Allowances	0.0	0.0	-0.1	-0.1	-0.5	-0.4	0.0	-0.4
Undistributed offsetting receipts	0.0	0.0	-38.8	-38.8	-1.4	-1.4	-40.1	-41.5
Net Interest	0.0	0.0	198.8	198.8	0.0	0.0	213.8	213.8
Total	533.9	549.2	926.0	1,475.1	506.3	537.0	979.7	1,516.7

[1] Includes impact of supplementals and recissions.
* $50 million or less.

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Table 2–7. DISCRETIONARY PROPOSALS BY APPROPRIATIONS SUBCOMMITTEE

(In millions of dollars)

Appropriations Subcommittee	1992 Budget[1]		1993 Budget		Change: 1992 to 1993	
	BA	Outlays	BA	Outlays	BA	Outlays
Domestic Discretionary						
Commerce, Justice, State and Judicary	15,971	15,519	16,578	16,619	607	1,100
Defense	75	59	—	13	-75	-46
District of Columbia	700	690	688	698	-12	8
Energy and Water	9,860	9,251	8,910	8,452	-950	-799
Interior	13,141	12,610	12,486	12,475	-655	-135
Labor, HHS, Education	60,563	59,467	61,985	61,848	1,422	2,381
Legislative Branch	2,343	2,338	2,494	2,435	151	97
Rural Development, Agriculture	11,812	11,071	11,166	11,172	-646	101
Transportation	13,764	32,435	12,368	33,500	-1,396	1,065
Treasury-Postal Service, and General Government	11,050	11,329	11,217	12,124	167	795
Veterans Affairs, HUD, Independent Agencies	65,408	61,430	65,748	65,927	340	4,497
Allowances	—	—	-562	-524	-562	-524
Less Designated Emergencies and Desert Shield/Desert Storm amounts	-1,931	-1,372	-142	-544	1,789	828
Total Domestic Discretionary ("BA Freeze")	**202,757**	**214,827**	**202,936**	**224,195**	**179**	**9,368**
International Discretionary						
Commerce, Justice, & State—Funcition 150	4,978	4,886	5,661	5,477	683	591
Foreign Operations	15,683	13,697	15,144	13,724	-539	27
Labor, HHS, and Education	11	12	11	11	—	-1
Rural Development, Agriculture and Related	1,484	1,474	1,323	1,378	-161	-96
Less Designated Emergencies and Desert Shield/Desert Storm amounts	—	-80	—	-23	—	-57
Total International	**22,156**	**19,989**	**22,139**	**20,568**	**-17**	**579**
Defense Discretionary						
Defense, including Military Construction	281,987	300,429	267,957	278,748	-14,030	-21,681
Energy and Water, Function 050	11,980	11,685	12,132	11,901	152	216
Commerce, Justice, State and Judiciary	234	227	487	466	253	239
Transportation	207	225	203	186	-4	-39
Veterans Affairs, HUD, and Independent Agencies	335	336	322	329	-13	-7
Less Designated Emergencies and Desert Shield/Desert Storm amounts	-10,356	-17,135	—	-5,522	10,356	11,613
Total Defense Discretionary	**284,385**	**295,767**	**281,101**	**286,107**	**-3,284**	**-9,660**
Total Discretionary	**509,298**	**530,583**	**506,176**	**530,870**	**-3,122**	**287**

[1] FY 1992 amounts include supplemental and rescissions submitted subsequent to the FY 1992 Budget.

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Table 2–8. FEDERAL EMPLOYMENT IN THE EXECUTIVE BRANCH[1]

(Full-Time Equivalent Employment)

Agency	Fiscal Year			
	1991 actual	1992 estimate	1993 estimate	Change: 1992 to 1993
Civilian Cabinet Agencies:				
Agriculture	110,316	111,882	111,021	-861
Commerce	38,988	35,594	35,682	88
Education	4,630	4,927	5,032	105
Energy	17,790	19,950	19,950	—
Health and Human Services	121,121	125,784	125,704	-80
Housing and Urban Development	13,601	14,331	13,837	-494
Interior	72,346	74,900	74,000	-900
Justice	84,073	94,286	97,958	3,672
Labor	17,720	18,241	18,265	24
State	25,409	25,895	26,012	117
Transportation	66,010	70,134	70,212	78
Treasury	160,192	162,949	161,984	-965
Veterans Affairs	217,665	220,641	221,818	1,177
Other agencies (excluding FDIC and Postal Service):				
Agency For International Development	4,347	4,562	4,454	-108
Corps of Engineers	27,241	27,725	27,444	-281
Environmental Protection Agency	16,323	17,622	17,917	295
General Services Administration	19,704	20,013	19,858	-155
National Aeronautics and Space Administration	24,149	24,737	24,947	210
Nuclear Regulatory Commission	3,300	3,335	3,377	42
Office of Personnel Management	5,762	6,156	6,156	—
Panama Canal Commission	8,551	8,603	8,603	—
Small Business Administration	4,887	4,697	4,637	-60
Tennessee Valley Authority	22,273	25,000	23,000	-2,000
United States Information Agency	8,226	8,543	8,679	136
All other agencies[2]	38,125	40,453	40,413	-40
Subtotal, Civilian employment (excluding FDIC and RTC)	**1,132,749**	**1,170,960**	**1,170,960**	—
Federal Deposit Insurance Corporation and Resolution Trust Corporation	12,130	16,300	16,969	669
Defense—military functions[3]	969,059	938,669	897,772	-40,897
Total, Civilian employment in the executive branch	**2,113,938**	**2,125,929**	**2,085,701**	**-40,228**
Military (uniformed personnel):				
Defense	2,125,731	1,929,870	1,807,506	-122,364
Coast Guard (Department of Transportation)	37,653	38,920	39,417	497
Total, uniformed personnel	**2,163,384**	**1,968,790**	**1,846,923**	**-121,867**
Grand total, executive branch employment	**4,277,322**	**4,094,719**	**3,932,624**	**-162,095**

[1] Excludes developmental positions under the Worker-Trainee Opportunity Program; participants in the Cooperative Education Program; disadvantaged and part-time workers under such Office of Personnel Management programs as Summer Aides, stay-in-school, and junior fellowship; and certain statutory exemptions. Totals do not include Postal Service Employment of 757,798 in 1993—down 6,670.

[2] Includes 108 FTE's as a contingency allowance in 1993.

[3] By law (10 U.S.C., Chapter 4, section 140b), the Department of Defense is exempt from full-time equivalent employment controls. Data shown are estimated.

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Table 2–9. ECONOMIC PROJECTIONS ASSUMING PRESIDENT'S PROGRAM[1]

(Calendar years; dollar amounts in billions)

	Actual 1990	Projections						
		1991	1992	1993	1994	1995	1996	1997
Gross Domestic Product (GDP):								
Levels, dollar amounts in billions:								
Current dollars	5,514	5,675	5,926	6,307	6,712	7,141	7,589	8,054
Constant (1987) dollars	4,885	4,848	4,919	5,066	5,218	5,374	5,532	5,689
Implicit price deflator (1987 = 100), annual average	112.9	117.1	120.5	124.5	128.6	132.9	137.2	141.6
Percent change, fourth quarter over fourth quarter:								
Current dollars	4.1	3.5	5.4	6.5	6.4	6.4	6.2	6.1
Constant (1987) dollars	-0.1	0.2	2.2	3.0	3.0	3.0	2.9	2.8
Implicit price deflator (1987 = 100)	4.2	3.3	3.2	3.4	3.3	3.3	3.2	3.2
Percent change, year over year:								
Current dollars	5.1	2.9	4.4	6.4	6.4	6.4	6.3	6.1
Constant (1987) dollars	1.0	-0.8	1.5	3.0	3.0	3.0	2.9	2.8
Implicit price deflator (1987 = 100)	4.1	3.7	2.9	3.3	3.3	3.3	3.2	3.2
Gross National Product (GNP):								
Levels, dollar amounts in billions:								
Current dollars	5,524	5,689	5,938	6,319	6,726	7,156	7,604	8,070
Constant (1987) dollars	4,895	4,860	4,929	5,076	5,228	5,385	5,544	5,701
Implicit price deflator (1987 = 100), annual average	112.9	117.1	120.5	124.5	128.6	132.9	137.2	141.6
Incomes, billions of current dollars:								
Personal income	4,680	4,832	5,037	5,378	5,712	6,084	6,458	6,854
Wages and salaries	2,739	2,810	2,943	3,134	3,335	3,548	3,771	4,002
Corporate profits before tax	332	313	341	423	456	493	524	556
Consumer Price Index (all urban):[2]								
Level (1982–84 = 100), annual average	130.7	136.2	140.2	144.8	149.4	154.2	159.2	164.1
Percent change, Q4/Q4	6.2	2.9	3.1	3.3	3.2	3.2	3.2	3.1
Percent change, year/year	5.4	4.2	3.0	3.3	3.2	3.2	3.2	3.1
Unemployment rate, civilian, percent:[3]								
Fourth quarter level	5.9	6.9	6.8	6.4	6.0	5.7	5.3	5.3
Annual average	5.5	6.7	6.9	6.5	6.1	5.8	5.4	5.3
Federal pay raises, January, percent	3.6	4.1	4.2	3.7	4.7	4.7	4.5	3.5
Interest rates, percent:								
91-day Treasury bills[4]	7.5	5.4	4.1	4.9	5.3	5.3	5.2	5.1
10-year Treasury notes	8.6	7.9	7.0	6.9	6.7	6.6	6.6	6.6

[1] Based on information available as of January 10, 1992. These projections differ slightly from those of early December, which were used to prepare the detailed budget estimates (see Appendix One, Chapter 8, "Explanation of Estimates").
[2] CPI for all urban consumers. Two versions of the CPI are now published. The index shown here is that currently used, as required by law, in calculating automatic adjustments to individual income tax brackets.
[3] Percent of civilian labor force, excluding armed forces residing in the U.S.
[4] Average rate on new issues within period.

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3. Economic Assumptions and Sensitivities

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3. ECONOMIC ASSUMPTIONS AND SENSITIVITIES

INTRODUCTION

Economic growth, which has been essentially flat in recent months, is widely expected to gather momentum in the second half of the year and into 1993. Sharply falling interest rates, low inflation, and healthier corporate and household balance sheets are establishing a foundation for expansion. The President's growth agenda, discussed in Chapter 2, if enacted, would significantly strengthen economic activity and create new jobs.

RECENT DEVELOPMENTS

Real gross domestic product (GDP) increased at an average 1.6 percent annual rate in the second and third quarters of 1991, following declines at an average 3.2 percent rate in the prior two quarters.[1] The pace of economic activity in the fourth quarter is not yet known for certain, but monthly measures of production and employment now available suggest that activity was sluggish at best. Industrial production decreased 0.6 percent at an annual rate from the third to fourth quarter, while the Nation's payrolls declined. The inability of the recovery to gather momentum has contributed to a sense of caution among consumers and businesses.

ECONOMIC PROJECTIONS

Short-Term Prospects.—The Administration's economic projections are *not a forecast.* They are predicated on the enactment of the President's program. They have been developed jointly by the Council of Economic Advisers, the Treasury and the Office of Management and Budget to project the effects of the President's policies in the current context. The projections show economic growth resuming this spring. The pace is projected to accelerate through 1992, putting the civilian unemployment rate on a downward path (Table 3–1). The majority of private sector forecasters and the Congressional Budget Office share this assessment, although the projected strength of the upturn varies among forecasters.

The expectation that a sustained upturn will soon begin is based on several factors. *First, interest rates have fallen to their lowest levels since the early 1970s.* Inflation has also eased during the past year, which should contribute to further reductions in long-term rates. Real interest rates (nominal rates minus inflation) have fallen as well.

Lower mortgage interest rates have helped make purchasing a new home more affordable than at any time since 1974 and will serve to boost home sales and new construction. Declining interest rates should also stimulate spending on other interest-sensitive goods such as consumer durables and business investment. The initial step-up in these expenditures is likely to contribute to widespread employment and income gains, propelling subsequent rounds of increased expenditure.

Second, economic policy is focused on reviving economic growth. In December 1991, the Federal Reserve reduced the discount rate by a full percentage point. The moderation of inflation provides the Federal Reserve ample room to ease interest rates further if this appears warranted. The Administration's fiscal policy initiatives would also aid the economy both in the short- and long-term (see Chapter 2).

Third, households and businesses have begun to reduce the debt burdens amassed in the

[1] As part of the benchmark revision to the national accounts released in December, GDP replaced GNP as the aggregate measure of economic activity. GDP is the value of goods and services produced in the United States. It includes the income earned by nonresidents in the U.S. and the income from assets in the U.S. owned by foreigners. In contrast, GNP is the value of goods and services produced by U.S. residents in the U.S. and abroad and the income from their assets located here and abroad. For the U.S., GDP is almost as large as GNP (99.8 percent in 1990), and trends in GDP and GNP are similar. Most other countries use GDP rather than GNP to measure overall economic activity.

The benchmark revision also changed the base year used to calculate real aggregate output from 1982 to 1987. The shift in base year lowered measured real growth over the past 14 years by an average of 0.2 percentage point per year and raised the implicit price deflator by a similar percentage.

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Table 3–1. ECONOMIC PROJECTIONS ASSUMING PRESIDENT'S PROGRAM[1]

(Calendar years; dollar amounts in billions)

	Actual 1990	Projections						
		1991	1992	1993	1994	1995	1996	1997
Gross Domestic Product (GDP):								
Levels, dollar amounts in billions:								
Current dollars	5,514	5,675	5,926	6,307	6,712	7,141	7,589	8,054
Constant (1987) dollars	4,885	4,848	4,919	5,066	5,218	5,374	5,532	5,689
Implicit price deflator (1987 = 100), annual average	112.9	117.1	120.5	124.5	128.6	132.9	137.2	141.6
Percent change, fourth quarter over fourth quarter:								
Current dollars	4.1	3.5	5.4	6.5	6.4	6.4	6.2	6.1
Constant (1987) dollars	-0.1	0.2	2.2	3.0	3.0	3.0	2.9	2.8
Implicit price deflator (1987 = 100)	4.2	3.3	3.2	3.4	3.3	3.3	3.2	3.2
Percent change, year over year:								
Current dollars	5.1	2.9	4.4	6.4	6.4	6.4	6.3	6.1
Constant (1987) dollars	1.0	-0.8	1.5	3.0	3.0	3.0	2.9	2.8
Implicit price deflator (1987 = 100)	4.1	3.7	2.9	3.3	3.3	3.3	3.2	3.2
Gross National Product (GNP):								
Levels, dollar amounts in billions:								
Current dollars	5,524	5,689	5,938	6,319	6,726	7,156	7,604	8,070
Constant (1987) dollars	4,895	4,860	4,929	5,076	5,228	5,385	5,544	5,701
Implicit price deflator (1987 = 100), annual average	112.9	117.1	120.5	124.5	128.6	132.9	137.2	141.6
Incomes, billions of current dollars:								
Personal income	4,680	4,832	5,037	5,378	5,712	6,084	6,458	6,854
Wages and salaries	2,739	2,810	2,943	3,134	3,335	3,548	3,771	4,002
Corporate profits before tax	332	313	341	423	456	493	524	556
Consumer Price Index (all urban):[2]								
Level (1982–84 = 100), annual average	130.7	136.2	140.2	144.8	149.4	154.2	159.2	164.1
Percent change, Q4/Q4	6.2	2.9	3.1	3.3	3.2	3.2	3.2	3.1
Percent change, year/year	5.4	4.2	3.0	3.3	3.2	3.2	3.2	3.1
Unemployment rate, civilian, percent:[3]								
Fourth quarter level	5.9	6.9	6.8	6.4	6.0	5.7	5.3	5.3
Annual average	5.5	6.7	6.9	6.5	6.1	5.8	5.4	5.3
Federal pay raises, January, percent	3.6	4.1	4.2	3.7	4.7	4.7	4.5	3.5
Interest rates, percent:								
91-day Treasury bills[4]	7.5	5.4	4.1	4.9	5.3	5.3	5.2	5.1
10-year Treasury notes	8.6	7.9	7.0	6.9	6.7	6.6	6.6	6.6

[1] Based on information available as of January 10, 1992. These projections differ slightly from those of early December, which were used to prepare the detailed budget estimates (see Appendix One, Chapter 8, "Explanation of Estimates").
[2] CPI for all urban consumers. Two versions of the CPI are now published. The index shown here is that currently used, as required by law, in calculating automatic adjustments to individual income tax brackets.
[3] Percent of civilian labor force, excluding armed forces residing in the U.S.
[4] Average rate on new issues within period.

1980s. Consumers trimmed their outstanding installment debt almost every month last year. Corporations have been substituting equity for debt and shifting from short-term to longer-term debt. With healthier balance sheets, households and businesses should become increasingly willing to boost spending, and would be in a better position to sustain those increases.

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Finally, an improving economy will help to restore consumer and business confidence. With an easing of apprehension about the future, consumers and businesses should be willing to make the long-term spending decisions that add impetus to an upturn.

Long-Term Projections.—After 1993, with enactment of the President's program, real GDP is projected to grow about 3 percent per year through 1997, accompanied by declining unemployment and stable or slightly lower interest rates and inflation. The real GDP growth is based on an assumed faster growth in labor productivity and in employment.

As in the case of previous budgets, these long-term projections reflect goals for economic performance that are contingent on the adoption of the President's economic policy proposals. The projections are not a forecast in the usual sense.

EFFECTS OF THE ADMINISTRATION'S PROPOSALS

The proposals discussed in Chapter 2 are expected to create more jobs, more income and more growth, thereby lowering the budget deficit. They result in a significant improvement in the outlook from a "business-as-usual" projection, which assumes that Congress rejects the President's proposals and adopts a more conventional response to the current economic situation. (See Table 3–2.)

GDP adjusted for inflation is estimated to increase about 0.4 percentage point per year faster through 1997, attaining a level that is about $160 billion higher than on a business-as-usual path. This should create an additional half a million jobs during the next four years.

Relative to "business as usual," the policy package is estimated to reduce the 1993 deficit by $14 billion; by 1997 the deficit-reducing effect mounts to $66 billion. (See Table 3–3.) Higher real incomes raise receipts while lower unemployment and interest rates trim outlays. Cumulatively over the six years through 1997, budget deficits are estimated to be reduced by $201 billion relative to business as usual. If failure to enact the President's proposals were to result in a reduction of one percent per year in the real growth assumed in the Administration's policy, the 1993 deficit would be almost

Table 3–2. **ECONOMIC PROJECTIONS: ADMINISTRATION POLICY VERSUS BUSINESS AS USUAL**

(Calendar years)

	1992	1993	1994	1995	1996	1997
Percent increase, fourth quarter over fourth quarter:						
Real GDP:						
Business as usual	1.6	2.4	2.5	2.6	2.5	2.4
Administration policy	2.2	3.0	3.0	3.0	2.9	2.8
GDP deflator:						
Business as usual	3.3	3.4	3.3	3.3	3.2	3.2
Administration policy	3.2	3.4	3.3	3.3	3.2	3.2
Calendar year average in percent:						
Civilian unemployment rate:						
Business as usual	7.1	6.9	6.7	6.3	5.8	5.6
Administration policy	6.9	6.5	6.1	5.8	5.4	5.3
91-day Treasury bill rate:						
Business as usual	4.2	5.1	5.5	5.5	5.4	5.3
Administration policy	4.1	4.9	5.3	5.3	5.2	5.1
10-year Treasury note rate:						
Business as usual	7.2	7.3	7.1	7.0	7.0	6.9
Administration policy	7.0	6.9	6.7	6.6	6.6	6.6

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$23 billion higher, and cumulatively over 6 years deficits would be nearly $350 billion higher.

Omnibus Trade and Competitiveness Act of 1988.—As required by this Act, Table 3–4 shows a range of estimates for economic variables related to saving, investment and foreign trade. From fiscal years 1991 to 1993, the merchandise trade balance is expected to improve moderately. The current account deficit and net foreign investment are expected to be about unchanged: the improvement in the trade balance is projected to be approximately offset by the end to the contributions of our Allies toward the cost of Desert Shield and Desert Storm. Net domestic saving, excluding the Federal Government and net private investment, is projected to rebound significantly as the economy grows.

It is difficult to gauge with precision the effect of Federal Government borrowing from the public on interest rates and exchange rates, as required by the Act. Both are influenced by many factors besides Government borrowing in a complicated process involving supply and demand of credit and perceptions of fiscal and monetary policy here and abroad. The proposals in this budget are not expected to exert a substantial independent influence on exchange rates.

STRUCTURAL DEFICIT

The sharp increase in outlays for deposit insurance, together with the weakness in the economy, have temporarily raised the consolidated budget deficit substantially. Removing these factors to produce an adjusted structural deficit, as shown in Table 3–5, reduces the consolidated deficit by approximately $130 billion in both 1992 and 1993.

The shortfall of economic activity from its previously estimated high employment

Table 3–3. **IMPACT ON BUDGET DEFICITS: ADMINISTRATION POLICY VERSUS BUSINESS AS USUAL**

(In billions of dollars)

	1992	1993	1994	1995	1996	1997	Total, 1992–97
Additions to deficit if, instead of Administration policy, there is:							
Business as usual	1.9	13.5	27.8	40.1	51.9	65.8	201.0
1% per year lower real growth than Administration policy	6.1	22.5	43.2	65.3	91.3	119.1	347.5
1% per year lower real growth than business as usual	8.0	36.0	71.0	105.4	143.2	184.9	548.5

Table 3–4. **SAVING, INVESTMENT, AND TRADE BALANCE**

(Fiscal years; in billions of dollars)

	1991 actual	1993 estimate
Merchandise trade balance	-83	-45 to -65
Current account balance	-20	0 to -25
Net foreign investment	-4	0 to -25
Net domestic saving (excluding Federal saving)[1]	282	350 to 370
Net private domestic investment	111	190 to 210

[1] Defined for purposes of Public Law 100–418 as the sum of private saving and the surpluses of State and local governments. All series are based on National Income and Product Accounts except for the current account.

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Table 3–5. **ADJUSTED STRUCTURAL DEFICIT**
(In billions of dollars)

	1992	1993	1994	1995	1996	1997
Consolidated surplus or deficit (-)[1]	-401	-353	-212	-193	-181	-183
Cyclical component	53	50	38	25	13	3
Structural surplus or deficit (-)	-348	-303	-174	-168	-168	-180
Deposit insurance outlays	80	76	-25	-27	-22	-32
Adjusted structural deficit	-268	-227	-199	-195	-190	-212

[1] Cash basis.

level is projected to add about $50 billion to the budget deficit in 1992 and 1993. Assuming that the economy returns to its high employment level in 1997, the cyclical component would be virtually eliminated by that year.

On a cash basis, outlays for deposit insurance are projected to reach a peak in 1992 at $80 billion, but still be substantial in 1993. Thereafter, large inflows from asset sales would result in deposit insurance reducing the consolidated deficit; these net inflows are excluded from the adjusted structural deficit.

SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS

Both receipts and outlays are powerfully affected by changes in economic conditions. This sensitivity seriously complicates budget planning because deviations in actual outcomes from what was assumed lead to errors in the budget projections. Many of the budgetary effects of changes in economic assumptions are fairly predictable, however, and a set of rules of thumb embodying these relationships can be used to estimate how various changes in the economic assumptions would alter outlays, receipts and the deficit. Table 3–6 summarizes these rules of thumb.

Economic variables that affect the budget do not usually change independently of one another. Output and employment tend to move together in the short run: a higher rate of real GDP growth is associated with declining unemployment, while weak or negative growth is accompanied by rising unemployment. In the long run, however, changes in the average rate of growth of real GDP are mainly due to changes in the rate of growth of productivity and labor force, and are not necessarily associated with changes in the average rate of unemployment. Inflation and interest rates are also closely linked: a higher expected rate of inflation increases interest rates, while lower expected inflation reduces rates. Changes in real GDP growth or inflation have a much greater cumulative effect on the budget if they are sustained for several years than if they occur for only one year.

Table 3–6 shows that if real GDP growth is lower by one percentage point in calendar 1992 only, and the unemployment rate rises by one-half percentage point, the 1992 deficit will be increased by $6.1 billion. The budget effects are much larger if the real growth rate is assumed to be one percentage point less in each year, 1992–1997, and the unemployment rate correspondingly rises one-half percentage point in each year. The levels of real and nominal GDP are reduced by a steadily growing percentage, and the deficit is $119 billion higher by 1997.

The effects of slower productivity growth are shown in a third example where real growth is one percentage point lower per year, while the unemployment rate is unchanged. In this case, the estimated budget effects mount steadily over the years, but more slowly. The effect on the deficit reaches $108 billion by 1997.

Joint changes in interest rates and inflation have a smaller effect on the deficit than

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equal percentage point changes in real GDP growth because their effects on receipts and outlays are substantially offsetting. If the rate of inflation and the level of interest rates are permanently raised by one percentage point, the price level and nominal GDP rise by a cumulatively growing percentage. In this case, the effects on receipts and outlays mount steadily in successive years, adding $62 billion to outlays and $85 billion to receipts in 1997, reducing the deficit by $23 billion.

Table 3–6 also shows the interest rate and the inflation effects separately, and rules of thumb for the added interest cost associated with higher or lower deficits (increased or reduced borrowing).

The effects of changes in economic assumptions in the opposite direction are approximately symmetric to those shown in the table. The impact of a one percentage point lower rate of inflation or higher real growth would be of about the same magnitude, but with the opposite sign.

These rules of thumb hold the income share composition of GDP constant. Because different income components are subject to different taxes and tax rates, estimates of total receipts can be affected significantly by changing these income shares. These relationships are too complex, however, to reduce to simple rules.

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Table 3–6. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS

(In billions of dollars)

Budget effect	1992	1993	1994	1995	1996	1997
Real Growth and Employment						
Effects of 1 percent lower real GDP growth in calendar year 1992 only, including higher unemployment: [1]						
Receipts	-5.5	-12.3	-14.6	-15.1	-15.5	-16.0
Outlays	0.6	3.7	4.3	5.7	7.1	8.6
Deficit increase (+)	6.1	16.0	19.0	20.8	22.5	24.6
Effects of a sustained 1 percent lower annual real GDP growth rate during 1992–1997, including higher unemployment: [1]						
Receipts	-5.5	-18.2	-33.7	-50.3	-68.0	-87.1
Outlays	0.6	4.3	9.5	15.0	23.2	32.0
Deficit increase (+)	6.1	22.5	43.2	65.3	91.3	119.1
Effects of a sustained 1 percent lower annual real GDP growth rate during 1992–1997, with no change in unemployment:						
Receipts	-5.5	-18.2	-34.2	-52.0	-71.4	-92.6
Outlays	0.1	0.9	2.6	5.6	9.7	15.3
Deficit increase (+)	5.7	19.1	36.8	57.6	81.1	107.9
Inflation and Interest Rates						
Effects of 1 percentage point higher rate of inflation and interest rates during calendar year 1992 only:						
Receipts	6.1	12.8	13.3	12.8	13.4	14.1
Outlays	4.9	13.0	11.4	10.0	8.9	8.7
Deficit increase (+)	-1.1	0.2	-1.9	-2.8	-4.5	-5.4
Effects of a sustained 1 percentage point higher rate of inflation and interest rates during 1992–1997:						
Receipts	6.1	19.6	34.6	49.9	66.6	85.0
Outlays	4.9	18.5	30.7	41.0	50.8	61.5
Deficit increase (+)	-1.1	-1.1	-3.8	-8.9	-15.9	-23.4
Effects of a sustained 1 percentage point higher interest rate during 1992–1997 (no inflation change):						
Receipts	0.7	1.9	2.5	2.7	2.9	3.2
Outlays	4.6	14.8	22.0	27.2	31.9	36.8
Deficit increase (+)	4.0	13.0	19.6	24.5	29.0	33.6
Effects of a sustained 1 percentage point higher rate of inflation during 1992–1997 (no interest rate change):						
Receipts	5.4	17.7	32.1	47.2	63.7	81.8
Outlays	0.3	3.7	8.7	13.8	18.9	24.7
Deficit increase (+)	-5.1	-14.1	-23.5	-33.4	-44.8	-57.1
Interest Cost of Higher Federal Borrowing						
Effect of $100 billion additional borrowing during 1992	2.1	6.5	7.0	7.5	8.0	8.4

[1] The unemployment rate is assumed to be 0.5 percentage point higher per 1.0 percent shortfall in the level of real GDP.

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Investing in the Future

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Investing in the Future:

4. Reforming American Education and Investing in Human Capital

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4. REFORMING AMERICAN EDUCATION AND INVESTING IN HUMAN CAPITAL

I. HIGHLIGHTS

Education Department funding.—The budget proposes total discretionary budget authority for the Department of Education of $24.3 billion, an increase of more than $1.6 billion, or 7 percent, over 1992—the largest such increase for any department. Total budget outlays for the Education Department are $30.4 billion, an increase of $3.9 billion or 15 percent over 1992. Total budget authority for Education is $32.3 billion, $2.9 billion or 10 percent over 1992.

Head Start.—The budget requests $2.8 billion, an increase of $600 million, or 27 percent, over 1992. The 1993 level represents an increase of $1.6 billion, or 127 percent, since 1989. This level will support 779,206 children, an increase of 157,206 over 1992—enough to provide one year of Head Start participation for all eligible children wanting to participate in the program.

Public and private school choice initiatives.—Two initiatives would result in over $1 billion for innovative local choice proposals that would help middle- and low-income families have more of the same choices of schools that wealthier families have. The **Choice Grants for America's Children Act** would be funded at $500 million, to be matched by an equal amount of State funds, for a total of $1 billion for the program. States and localities that develop model choice programs would receive up to $500 in Federal matching funds for each eligible middle- and low-income child. This could mean up to $1,000 or more to each child offered the opportunity to choose public or private schooling.

Table 4–1. **THE BUDGET PROPOSES A 45 PERCENT INCREASE OVER 1989, AND AN 11 PERCENT INCREASE OVER 1992, FOR THE EDUCATION DEPARTMENT AND HEAD START**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Selected Department of Education Programs:						
Educational Excellence/Choice Programs ..	—	100	768	+668	+668%	N/A
Mathematics and science education	137	268	316	+48	+18%	+131%
Drug-free schools	355	624	654	+30	+5%	+84%
Education for the disabled	1,961	2,855	2,943	+88	+3%	+50%
Compensatory education	4,579	6,707	6,828	+121	+2%	+49%
Guaranteed student loans	4,285	4,820	6,046	+1,226	+25%	+49%
Pell grants	4,484	5,463	6,641	+1,178	+22%	+48%
Presidential achievement scholarships	—	—	170	+170	N/A	N/A
Disadvantaged student support services ...	227	395	417	+22	+6%	+85%
Historically Black Colleges	84	112	122	+10	+9%	+45%
Research, statistics and assessment	78	148	243	+90	+64%	+212%
Total discretionary budget authority (non-add)	17,059	22,628	24,257	+1,629	+7%	+42%
Total budget authority	22,956	29,441	32,339	+2,898	+10%	+41%
Head Start	1,235	2,202	2,802	+600	+27%	+127%
Total, Education and Head Start	**24,191**	**31,643**	**35,141**	**+3,498**	**+11%**	**+45%**

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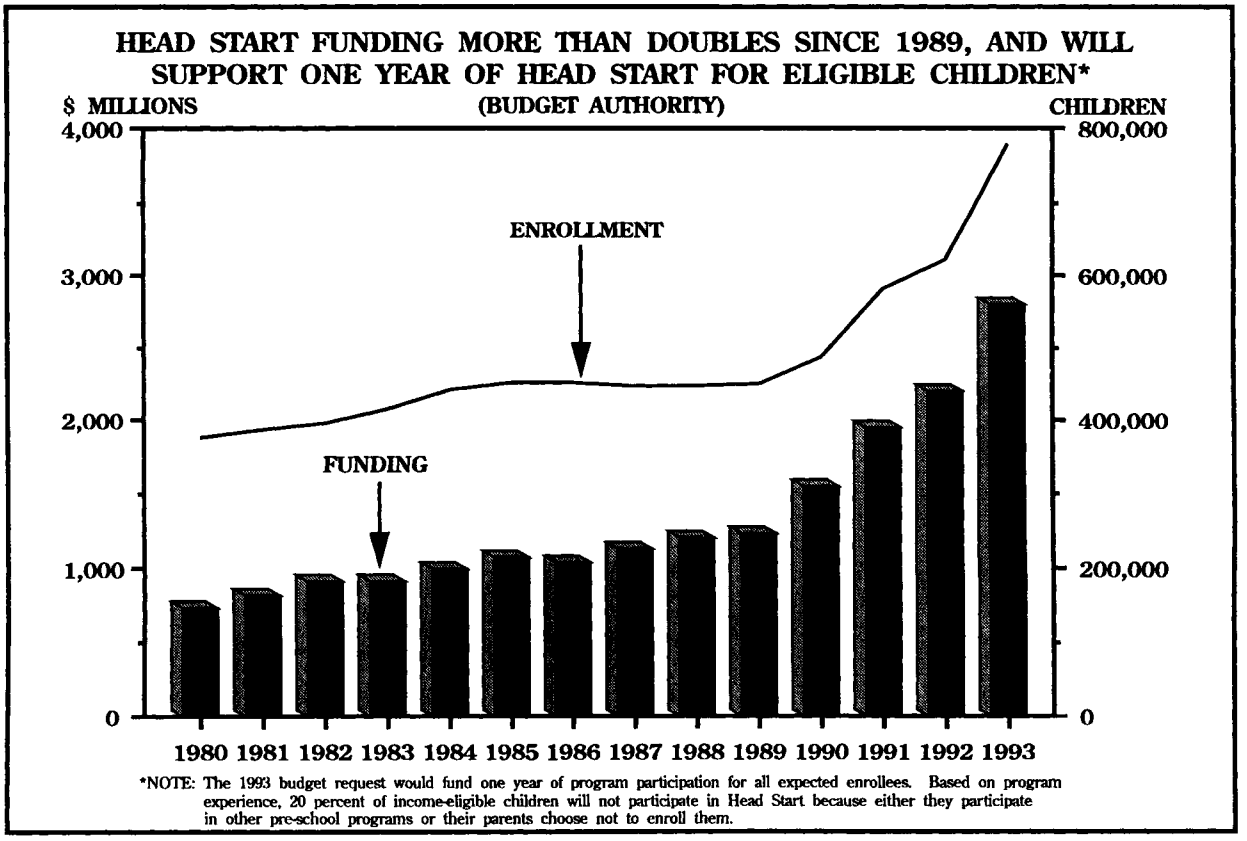
The budget also includes $30 million for the **Low-Income School Choice Demonstration Act,** designed to answer clearly many of the concerns about the viability of providing the full cost of public and private school choice to low-income families, without adversely affecting local education programs.

AMERICA 2000.—In April 1991, the President announced his AMERICA 2000 education reform strategy, aimed at helping communities achieve the National Education Goals by the year 2000. By the end of December 1991, over half of the States and 1,000 communities across America had already accepted the challenge of AMERICA 2000 and had begun to develop comprehensive strategies to meet the National Education Goals.

Federal funding in support of the National Education Goals.—Under the budget proposals, support provided for the goals by 25 Federal agencies, would increase to $81.3 billion. This is an increase of 44 percent since 1989. It is an increase of $6.1 billion, or eight percent over 1992.

Mathematics and science education.—The Administration proposes to help States provide training to 770,000 elementary and secondary school teachers, and to launch a new, intensive teacher training initiative through the coordinated efforts of the Education Department, the National Science Foundation, and Federal laboratories.

Pell Grants.—A 22 percent increase over 1992 is proposed for Pell grants, the primary Federal post-secondary grant program—by far the largest annual increase in program history. Low- and middle-income families would be granted major new relief from the rising cost of higher education. Funding would increase by $1.2 billion, to $6.6 billion. The maximum award would increase 54 percent, from $2,400 to $3,700. Compared to 1992, more aid and higher average awards would be available to 3.4 million students. Students from families at all income levels would receive higher average awards. All family income groups up to



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$50,000 would receive more grant funds than in 1992.

Rewards for academic achievement.—The Administration proposes a new scholarship program for the Pell grant recipients with the highest levels of academic achievement in high school and college. Qualified students would receive a $500 merit-based bonus to their Pell grant. In addition, all student aid recipients would have to maintain certain academic standards in order to continue to receive their awards.

Job Training 2000.—The Administration proposes to replace the fragmentation and inefficiency of current Federal job training programs, with a new, coordinated, market-driven system. It would greatly improve services to clients, provide $2.2 billion for new job training vouchers, provide training based on locally determined needs, ensure that only quality training providers receive Federal subsidies, and allocate most funding in the form of voucherable aid to individuals.

Tax incentives.—The Administration proposes to permit *deduction of interest paid on existing and new student loans* for postsecondary education. The Administration also proposes *penalty for withdrawal* of money from individual IRAs if the funds are used for medical or educational expenses.

II. FEDERAL FUNDING

Education Department Funding

The budget provides an increase for domestic discretionary outlays for Education Department programs of $1.7 billion, or 8 percent, over 1992, for a total of $22.6 billion. The increase in new discretionary budget authority, $1.6 billion, or seven percent, is the largest of any Department.

These increases reflect the high priority given to education in the budget and permit the highest Education Department funding levels for discretionary programs ever.

Federal Resources for Education and Training Programs

The first inventory of Federal resources in support of the National Education Goals was prepared for the first annual report of the National Education Goals Panel (September 1991). The inventory covered the years 1989 through 1991. Information was provided by 26 Federal agencies that support education, training and related services to individuals, improvements to the educational system, or activities to improve the mental, physical or emotional condition of children and adults who will be or are participants in the educational system. Because it was the first such inventory, it was expected that the estimates would change as agencies

Table 4–2. **EDUCATION DEPARTMENT FUNDING INCREASES 10 PERCENT OVER 1992 AND 41 PERCENT OVER 1989**

(Dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Budget Authority:						
Discretionary Programs	17,059	22,628	24,257	+1,629	+7%	+42%
Mandatory Programs	5,897	6,813	8,082	+1,269	+19%	+37%
Outlays:						
Discretionary Programs	16,181	20,895	22,585	+1,690	+8%	+40%
Mandatory Programs	5,427	5,632	7,825	+2,193	+39%	+44%
Total:						
Budget Authority	22,956	29,441	32,339	+2,898	+10%	+41%
Outlays	21,608	26,528	30,410	+3,882	+15%	+41%

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gained experience with the definitions and concepts.

For the budget, agencies have revised data provided in the first inventory and provided estimates for 1992 and 1993.

- For this update, 25 Federal agencies reported.
- The most important program for the education of disadvantaged pre-school children, Head Start, is funded in the budget at $2.8 billion, more than double the 1989 level, and a 27 percent increase over 1992.
- Programs in the Department of Education constitute the largest source of Federal funds for school age children.
- The Education Department and the Department of Defense account for 85 percent of the resources devoted to education and training services for persons beyond high school age.

Federal resources in support of the National Education Goals, including training and related services, have grown rapidly. The budget provides $81.3 billion in support of the goals, or $6.1 billion, 8 percent higher than the level in 1992, and $24.9 billion, or 44 percent, over 1989. This growth reflects the high priority given education programs in the past three years.

Federal investment in education research and development.—Federal funding for education research and development has increased $152 million, or 66 percent, since 1989. Activities range from basic research on the biologic processes involved in learning to development of new curricula.

The urgency of finding answers to the questions of how to improve American education has also generated significant investment in research and development in the foundation and other private sector arenas. Most importantly, in 1991, the nation's business community accepted the President's challenge to become more prominently involved. Business leaders established the New American Schools Development Corporation and

Table 4–3. **FEDERAL PROGRAM RESOURCES IN SUPPORT OF THE NATIONAL EDUCATION GOALS INCREASE 44 PERCENT OVER 1989, AND 8 PERCENT OVER 1992**

(Dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
By Age Category					
Preschool years	9,260	17,664	20,297	+2,633	+15%
School years	15,783	20,684	21,996	+1,312	+6%
Post-high school	30,119	35,381	37,496	+2,115	+6%
Not age specific	1,242	1,497	1,515	+18	+1%
Total	56,404	75,225	81,305	+6,080	+8%
By Department/Agency					
Education	22,421	28,998	31,821	+2,823	+10%
Health and Human Services	7,950	15,636	17,830	+2,194	+14%
Defense	12,823	13,748	13,756	+8	—
Agriculture	7,354	9,862	10,632	+770	+8%
Labor	3,776	4,073	4,153	+80	+2%
Veterans	892	1,044	1,164	+119	+11%
Other	1,187	1,862	1,950	+87	+5%
Total	56,404	75,225	81,305	+6,080	+8%

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are providing millions of dollars to finance its activity. Free of government limitations, the Corporation will fund a number of design teams to develop radical new "break the mold" approaches to teaching and learning. The most successful teams will then be funded to help States and school systems implement the designs.

III. PROGRAMS AND STRATEGIES THAT SUPPORT PRE-SCHOOL AND ELEMENTARY AND SECONDARY EDUCATION

Helping Children Get Ready to Learn

The first National Education Goal calls for all children to start school ready to learn. The best preparation for school comes from a caring family, devoted to and able to provide for a child's health, well-being and education. The Federal Government shares responsibility for preparing children to learn in a variety of ways.

Head Start.—Some children, especially those from low-income and disadvantaged backgrounds and children with disabilities, may face additional challenges when competing in school and may be at-risk for starting behind their peers. Head Start makes available extra help to these children. Head Start offers a wide range of comprehensive developmental services, which include educational instruction, nutritional services, health screenings, immunizations, dental treatment, mental health services, and other social services. Head Start services help the children and the entire family. Parents are encouraged to become actively involved in both participating and planning Head Start activities.

The budget provides Head Start with the largest one-year increase in its 25 year history, raising Head Start funding by $600 million or 27 percent over 1992 to a total of $2.8 billion.—This record level represents an increase of 127 percent over 1989. With the unprecedented increase in the budget, Head Start will support the enrollment of an estimated 779,206 children, 157,206 more than in 1992. The budget will support full participation in one year of Head Start for all eligible children wanting to participate in the program before they enter school.

Some Head Start children may be from families at-risk for drug abuse. To help these children and their families confront the problem of drug abuse, the budget includes $30.6 million to continue the Head Start anti-substance abuse initiative. Through this initiative, Head Start grantees can assist children whose families are at high risk for involvement in alcohol or drug abuse. The anti-substance abuse initiative is one component of the Department of Health and Human Services' two generational strategy. The Department is working to develop collaborative partnerships to address parental literacy and employment as well as address drug exposure and to develop early intervention strategies to combat drug abuse in Head Start families.

Table 4–4. **THE FEDERAL INVESTMENT IN EDUCATION R&D INCREASES 68 PERCENT OVER 1989 AND 20 PERCENT OVER 1992**

(Budget authority; dollar amounts in millions)

Department/Agency	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Education	134	171	216	+45	+26%
Health and Human Services	45	65	74	+9	+14%
National Science Foundation	21	53	62	+9	+17%
Defense	27	30	30	—	—
Total	227	319	382	+57	+20%

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The budget also supports enhanced efforts to evaluate the benefits to be gained from increased investments in Head Start services. While there is evidence to show that Head Start children experience substantial immediate gains in cognitive ability, school readiness and achievement, less is known about the long-term effects of many Head Start services. Building upon efforts begun in 1992, the budget includes $12 million for studies to inform policy on these matters. To ensure Head Start's quality remains high, every grantee will be monitored at least every three years by a team of experts in the field.

Even Start.—The budget includes $90 million for the Even Start family literacy program, an increase of $20 million, or 29 percent, over 1992. First funded in 1989, Even Start programs now operate in every State, helping young at-risk children to obtain the skills they will need to succeed in school while helping improve the educational and parenting skills of their parents.

WIC.—The budget funds full participation in the Women's, Infants and Children Supplemental Feeding Program (WIC) for all eligible pregnant women and infants. Funding would increase over 1992 by $240 million, or 9 percent, to a total of $2.8 billion. Compared to 1989, WIC would grow by almost a billion dollars, or 47 percent. Through WIC, pregnant women, infants and young children receive the food they need for proper nutrition. Proper nutrition during pregnancy and infancy is important to later physical and mental development. In 1989, WIC served 3.3 million eligible women and children each month. At the budget level, WIC would serve 5.3 million women and children, an increase of 61 percent over 1989.

Expanded State competitive bidding programs for infant formula have helped hold down prices. Competitive bidding helps supplement funding increases and supports continued growth in the number of families served.

Child nutrition programs.—The budget includes $6.5 billion for subsidies for school lunch, school breakfast, and day care homes. This is an increase of $412 million, or 7 percent over 1992; an increase of $1.9 billion, or 42 percent over 1989. Legislative proposals would increase support for families with incomes from between 130 percent and 185 percent of the poverty level by reducing subsidies in the school lunch and breakfast programs to students from families with higher incomes.

Child care assistance.—The Child Care and Development Block Grant, which the Administration negotiated with Congress in 1990, provides several new forms of day care assistance to lower income families. The new block

Table 4–5. **THE BUDGET SUPPORTS FULL PARTICIPATION* OF DISADVANTAGED CHILDREN IN HEAD START FOR ONE YEAR**

(Budget authority; dollar amounts in millions)

Item	Actual							1992 Enacted	1993 Proposed
	1975	1980	1985	1988	1989	1990	1991		
Appropriation	404	735	1,075	1,206	1,235	1,552	1,952	2,202	2,802
Enrollment	349,000	376,000	452,000	448,000	451,000	488,000	582,000	622,000	779,206
					Annual increases since 1988:				
Increase over previous year's enrollment					+3,000	+37,000	+94,000	+40,000	+157,206
Total enrollment increase since 1988									+331,206

Note: The 1993 budget request would fund one year of program participation for all expected enrollees. Based on program experience, 20 percent of income-eligible children will not participate in Head Start because either they participate in other preschool programs or their parents choose not to enroll them.

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grant program, funded at $850 million, makes payments to States to help low-income families pay for day care. The program provides 75 percent of its funds for child care vouchers, which parents can use to choose a provider. The program ensures a broad choice of providers, allowing parents to choose a local church program, a day care center, a family day care home, or a neighbor to care for their children.

The remaining 25 percent of the block grant may be used for improving the quality and availability of services. With these funds, States can provide start up funds and operating grants for before- and after-school day care or other child development activities. Several States plan to use these funds to provide after-school care to low-income students at their schools.

Tax credits.— Under the same child care legislation the Administration negotiated with Congress in 1990, substantial changes also were made in the earned income tax credit to augment resources for low-income families. The refundable tax credit for working families with one child was increased. An adjustment was made to provide a higher credit for families with two or more children. Over five years (1993–1997), these changes will provide payments of $22 billion and lower taxes by $4 billion for eligible families.

A new "Wee Tot" credit was enacted for families with young children that provides an additional tax credit of 5 percent of earnings. Over five years, this will provide $1 billion of benefits to eligible families.

Another tax credit of 6 percent of earnings was enacted to help families defray the cost of health insurance policies that cover their children. Over five years, this credit will add $4 billion in payments and lower taxes for eligible families.

Individuals with Disabilities Education Act (IDEA).—Under IDEA, States would receive $320 million for additional services to an estimated 380,000 disabled pre-school children.

Under IDEA's Infants and Families program, States would receive $181 million. Funds are primarily for administrative support to State-wide systems that coordinate comprehensive interagency programs of early intervention services to all children, birth through two years of age, who have disabilities or are "at risk" of having developmental delays. These grants support State efforts to coordinate State and local activity with the 18 Federal programs, including Medicaid, that provide billions of dollars for services to this population.

"Ready to learn" Primary Health Care Grants.—The budget includes $6 million for a demonstration program in the Department of Health and Human Services to develop ways to improve access to primary health care for young children in low-income communities. Grants will fund local schools and health care providers to bring services to families that do not otherwise receive them.

Elementary and Secondary Education Programs and Strategies

The AMERICA 2000 strategy outlined below provides the framework within which elementary and secondary education reform can thrive. In addition, Federal programs for elementary and secondary education fund specific education reform and school improvement strategies for all children, and finance additional support for remedial services for the educationally disadvantaged and the disabled.

Choice.—Many States and communities have already recognized the importance to school reform of allowing parents to choose the public or private school their child will attend. In 1991, 10 States approved some form of choice legislation. The Federal Government needs to add its support to accelerate the growth of this growing movement and would do so under several proposals in this budget.

The Choice Grants for America's Children Act.—$500 million would be available to States and localities that want to experiment with various ways to provide education certificates to middle- and low-income children for public and private schooling. Federal funds would match State funds, up to $500 per child, so that eligible children could receive $1,000 or more to use at the public or private school of their choice.

Enactment of this proposal would provide new impetus to State efforts to implement choice plans by providing new funds to support

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Table 4–6. **SELECTED PROGRAMS THAT SUPPORT EARLY CHILDHOOD DEVELOPMENT INCREASE 49 PERCENT OVER 1989 AND 10 PERCENT OVER 1992**

(Budget authority except where noted; dollar amounts in millions)

Program	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Head Start	1,235	2,202	2,802	+600	+27%
WIC	1,929	2,600	2,840	+240	+9%
Earned Income tax Credit: Refunded Credits (Outlays)	4,005	7,170	7,895	+725	+10%
Dependent Care Tax Credit (Outlay Equivalent)	4,875	3,605	3,805	+200	+6%
Child Care and Development Block Grant	—	825	850	+25	+3%
Child Nutrition (Outlays)	4,556	6,068	6,480	+412	+7%
Total	16,600	22,470	24,672	+2,202	+10%

model State and local initiatives. For example, in 1991, Pennsylvania, in a bipartisan effort, came very close to adopting the first Statewide public/private school choice program in the Nation. The Pennsylvania plan would have provided parents with a certificate valued at up to $900 a year, if they chose to send their child to either a private school or a public school outside their neighborhood. The availability of Federal matching funds for part of the cost of the program would surely have made this approach even more attractive to the State.

The Low-Income School Choice Demonstration Act.—$30 million would support comprehensive public and private school choice experiments to help States and school districts develop models to provide low-income families with educational choice. These demonstrations are designed to address and answer concerns about the viability of providing the full cost of choice to low-income families without adversely affecting local education programs.

Chapter 1 "follow the child."—The Chapter 1 program of grants to school districts for remedial education ($6.2 billion of the $6.8 billion requested for compensatory education) would be amended. A child receiving Chapter 1 services, whose parents choose another school under a local choice plan, would take his Chapter 1 funds with him to that new school.

New American Schools.—The many impressive education reforms being tested all across the country should improve current forms of education. But the demands of the competitive global economy of the future and the distance the education system has to go to meet them call for bold new forms of learning. They require "break the mold" schooling designs. The States and communities that are making public commitments to the AMERICA 2000 strategy are committed to creating such schools. A public and a private sector initiative provide additional support for this requirement:

(a) *New American Schools Development Corporation.*—In response to the President's challenge, American business has formed a nonprofit corporation and is raising funds to support creative education designs that government funding is unlikely to generate.

The private sector's stake in an educated workforce is a driving force behind its willingness to put millions of dollars into support for new education designs. Over the next five years, the Corporation will fund a series of design teams and implementation tests of whole school and whole school district radical restructuring. Out of these efforts should come many of the successful models

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for the learning environment of the next century.

(b) *Grants for New American Schools.*—The proposed AMERICA 2000 Excellence in Education Act would provide competitive grants of up to $1 million each to help over 535 communities develop new schooling designs. These designs may take as many as three years to develop and would build on the best research on how to improve the local school situation. Depending on timing, some of the designs implemented could be those developed by the Corporation.

Standards, curriculum frameworks, and assessments.—The Nation needs objective, widely accepted standards that clearly define the knowledge and skills children should have in at least the five core subjects—English, history, mathematics, science, and geography.

Independent subject matter experts are working on such standards. The National Council on Education Standards and Testing has developed a framework for creation of national standards and assessments. The budget includes $25 million to help States redesign their curriculum and assessment systems.

AMERICA 2000 Excellence in Education Act.—For three years, the Administration has sought Congressional approval for a series of programs that would help States raise the quality of education for all students. For this legislation, including the Choice Grants for America's Children Act, the Low-Income School Choice Demonstration Act, and the New American Schools described above, the budget proposes funding of $768 million, an increase of $668 million over the $100 million contingently appropriated for 1992.

The other major program components are:

- *Merit schools*—funds to each State to reward schools that succeed in improving student achievement over a period of several years.
- *Governors' academies for teachers*—grants to each State to establish programs to provide intensive training for experienced teachers in the core academic subjects.
- *Governors' academies for school leaders*—grants to each State to support training for prospective and current school leaders.
- *Alternative certification of teachers and principals*—grants to help States or school districts develop alternative routes to the certification of persons who wish to become teachers or principals.

Compensatory education.—For remedial education for the disadvantaged, the budget requests $6.8 billion to support programs for more than 5 million children. Over 90 percent of the Nation's school systems receive these funds. Funding has increased $2.2 billion, or 49 percent, since 1989.

Drug-free schools.—The budget requests $654 million for programs under the Drug-free Schools and Communities Act, a $30 million increase over 1992. The request includes $60 million, double the 1992 level, for emergency grants, which provide extra funding for prevention programs in school districts with the most substantial drug-related problems.

Children with disabilities.—Under the Grants to States program of Part B of the Individuals with Disabilities Education Act (IDEA), States receive funds in return for providing all children with disabilities a free appropriate public education in accord with the procedures of the Act. For 1993, the budget proposes $2.1 billion for Part B, an increase of five percent over 1992, to supplement State and local funds for the education of 4.6 million children. Funding for all IDEA programs for children with disabilities has increased 50 percent since 1989.

Mathematics and Science Education

National Education Goal 4 calls for U.S. students to be first in the world in science and mathematics achievement. The President established a special committee, under the Federal Coordinating Council on Science, Engineering and Technology (FCCSET), to recommend a coordinated strategy to use Federal assets and expertise, and to work with the States to achieve that goal. The budget provides the resources to support that strategy.

The budget proposes $2,092 million for mathematics and science education programs

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in 11 agencies, an increase of $137 million, or 7 percent, over 1992. The largest increases are for the Education Department's Eisenhower Mathematics and Science Education programs, which would be funded at $316 million, $48 million, or 18 percent, over 1992.

The highest priority of FCCSET is improvement of pre-college math and science education, for which $768 million is proposed, an 18 percent increase over 1992. After a first year of data collection and analysis, Federal agencies will be implementing during 1992 the initial aspects of a comprehensive and integrated Federal math and science education strategy. The development of this strategy and the initiatives for 1993 described below will help States and localities make significant improvements in math and science achievement and make progress toward the National Education Goals. There are three new initiatives:

Teacher training.—The most important Federal policy to improve math and science education is support for enhancing the quality and enthusiasm of the current teaching corps. The Governors' teachers academies proposed under the AMERICA 2000 Excellence in Education Act will improve teaching skills for teachers in the five core subject areas. The budget would increase specific efforts to train math and science teachers through the programs of the Education Department and the National Science Foundation (NSF), and the use of Federal laboratory personnel and facilities. The budget proposes to double, to 45,000, the number of teachers receiving federally-assisted longer term, in-depth training. Shorter-term training will be provided for another 725,000 teachers. Almost half the Nation's precollege math and science teachers, a total of 770,000 individuals, would participate in federally-funded training.

Demonstrations of electronic dissemination of math/science education learning methods.—The teaching of math and science is ideally suited to the use of electronic dissemination technologies because of the variety of subject matter that otherwise may not be included in the standard curricula. To further the AMERICA 2000 objective of establishing electronic networks linking schools and other learning centers, the budget proposes a series of demonstrations of the use of Federal agency electronic communication technology to enhance math/science curricula. This initiative links the expertise of the Education Department, NSF and the other experienced Federal agencies (such as Defense); the private sector; and States and localities. Demonstration models will be selected on the basis of a 1992 national conference on existing programs and new ideas.

Computers and scientific equipment.—Studies show that student performance in math and science is enhanced by use of computers and scientific equipment. In times of tight school budgets, investment in such equipment is often deferred. Federal agencies will be directed to make available to schools excess computers and scientific equipment that are suitable for use in their curricula.

Table 4–7. **THE MATHEMATICS AND SCIENCE EDUCATION BUDGET INCREASES 69 PERCENT OVER 1989 AND 7 PERCENT OVER 1992**

(Budget authority; dollar amounts in millions)

Program	1989* Actual	1992 Enacted	1993 Proposed	Dollar change: 1992 to 1993	Percent change: 1992 to 1993
Pre-college programs	296	651	768	+117	+18%
Undergraduate and graduate programs	923	1,213	1,231	+18	+1%
Science literacy	18	91	93	+2	+2%
Total	1,236	1,955	2,092	+137	+7%

*Before the FCCSET Committee was established, such data were not collected. Values are OMB staff estimates.

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AGENDA FOR EDUCATION REFORM

Education spending by all levels of government has mushroomed in the past decade, but there has been no such dramatic improvement in educational achievement. Money is important to quality schooling, but the Nation has learned that achievement does not improve without true reform from the classroom to the state house to go with it.

Shortly after taking office, President Bush called on the Nation's Governors to join him in a first ever National Summit Conference on Education. Held in Charlottesville, Virginia in September 1989, the Conference began a close working relationship among the Nation's Chief Executives. The first major product of that collaboration was the development of the six National Education Goals. These goals, which have been widely accepted, set ambitious targets for the year 2000.

AMERICA 2000 Education Strategy

The AMERICA 2000 education strategy is a long-term plan to achieve the six National Education Goals. It seeks major change in all 110,000 public and private elementary and secondary schools and in every community. It is a national strategy, not a Federal program. It supports and relies upon the initiative of States, local officials, the private sector, educators, and families. The strategy has four major Tracks:

- For Today's Students: Better and More Accountable Schools.
- For Tomorrow's Students: A New Generation of American Schools.
- For Today's Workforce: A Nation of Students.
- Communities Where Learning Can Happen.

All the major initiatives described in this Chapter support one of these four Tracks.

The National Education Goals

Goal 1: By the year 2000, all children in America will start school ready to learn.

Goal 2: By the year 2000, the high school graduation rate will increase to at least 90 percent.

Goal 3: By the year 2000, American students will leave grades four, eight and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

Goal 4: By the year 2000, U.S. students will be first in the world in science and mathematics.

Goal 5: By the year 2000, every adult American will be literate and possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

Goal 6: By the year 2000, every school in America will be free of drugs and violence and offer a disciplined environment conducive to learning.

The AMERICA 2000 Commitment

Each State or community agrees to undertake four tasks:

1. Adopt the six National Education Goals as its own.
2. Develop a State/community-wide strategy to achieve them.
3. Design a report card to the public to measure results.
4. Plan for and support a New American School.

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Because AMERICA 2000 is first and foremost an agenda for State and local action, the key to its success lies in adoption of its principles by each State and community. Only the full participation of all citizens and sectors of society can bring about the sustained effort necessary to improve student achievement. To this end, States and communities are making commitments to locally tailored implementation of the principles and actions described in the AMERICA 2000 strategy.

By the end of December 1991, over half the States and more than 1,000 communities had already made formal commitments to AMERICA 2000.

Leadership for Education Reform

The Administration took up the challenge of leadership in education reform from the beginning of the President's term and has pursued it vigorously ever since. The Bush Administration:

- Transmitted to Congress the first Excellence in Education Act in April 1989.
- Formed the first President's Education Policy Advisory Committee so that leading citizens from business, education, and the public can provide advice directly to the President on education problems and solutions.
- Convened the historic Education Summit with the Nation's Governors in Charlottesville, Virginia, September 1989.
- Promulgated the six National Education Goals, which have been adopted by the Nation's Governors.
- With the Nation's Governors, formed the National Education Goals Panel to report on progress toward the goals. The panel published its first annual report in September 1991.
- Established the Federal Coordinating Council on Science, Engineering and Technology, Committee on Education and Human Resources, to analyze and coordinate Federal policy for mathematics and science education.
- Convened SCANS—the Secretary of Labor's Committee on Achieving Necessary Skills—to analyze the education needs of the workplace of the future.
- On April 18, 1991, launched AMERICA 2000, a four-pronged strategy to transform American Education.
- In June 1991, transmitted the AMERICA 2000 Excellence in Education Act to Congress, containing new program initiatives to help States achieve the National Education Goals.
- In June 1991, transmitted the Higher Education Act Amendments of 1992.
- Asked the business community to form the private non-profit New American Schools Development Corporation, to fund development of new models of schooling.
- Signed the National Literacy Act.
- Obtained Congressional approval for a National Council on Education Standards and Testing.

IV. INCREASING ACCESS TO HIGHER EDUCATION FOR FAMILIES AT ALL INCOME LEVELS, AND REWARDING ACADEMIC ACHIEVEMENT

The Federal Government, through the programs of title IV of the Higher Education Act (HEA), provides for 75 percent of all funds for grants, loans, and work-study jobs available to postsecondary students. While States provide the largest share of funding for higher education, most State aid is provided to institutions without regard to the financial needs of students. The Federal Government's aid makes financial access to higher education possible for students of all incomes. The Administration's proposals for reauthorization of the Higher Education Act were transmitted in June 1991 and are modified for the budget.

Pell Grants and Rewards for Academic Achievement

Pell Grants.—The budget proposes the highest funding for Pell grants and the largest one year increase in history, with a 1993 request of $6.6 billion, $1.2 billion, or 22 percent, over 1992, to support awards to 3.4 million

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students. The maximum Pell grant would be raised to $3,700, a 54 percent increase over the 1992 level of $2,400. The average award would increase for all income categories, and the overall average award would rise from $1,452 to $1,846.

A primary limitation on middle-income family access to Pell grants is the requirement to provide a contribution toward the cost of education based on home value. Home values have risen much faster than family income, but the law still assumes a family can borrow a correspondingly larger share of home equity, even if its income cannot support the payments. In response, the budget proposes to cap the amount of home value assessed for the family contribution at three times the family's income level.

The budget increases Pell grant funds for students from all income categories up to $50,000. Low- and middle-income persons would see substantial increases in Pell grant aid. For those with incomes less than $20,000, the average award would increase 31 percent, and program funds would increase by almost $545 million.

Presidential achievement scholarships.—The budget again proposes scholarships of up to $500 to every Pell recipient who demonstrates high academic achievement. High school seniors and college students who are eligible for Pell grants could receive an additional $500 on top of their Pell grants in recognition of their superior academic achievement. Eligible high school seniors would be those that rank in the top 10 percent of their graduating class, or who score at high levels (to be set in regulation) on national standardized tests. Qualifying college students would be those who rank in the top 20 percent of their college class.

For the first time ever, the Federal government would be signaling to the 3.4 million Pell grant recipients that improved academic performance should be their goal and will be rewarded.

Student aid reform proposals would make determinations of dependency more accurate, remove more abusive proprietary schools with bad student completion, job placement and default records from the programs, and institute a modest academic achievement standard as a qualification for aid. These program improvements have the indirect effect of lowering the number of students who might otherwise receive Pell grants, but these reforms are clearly necessary to assure program integrity.

Guaranteed Student Loans and Other Student Aid

Guaranteed student loans (GSL) program reforms.—The GSL program requires extensive improvements in program manage-

Table 4–8. **ADJUSTING PELL GRANT ASSESSMENTS TO INCREASE ACCESS FOR MIDDLE-INCOME FAMILIES**

Note: Proposal expands middle-income student access to Pell grants by placing a limit on assessment of home values. Home values have risen faster than incomes and family ability to support debt.

(In dollars)

	Example	
	Current Law	Proposal
Family Income	40,000	40,000
Calculation:		
Assessed/Capped Home Value [1]	200,000	120,000
Less mortgage outstanding	-40,000	-40,000
Assessed Equity [2]	160,000	80,000

[1] Proposal excludes all home value above three times income.
[2] Assessed equity is further reduced by an asset protection allowance based on parents' age.

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Table 4–9. **THE BUDGET INCLUDES A 22 PERCENT INCREASE IN PELL GRANT FUNDING OVER 1992 AND A 48 PERCENT INCREASE OVER 1989**

	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Pell grants in total:				
Budget authority (in millions of dollars)	5,463	6,641	+1,178	+22%
Maximum award (in dollars)	2,400	3,700	+1,300	+54%
Average award (in dollars)	1,452	1,846	+394	+27%
Funding by Income Category (in millions of dollars):				
Under $10,000	3,398	3,697	+299	+9%
$10,000 to $20,000	1,355	1,601	+246	+18%
$20,000 to $30,000	616	712	+95	+15%
$30,000 to $40,000	165	221	+57	+34%
$40,000 to $50,000	38	47	+9	+24%
$50,000 and above	10	10	—	—
Average Award by Income Category (in dollars):				
Under $10,000	1,635	2,137	+502	+31%
$10,000 to $20,000	1,466	1,921	+455	+31%
$20,000 to $30,000	1,100	1,305	+205	+19%
$30,000 to $40,000	809	999	+190	+23%
$40,000 to $50,000	649	764	+115	+18%
$50,000 and above	552	752	+200	+36%
Presidential Achievement Scholarships:				
Budget authority (in millions of dollars)	—	170	+170	—
Scholarship award (in dollars)	—	500	+500	—

ment, as well as legislative restructuring, to restore its integrity and ensure that the largest student aid program functions effectively and efficiently. The Administration has undertaken significant management reforms and proposed responsible reform legislation.

Program management reforms are based on the recommendations of a study conducted by the Department of Education and the Office of Management and Budget in 1990–1991. The legislative changes were proposed in June 1991, for the Higher Education Act reauthorization. Recognizing the urgency of the problems, Congress moved quickly to enact several important changes in the Emergency Unemployment Compensation Act of 1991. These include: garnishment of wages for defaulted borrowers; credit checks for borrowers age 21 and over; requiring a creditworthy co-signer if a negative credit history is found; and authorizing data matches with Federal agencies to locate defaulters.

Additional essential structural changes proposed would:

- *Improve School Quality.*—The budget includes $50 million to help States take an active role in licensing schools, the first step toward improving school quality. Eventually, as described more fully in the Job Training 2000 section below, the modified Private Industry Council (PIC) system would help assure that only quality vocational programs are eligible for aid.
- *Reduce Federal risk.*—Lenders with default rates in excess of 20 percent would have their subsidy payments reduced by .25 percentage points. States would support their guarantee agencies with the equivalent of "full faith and credit" backing, increasing State incentives to work

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with the Education Department to avert a financial collapse that threatens student access to loans. States would pay a share of excessive default costs at schools they license.

- *Stabilize guarantee agencies.*—Guarantee agencies would be required to maintain minimum reserve levels and be subject to new requirements for financial oversight. In the event of impending collapse of a guarantee agency, the Secretary would be able to take over the agency and prevent harm to students.

- *Prevent defaults and enhance collections.*—The proprietary school gross default rate is currently 45 percent. Students at four-year colleges default at a rate of 13 percent. High defaults generated by abusive proprietary schools are taking funds from good students at good schools—including good vocational schools. Reform is essential.

  Proposals would: require 60-day delayed disbursement for first-year students at schools with default rates over 30 percent; require lenders to offer graduated repayment schedules; eliminate eligibility for programs of less than 600 hours; bar foreign schools, which are hard to monitor; and extend indefinitely the elimination of statutes of limitations for collecting defaulted loans.

- *Increase loan amounts.*—Substantial increases in the annual and cumulative loan limits are requested to further help students meet the cost of education.

Support services for disadvantaged students—The budget proposes $417 million, an increase of 6 percent over 1992, for programs to help disadvantaged students learn about and prepare for college, complete college educations, and attend graduate programs. The Administration proposes legislative reforms for the pre-college programs that would link them with State and local education programs to maximize effectiveness. Currently, these programs operate through individual colleges and are not required to be part of State and local strategies to prepare their students for higher education.

Tax incentives for education.—The Administration proposes two major tax incentives to help meet the rising cost of education:

- Allow deduction of interest on student loans for postsecondary education tuition, fees and reasonable living expenses. Interest could be deducted as of July 1, 1992 on existing and new student loans. The deduction is estimated to save families $443 million in 1993, and $3.6 billion through 1997.

- Allow penalty-free withdrawal of money from individual IRAs if that money is used for educational or medical expenses. Education expenses could be for the IRA owner or spouse or children of the IRA owner.

V. WORK FORCE DEVELOPMENT

JOB TRAINING 2000—Transforming the Federally-Funded Vocational Education and Job Training Programs into a Market-Driven, Effective and Efficient System

More than 60 programs administered by seven Federal agencies offer vocational education and job training at a cost of about $18 billion each year. Services are disjointed, administration is inefficient, and few individuals—especially young, low-income, unskilled

Table 4–10. **NEW TAX INCENTIVES FOR EDUCATIONAL DEVELOPMENT**
(In millions of dollars)

	1993	1992–97
Deductibility of student loan interest	443	3,555
Penalty-free IRA withdrawal*	118	648

*Includes estimates for penalty-free withdrawal for both educational and medical expenses.

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people—can get good information on program quality, job opportunities or skill requirements. Eligible populations overlap, and business has only limited input to the system. Weak quality controls have allowed hundreds of unscrupulous proprietary institutions to take billions of dollars in Federal subsidies without providing effective training.

Business' extensive investment in training—about $30 billion per year for formal training, mainly by large firms—meets the needs of many workers. But for those who want and need help from federally supported job training and postsecondary vocational education, only a bewildering maze of programs awaits. Programs must be improved and delivery streamlined to meet the demands of the changing work place.

The Administration proposes to transform this incoherent complex of programs into a vocational training system responsive to the needs of individuals, business, and the national economy. The Job Training 2000 initiative would be coordinated through the Private Industry Councils (PICs) formed under the Job Training Partnership Act (JTPA). A modified, expanded, accountable PIC system would receive grants to administer or coordinate service delivery of the major Federal vocational training resources. It would provide training program quality control in cooperation with the States, and assure an effective, efficient system to meet the workforce development needs of the Nation into the next century.

The Client's Perspective.—In contrast to the current program maze, individuals would enter the Federal job training system through "one-stop shopping" Skill Centers. These centers would replace the dozens of entry points now in each community. Centers would present a coherent menu of options and services: training referral, vouchers, job placement assistance, information on training institutions and job market projections. Disadvantaged individuals would continue to be eligible for support services.

Two kinds of clients would be served: (1) the unemployed who are job ready and seek placement assistance; and (2) youth and adults—many of whom are disadvantaged—who want or need a vocational or job training program before they can obtain a job. All would benefit from better information on area job prospects. All would make better training choices based on information provided by Skill Centers on institutional quality and on the needs of the local employer community.

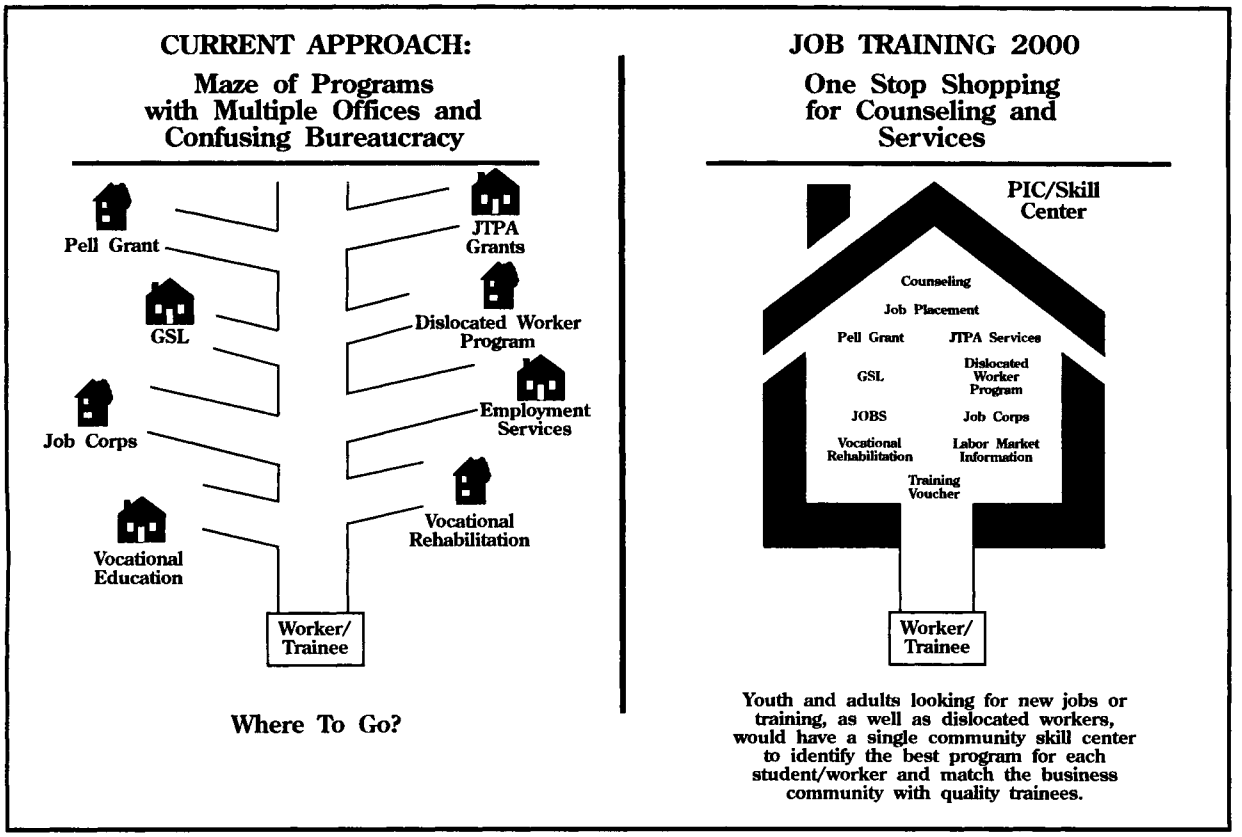
PIC structure.—Now located in 641 JTPA local service delivery areas, PICs would form the management core of the new system. PIC membership would continue to be centered around business representatives; local education and social service program officials also would sit on the board. The benefits of this business community input, now available only to JTPA, would be extended to the other major Federal vocational training programs.

Program structure.—The new PIC would manage or coordinate local delivery of services for about $12 billion from Federal programs. Federal resources would continue to be appropriated through current agencies, but local delivery would be coordinated and streamlined. No post-secondary vocational school or program could have access to Federal aid without local PIC certification. Business and community leaders on PICs are best able to assess the ability of local vocational institutions to meet local labor market needs.

Certain programs—vocational training under title IV of the Higher Education Act, JTPA's dislocated worker assistance, AFDC/JOBS, vocational rehabilitation, and Veterans vocational education—would retain their existing local program structure, but certification and approval of vocational training programs would be coordinated through PICs. Only participation in certified training programs would be funded.

The often ineffective Employment Service (ES) would be restructured and its resources incorporated into Skill Centers. Skill Centers would offer testing, counseling, job market information, and referral to jobs, JTPA, AFDC/JOBS, and other vocational training programs or postsecondary institutions at which student aid would be available. Certain current ES activities, such as veterans employment services and alien labor certification, would continue as adjunct activities of the Skill Centers.

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Certifying programs.—Working with State approving agencies, a PIC certifying committee would approve all training programs based on curricula; reasonable costs; the record on student retention, completion, job placement, duration on the job; and loan default rates. Ineffective programs could no longer receive Federal funds. The focus would be on program quality and the needs of labor markets.

$2.2 billion in new training vouchers.—A portion of current JTPA contract funds, Food Stamp employment and training funds, and all Perkins Act postsecondary funding would be allocated to the PICs to finance training vouchers. The JTPA and Perkins Act resources would be allocated to each PIC by formula based on its relative share of unemployment and the poverty population. PICs would issue vouchers for classroom training, on-the-job-training, and training-related and support services. Recipients of these vouchers would be low-income and disadvantaged youth and adults, as defined by the eligibility criteria spelled out in the Administration's proposed JTPA amendments. Of the total, $683 million could be used at PIC discretion for summer youth jobs program vouchers.

Voucher programs of the Higher Education Act and Veterans vocational training program.—The current voucher programs for vocational training under the Higher Education Act—Pell grants and Guaranteed student loans (GSL)—and Veterans vocational training would continue as now, but could be used only in PIC-certified vocational programs. Pell and GSL applicants would consult with the Skill Center on vocational programs. Recipients would no longer be limited to information they receive from an institution. They would learn about job prospects by occupation, the quality and track record of area institutions, and availability of financial aid.

Training and services contracting.—In rural areas, areas in which there are insufficient training opportunities, and where existing training programs are unable to serve the extremely disadvantaged effectively, a PIC

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would retain the authority and resources to contract for services.

Recruiting for Job Corps.—Job Corps provides residential education and training services for a particular group of very disadvantaged young people. To ensure that eligible young people select the best option to meet their needs, Skill Centers would refer eligible youth who are interested in and could benefit from attending a residential training program to Job Corps.

Incentives for better training.—Job Training 2000 would improve accountability for results through financial incentives to training institutions. Whether funded by contract, new vouchers, Pell grants or GSLs, at least 20 percent of the amount the training institution would otherwise receive (excluding student living expenses) would be withheld until the trainee completes the program and holds a job in the field of training for at least 90 days.

Budget effects.—Overall, the initiative is expected to be budget neutral within the significantly increased education and job training budget totals proposed for 1993. The Job Training 2000 reforms would generate budget savings through administrative efficiencies, training cost controls, and almost certainly lower student loan default rates. Savings should be offset by increased demand for the higher quality services, as the system becomes fully operational and known to people seeking job training and placement services.

Next steps.—In early 1992, the Administration will forward detailed legislation to Congress to implement Job Training 2000. In the interim, the appropriations request for 1993 is based on existing statutory authority and reforms proposed for individual programs.

Job Training 2000 will give America an effective job training system that meets the needs of the labor market. That system needs to be a part of a still broader strategy

Table 4–11. **RESOURCES FOR JOB TRAINING 2000**
(Budget authority; dollar amounts in millions)

	1993 Proposed
I. Direct PIC/Skill Center Resources:	
Training vouchers	[1] 2,204
Training and support service contracts	472
Administrative grants to localities	275
Job Corps recruitment	40
Skill center operations	[2] 1,029
Veterans employment service, other	90
Total	4,110
II. Programs coordinated through PICs:	
AFDC/JOBS	1,000
Pell grants for vocational training	2,395
GSL for vocational training	2,524
Other student aid for vocational training	100
Vocational rehabilitation training	400
Veterans vocational training	495
"Tech-Prep" 4 year programs	100
JTPA title III dislocated worker program	577
Subtotal	7,591
Total	11,701

[1] Includes: $1,025 million from JTPA Title II; $396 million from Perkins Act postsecondary vocational training; $100 million from Food Stamp employment and training; $683 million from summer youth program.
[2] Includes: $971 million from the Employment Service; $58 million from Food Stamp employment and training.

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linking business, education, and lifelong learning, as outlined in Track III of AMERICA 2000. It is supported by other policy initiatives and resources. These components are described next.

Additional Programs and Strategies in Support of Workforce Development

AMERICA 2000 calls for America to become "A Nation of Students," acquiring the education and skills necessary for the competitive economy of today and tomorrow and committed to lifelong learning. The Departments of Labor and Education are the principal agencies for workforce development activities.

Skills standards.—Just as the elementary and secondary education system needs standards by which to judge the adequacy of teaching and learning, so, too, do industries need to develop voluntary, specific skills standards to ensure a qualified workforce. In July 1991, the Secretary of Labor's Committee on Achieving Necessary Skills (SCANS) identified general competencies and a foundation of skills and personal qualities necessary good job performance.

In 1992, the Education and Labor Departments will be working with committees representing individual industries and their workers to identify their specific training requirements. The Secretary of Labor's National Advisory Committee on Work-based Learning continues to support voluntary industry-based skill standards, and to research methods and incentives for private investment in work-related education.

Youth apprenticeship and the transition from school to work.—The Labor and Education Departments will work together to encourage establishment of a nationwide system of structured apprenticeship training programs, tied to the skills standards being developed. Students choosing apprenticeships would make formal agreements with the school, the employer and the parents or guardian, for a structured combination of academic instruction, classroom training, paid on-the-job-training and work experience, and mentoring. One incentive for employers to participate in such programs will be expanded authority under the Fair Labor Standards Act to pay training wages to workers enrolled in approved apprenticeship programs.

Federal aid for lifelong learning.—The pace of change in the workplace is accelerating. Skills learned for today may not be relevant a few years later. Older workers re-entering the job market may need one or more courses to update their skills. The Administration proposes that subsidized loans under the Guaranteed student loans program (GSL) be available to help pay for this training.

To facilitate access to this and other Federal training aid, the budget includes $2 million for a feasibility study and demonstration of bank-card-like education cards. It would contain data a training institution would need to determine eligibility for loan programs and other aid. This would make applying for aid easier and encourage more people to get the training they need. The card could also carry a summary of education and work history to facilitate job applications.

Vocational education.—The budget requests $1.2 billion for Vocational education programs. This includes $991 million for basic grants to States, a four percent increase over 1992. States are beginning a major overhaul of vocational education programs, beginning with assessments of their population's needs and the quality of the programs. The budget provides $100 million, an 11 percent increase over 1992, for "Tech-Prep" vocational education programs, which integrate secondary and post-secondary education for students entering technical occupations.

Job Corps.—The budget requests $910 million for Job Corps, a residential education and training program for severely disadvantaged youth, ages 14 to 21 years. This level of funding would support 69,367 young people at 109 centers.

The National Literacy Act.—On July 25, 1991, the President signed the National Literacy Act signaling renewed Federal priority for programs and policies to raise literacy levels. One of its most significant provisions created the National Institute for Literacy Research and Practice, for which the budget requests $5 million. The Institute will be a national resource center on adult literacy issues, conducting research and providing technical

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assistance to States and other program providers.

The Literacy Act also created the National Workforce Literacy Assistance Collaborative in the Labor Department. The budget provides $1.2 million for this activity, which provides technical assistance on literacy training to small- and medium-sized firms.

Adult education.—The budget provides $304 million for literacy and basic education for adults under the Adult Education Act. Included is $261 million, an 11 percent increase, for grants to States. The National Literacy Act requires each State to develop a system of indicators of program quality, to evaluate programs, and to assess State-wide progress on adult literacy.

AFDC/JOBS.—The budget includes $1 billion, the full amount authorized, to finance the Federal share of the Job Opportunities and Basic Skills program (JOBS). JOBS helps eligible parents receiving assistance under the Aid to Families with Dependent Children program (AFDC) obtain education, training, and employment services, and thus avoid long-term welfare dependency.

The AFDC demonstration authority will fund two new employment-related demonstrations. One set of projects would provide incentives to for-profit companies to train and place welfare clients in jobs. Another set would provide lump-sum payments to recipients who work their way off AFDC.

Worker adjustment and the North American Free Trade Agreement (NAFTA).—During negotiations over the extension of "fast track" authority last spring, the Administration agreed to work with Congress to ensure that there is adequate assistance and effective retraining for workers who may be displaced as a direct result of the NAFTA. While the best worker adjustment program is a healthy and expanding U.S. economy, the Administration recognizes that effective retraining and adjustment programs facilitate smooth adaptation to shifts in technology and industrial competitiveness. Adjustment services for NAFTA-displaced workers, whether provided through the improvement of an existing program or through the creation of a new program, will be timely, comprehensive and effective. The Administration is committed to working with Congress to ensure that the objectives outlined above are met and are adequately funded. The Administration's plan will be forwarded to Congress when the NAFTA is developed more fully.

National Adult Literacy Survey (NALS).—In early 1992, the National Center for Education Statistics will sponsor the first quadrennial national household survey to measure levels of literacy among the Nation's adult population, ages 16 and over. The new survey will, for the first time, provide policy makers information about the skill with which various segments of the population can use printed information. Results should be available in 1993.

Davis-Bacon Act reforms.—Job and skills development opportunities will be increased as a result of regulatory and legislative reforms of the Davis-Bacon Act, which governs construction paid for with Federal funds. Labor Department regulations, planned for 1992, would allow the use of "helpers" in a ratio of two helpers to three journeymen. Under these regulations, there will be more jobs for lower skilled workers, providing immediate employment and potential steps up the job ladder. Additional job opportunities would result from the legislative proposal to raise the threshold for contracts to which Davis-Bacon applies from $2,000 to $250,000. This change would permit more construction work to be done within available funds.

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Investing in the Future:

5. Focusing on Prevention and the Next Generation

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5. FOCUSING ON PREVENTION AND THE NEXT GENERATION

HIGHLIGHTS

Through careful investment in prevention, the Nation can avert premature deaths, extend average life expectancy, and reduce illness and disability. To maximize the effectiveness of the resources devoted to prevention, the budget focuses on those activities which will yield the greatest results in terms of improved health outcomes. The budget proposes to increase investment in programs serving children to $100 billion, up from $60 billion in 1989.

The budget accelerates and expands the investments in prevention and children highlighted in the 1992 budget, including increased funding for:

- childhood immunizations (+18%);
- infant mortality/Healthy Start (+17%);
- women, infants, and children (WIC) nutritional assistance (+9%);
- Head Start (+27%);
- access to primary care services/community and migrant health centers (+21%);
- National Health Service Corps (+9%);
- nutrition education (+17%);
- breast and cervical cancer screening (+24%);
- total HIV/AIDS funding (+13%);
- smoking cessation (+5%);
- injury prevention (+9%);
- family planning (+8%);
- tuberculosis prevention (+106%);

Table 5–1. **THE BUDGET PROVIDES SUBSTANTIAL INCREASES FOR PROGRAMS FOCUSED ON PREVENTION AND THE NEXT GENERATION**

(Obligations in millions of dollars)

Initiative	1989 Actual	1992 Enacted	1993 Proposed	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
CDC Childhood Immunization	141	297	349	+18%	+148%
Infant Mortality Reduction	5,681	7,950	9,365	+18%	+65%
(Healthy Start)	—	64	143	+123%	N/A
Women, Infants, and Children Nutrition Assistance (WIC)	1,929	2,600	2,840	+9%	+47%
Head Start	1,235	2,202	2,802	+27%	+127%
Access to Primary Health Care Services	4,184	6,334	7,643	+21%	+83%
(Community/Migrant Health Centers)	482	594	684	+15%	+42%
(National Health Service Corps)	48	100	120	+19%	+150%
Nutrition Education	138	152	178	+17%	+23%
Breast and Cervical Cancer Mortality Prevention	—	416	515	+24%	N/A
Smoking Cessation	78	106	111	+5%	+42%
Physical Fitness and Diet	68	100	102	+2%	+50%
Injury Prevention	1,482	1,862	2,026	+9%	+37%
Family Planning	333	461	498	+8%	+50%
CDC Lead Poisoning Prevention	—	21	40	+90%	N/A
Tuberculosis Control	21	32	66	+106%	+214%

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- evaluations of prevention and children's programs designed to ensure that Federal investments yield the highest possible return.

The budget proposes funding these initiatives at the levels shown on Table 5–1. These initiatives will yield substantial results, a number of which are included in Table 5–2.

INVESTING IN AMERICA'S CHILDREN

The budget reflects the continuing high priority that the Administration places on programs serving children. Government-wide funding for children is projected to rise from $60 billion in 1989 to over $100 billion in 1993, a 66 percent increase since 1989 (see Table 5–3).

Substantial increases are provided for:

- *Childhood Immunizations.* Childhood immunizations are among the most cost-effective prevention activities. A $1 investment in Measles-Mumps-Rubella (MMR) vaccine may return $14 in averted medical care costs.[1] Other routinely administered vaccines such as Diphtheria-Tetanus-Pertussis (DTP) and Oral Polio are reported to have similarly high rates of return.[2] Because of the well established payoffs of childhood immunizations, the Federal Government has continued to make increasingly large investments in this activity. Through coordinated efforts at all levels of government and the private sector, the Nation has achieved a 98 percent immunization rate for children entering school.

  While the immunization rate for American children entering school is one of the best in the world, the Nation still faces difficulties in getting its young children, particularly those living in the inner cities, immunized on schedule. A recent assessment of immunization levels in selected low-income inner city neighborhoods revealed that the percentage of two year-olds that had received their recommended dose of vaccines on schedule ranged from only 27 to 55 percent.[3]

  The budget will increase Federal support for Centers for Disease Control (CDC) childhood immunization activities by $52 million, an 18 percent increase over the 1992 enacted level (see Table 5–4). CDC will use this increased investment to target more of its efforts toward raising immunization levels in inner cities and other areas where the expected health returns on these activities are certain to be high. Further, the budget continues to support other Federal programs providing immunizations.

- *Healthy Start/Infant Mortality Prevention.* The Nation's infant mortality rate continues to decline, having reached its lowest level ever (9.1 deaths per 1,000 live births) in 1990. But while the overall infant mor-

[1] White CC, Koplan JP, Orenstein WA, *American Journal of Public Health*, 1985 p. 739–744.

[2] Hinman AR, Koplan JP, *Developments in Biological Standardization*, 1985 p. 429–437.

[3] Department of Health and Human Services, Centers for Disease Control, Center for Prevention Services, 1991.

Table 5–2. **THE BUDGET FOR PREVENTION WOULD PROVIDE:**

Immunizations
- 6.7 million polio vaccinations
- 4.1 million measles-mumps-rubella vaccinations
- 2.6 million hepatitis b vaccinations

Head Start
- 157,000 *additional* children enrolled

Prevention screenings
- 96,000 *additional* women screened for breast cancer or cervical cancer
- 125,000 *more* children will be screened for lead poisoning

Access to Health Services
- 445,000 *more* disadvantaged Americans will have access to primary health care services

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Table 5–3 **THE BUDGET PROVIDES $100 BILLION FOR CHILDREN'S PROGRAMS, UP 66 PERCENT SINCE 1989**

(Obligations in millions of dollars)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Nutrition:						
WIC	1,929	2,600	2,840	+240	+9%	+47%
Child Nutrition	4,556	6,068	6,451	+383	+6%	+42%
Other Nutrition	6,863	11,863	11,874	+11	—	+73%
Nutrition Education	138	152	178	+26	+17%	+29%
Health:						
Maternal/Child Health	554	650	674	+24	+4%	+22%
Medicaid	7,020	15,750	17,780	+2,030	+13%	+153%
Community/Migrant Health	180	235	265	+31	+13%	+47%
Immunizations	141	297	349	+52	+18%	+148%
Healthy Start	—	64	143	+79	+123%	—
Other Health	193	267	298	+31	+11%	+54%
Education and Social Services:						
Head Start	1,235	2,202	2,802	+600	+27%	+127%
Handicapped Education	2,103	2,855	2,942	+87	+3%	+40%
Compensatory Education	4,580	6,707	6,828	+121	+2%	+49%
Educational Excellence	—	100	768	+668	+668%	—
Eisenhower Math and Science Education Programs	128	268	316	+48	+18%	+147%
Other School Improvement	1,089	1,338	1,372	+34	+3%	+26%
Child Care Block Grant	—	825	850	+25	+3%	—
Foster Care and Adoption	1,543	2,500	2,835	+335	+13%	+84%
Social Security	11,262	13,237	13,876	+639	+5%	+23%
Aid to Families with Dependent Children and Child Support	11,166	15,014	15,303	+289	+2%	+37%
Refundable Tax Credits	5,785	10,410	11,376	+966	+9%	+96%
Total Children's Funding	60,465	93,402	100,120	+6,718	+7%	+66%

tality rate continues to decline, mortality for African American infants remains twice that for white infants—demonstrating the need for intensely targeted assistance.[4]

The budget proposes over $9.3 billion for all Federal activities to reduce infant mortality, 18 percent above 1992 levels (see Table 5–5). In the 1992 budget, the President proposed Healthy Start, an important initiative that targets Federal resources to 15 areas with exceptionally high rates of infant mortality. Unfortunately, Congress did not adequately fund Healthy Start in 1992. The budget follows up this effort by requesting a 123 percent increase in funding, raising funding for Healthy Start to $143 million in 1993.

Additional investment in prenatal care and nutritional assistance targeted to low-income women continues to yield high returns. Overall, nearly 25 percent of all women and nearly 40 percent of African American and Hispanic women do not begin prenatal care during their first trimester of pregnancy, the most crucial time

[4] Department of Health and Human Services, National Center for Health Statistics, *Monthly Vital Statistics Report*, November 28, 1990.

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Table 5–4. INCREASES FOR CHILDHOOD IMMUNIZATIONS

(Obligations in millions of dollars)

	Actual					1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
	1980	1985	1989	1990	1991				
CDC Childhood Immunizations Grants	32	54	141	187	218	297	349	+52	+18%
Other Federal Financing Sources:									
Medicaid EPSDT Screening	N/A	60	100	110	281	423	524	+101	+24%
Maternal and Child Health Block Grant	N/A	478	554	554	587	650	674	+24	+5%
Healthy Start Initiative	—	—	—	—	25	64	143	+79	+123%
Total Resources Available for Immunizations	32	592	795	851	1,111	1,434	1,690	+256	+18%

for prenatal care.[5] One study has indicated that investment in prenatal care can yield significant returns: each dollar invested in prenatal care for high-risk women might save $3 in treatment costs.[6] A recent evaluation of the Special Supplemental Food Program for Women, Infants, and Children (WIC) found that for each dollar spent on nutritionally at-risk pregnant women and infants, Medicaid spending fell by between $1.92 and $4.21 during the first 60 days after birth.[7]

- *Women, Infants, and Children Nutrition Assistance (WIC).* The budget continues the President's strong commitment to WIC with the largest one-year increase ever proposed for the program, $240 million (9 percent), for a total of $2.84 billion (see Table 5–6). This level of support represents a 47 percent increase in WIC since 1989, and a $490 million increase in the last two years alone. This level of funding provides sufficient funds for full participation by eligible pregnant women and infants, and allows the number of women, infants and children served to increase by 33 percent since 1989.

- *Head Start/Early Childhood Development.* Additional investment in early childhood education programs such as Head Start continues to produce significant returns. Head Start provides a range of comprehensive early childhood development services, including education, nutrition, health and other social services. Several studies indicate that children who enroll in Head Start experience immediate gains in cognitive growth, social development, and health status.[8] One study even suggests that for every dollar invested, Head Start may eventually save $6 in averted costs associated with special education, crime, and income support.[9]

  The budget contains the largest single-year funding increase in the history of Head Start, proposing an additional $600 million for a total of $2.8 billion (see Table 5–7). With the Administration's proposal, Head Start will serve an estimated 157,206 more children in 1993, for a total of 779,206 eligible children receiving a year of Head Start before entering gram-

[5] Department of Health and Human Services, National Center for Health Statistics, *Health United States, 1990,* (Washington, D.C.: U.S. Government Printing Office, 1991) p. 57.

[6] Institute of Medicine Committee to Study the Prevention of Low Birthweight, *Preventing Low Birthweight* (Washington, D.C.: National Academy Press, 1985).

[7] United States Department of Agriculture, Food and Nutrition Services, "The Savings in Medicaid Costs for Newborns and Their Mothers from Prenatal Participation in the WIC Program: Addendum" (Washington, D.C., October 1991) p. 5.

[8] Department of Health and Human Services, Office of Human Development Services, *The Impact of Head Start on Children, Families, and Communities: Head Start Synthesis Project,* (Washington, D.C.: U.S. Government Printing Office, 1985).

[9] Weikart, David, P., *Quality Preschool Programs: A Long-Term Social Investment,* (New York, NY: Ford Foundation, 1989).

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Table 5–5. THE BUDGET EXPANDS PROGRAMS TO REDUCE INFANT MORTALITY

(Obligations in millions of dollars)

	Actual			1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
	1989	1990	1991				
HHS:							
Public Health Service:							
Services	764	747	1,122	1,233	1,383	+150	+12%
Research	185	210	259	292	310	+18	+6%
Training	3	4	17	20	27	+6	+32%
HCFA Medicaid:							
Services	2,800	3,100	3,500	3,800	4,800	+1,000	+26%
Research	—	1	3	4	5	+1	+25%
Agriculture (WIC):							
Services	1,924	2,121	2,345	2,595	2,833	+238	+9%
Research	5	5	5	5	7	+2	+40%
Total Federal Spending	5,681	6,189	7,251	7,950	9,365	+1,415	+18%
Total Federal Spending by Function:							
Services	5,488	5,968	6,967	7,628	9,016	+1,388	+18%
Research	190	216	267	301	322	+21	+7%
Training	3	4	17	20	27	+6	+32%

Table 5–6. WIC INCREASES BY $240 MILLION—A 47 PERCENT INCREASE OVER 1989

(Obligations in millions of dollars)

	Actual		1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
	1989	1991					
Women, Infants and Children Nutrition Assistance (WIC)	1,929	2,350	2,600	2,840	+240	+9%	47%

mar school. *This unprecedented increase in Head Start* supports participation of all eligible and interested disadvantaged children for one year.

The budget also requests $850 million for the *child care and development block grant,* which was part of the child care legislation that the President proposed and subsequently signed in 1990. Funds from this block grant provide low-income families with vouchers they can use with the child care provider of their choice, and provide additional early childhood development services for pre-school age children.

The budget further includes $6 million for a new initiative in HHS to use local schools as a way to bring primary health care services to children from low-income families who might not already have access to these services. These "Ready to Learn" grants will enable community health centers and local schools in selected low-income communities to provide health outreach services through local schools.

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Table 5–7. **HEAD START INCREASES BY $600 MILLION**
(Obligations in millions of dollars)

	Actual					1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
	1980	1985	1989	1990	1991				
Head Start	735	1,075	1,235	1,552	1,952	2,202	2,802	+600	+27%
Child Care Block Grant	—	—	—	—	732	825	850	+25	+3%
"Ready To Learn" Grants	—	—	—	—	—	—	6	+6	N/A
Total Federal Spending	735	1,075	1,235	1,552	2,684	3,027	3,658	+631	+21%

OTHER PREVENTION INVESTMENTS

- *Access to Primary Health Care/Expanding Community Health Centers.* Comprehensive primary health care services include diagnosis and treatment as well as education designed to encourage healthy behavior. Continued investment in improving access to primary health care is important to many communities and can yield sizable returns. There is evidence that increased access in low-income communities can improve overall health status and reduce the use of emergency services.[10]

  To put primary health care services within the reach of people who do not currently have adequate access (in addition to the President's comprehensive health care reform strategy), the budget includes an additional $1.3 billion for programs supporting primary and preventive health care (see Table 5–8).

- *National Health Service Corps.*—The budget also contains $120 million, $19 million over 1992, for the National Health Service Corps (NHSC). This 19 percent increase will enable the NHSC to expand the program and train additional physicians to provide health services in low income and underserved areas, increasing the availability of primary case—particularly in low-income underserved areas. This initiative is a vital part of the President's comprehensive health care reform.

- *Nutrition Education.*—The budget includes a large increase to improve services to WIC participants. USDA's nutrition education initiative includes funding to increase the Expanded Food Nutrition Education Program (EFNEP) in the Extention Service, allowing additional WIC participants to participate. This program provides intensive nutrition education, food preparation, and budget management skills to low-income families with children. In studies, EFNEP has been shown to be a cost-effective program which improves food and nutrition knowledge and practice.

- *Breast and Cervical Cancer.* Despite increasing Federal investment in breast and cervical cancer screening, NIH predicts that over 45,000 women are expected to die from these two diseases in 1993.[11] Unless medical research can produce a treatment to prevent these conditions, the key to successful treatment of breast and cervical cancer remains early detection. The earlier these diseases are discovered, the sooner treatment can begin and the greater the chance of survival.

  Screening for breast and cervical cancer has been increasingly effective at preventing mortality, and the Federal investment has risen to enable more women to benefit from such preventive measures. Over the past 15 years, the incidence of invasive cervical cancer among women age 65 and older has dropped at an estimated annual

[10] Department of Health and Human Services, Public Health Service, *Healthy People 2000* (Washington, D.C.: U.S. Government Printing Office, 1990), p. 534.

[11] Department of Health and Human Services, Testimony of Dr. Bernadine Healy, Director of the National Institutes of Health, before the House Government Operations Committee, December 11, 1991.

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Table 5–8. THE BUDGET INCREASES SUPPORT FOR PRIMARY CARE SERVICES BY 21 PERCENT

(Obligations in millions of dollars)

	Actual			1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
	1989	1990	1991					
Community and Migrant Health Centers	482	506	530	594	684	+90	+15%	+42%
Maternal and Child Health Block Grant	554	554	587	650	674	+24	+4%	+22%
Health Care for the Homeless	15	36	51	56	68	+12	+21%	+353%
National Health Service Corps	48	51	91	100	120	+19	+19%	+150%
HCFA—Medicaid and Medicare	3,085	3,493	4,292	4,934	6,097	+1,163	+24%	+98%
Total Federal Spending	4,184	4,640	5,551	6,334	7,643	+1,308	+21%	+83%

rate of about 4 percent, due largely to the increased use of pap smears. While breast cancer remains a leading cause of death, the use of mammography for early detection is the best current hope for preventing breast cancer deaths.[12]

The budget will invest an additional $99 million for screening through the Medicare program and through the Public Health Service (see Table 5–9). Of these amounts, CDC will spend $70 million on breast and cervical cancer screening grants, a 40 percent increase over 1992 levels, and a 14-fold increase since 1990. This investment will focus resources on screening low-income, high-risk women in age groups for which screening is recommended who otherwise would have no other access to these prevention activities.

- *HIV/AIDS Funding.*—Total HIV/AIDS funding increases by 13 percent to $4.9 billion. This represents an increase of 118 percent in total HIV/AIDS funding since 1989. Funding for HIV/AIDS treatment also increases substantially (+20 percent) over 1992.
- *Smoking Cessation.*—According to a report of the Surgeon General, continued investment in smoking cessation, particularly if

[12] Department of Health and Human Services, Health Care Financing Administration, *Medicare and Medicaid Guide,* (Washington, D.C.: U.S. Government Printing Office, 1990).

Table 5–9. THE BUDGET INCREASES SUPPORT FOR BREAST AND CERVICAL CANCER SCREENING

(Obligations in millions of dollars)

	Actual			1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
	1989	1990	1991				
HCFA—Medicare:							
Mammograms	—	—	170	290	360	+70	+24%
Pap Smears	—	30	60	60	70	+10	+17%
PHS (CDC Screening Grants, IHS Screening, NIH and AHCPR Research and Education Activities)	—	15	42	66	85	+19	+29%
Total Federal Spending	—	45	272	416	515	+99	+24%

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Table 5–10. **TOTAL AIDS FUNDING INCREASES 13 PERCENT OVER 1992 AND 118 PERCENT OVER 1989**

(Obligations in millions of dollars)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
HIV/AIDS:						
Research	892	1,189	1,238	+49	+4%	+39%
Treatment	737	2,096	2,507	+411	+20%	+240%
Prevention	483	594	621	+27	+5%	+29%
Income Support	153	492	570	+78	+16%	+273%
Total Federal	2,265	4,371	4,936	+565	+13%	+118%

Note: The figures above are preliminary estimates for programs in the Departments of Health and Human Services, Defense, Veterans Affairs, Education, Justice, State, Labor, and independent agencies. The total also includes estimated obligations for the Social Security Administration. In addition to the spending identified above, the budget includes other initiatives, most notably those related to drugs and infant mortality, that contribute to the fight against HIV and AIDS.

targeted towards pregnant women, is likely to yield beneficial returns. Smoking during pregnancy retards fetal growth, reduces birthweight, and doubles the risk of having a low-birthweight baby.[13] Studies have shown a 25–50 percent higher rate of fetal and infant deaths among women who smoke during pregnancy compared with those who do not.[14] One study even suggests that each dollar invested in smoking cessation for pregnant women may yield about $6 in averted costs for neonatal intensive care and extended care for low-birthweight infants.[15] Beyond the damage tobacco use during pregnancy may cause, smoking is also a factor in the deaths of over 400,000 Americans every single year.[16]

The budget increases support of smoking cessation by 5 percent over 1992 levels (see Table 5–10). Included in this increase is an additional $3 million for the CDC Office on Smoking and Health, enabling CDC to expand its smoking cessation education activities for specific at-risk populations, including minority and low-income, pregnant women.

- *Lead Poisoning Prevention.* Lead poisoning is the most common environmental disease of young children, disproportionately affecting poor, minority children in the inner cities. Yet childhood lead poisoning may be preventable.

  Preventing lead poisoning is a two-step process: first, lead poisoning must be detected, and second, the source of the poisoning should be abated. The budget includes $40 million, a 90 percent increase, for CDC Lead Poisoning Prevention Grants which support about 30 state-wide lead poisoning screening programs. CDC grants allow states to identify low-income children at risk of lead poisoning and refer those with high blood lead levels for medical treatment.

  In addition to the CDC grant program, the Department of Housing and Urban Development (HUD) will continue assisting low- and moderate-income private residential property owners abate lead-based paint by providing $24 million in grants to States and localities. HUD's public housing modernization program will continue to be the main source of funding for lead-based paint testing and abatement activity in

[13] Department of Health and Human Services, *The Health Benefits of Smoking Cessation: A Report of the Surgeon General,* (Washington, D.C.: U.S. Government Printing Office, 1990), p. 367–411.

[14] *Ibid.*

[15] Marks JS, Koplan JP, Hogue CJ, Dalmat ME, *American Journal of Preventive Medicine,* 1990 p. 282–289.

[16] Department of Health and Human Services, *The Health Consequences of Smoking: 25 Years of Progress, A Report of the Surgeon General,* (Washington, D.C.: U.S. Government Printing Office, 1989).

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Table 5–11. **THE BUDGET INCREASES SUPPORT FOR SMOKING CESSATION**

(Obligations in millions of dollars)

	Actual			1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
	1989	1990	1991				
HHS:							
NIH and ADAMHA Evaluation of Smoking Cessation Interventions and Health Effects	74	76	87	96	98	+2	+2%
CDC (Office on Smoking and Health)	4	5	6	10	13	+3	+30%
Total Federal Spending	78	81	93	106	111	+5	+5%

public housing. It is estimated that approximately $50 million will be spent on these activities in 1993.

- *Injury Prevention.* Preventing injury through encouraging increased personal responsibility can also save lives. For example, every one percent increase in seat belt use saves more than 160 lives per year. If the U.S. were to increase the national average of seat belt use from the 1990 rate of 48 percent to the Administration's goal of 70 percent by the end of 1992, 3,800 lives could be saved annually and 100,000 injuries could be prevented—yielding potential economic benefits of $2.5 billion.[17]

  The budget increases funding for injury prevention to almost $2 billion, a 9 percent increase over 1992. These funds will be used primarily within the Department of Transportation (DOT) for aviation, rail, highway, marine, and pipeline and hazardous material transportation safety. An estimated 50,000 lives are lost annually in incidents in the transportation sector. DOT will use these funds for safety inspection and enforcement, research and development, and education programs all aimed at reducing accidents in the transportation sector. The budget also includes increased emphasis on reducing drunk driving and increasing occupant protection.

- *Family Planning.* Studies suggest that investments in family planning may also yield high returns. Some studies attribute reductions in infant mortality achieved over the last 20 years in part to effective family planning.[18] Recognizing the importance of these services, the budget contains an additional $37 million for HHS family planning grants and Federal Medicaid payments, an increase of 8 percent (see Table 5–12).

- *Physical Fitness and Diet.* Additional investment in efforts to improve physical fitness and diet may yield significant returns. Studies show that regular physical activity can help prevent or manage coronary heart disease, hypertension, non-insulin dependent diabetes, osteoporosis, and obesity. People who are active have lower rates of colon cancer and stroke, as well as fewer back injuries. Moreover, changes in diet have been shown to reduce the risk of cardiovascular disease and stroke.

  The budget increases funding for health education, disease prevention, and physical fitness activities. The budget also focuses on bringing health promotion and disease prevention activities to older Americans. The Administration on Aging will provide more health risk assessments,

[17] National Highway Traffic Safety Administration staff estimates.

[18] Institute of Medicine Committee to Study the Prevention of Low Birthweight, *Preventing Low Birthweight* (Washington, D.C.: National Academy Press, 1985).

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Table 5–12. **THE BUDGET INCREASES SUPPORT FOR FAMILY PLANNING**
(Obligations in millions of dollars)

	Actual			1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
	1989	1990	1991				
PHS Family Planning	138	141	144	150	155	+5	+3%
HCFA—Medicaid	195	253	281	311	343	+32	+10%
Total Federal Spending	333	394	425	461	498	+37	+8%

nutritional counseling, group exercise programs and other health promotion activities. These activities might improve the health and quality of life of older Americans and allow many older people to receive these services regularly.[19]

- *Tuberculosis Control.* For years, the Nation has been making great strides toward eliminating tuberculosis (TB). The disease has been curable and preventable for almost four decades. The long-term decline in TB morbidity enjoyed by the United States ended in 1984. TB cases in the U.S. have been increasing since 1985.[20]

  TB diagnosis and treatment could be an effective health intervention and the Administration is determined to stem the recent growth of TB levels by attacking the recent outbreak of this preventable disease head on.[21] Therefore, the budget includes a 106 percent increase over 1992 for CDC Tuberculosis Control Grants (see Table 5–13).

The budget also includes several policies designed to enhance the investment in prevention and children:

- *Prevention Research.* As the Nation's investment in prevention continues to grow, it will become increasingly important to know what improvements in health outcomes will result from additional resources. For example, if outcomes (such as the number of lives saved, the number of disease cases averted, the years of life extended or the medical costs averted) associated with increased investment in a given activity could be predicted with accuracy, the Nation could make even better decisions for allocating Federal resources.

  CDC will continue its efforts, beginning in 1992 to produce innovative, measurable

[19] Institute of Medicine, *The Second Fifty Years: Promoting Health and Preventing Disability,* (Washington, D.C.: National Academy of Sciences, 1990), p. 182.

[20] Department of Health and Human Services, Centers for Disease Control, *Morbidity and Mortality Weekly Report Surveillance Summary,* January 1992.

[21] Centers for Disease Control, Center for Prevention Services staff estimate of the cost-effectiveness of Tuberculosis diagnosis and treatment.

Table 5–13. **THE BUDGET RESPONDS TO RECENT OUTBREAKS OF TUBERCULOSIS**
(Obligations in millions of dollars)

	Actual			1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
	1989	1990	1991				
HHS (CDC Tuberculosis Control Grants and HIV/AIDS Tuberculosis Control)	21	23	25	32	66	+34	+106%

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assessment techniques that combine the overall level of investment in prevention activities with traditional cost-effectiveness measures. CDC's leadership will allow the Nation to develop priorities among prevention activities based on a thorough understanding of the returns on possible future investments.

- *Improving Program Effectiveness Through Evaluation.* The budget supports efforts in several programs to maximize the investment in prevention through program evaluation:

  Head Start.—Following upon a 1992 budget initiative, this budget includes $12 million in Head Start for enhanced evaluations, research and demonstrations. Although research indicates that children enrolled in Head Start experience substantial immediate gains in cognitive growth, school readiness, and achievement, less is known about the program's long term effects and about the effect of the wide range of Head Start services.

  Healthy Start.—An integral part of the Healthy Start infant mortality initiative is a comprehensive evaluation and monitoring component. Healthy Start grantees have set the goal of reducing infant mortality rates in each grantee's area by 50 percent within five years. The budget continues this effort to assess the progress of grantees in reducing infant mortality.

  Childhood Immunizations.—The budget encourages innovative efforts to improve immunization rates, particularly for low-income, inner city children. The budget continues to support a $9 million infant immunization initiative to investigate and evaluate the potential effectiveness of linking eligibility for continued participation in low-income assistance programs (WIC, Medicaid, AFDC) with documented immunization of young children.

  HIV Prevention.—While the budget includes a 5 percent increase over 1992 levels for CDC HIV prevention activities, recent reports from the General Accounting Office and the Institute of Medicine have indicated that the effects of CDC HIV prevention activities have yet to be fully documented. This year, CDC and other Federal agencies will undertake efforts to evaluate and document how well HIV prevention funds are currently being used and make recommendations for improving this vital investment in the future.

OTHER SOURCES OF INVESTMENT IN PREVENTION

The Federal contribution is only one—albeit sizable—component of the Nation's investment in prevention. States, local governments, employers, and health insurers also invest in prevention and have important roles to play as well.

States spend billions of their own funds on public health activities (an estimated $5.1 billion in 1989), and for the Federal-State financed Medicaid program (an estimated $64 billion in State funds in 1993—up from an estimated $24 billion in 1989).

Local governments also spend billions on prevention activities ($2.3 billion in 1989), and play an essential role in directing resources towards their unique problems.

Employers paid an estimated $145 billion for private health insurance premiums in 1989, a portion of which goes toward preventive services.[22] According to the Health Insurance Association of America (HIAA), some screening procedures are already widely available in group policies; 68 percent of employees with job-based health insurance are covered for mammography, and 67 percent are covered for pap smears.[23]

Health insurers are financing more preventive health care services than in the past. Major health insurers such as the Blue Cross and Blue Shield Association now offer coverage of medical tests for breast, colon, cervical and lung cancer; heart disease; hypertension; diabetes; thyroid disease; and osteoporosis.[24]

[22] Health Insurance Association of America, *Source Book of Health Insurance Data* (Washington, D.C. 1991), p 17.

[23] Health Insurance Association of America (HIAA) 1990 employer survey.

[24] *New York Times,* June 19, 1991.

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THE FOCUS ON PREVENTION

The current generation of Americans enjoys the longest life expectancy (over 75 years) of any in the country's history.[25] Many of the most dreaded diseases that plagued the U.S. during the 19th and early 20th centuries, such as cholera, typhoid fever, smallpox, and polio, have virtually been eradicated through advances in medical knowledge and technology, public health, and sanitation.

Despite these advances, significant health status improvements remain to be made as Americans still face disease, death and disability from preventable illnesses. The U.S. currently ranks 22nd in the world in terms of life expectancy for males and 16th for females (The Japanese live longest with males averaging 76 years and females averaging 82 years.)[26] About half of the 2.2 million deaths which occur in the U.S. every year are potentially preventable, as are many of the illnesses that afflict millions of Americans (see Table 5–14).

Three Important Reasons for Investing in Prevention and Children: *One reason is that careful investment in prevention is simply good health care policy.* As a society, Americans value life. By investing carefully in prevention, hopefully the Nation can continue to make progress in averting premature deaths, and thereby extend the average life expectancy for Americans. Further, if the Nation makes reasoned choices in prevention, it may also reduce illnesses and disabilities that prevent people from leading healthy, productive lives.

A second reason to invest in prevention is that such investments may help to avert acute conditions and the associated costs of treating them. For example, it is far

[25] Department of Health and Human Services, National Center for Health Statistics, *Health United States, 1990,* (Washington, D.C.: U.S. Government Printing Office, 1991), p. 67.

[26] Ibid. p. 74.

Table 5–14. **LEADING CAUSES OF DEATH AND ILLNESS IN AMERICA, 1992**

Cause of Death	Deaths	YPLL	Hospital Discharges	Prevalence
Heart Disease	712,254	1,286,000	3,528,000	21,010,000
Cancer	522,450	1,870,000	1,364,000	7,076,000
Stroke	142,542	234,000	682,000	2,516,000
Injuries	95,085	2,212,000	2,335,000	59,161,000
Lung Disease	93,745	147,000	463,000	13,967,000
Pneumonia/Influenza	84,022	179,000	1,130,000	126,224,000
Suicide/Homicide	56,430	1,527,000	N/A	(1)
Diabetes	50,468	168,000	407,000	6,221,000
AIDS	51,000	1,546,000	154,000	91,000
Infant Mortality	38,118	2,635,000	NA	(1)
Liver Disease and Cirrhosis	25,903	224,000	57,000	900,000
Additional Causes of Death	332,297	629,000	N/A	NA
Total	2,204,314	12,657,000	N/A	N/A

N/A= Not applicable.
[1] Prevalence figures are not available for Suicide/Homicide and Infant Mortality since prevalence is less applicable for these causes.
Source: Public Health Service and Centers for Disease Control projections.
NOTE: Prevalence figures are estimates of the number of persons in the United States who have a particular disease or who will experience serious injury some time during the given year. Years of potential life lost before age 65 (YPLL), prevalence, and hospital discharges data are provided in addition to cause of death figures since these three sets of data provide a broader sense of the impact a particular disease has on society. These additional indicators illustrate, for example, that while some diseases (e.g. diabetes) cause fewer deaths than others (e.g. cancer), those diseases causing fewer deaths nonetheless affect the lives of a great many Americans. These indicators also show that since some causes of death, such as infant mortality and AIDS, affect the young disproportionately, they produce a high number of potential life years lost. Taking a variety of such indicators into account is thus important when considering prevention activities.

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better to pay $65 to immunize a child fully for measles, mumps, and rubella than pay the roughly $7,000 it costs to hospitalize a child for a case of measles.[27]

Third, investments in prevention activities which focus on children can help prepare the Nation's children for a healthy and productive future. Many of the most important risk factors for chronic disease in adults have their roots in behaviors acquired during childhood.[28] This generation has a responsibility to ensure that children get a good start in life, and that the Nation's children can continue to improve on the current 75-year life span. As the next generation of Americans grows up, it should enjoy the benefits of efforts to prevent many of the diseases and deaths that afflict this generation.

While many activities may be included under the broad heading of "prevention," not all prevention activities lead directly to a reduction in disease or in lives saved. A useful framework for distinguishing among prevention activities is to separate them by type:

"Salk-like Solutions"—In 1953, Dr. Jonas Salk developed the polio vaccine and since that time polio has nearly been eradicated from the Western Hemisphere. Interventions like Dr. Salk's polio vaccine are the ultimate preventive measure; they directly prevent a specific disease from occurring. Further, such "Salk-like Solutions" are generally the most effective since success does not depend upon follow-up actions. Through intensive medical research, the Nation is trying to find more "Salk-like Solutions".

Diagnostic Interventions—Such prevention activities include blood lead level screening, pap smears, mammograms, and blood cholesterol screening. Diagnostic interventions are generally intended to detect a condition or to assess the likelihood that a condition could exist before it becomes a serious health risk. For example, mammograms do not prevent breast cancer, but with early detection and proper medical follow-up, can reduce or prevent breast cancer mortality.

Interventions to Modify Behavior—Such prevention activities include educational campaigns to reduce smoking or increase the use of seat belts, or the purchase and delivery of nutritional food to low-income pregnant women and infants. Diagnostic interventions and interventions designed to modify behavior are not necessarily mutually exclusive. Certain prevention activities may be diagnostic interventions which require medical follow-up and may also be designed to modify behavior (for example, testing for HIV or sexually transmitted diseases; or giving nutrition assistance and counseling to a pregnant woman).

Identifying effective preventive measures, so prevention can be promoted and encouraged, is a most important step in achieving a healthier society. Unfortunately, there are few "Salk-like Solutions," so most prevention activities depend upon personal responsibility, focusing on further medical follow-up or changes in personal behavior to be effective.

PREVENTION AND THE IMPORTANCE OF PERSONAL BEHAVIOR

Preventing Deaths and Illnesses: Better control of fewer than 10 factors—such as diet, prenatal care, exercise, the use of tobacco, alcohol and illegal drugs, and the use of seat belts—could prevent between 40 and 70 percent of all premature deaths, a third of all cases of acute disability, and two-thirds of all cases of chronic disability (see examples in Behavior Change chart). Many of these factors involve freely-made individual choices. Since the preservation of individual choice is a cornerstone of American democracy, disease and injury prevention must become personal as well as national priorities.

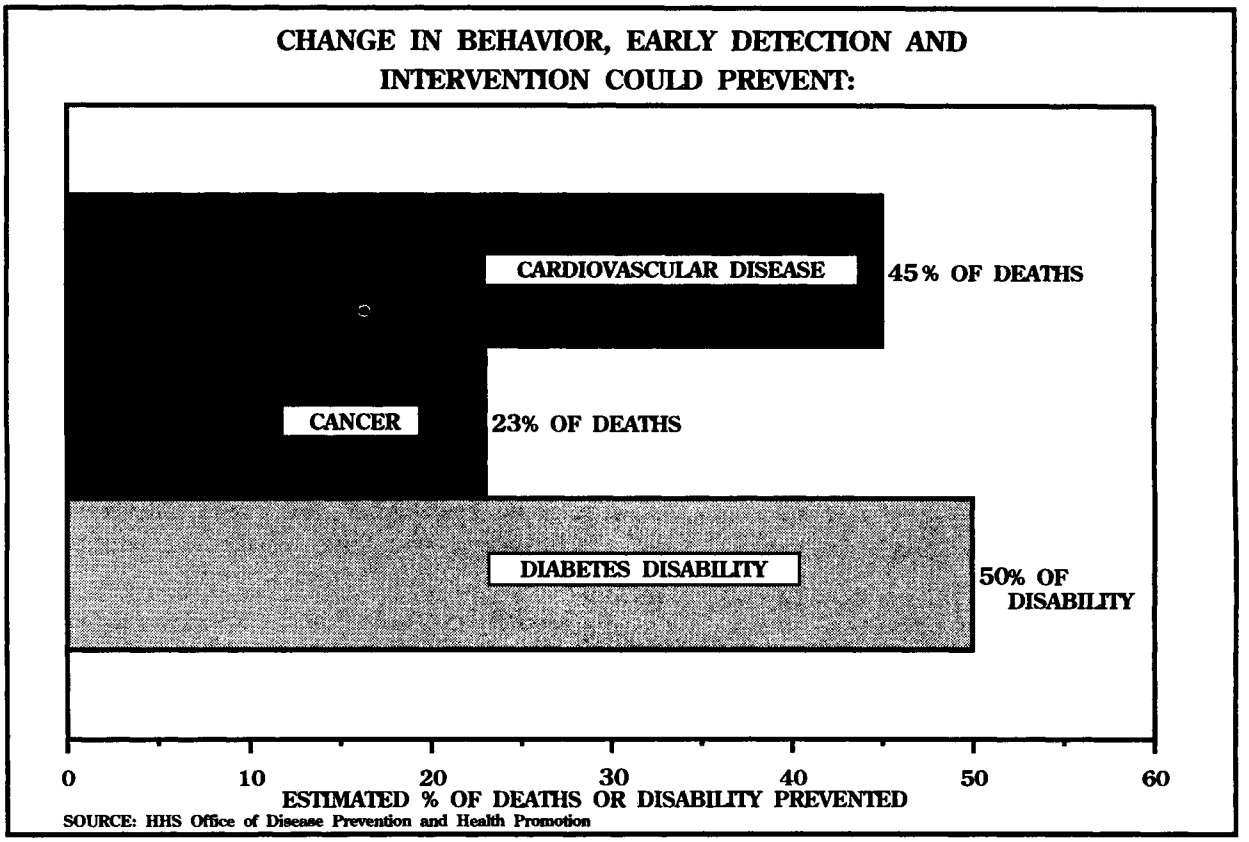
The Past: Favorable health effects of past changes in behavior have been significant, as investments in prevention and associated policies designed to promote healthy behavior have yielded results.

- *Smoking.* The Nation has witnessed the effects of changes in behavior across soci-

[27] Based upon Centers for Disease Control estimates of the cost to immunize one child for the full schedule of measles, mumps, rubella vaccine as recommended by the Advisory Committee on Immunization Practices, and on CDC estimates of the cost of hospitalization for measles. The estimates assume that each vaccine is purchased at the projected 1993 Federal contract price.

[28] Department of Health and Human Services, Testimony of Dr. J. Michael McGinnis, Deputy Assistant Secretary for Health, U.S. Department of Health and Human Services, before the Senate Governmental Affairs Committee, November 14, 1991.

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ety as the incidence of one of the leading contributors to preventable deaths, smoking, has declined from 40 percent in adults in 1965, to 28 percent in 1990. This dramatic behavior change was brought about through a complex combination of actions by individuals, private industry, health providers, and all levels of government (see chart).

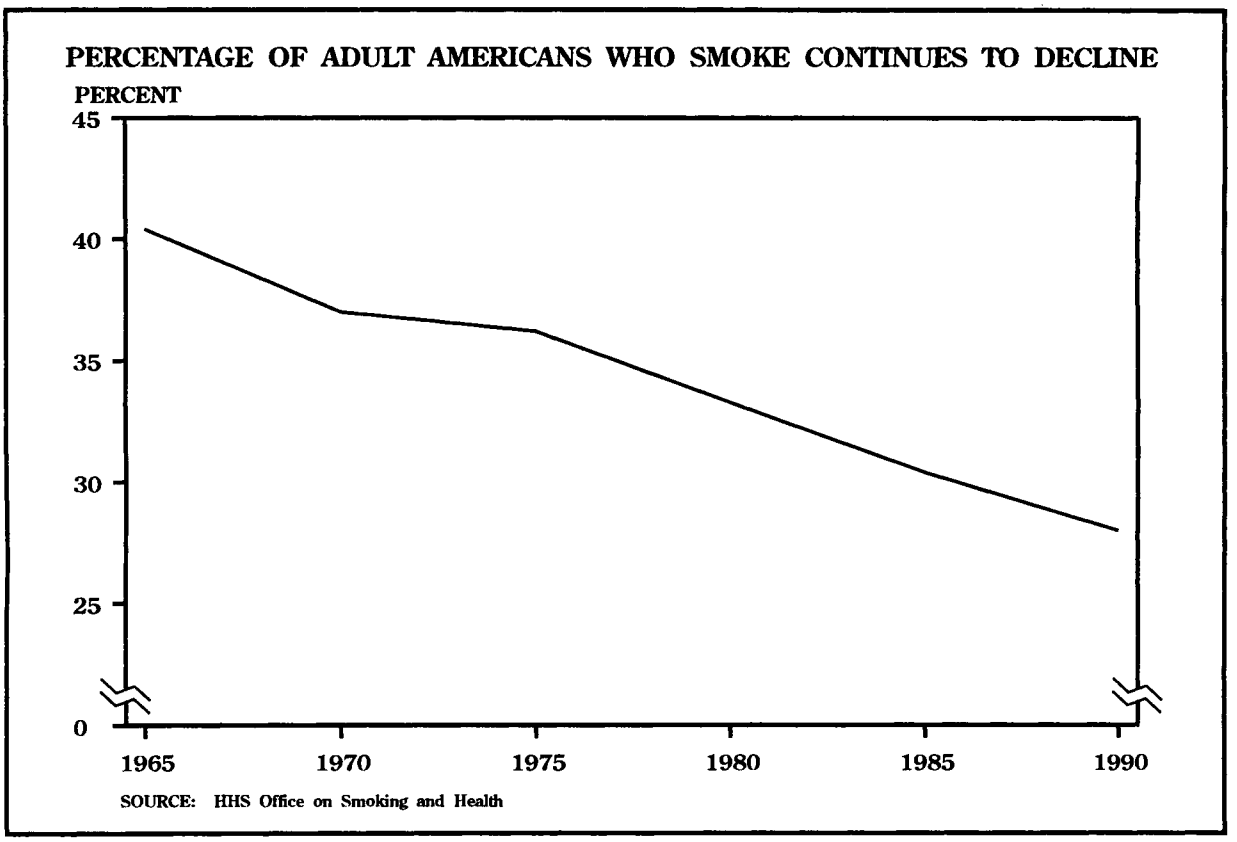
- *Traffic Accidents.* Increased use of safety belts, declines in drunk driving, and better vehicle crashworthiness have cut the traffic fatality rate by 50 percent since 1973. If the traffic fatality rate had remained at the 1973 level, an additional 40,000 lives would have been lost in 1991 alone.

  One of the most important factors in reducing the traffic fatality rate has been the growing use of seat belts and child safety seats. As shown in the accompanying chart, simply accepting the personal responsibility for using these safety devices has saved numerous lives. As people increase their use of seat belts, child safety seats, and air bags, the Nation will see more lives saved every year. Air bags will be installed in an estimated 90 percent of all new cars sold in the United States by 1995.

- *Heart Disease and Stroke.* During the 1980s, death rates declined for two of the leading causes of death among Americans: heart disease and stroke. Much of this progress is attributable to changes in behavior. The more than 40 percent decline in heart disease mortality since 1970 reflects dramatic increases in high blood pressure detection and control, the decline in cigarette smoking, and increasing awareness of the role of blood cholesterol and dietary fat. Stroke death rates, which have dropped by more than 50 percent in the same period, also reflect gains in hypertension control and reductions in smoking.

The Future: Building on the successes of these previous prevention investments, the 1992 President's Budget focused resoruces

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on prevention. This budget will expand and deepen the nation's commitment to careful investment in prevention. There will be many beneficial results from this investment in 1993, including:

- *6,710,000 polio immunizations, 4,147,000 measles, mumps, and rubella immunizations, and 2,600,000 hepatitis b immunizations;*
- *an additional 157,206 children per year will be enrolled in Head Start (all expected eligible enrollees will have access to one year of Head Start);*
- *445,000 more persons will have access to primary care services through community health centers;*
- *at least 96,000 more women per year will be screened for breast and cervical cancer;*
- *191,000 more adults and adolescents per year will either quit or never begin smoking; and*
- *125,000 more children per year will be screened for lead poisoning.*

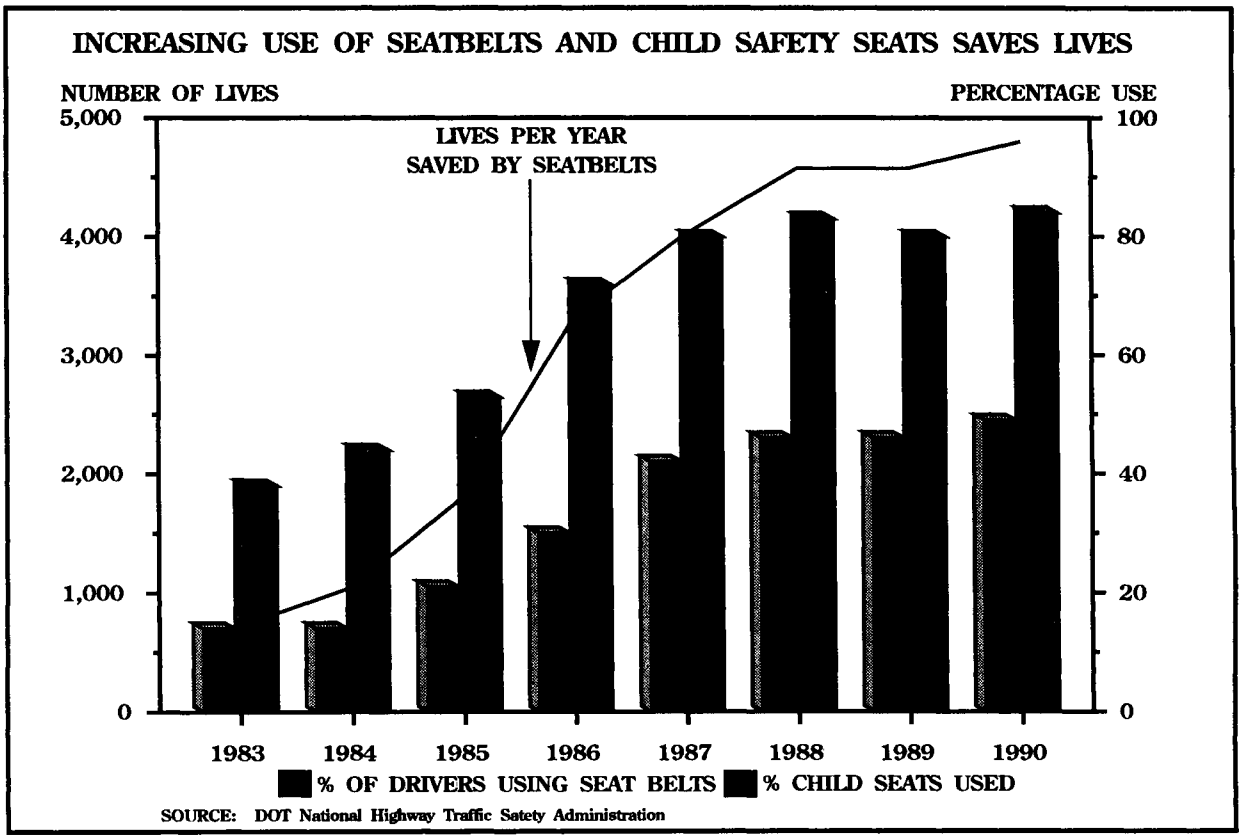
The combination of additional dollars contained in the budget and continued improvements in healthy behavior should help maintain the declining trends in morbidity and mortality—providing better lives for all Americans.

The importance of personal responsibility: *Each individual citizen is the final and perhaps most crucial player in improving the health of the Nation.* Measurable improvements in health outcomes can result from changes in individual health behaviors. The normal course of daily activity presents each person with numerous opportunities for promoting health and preventing disease. Yet with each opportunity comes the responsibility that each person has for his or her own personal health habits.[29]

[29] U.S. Department of Health and Human Services, Public Health Service, *Healthy People 2000: National Health Promotion*

Continued

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and Disease Prevention Objectives (Washington, D.C.: U.S. Government Printing Office, 1990), p. 85.

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Investing in the Future:

6. Enhancing Research and Development and Expanding the Human Frontier

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6. ENHANCING RESEARCH AND DEVELOPMENT AND EXPANDING THE HUMAN FRONTIER

It is by now widely recognized that a key to enhancing long-term economic growth in America is improving productivity. Productivity growth will enable our economy to grow faster than our population—thus making possible improvements in America's standard of living.

The Bush Administration has proposed, over the past three fiscal years, a pattern of investment in areas of research and development that will help to boost productivity and improve economic performance. This budget continues that pattern of aggressive investment in both basic and applied R&D. Today new frontiers are emerging in science, space and technology, including new materials, advanced computing, manufacturing methods, space exploration, and biotechnology. By helping to expand America's knowledge base in these and other areas, and by advancing the development of new technologies, the budget lays the groundwork for growth.

This chapter discusses a range of Federal research and development programs and is-

Table 6–1. **ENHANCING RESEARCH AND DEVELOPMENT AND EXPANDING THE HUMAN FRONTIER—HIGHLIGHTS**
(Dollar amounts in millions)

Budget Authority	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Applied Research:					
High Performance Computing and Communications	N/A	655	803	+148	+23%
Advanced Materials and Processing	N/A	1,659	1,821	+162	+10%
Biotechnology Research	N/A	3,759	4,030	+271	+7%
Energy R&D	397	774	914	+140	+18%
Moving Fusion Energy from Science to Engineering	347	337	360	+23	+7%
Advanced Manufacturing R&D (non-defense)	N/A	252	321	+69	+27%
Transportation R&D	802	1,224	1,433	+209	+17%
Protecting the Public Health	3,482	4,757	4,849	+92	+2%
Expanding R&D at the National Institute of Standards and Technology	159	247	311	+64	+26%
Space Technology	256	273	305	+32	+12%
Basic Research:					
Doubling the NSF Budget by 1994	1,923	2,572	3,026	+454	+18%
Support for Individual Investigators (HHS, NSF, DOE)	5,884	7,273	7,939	+666	+9%
Human Genome Project	N/A	164	175	+11	+7%
Superconducting Super Collider	98	484	650	+166	+34%
U. S. Global Change Research Program	N/A	1,110	1,372	+262	+24%
Astronomy and Astrophysics	617	836	890	+54	+6%
National Research Initiative (USDA)	N/A	98	150	+52	+53%
Maintaining National Security: Defense R&D:					
Defense	38,031	40,043	40,509	+466	+1%
Energy	2,321	2,668	2,640	-28	-1%
Expanding the Geographic Frontier:					
Improving Access to Space	4,411	5,312	5,412	+100	+2%
Space Exploration	1,433	2,646	2,836	+190	+7%

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sues, including space and defense, that are related to these frontiers. The budget proposes to invest over $76 billion for *research and development*, including R&D facilities, in 1993. This represents an increase of nearly $2 billion, or 3 percent over 1992. Within this total, Federal civilian R&D would increase by 7 percent, while defense-related R&D would increase by 1 percent. The budget proposes over $14 billion for basic research, an increase of over $1 billion, or 8 percent, over 1992. The budget also proposes over $17 billion for civilian applied research and development, an increase of over $1 billion or 6 percent.

The budget proposes several crosscutting investments that will build the base for the continuing expansion of the frontier of knowledge: a new initiative to improve the synthesis, processing and performance of both new and traditional materials; a new initiative to increase funding for biotechnology research, especially in applications; and continuation and strengthening of initiatives in high performance computing and communications and global change research. In addition, the budget proposes to expand the initiative to improve mathematics and science education at all levels, as discussed in Chapter 4, "Reforming American Education and Investing in Human Capital."

The budget proposes to provide support for several important civil space programs, including Space Station Freedom, space science missions such as the Advanced X-ray Astrophysics Facility and the Earth Observing System, and new initiatives such as the new launch system, the National Aerospace Plane, and technology related to exploration of the Moon and Mars. Because of the President's desire to constrain the overall growth of Federal spending, however, and in response to Congressional directives, the total increase for civil space programs is only $738 million, or 5 percent.

HIGHLIGHTS

APPLIED RESEARCH

These initiatives help to spur innovation and the movement of new products and processes from the laboratory to the marketplace.

High Performance Computing and Communications.—The budget proposes an increase of $148 million, or 23 percent, to a total of $803 million for the second year of an interagency program to help establish American pre-eminence in the fields of high performance computing and communications. This Presidential Initiative initiative, involving nine Federal agencies (in addition to the private sector), will focus on the underlying research and the academic training needed to accelerate significantly the availability of the next generation of high performance computing systems and digital communications networks. The goal is to assist in the development of computing capability with roughly 1,000 times improvement over current systems by 1996 and communications systems 100 times faster than those currently in use.

Advanced Materials and Processing.—The budget proposes $1,821 million, an increase of 10 percent over 1992, for a 10-agency program intended to improve the manufacture and performance of materials. This new Presidential Initiative is intended to achieve advances in materials that will enable improvements in a wide range of other technologies. Emphasis will be placed on research on materials synthesis and processing, two areas critical to developing new materials and to improving the quality of all materials.

Biotechnology Research.—The budget proposes $4,030 million, an increase of $271 million or 7 percent over 1992, for biotechnology research programs in 12 agencies. This new Presidential Initiative capitalizes on the current U.S. leadership in biotechnology, and recognizes the key role biotechnology plays in enhancing the Nation's technological strength, economic growth, and the health and quality of life of its people. The program will emphasize potential new applications of biotechnology in health, manufacturing/bioprocessing, and the environment; will

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strengthen research and infrastructure for structural biology; and will expand interdisciplinary training at the interfaces of biology, chemistry, physics, mathematics, computer science, materials science, and engineering.

Energy Technology R&D.—The budget proposes $914 million, an increase of $140 million, or 18 percent, for investments in targeted high-payoff technologies and strategies to increase the efficiency of energy use, to develop cost-effective alternatives to petroleum and to advance new electricity technologies, including battery technology. This investment is guided by the National Energy Strategy which was announced by the President in February, 1991.

Fusion R&D.—The budget proposes $360 million, an increase of $23 million or nearly 7 percent for the development of energy from nuclear fusion. This National Energy Strategy initiative maintains the strong national commitment to the International Thermonuclear Experimental Reactor (ITER) engineering design activity. The ITER experiment is carried out in partnership with Japan, the European Community, and Russia.

Advanced Manufacturing R&D.—The budget includes over $1 billion for R&D on advanced manufacturing technologies. This includes an increase of 27 percent for nondefense-related manufacturing R&D. In addition, the budget proposes an increase of $25 million to a total of $105 million for the National Science Foundation for a new initiative in manufacturing research. The budget also proposes $27 million for manufacturing R&D at the National Institute of Standards and Technology.

Transportation R&D.—The budget proposes $1,433 million, an increase of 17 percent, for transportation R&D, funded primarily by the Department of Transportation (DOT) and the National Aeronautics and Space Administration (NASA). The increase will support continued high-priority R&D on aviation and high-speed rail projects. For R&D in DOT, the budget proposes $498 million, an increase of 12 percent, for research programs to improve air traffic management, to increase the use of satellites for aviation navigation and communications, for improved intelligent vehicle/highway systems and for magnetically levitated trains. For aeronautics R&D in NASA, not including high-performance computing, the budget proposes $855 million, an increase of $98 million or 13 percent. The increase will support continued high-priority R&D on environmental issues associated with supersonic flight and on high-temperature propulsion materials. The budget also includes $80 million for continued technology development for the joint NASA/DOD National Aerospace Plane program, leading to a future decision on a flight research vehicle.

Protecting the Public Health.—*Biomedical Research*: The budget proposes $4.8 billion for applied research and development at the Department of Health and Human Services, an increase of $92 million, or 2 percent. The budget includes a total of $10.6 billion for basic and applied research and development at the Department of Health and Human Services. *Women's Health Initiative*: The budget includes an 80 percent increase for a recently-launched NIH study on women's health, which is designed to answer difficult questions about how best to prevent deaths from cancer, heart disease, and the bone fractures common with advancing age in women. *HIV/AIDS*: The budget proposes a 4 percent increase to over $1.2 billion for biomedical and behavioral research on Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome. (The budget proposes a total increase of $565 million, or 13 percent, for HIV/AIDS research, treatment, prevention and income support.)

Expanding R&D at the National Institute of Standards and Technology.—The budget proposes a 26 percent increase to a total of $311 million for NIST. The 1993 proposal will continue an effort begun in 1991 to expand NIST's ability to perform generic applied research and technology development and to address a growing number of important standards and measurement issues. In addition, the budget proposes $68 million for the Advanced Technology Program, an increase of 36 percent over 1992.

Creating Technology for Space and Earth.—The budget proposes $305 million, an increase of 12 percent, for NASA space technology development. This increase recognizes the central role of new technology in the future of the U.S. space program. Strengthening cur-

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rent investments in technology will later pay off in new capabilities for scientific research, communications, robotics, launch vehicles, and other space-related areas.

BASIC RESEARCH

These initiatives lead to the creation of new knowledge which will enable future innovation.

Doubling the National Science Foundation (NSF) Budget by 1994.—The budget proposes an increase of 18 percent overall for NSF, including a 21 percent increase for basic research. This will continue the Administration's commitment to double NSF's budget by 1994. This increase is targeted toward investments in the people, equipment and unique research facilities that underpin the U.S. scientific enterprise.

Increasing Support for Individual Investigators.—The budget proposes nearly $8 billion for the support of individual investigators funded by the Departments of Health and Human Services and Energy and the National Science Foundation. This is an increase of over 9 percent over 1992. Individual investigators are the backbone of the U.S. scientific and engineering enterprise. These researchers, located primarily at the Nation's colleges and universities conduct most of the fundamental research on which technological progress is founded. In addition, and perhaps more importantly, they educate and train the next generation of scientists and engineers.

Human Genome Project.—The budget proposes an increase of $11 million, or 7 percent, to a total of $175 million in the Departments of Energy and Health and Human Services (National Institutes of Health). The goal of the project is to analyze within 15 years the entire complement of human genetic material at the molecular level. The Departments are developing capabilities and tools, constructing maps, sequencing human chromosomes, developing accessible data bases, and characterizing disease-related genes. Both agencies are also addressing ethical, legal, and social issues surrounding the uses of knowledge about the human genome and are developing educational activities on genome issues for the general public.

Superconducting Super Collider (SSC).—The budget proposes an increase of $166 million for the SSC to a total of $650 million. This will support continued work toward the transition from prototype superconducting magnets to production and continued construction of support facilities. It will also provide for the construction of a tunnel segment for testing purposes. The funding level maintains the 10-year design and construction schedule approved last year. The total cost of slightly over $8 billion assumes one-third non-Federal contributions including $233 million in 1993.

U.S. Global Change Research Program (USGCRP).—The budget proposes an overall increase of $262 million, or 24 percent, to a total of $1,372 million for this Presidential Initiative–the most advanced program on global change research issues in the world. The proposed increase will assist efforts to understand more fully the earth's climate system. That understanding will facilitate development of sound policies concerning global environmental issues such as ozone depletion and global warming.

Astronomy and Astrophysics.—The budget proposes a total of $890 million for these two closely related disciplines which are funded primarily by the National Science Foundation and the National Aeronautics and Space Administration. The objective of these programs is to increase our understanding of the universe. The budget proposals are consistent with the recommendations of a recent report of the National Research Council ("The Decade of Discovery in Astronomy and Astrophysics") concerning ground- and space-based astronomy and astrophysics research for the next decade, including increased operations and maintenance support for existing facilities, increased support for individual investigators, and the development of small and medium-sized instruments.

National Agricultural Research Initiative.—The budget continues the commitment to the National Research Initiative (NRI), first proposed in the 1991 budget, by proposing $150 million, an increase of $52 million, or 53 percent, over 1992. In 1991, $100 million was proposed as the initial installment, to be increased by $50 million each year to

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the extent that funds were awarded competitively and not earmarked for specific sites or institutions. Six categories of research will continue to be funded: natural resources and the environment; nutrition, food quality and health; plant systems (including mapping of plant genomes); animal systems; markets, trade, and policy; and processes antecedent to adding value and developing new products.

MAINTAINING NATIONAL SECURITY

Defense R&D.—The budget proposes a total of over $43 billion for R&D for national security activities, an increase of $438 million, or 1 percent over 1992. This amount includes more than $40 billion for R&D supported by the Department of Defense, and almost $3 billion for defense-related R&D supported by the Department of Energy.

IMPROVING TECHNOLOGY TRANSFER

Accelerating the Pace of Technology Transfer.—The budget projects a continuing significant increase in the level of technology transfer activities, including almost 1,700 Cooperative Research and Development Agreements, an increase of 40 percent over the two years since 1991; about 3,300 new invention disclosures; 1,500 patent applications; and almost 500 technology licenses awarded.

Expanding the Role of the National Laboratories.—The budget assumes that the National Laboratories will play an increasing role in high priority areas of civilian applied research and development, including high performance computing, space exploration, advanced materials research, and others. The laboratories could play an important role in helping to form R&D consortia and other collaborative R&D arrangements led by industry and universities.

STIMULATING PRIVATE SECTOR R&D INVESTMENTS

R&E Tax Credit.—The budget proposes to make the Research and Experimentation tax credit permanent.

Encouraging R&D by Multinational Companies.—The budget proposes a 18-month extension in the rules for allocation of foreign and domestic expenditures for companies with foreign operations.

EXPANDING THE GEOGRAPHICAL FRONTIER: SPACE

Improving Access to Space.—The budget proposes $5.4 billion, an increase of 2 percent, for civil space transportation. Plans for the Space Shuttle include improving its operational efficiency, updating key components to protect against obsolescence, and using the new, commercially-developed SpaceHab module to carry more experiments for microgravity research. In the area of expendable launch vehicles, NASA and the Department of Defense will jointly develop a new launch system to reduce the cost of access to space, improve reliability, increase operability and flexibility, and extend U.S. launch capability to support heavier payloads. First launch of this new system is planned for 2002. The two agencies will also sponsor research that can lead to improvements in existing launch systems. The government will continue to procure commercial launch services, including use of the new Commercial Experiment Transporter (COMET) system.

Space Exploration.—The exploration of space continues to excite and capture the imagination of people all over the world. Building on three decades of robotic and manned missions of discovery, the budget proposes a total of $2.8 billion, a 7 percent increase, for programs leading to exploration of the Moon and the planets. Plans for 1993 include continuing work on Space Station Freedom, analyzing data from ongoing planetary missions, designing and constructing new exploration spacecraft, and advancing key technologies needed for future robotic and manned missions to the Moon and Mars. The budget proposes about $15 billion for the National Aeronautics and Space Administration, an increase of 5 percent over 1992.

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ENHANCING RESEARCH AND DEVELOPMENT

Research and development (R&D) yields new knowledge, products and processes that, over the long term, result in economic growth and an improved quality of life for all Americans. Investment in research and development is a top priority for an Administration that believes in investing in the future. Investments in research and development form the foundation for the exploration of all of the new frontiers of today and tomorrow.

INVESTMENTS IN R&D PROVIDE LARGE BENEFITS TO THE NATION

The Federal Government has a long history of funding R&D with the goal of spurring innovation. Examples can be found as far back as research sponsored by the Navy in the late 1700's. Other examples include the establishment in the 1860's of the land-grant college system with its emphasis on research to improve agricultural productivity, and the 50-year history of support for aeronautics research and technology, an effort which has contributed to today's large positive balance of trade in the aerospace sector. Since World War II, the Federal Government has been a major sponsor of R&D performed by industry, either directly or indirectly such as through the tax code.

It is widely accepted that R&D investments lead to new knowledge and innovation, which, in turn, leads to economic growth. For example, recent work (Romer) has emphasized this relationship by showing that new knowledge is as important an investment as capital and labor in determining the output of the economy. Romer asserts that increased knowledge, like increased capital, raises the return on investment, and, in turn, more investment spurs the creation of new knowledge. There is also strong analytical evidence that R&D is an important contributor to productivity growth. Studies by Griliches (1973), Sherer (1982), Terleckyj (1982), Sveikauskas (1982) and Mansfield (1984), inter alia, have shown that R&D tends to be the strongest and most consistent positive influence on productivity growth.

The Bureau of Labor Statistics (BLS) prepares and publishes official measures of productivity growth and carries out research to improve them. The results of a study by Sveikauskas (BLS, 1989) suggest that privately-funded R&D in the non-farm business sector has resulted in average annual productivity improvements of 0.15 percent between 1948–1973 and 0.14 percent from 1973–1987. The contribution of R&D to productivity calculated by BLS appears to account for roughly 14 percent of the total multifactor productivity growth over these time periods. Significantly, the BLS study also noted that the direct influence of R&D on productivity growth was greatest in manufacturing, accounting for an average annual productivity growth of 0.49 percent between 1948–1987.

Other studies (Levy and Terleckyj, 1983; Griliches, 1986) have provided evidence that Federally-financed R&D also has a positive direct impact on productivity, albeit somewhat smaller and more difficult to find with consistency.

In addition, empirical evidence from as far back as the 1950's indicates that increased governmental R&D funding can result in increased private R&D funding. Recent work (Leyden and Link, 1991) offers some evidence that not only is there a complementary relationship between governmental and private R&D, but that governmental R&D affects the behavior of private performers of R&D, i.e., it stimulates more sharing of technical knowledge, and thus contributes to the greater social benefit of the Nation.

All of the scholarly work has identified R&D as a major positive influence on productivity. But much remains to be learned about this phenomenon, particularly with respect to: (1) the differences between direct benefits (i.e., to the financing firm or sector) and indirect benefits (i.e., to firms downstream); (2) between product and process R&D; (3) the mechanisms and the time frame over which R&D (and even different types of R&D) depreciate; and (4) the most accurate way to deflate research expenditures over time. BLS, NSF and others will support research on these problems during 1993.

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THE NEED FOR INCREASED R&D INVESTMENTS

The goals of R&D are to generate new knowledge; train the future skilled workforce; and to provide a catalyst for economic activity. Taken together, these goals provide the most compelling rationale for increased Federal support for R&D.

The combination of public and private national investments in R&D have contributed to the unprecedented advance of human knowlege and improvement in the quality of life for much of the world. All of the available empirical evidence suggests that "more is better" in that (1) increased total R&D investment adds to the productivity of the Nation, and (2) Federal R&D investments are important. Thus, there is ample justification for increased Federal investment in R&D as well as for Federal action to increase the levels of private R&D investment.

One measure that historically has been used to gauge the appropriate level of R&D is the total size of the national R&D investment relative to the Gross National Product (GNP). Using this measure, R&D as a share of GNP stood at about 2.7 percent in the early 1960's, fell during the decade of the 1970's, and returned to that level in the 1980's. Total U.S. R&D investments have increased in absolute terms over that period. Compared with our major trading partners, U.S. R&D as a percent of GNP is less than that of Japan and Germany, but larger than France or the United Kingdom.

Over the past decade, the ratio of Federal R&D outlays to GNP has hovered at about 1.2 percent. In each of the past three budgets, President Bush has proposed increases that would have increased this share. Congress has not fully funded these requests.

Recently, the Federal Government has begun to use the Gross Domestic Product (GDP) as an indicator of the overall strength of the economy, rather than the more traditional GNP. When a similar comparison is made to GDP, it shows that R&D as a share of GDP declined through the 1970's and most of the 1980's. Since 1989, R&D has been steadily increasing as a share of GDP. The budget provides increases and incentives designed to continue to increase R&D investment as a percent of GDP.

THE FEDERAL R&D BUDGET: OVERVIEW AND TRENDS

The budget proposes to allocate $76.6 billion for R&D, including R&D facilities. This is an increase of nearly $2 billion, or 3 percent, over 1992. Within this total, $14.3 billion will be allocated for basic research, an increase ofover $1 billion, or 8 percent, and over $59 billion for applied research, an increase of about $1.5 billion, or 3 percent, over 1992. Federal civilian R&D will increase by 7 percent while defense-related R&D (in the Departments of Defense and Energy) will increase by 1 percent.

As a percentage of total Federal domestic discretionary spending, total civilian R&D has declined from a peak of 26 percent in the Apollo years to a trough of 10 percent in 1983. It has begun to increase again to about 14 percent in recent years. The President proposed to increase this share to 15 percent in 1992, but Congress cut this request. The budget seeks to increase this share once again to 15 percent in 1993.

The Federal Government currently accounts for about 44 percent of the total U.S. investment in R&D. Industry, academia, and nonprofit organizations make up the remaining 56 percent. In 1991, it is estimated that total U.S. R&D expenditures, Federal and non-Federal, were $151.6 billion, an increase of over 4 percent over 1991. In total, the U.S. investment in R&D is about 2.7 percent of GDP. Trends in industry R&D funding, and initiatives to spur increased industry investment through making permanent the tax credit for research and experimentation, are discussed later in this chapter.

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Table 6–2. THE BUDGET PROPOSES AN INCREASE OF $2.5 BILLION IN FEDERAL INVESTMENT IN RESEARCH AND DEVELOPMENT

(Dollar amounts in millions)

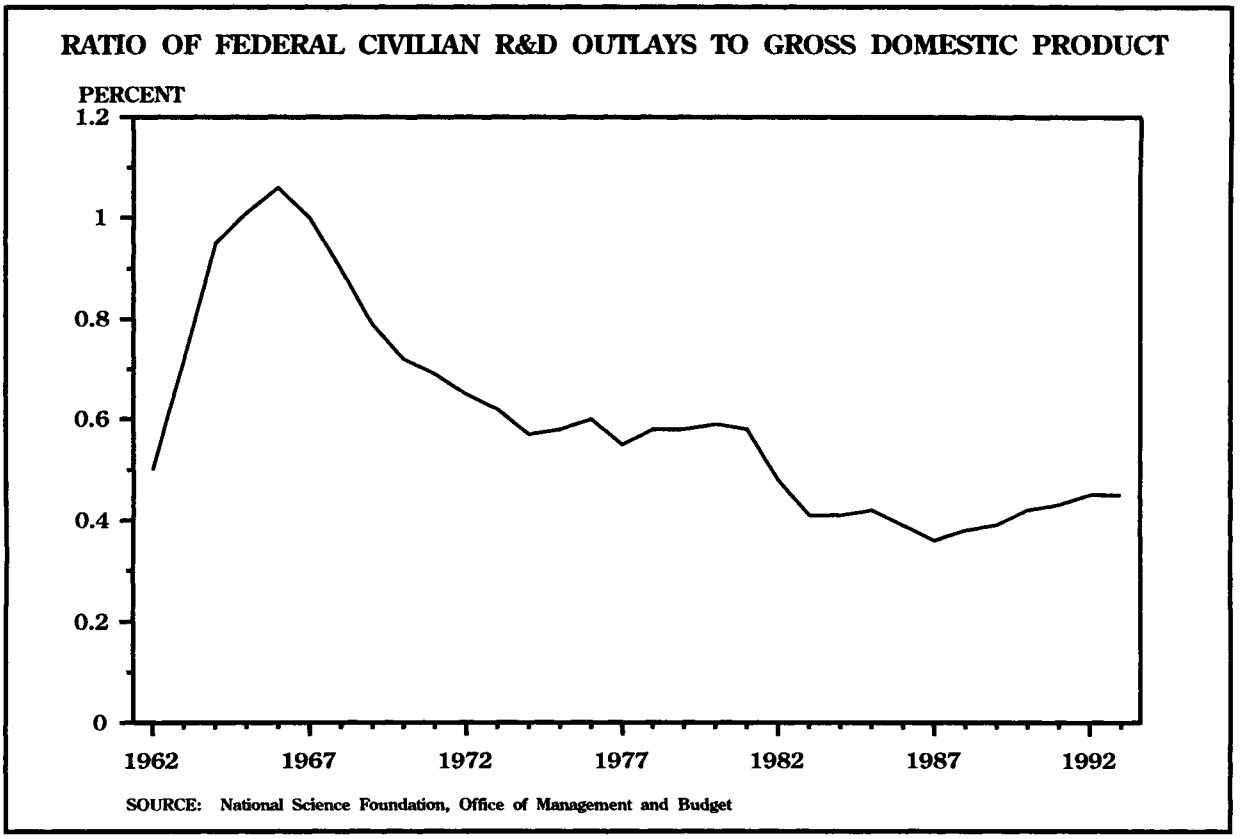
Department or Agency	Budget Authority					Outlays				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Government-wide totals:										
Conduct of R&D:										
Basic Research	10,615	13,254	14,322	+1,068	+8%	10,255	12,491	13,405	+914	+7%
Civilian	9,650	12,053	13,086	+1,034	+9%	9,312	11,325	12,142	+817	+7%
Defense [1]	965	1,201	1,236	+35	+3%	943	1,166	1,263	+97	+8%
Applied Research and Development	51,298	57,839	59,302	+1,463	+3%	50,626	53,890	56,253	+2,363	+4%
Civilian	11,620	16,257	17,313	+1,056	+6%	11,030	15,132	15,958	+826	+5%
Defense [1]	39,678	41,582	41,988	+406	+1%	39,596	38,758	40,295	+1,538	+4%
Subtotal, Conduct of R&D	61,913	71,093	73,624	+2,531	+4%	60,881	66,381	69,658	+3,277	+5%
R&D Facilities	2,293	3,498	2,933	−565	−16%	2,054	3,286	3,189	−96	−3%
Total, Conduct of R&D and Facilities [2]	64,206	74,592	76,557	+1,965	+3%	62,935	69,666	72,847	+3,181	+5%
Conduct of R&D by Agency:										
Defense-military	38,031	40,043	40,509	+466	+1%	37,545	37,175	38,847	+1,672	+4%
Health and Human Services	7,894	10,216	10,649	+433	+4%	7,486	9,468	10,199	+731	+8%
Energy	5,362	6,514	6,578	+65	+1%	5,692	6,195	6,219	+23	—
National Aeronautics and Space Administration	5,303	7,706	8,673	+967	+13%	4,975	7,272	7,710	+438	+6%
National Science Foundation	1,671	1,967	2,375	+408	+21%	1,557	1,840	2,056	+216	+12%
Agriculture	1,050	1,328	1,332	+4	—	1,021	1,245	1,285	+40	+3%
Interior	467	583	552	−31	−5%	478	580	546	−34	−6%
Environmental Protection Agency	389	496	525	+29	+6%	345	454	495	+41	+9%
Commerce	417	580	614	+34	+6%	363	542	582	+40	+7%
Transportation	313	446	498	+52	+12%	322	410	457	+47	+11%
Agency for International Development	261	322	325	+3	+1%	379	314	303	−11	−4%
Veterans Affairs	212	230	245	+15	+7%	187	247	262	+14	+6%
Other Agencies [3]	542	662	750	+88	+13%	532	639	699	+60	+9%

[1] Includes the military-related programs of the Departments of Defense and Energy.
[2] Components may not add to totals because of rounding.
[3] Includes the Departments of Education, Justice, Housing and Urban Development, Labor, the Treasury, the Nuclear Regulatory Commission, Tennessee Valley Authority, Smithsonian Institution, and the Corps of Engineers.

APPLIED R&D: EXPANDING THE FRONTIER OF TECHNOLOGICAL DEVELOPMENT

Federal investments in applied research and development provide a strong foundation for the development of new technologies, which, when successfully applied by the private sector, can yield large benefits in terms of productivity improvements, economic growth and new jobs. In total, the budget proposes about $59.3 billion, an increase of about $1.5 billion or nearly 3 percent to support R&D investments across a wide range of technology areas.

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The Administration has sought to foster technological advancement through a multifaceted technology policy that includes:

- increased Federal investments in high-payoff applied research and development, including increased emphasis on pre-competitive, generic technologies;
- increased government-industry collaboration, including both formal consortia arrangements (such as the Advanced Battery Consortium) and informal interaction (such as the Computer Systems Policy Project);
- accelerated technology transfer from government laboratories;
- greater emphasis on investments in new technologies as part of several National Strategies to address transportation and energy issues, and to advance the U.S. space program;
- support for incentives to encourage greater private sector R&D investments including making permanent the R&E tax credit, expansion of the National Cooperative Research Act (NCRA) to include joint production ventures, and the proposed reduction in the taxation rate for capital gains.

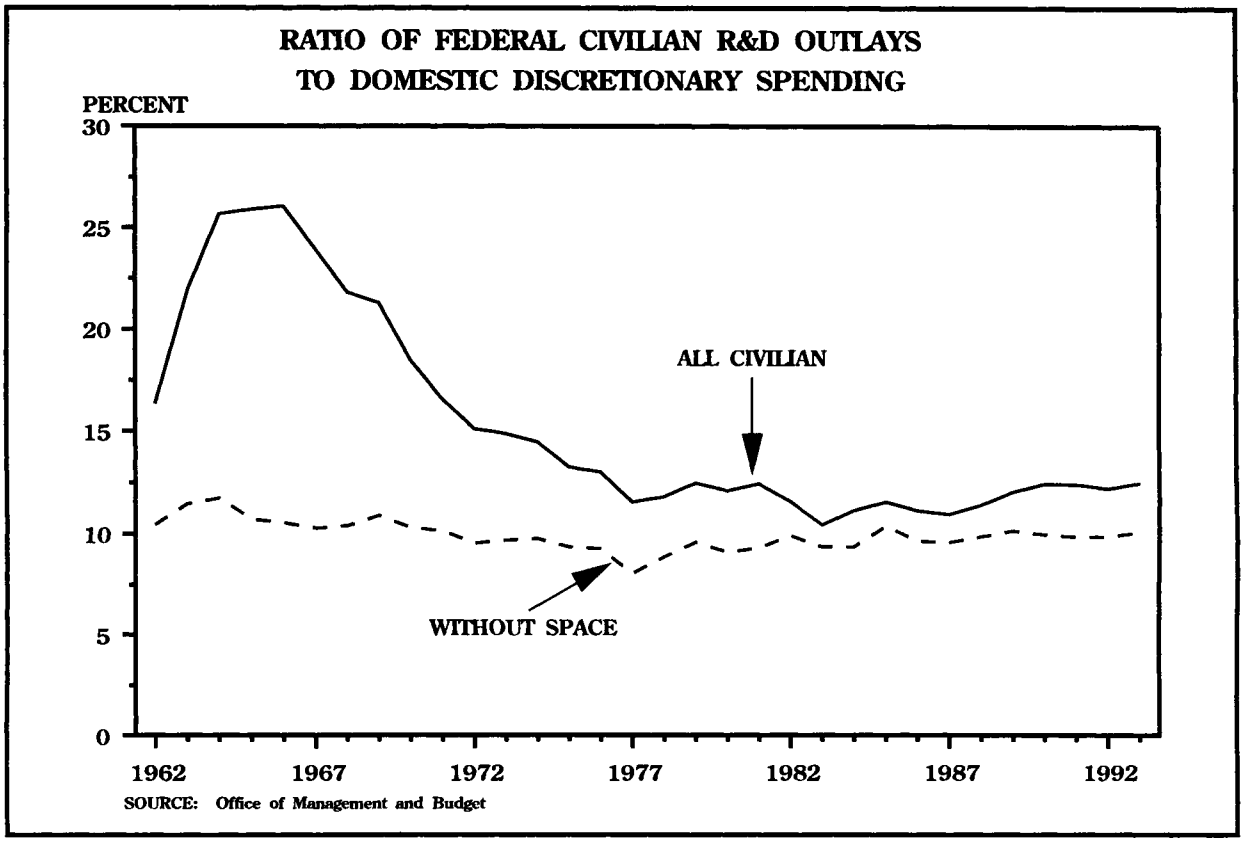
Elements of this policy are embodied in each of the budget initiatives in applied research and development.

Overview of Applied Research and Development

The principal strategy for the Federal applied civilian R&D programs is to invest in areas of R&D that support agency mission requirements, but also have potentially broad applications in the private sector, even though the commercial applications themselves would not be funded by the government. In such cases, the Government's role is to support the development of generic or enabling technologies at the pre-competitive stage of R&D:

- generic or enabling technologies have the potential to be applied to a broad range of products or processes across many firms

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or industrial sectors; and, because the benefits are not necessarily appropriable to individual firms, the private sector is likely to underinvest;

- pre-competitive R&D is the stage of the R&D process where the results can be shared widely within and between industrial sectors, without reducing the incentive for individual firms to develop and market commercial products and processes based upon the results.

Many of these generic technologies have been identified as "critical" technologies that are important to a number of industries. Lists of these technologies have been compiled by both Federal agencies (Defense, Commerce), by private groups (Council on Competitiveness), and by the National Critical Technologies Panel. These lists provide a useful benchmark, but should not necessarily be viewed as definitive. Technology breakthroughs can occur in new fields long before such areas are widely recognized as "critical technologies", e.g., high-temperature superconductivity. The Federal Government has invested in many of these "critical" technologies for many years, e.g., biotechnology, computer hardware and software, rocket propulsion.

Mechanisms for Government-Industry-University R&D Collaboration

There are a number of different mechanisms that the Federal Government may use to support generic applied research and technology development. These include: cost-sharing of individual projects; formation of R&D consortia (often involving government, industry and university laboratories); and more informal government/university/industry collaboration.

Industrial R&D Collaboration.—Strategic alliances and partnerships among industries are not new. Individual firms have often looked to other companies for new technology, innovation and new markets to complement their own efforts. But in order to be successful over the longer term, such alliances must provide

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mutual, and generally comparable, benefits to the partners. The National Cooperative Research Act (NCRA) of 1984 enabled private companies to form research alliances (consortia, joint ventures, partnerships) among themselves without the fear of per se antitrust violations. As of December 1991, a total of 263 private sector consortia had been registered with the Justice Department.

The Administration has supported legislation to expand the NCRA to include joint production ventures. In addition, the Department of Commerce has proposed an initiative, the Strategic Partnerships Initiative, to promote voluntary R&D collaboration among private firms for the development and application of large-scale enabling technologies, with no direct Federal funding.

In recent years, a number of authors (Ouchi; Coase; Porter; Badaracco; Dertouzos, Lester and Solow) have written extensively on industrial R&D cooperation and consortia. These authors have noted the potential benefits of increased R&D collaboration, particularly where the industrial technologies are not fully "appropriable" to individual firms, or where there are generic problems or agreed-on multiple research paths which must be explored to enable new technologies to be developed.

They have also noted the limitations of R&D collaboration. Consortia may not be beneficial if allowed to extend to product development, or if the collaboration is not well-defined in advance, or if excessive reliance on collaboration results in inhibiting competition. The Federal Government has had limited involvement in consortia, but generally has had success in those consortia in which it has participated. For example:

- *The Concurrent Supercomputing Consortium* acquires computers with unprecedented capabilities and uses them to enable member scientists to tackle new classes of computational problems. This consortium, which consists of numerous government agencies (Defense, Energy, NSF, NASA), and academic and industrial institutions, has combined its resources to acquire the Intel Touchstone Delta System, the world's first general-purpose computer with a peak speed of 30-gigaflops.
- *The National Aerospace Plane joint-venture partnership* merged the best ideas of five contractors into a single design and permitted the sharing of advances in materials and propulsion technology and aerospace design. It also has helped ensure that there will be a broad U.S. industrial base for future operational hypersonic and aerospace vehicles.
- *In Energy R&D,* the Administration has pursued several R&D consortia. For example, the Administration recently initiated the *Advanced Battery Consortium* with the major U.S. auto companies, battery manufacturers and electric utilities. Over the past several years, the Administration has supported a collaborative R&D program in *photovoltaics technology,* including both individual cost-shared contracts as well as a consortium arrangement. In addition, the Administration proposed funding in the 1991 budget to establish an R&D consortium for *geosciences research* in support of advanced oil and gas recovery, but Congress did not support the request.

Because U.S. R&D consortia are relatively new, there is no firm track record to measure success. There is continuing debate about the role of R&D consortia in innovation and economic growth.

For example, in an informal survey of a number of senior industry officials conducted in 1990 by the National Research Council, many of these officials expressed doubt that generic research conducted in consortial arrangements with other companies and universities would offer significant commercial advantage, since the results would have to be shared broadly and are too remote from the marketplace. These officials were much more enthusiastic about the benefits of more informal researcher-to-researcher collaborations.

In addition, several articles have questioned the effectiveness of the Sematech consortium, and recently two of its member companies have withdrawn. However, many of the issues surrounding Sematech appear to be unique to it, and cannot be extrapolated to all consortia.

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There are attributes of joint research alliances that may increase the likelihood of long-term success. In the case of Federally-supported consortia, such attributes would include the following:

- The private sector participants should agree to share at least half of the total costs of the R&D.
- The area of interest for the consortium should be supportive of Federal missions, and should complement Federal R&D programs.
- The R&D itself should use existing Federal, private or university laboratories and research expertise.
- The R&D should not involve technologies where one or more of the private sector participants has a strong proprietary position or existing commercial production.
- The setting of R&D priorities within the area of interest should be led by the private sector participants.
- The R&D should be focused on generic or enabling technologies which have the potential to benefit a broad range of companies, processes or products.

These attributes are clearly embodied in the most recent Federally-supported R&D consortium, the U.S. Advanced Battery Consortium, and can be found in other Federal R&D consortia as well. Because consortial R&D arrangements are new, it will be necessary to experiment with different forms of collaboration, and the performance of each will need to be continuously assessed.

The Role of the National Laboratories in Cooperative R&D.—As a result of the major changes now taking place in the world, there are new opportunities to redeploy the Nation's national security R&D assets in support of broader objectives. In particular, the government's National Weapons Laboratories, which have historically been at the forefront of the development of advanced defense-related technologies, could make significant contributions to advanced generic technologies for a broader range of government and commercial applications. The National Laboratories could serve as catalysts in the formation of new, industry-led consortia that could make important technical contributions in a variety of the applied R&D areas discussed in this chapter. In this way the U.S. economy may benefit and receive additional return from the investments which have been made developing defense technology.

The National Laboratories already have a solid base of expertise in a number of critical technology areas, including biotechnology, advanced materials including both semi- and superconductors, advanced manufacturing, high performance computing including massively parallel processing, and advanced optical technologies, including flat panel displays. The R&D programs of the National Laboratories are discussed further in the section on "Maintaining National Security" later in this chapter.

Other Technology Policy Activities.—The technology policy principles embodied in the 1991 budget are, in part, an outgrowth of the U.S. Technology Policy statement issued in September, 1990 by the Office of Science and Technology Policy. To further assist in the development and implementation of this policy, the budget proposes $1 million for the Critical Technology Institute (CTI). The CTI, a new Federally-funded research and development center, will undertake studies and analyses that can assist Federal agencies in determining whether increased investments in these technologies will serve both agency mission needs and broader national needs. Together with funding provided in prior years, a total of $7.6 million will be available to the CTI in 1992 and 1993.

In addition, the budget proposes $6 million, an increase of 32 percent, for the Technology Administration within the Department of Commerce. This Administration was established in 1990 in recognition of the importance of technology to the Nation's long-term competitiveness and the need to integrate and manage numerous Department of Commerce technology functions. The enhanced budget will allow the Technology Administration to pursue more aggressively its efforts to coordinate Federal programs and actitivies which facilitate commercial application of existing and emerging technologies. In addition, it will allow the Technology Administration to enhance its efforts to stimulate greater co-

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operation among private sector entities with the aim of fostering better quality and higher productivity in U.S. manufacturing.

Budget Initiatives in Applied Research and Development

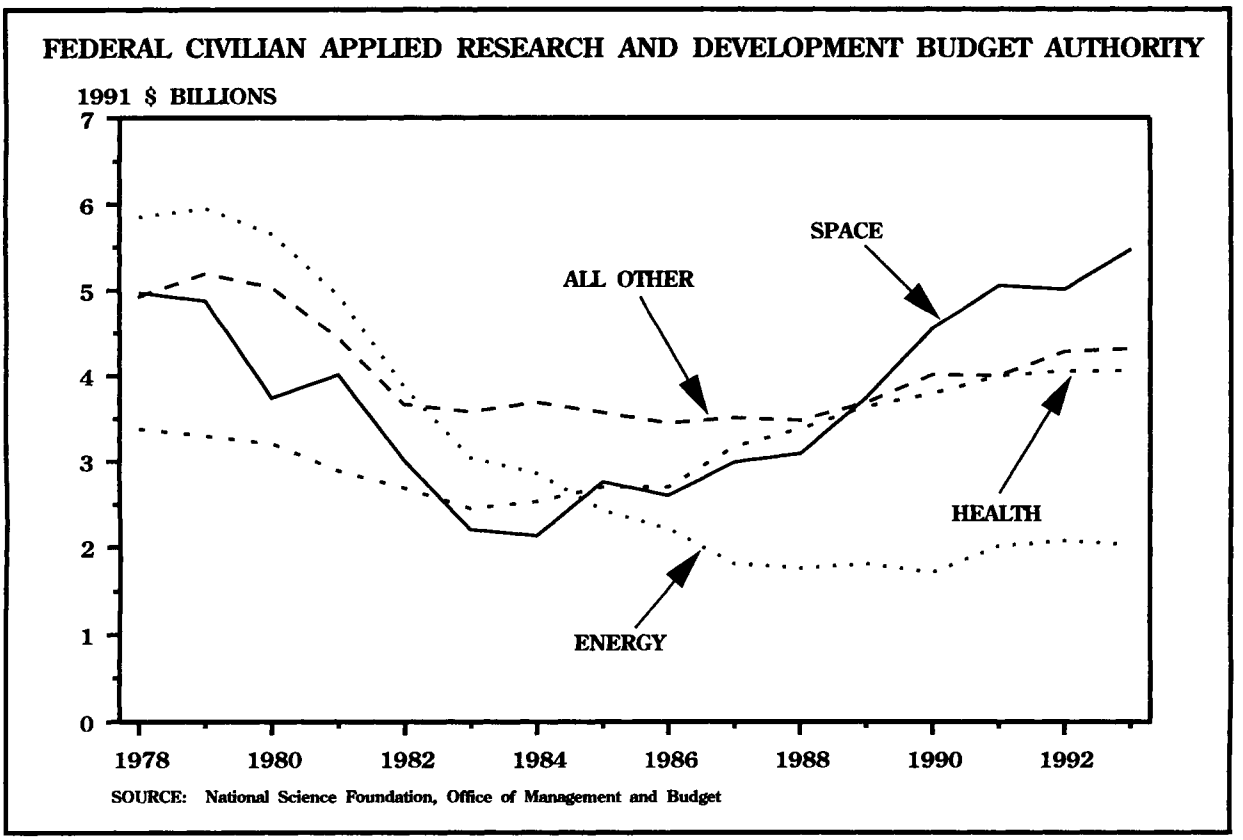
High Performance Computing and Communications.—The budget proposes $803 million for the second year of the High Performance Computing and Communications (HPCC) program. Planning and execution for this program has proceeded through nine participating Federal agencies working under the Federal Coordinating Council on Science, Engineering and Technology (FCCSET). The HPCC program focuses on the underlying research and the human talent needed to develop and apply the next generation of supercomputer systems (including hardware, software, and networks).

The goal of the HPCC initiative is to meet, by 1996, the needs of Federal research agencies to investigate and understand a wide range of fundamental scientific and engineering "grand challenge" problems: forecasting severe weather events; solving the molecular riddle of the genome; predicting new superconducting materials; minimizing air pollution; designing better aircraft; improving energy conservation; designing and packaging new computer chips; understanding and predicting global change.

Achieving this goal will require a 1,000-fold improvement in computing capability and 100-fold improvement in communications. These advances will also permit the private sector to "leap frog" over the otherwise incremental improvements in supercomputers and networks.

Investments in research and technology development are planned in four HPCC program components:

- *High Performance Computing Systems (Hardware):* Development of the underlying technology required for scalable parallel computer systems capable of sustaining trillions of operations per second on large projects (a thousand-fold improve-



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Table 6–3. **THE BUDGET INCLUDES INITIATIVES IN SEVERAL KEY AREAS OF APPLIED R&D**

(Dollar amounts in millions)

Initiative	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
High Performance Computing and Communications ...	N/A	655	803	+148	+23%
Advanced Materials and Processing	N/A	1,659	1,821	+162	+10%
Biotechnology Research	N/A	3,759	4,030	+271	+7%
Energy R&D	397	774	914	+140	+18%
Moving Fusion Energy from a Science to Engineering	347	337	360	+23	+7%
Advanced Manufacturing R&D (non-defense)	N/A	252	321	+69	+27%
Improving the Efficiency of the Transportation Sector through Technology	802	1,224	1,433	+209	+17%
Protecting the Public Health: Health Research and Disease Prevention	3,482	4,757	4,849	+92	+2%
Expanding R&D at the National Institutes of Standards and Technology	159	247	311	+64	+26%
Space Technology	256	273	305	+32	+12%

ment in computing capability). These systems will be the bases for the commercial supercomputers and workstations of tomorrow.

- *Advanced Software Technology and Algorithms (Software):* Development of generic software technology and algorithms for grand challenge research applications to realize the performance potential of high performance computing systems in a networked environment. This component recognizes that software improvements have increased computational performance much more than have hardware components.
- *National Research and Education Network (Networks and Communications):* Upgrade of the existing federally supported networks to provide distributed computing capability to research and educational institutions and further advanced research on very high speed gigabit (billion bit per second) networks and applications. Ultimately, this technology will be the foundation for sophisticated commercial networks.
- *Basic Research and Human Resources (Research/Training):* Support long term basic research, increase the number of students in computational science, and transfer technology for industrial grand challenge applications.

In the first year of operation, the HPCC program has realized several notable technical and programmatic achievements. Major new scalable high performance computing systems have been announced and delivered. New software applications have been developed for emerging high performance systems. Traffic on the network has doubled in the past year, as has the number of interconnected local and regional networks. Participating Federal agencies have begun solicitation to fund high performance computing research groups, centers, and consortia on various grand challenge problems, and a large number of researchers, scholars, students, scientists, and engineers have been trained to use these emerging new technologies.

Moreover, additional substantial advice and recommendations have come from various industrial, professional, and scientific organizations such as Educom, representing numerous universities, and the Computer Systems Policy Project (CSPP), representing leading U.S. computer companies. As an example of the dynamism and flexibility of the HPCC

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program, many of the CSPP recommendations presented in December 1991 are already being incorporated into the program. The CSPP has noted that the HPCC program is a significant, critical and necessary undertaking by the Federal Government, and have provided four valuable recommendations:

- *Expand the vision of the HPCC to include research on generic, enabling technologies to support a wider range of applications such as better health care, lifelong learning, improved services for senior citizens, enhanced industrial design, and broad access to public and private databases.* In recognition of the importance of these applications, the program is investing in many of the supporting advanced technologies such as open scalable systems, portable software, mass data storage, and advanced network protocols. In addition, the HPCC program is also providing opportunities for industry and academia to propose specific grand challenge applications such as those listed above.
- *Establish a technology and policy foundation for an information and communications infrastructure for the future.* To address this issue, the Federal Networking Council, an interagency coordination group that supports the National Research and Education Network, has formed a policy committee to address critical network issues such as security and privacy, intellectual property rights, and network access, interoperability, and technology transfer.
- *Improve management and governance of the HPCC program and increase opportunities for industry participation.* To improve management in the near term, the HPCC program will strengthen its current management structure. This should provide a clearer emphasis on implementation of policies and plans, enable monitoring of progress towards goals and objectives, better satisfy Congressional reporting requirements, and serve as a single point-of-contact for industry, academia, and other government agencies. Over the coming months, the Administration will be exploring new management approaches that might bring better coordination and accountability to the program. To improve technology transfer, the Department of Energy is supporting the development of a model Cooperative Research and Development Agreement (CRADA) that will ease significantly the exchange of computing technology between private industry and government laboratories.
- *Reorder the HPCC budget priorities to achieve a more balanced program.* In response to this recommendation, the budget proposes the largest dollar increase ($68 million) of any of the HPCC program components for software research. The program will continue to support basic research, generic technologies, and broad applications, but will work in the coming year to achieve the appropriate funding balance between software research and computer equipment and facilities.

The HPCC effort received added impetus in 1991 with the enactment of a multi-year authorization, the High Performance Computing Act of 1991 (Public Law 102–194). Passage of this legislation is yet another example of the broad national support for this program.

Advanced Materials and Processing Program.—The budget proposes $1,821 million, an increase of 10 percent, for a new interagency program to improve the synthesis, processing and performance of materials.

Everything is composed of materials. Faster, smaller semiconductor chips; flexible concrete skyscrapers; a biomaterial artificial hip; and strong, lightweight aircraft and spacecraft are but a few of the advances made possible through improved materials. New methods of preparing materials, virtually atom by atom, have become available in the past few years, which offer unprecedented opportunities for tailoring materials to meet the needs of society.

The Federal Government has long played a supporting role in materials science and engineering. The importance of strengthening the Federal commitment to materials R&D to take advantage of the unique scientific opportunities now present has been widely recognized. The National Critical Technologies Panel identified materials technology as one of six broad technology areas, and materials

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Table 6–4. **THE BUDGET PROPOSES A 23 PERCENT INCREASE FOR ALL ASPECTS OF HIGH PERFORMANCE COMPUTING**

(Dollar amounts in millions)

Description	Budget Authority			
	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Program Components				
High Performance Computing Systems	152	178	+26	+17%
Advanced Software Technology and Algorithms	278	346	+68	+24%
National Research and Education Network	92	123	+30	+33%
Basic Research and Human Resources	132	156	+24	+18%
Agency				
Defense (DARPA)	232	275	+43	+18%
National Science Foundation	201	262	+61	+30%
Energy	92	109	+17	+18%
National Aeronautics and Space Administration	71	89	+18	+25%
Health and Human Services	41	45	+4	+8%
National Oceanic and Atmospheric Administration	10	11	+1	+10%
Environmental Protection Agency	5	8	+3	+60%
National Institute of Standards and Technology	2	4	+2	+95%
Total, All agencies	655	803	+148	+23%

figure prominently in lists of key technologies prepared independently by the Departments of Defense and Commerce.

To address these opportunities and needs, a multi-year program involving 10 Federal agencies has been initiated within FCCSET to enhance R&D efforts in materials science and technology. The Advanced Materials and Processing Program (AMPP) will also focus increased attention on the interfaces between universities, government laboratories and industry, and on transferring technology from basic research to application.

The program targets four areas of materials science and technology for enhancement. The budget proposes to increase funding for: Synthesis and Processing of Materials by $65 million (9 percent); Theory, Modeling, and Simulation by $30 million (13 percent); Materials Characterization by $29 million (6 percent); and funds for Education and Human Resources in materials science and engineering by about $6 million (27 percent). Specific programs within these areas were selected for enhancement through a FCCSET interagency coordination and evaluation process. The evaluation criteria used in that process included technical merit, environmental/social merit, readiness, costs, and linkages to existing programs.

Over the course of the next year, the Federal agencies plan to work closely with the private sector to identify in more detail specific R&D priorities and to develop specific collaborative R&D programs.

Many of the programs cannot be assigned solely to specific classes of materials. Nonetheless, the classes of materials that will receive the largest increases in the budget proposal are: polymers ($10 million or 12 percent over 1992), ceramics ($18 million or 14 percent over 1992), composites ($24 million or 13 percent over 1992), biological materials ($21 million or 13 percent over 1992), and electronic materials, including semiconductors ($15 million or 9 percent over 1992).

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Table 6–5. **THE BUDGET PROPOSES A 10 PERCENT INCREASE FOR A NEW INITIATIVE IN ADVANCED MATERIALS AND PROCESSING**

(Dollar amounts in millions)

Description	Budget Authority			
	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Program Component				
Synthesis and Processing	683	748	+65	+9%
Theory, Modeling and Simulation	224	253	+30	+13%
Materials Characterization	474	503	+29	+6%
Education/Human Resources	21	27	+6	+27%
National User Facilities	257	291	+33	+13%
Agency				
Energy	603	678	+75	+12%
Defense	449	432	-17	-4%
National Science Foundation	266	319	+53	+20%
National Aeronautics and Space Administration	125	154	+29	+23%
Health and Human Services	77	82	+5	+7%
Agriculture	57	66	+9	+16%
Commerce	46	48	+2	+4%
Interior	25	24	-1	-4%
Transportation	9	16	+7	+76%
Environmental Protection Agency	3	4	+1	+33%
Total, All agencies	1,659	1,821	+163	+10%

Biotechnology Research.—Biotechnology is a set of powerful tools that can ultimately lead to products for conquering disease, easing world hunger and reducing pollution. Broadly defined, biotechnology includes any technique that uses living organisms to make or modify products, to improve plants or animals, or to develop microorganisms for specific use (Office of Technology Assessment, 1984). New biotechnology involves recombinant DNA, DNA transfer techniques, macromolecular structure, and bioprocessing, among other fields.

If projected technical advances are realized, the effect of biotechnology on society and the economy is likely to be dramatic. In 1991, according to a report by Ernst and Young, sales of biotechnology products approached $4 billion and sales are expected to increase to over $50 billion during the next ten years. Not only are new vaccines and drugs being developed, but biotechnology techniques have enabled the development of a new generation of methods for disease diagnosis including the genetic causes of disease.

Nationwide, hundreds of companies representing every industrial sector from agriculture to energy and manufacturing are using biotechnology to develop products and processes. Central to U.S. efforts in biotechnology is Federal support for research in scientific and engineering disciplines that will underpin future advances.

In early 1991, the President's Council on Competitiveness issued its "Report on National Biotechnology Policy." The report described three areas of concern: (1) science and technology; (2) risk-based regulation; and (3) a flourishing free market for biotechnology. The budget proposals are responsive to the Council's recommendations on science and technology. In the area of regulatory policy,

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the Council's Biotechnology Working Group considers proposals to remove unnecessary regulatory burdens by improving interagency coordination, streamlining the regulatory agencies' evaluation processes, and reevaluating regulations. Descriptions of Federal policies for the commercialization of food, animal, plant and microbial products will be published soon.

The budget proposes a total of about $4 billion for biotechnology research, an increase of $271 million or 7 percent over 1992. These resources will be contributed by 12 Federal agencies with biotechnology programs in a number of research areas as part of a set of FCCSET coordinated programs. A number of these programs are new and their various foci provide evidence of the growing and diverse applications of different biotechnology techniques. Examples of these programs include: biological sensor technology (funded by Defense) to improve threat detection at sea and drug interdiction efforts; conservation and renewable energy research (funded by Energy) to develop cost-effective biofuels; forensic DNA analysis for identification and testing (funded by Justice) to develop reliable and valid methods for conducting DNA profiling; and engineering research in the areas of bioprocessing and applied biotechnology (funded by NSF).

Coordination of agency programs maximizes the effectiveness of the total Federal effort. For example, nine agencies have existing programs in environmental biotechnology and eight have existing programs in manufacturing/bioprocessing. These programs have been developed in response to individual agency missions and, although they are largely complementary rather than duplicative, their independent existence indicates the need for enhanced interagency coordination.

While the first effects of biotechnology R&D have been felt in the areas of human health and disease, the impact of biotechnology will also soon be felt in many areas besides health. The next decade will see unprecedented applications of different biotechnology to agriculture and aquaculture, the restoration and protection of the environment, and the production of chemicals and fuels.

- *Environment.*—Biotechnology products hold great promise for environmental restoration and protection. The budget proposes $83 million for research on environmental biotechnology, a 20 percent increase over 1992. Environmental biotechnology research has a direct and fundamental role in developing applications like bioremediation, biorestoration and development of other environmental diagnostics. Examples of recent developments in this field include the engineering of microorganisms that degrade specific toxic organic chemicals and others that emit visible light signals when they encounter specific chemicals in the environment.

- *Manufacturing/Bioprocessing.*— Industry is just beginning to apply biotechnology to a wide spectrum of manufacturing processes. Biotechnology research in manufacturing/bioprocessing is likely to have increasingly important applications to the manufacture of pharmaceuticals, food-related products, chemical feedstocks, fuels, and a variety of novel products such as biomolecular materials. Modern bioprocessing is able to achieve economically efficient manufacture of many desirable products by using renewable resources and biocatalysts that minimize energy consumption and reduce waste products. The budget proposes $124 million for manufacturing/bioprocessing research, an increase of 25 percent over 1992.

- *Health.*—The basic science and health components of biotechnology represent a powerful driving force in health care technologies today. Earlier basic research on recombinant DNA (rDNA) has already come to fruition. The first generation of rDNA drugs included proteins such as insulin and white blood cell stimulators. The near future may see the use of animals as factories to produce large quantities of these proteins at lower cost. It is now possible to use these techniques to make biomaterials such as synthetic collagen to preserve liver cells in a matrix, thus creating alternatives to whole organ transplants for liver failure. A better understanding of the molecular basis of disease will lead to the identification of specific

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targets for disease intervention. The budget proposes nearly $1.7 billion in this area, an increase of $86 million or 5 percent.

- *Agriculture.*—Agricultural biotechnology research is applicable to food, feed, fiber and forestry production. While USDA has the primary responsibility within the Federal Government, seven other agencies support agricultural biotechnology research. Traditional biotechnologies have been practiced in agriculture since the beginning of civilization to improve plants and animals. New techniques vastly expand this potential. However, the knowledge base for application of modern biotechnology to plants, animals and microbes of agricultural significance has not been put to commercial use to the same degree as that for human health and medicine. Agricultural techniques now exist to produce better quality food and fiber, foods with higher nutrient content, crops and animals with greater tolerance to stresses, and better soil productivity and waste management. The budget proposes $208 million in this area, an increase of $17 million or 9 percent.

- *Energy.*—Decreasing petroleum reserves, coupled with increasing consumption, have made this country increasingly dependent on imported oil. The National Energy Strategy promotes conservation and the development of alternative energy resources. Biotechnology offers one key to such development through the use of products from plants and microorganisms. Energy-related biotechnology research is aimed at developing methods to produce and convert biomass (cell wall material of plants) to liquid fuels and chemical feedstocks, enhance petroleum recovery, and convert coal into environmentally benign fuels. The increased use of biological systems for energy will maximize the efficient and economic use of both renewable and fossil resources. The budget proposes $107 million, an increase of $27 million or 33 percent.

The Future.—The Federal investment in biological research of the past thirty years has contributed to the foundation for today's strong biotechnology enterprise. The U.S. is currently poised to exploit the promise of biotechnology. During 1993, the Federal Government will continue to coordinate and encourage research into unexplored areas and identify areas of opportunity for Federal investment.

Advancing New Energy Technologies.—A major element of the Administration's National Energy Strategy (NES) continues to be increasing investment in energy technology R&D. The budget proposes $914 million, an increase of $140 million or 18 percent, for increased investments in R&D in support of the Administration's NES R&D initiatives.

The Department of Energy's (DOE) NES related R&D strategy is intended to foster a results-oriented approach, based on the following key elements:

- an emphasis on R&D areas that, if successful, could lead to significant reductions in U.S. oil vulnerability;

- selection of R&D areas based on high R&D payoff potential, i.e., the potential to achieve significant cost and performance improvements;

- a comprehensive, interagency R&D program that includes both technology enhancements, e.g., more efficient engines, and more fundamental system changes, e.g., the potential for high speed rail and Maglev systems to displace automobile and air travel (rail and highway transportation systems are discussed later in this chapter in the section on Transportation R&D);

- a collaborative, cost-shared approach to research in applied areas where private industry ultimately will be responsible for the commercialization of the technology. This approach is intended to involve industry more in R&D planning and management to obtain significant cost sharing, with the research performed by industry or universities (except in situations where Government labs, such as DOE's National Laboratories, have unique research and testing capabilities). DOE encourages Government-assisted R&D consortia when they meet the criteria outlined earlier in this chapter.

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Table 6–6. THE BUDGET PROPOSES A 7 PERCENT INCREASE IN FEDERAL INVESTMENTS IN BIOTECHNOLOGY

(Dollar amounts in millions)

Description	Budget Authority			
	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Program Component				
Research Areas	3,759	4,030	+271	+7%
Agriculture	191	208	+17	+9%
Energy	80	107	+27	+33%
Environment	69	83	+14	+20%
Manufacturing/Bioprocessing	99	124	+25	+25%
Health	1,594	1,680	+86	+5%
General/Foundations	1,418	1,500	+82	+6%
Social Impact Research	9	9	—	—
Infrastructure	301	320	+19	+6%
Agency				
Health and Human Services	2,963	3,125	+162	+6%
(National Institutes of Health)	(2,801)	(2,944)	(+143)	(+5%)
Agriculture	179	168	-11	-9%
National Science Foundation	174	206	+32	+18%
Energy	182	243	+61	+34%
Veterans Affairs	86	90	+4	+5%
Defense	81	87	+6	+7%
National Aeronautics and Space Administration	37	45	+8	+22%
Agency for International Development	21	31	+10	+48%
Environmental Protection Agency	16	18	+2	+13%
Commerce	13	13	—	—
Interior	5	5	—	—
Justice	2	2	—	—
Total, All agencies	3,759	4,030	+271	+7%

DOE estimates that the NES R&D Initiative can be expected to lead to reductions in oil consumption by the year 2030 of 5–8 million barrels per day, depending on the success of the proposed R&D programs.

The NES initiatives include:

- *Electric and Hybrid Vehicles.* On October 25, 1991 the President and members of the U.S. Advanced Battery Consortium (USABC) announced a jointly-funded, four year, $260 million research effort to develop a new generation of batteries that would enable electric vehicles to be widely available within the next 10 years. These improved batteries could improve the practicality of electric cars by extending their range up to 120–200 miles. In 1993, proposed DOE funding for the second year of the USABC and supporting battery research is increased by 56 percent to nearly $42 million. The Federal investment will be matched on a 50:50 basis by the private sector.

The budget also proposes funding for the creation of a new Government-industry R&D consortium for hybrid vehicle propulsion technology. This new generation of vehicles would use combinations of battery technology with other systems such as fuel

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Table 6–7. **THE BUDGET PROPOSES AN 18 PERCENT INCREASE FOR NATIONAL ENERGY STRATEGY R&D INITIATIVES**

(Dollar amounts in millions)

Initiative	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Displacing Oil in the Transportation Sector	171	326	464	+138	+42%
Surface and Air Transportation Efficiency	121	226	299	+73	+32%
Electric/Hybrid Vehicles R&D	14	43	75	+32	+74%
Improved Vehicle Propulsion Technology	33	40	44	+4	+10%
Intelligent Vehicle/Highway Systems R&D	0	28	38	+10	+36%
High Speed Rail/Magnetic Levitation	0	20	28	+8	+40%
Energy Efficient Air Traffic Control R&D	24	32	46	+14	+44%
Energy Efficient Aeronautics R&D	50	63	68	+5	+8%
New Fuel Sources	50	100	165	+65	+65%
Fuels from Biomass	13	35	46	+12	+35%
Alternative Fuel Utilization	2	17	32	+15	+88%
Advanced/Enhanced Oil Recovery	24	37	47	+10	+27%
Natural Gas R&D	11	12	40	+28	+233%
Increased Energy Efficiency in Buildings and Industry	64	146	160	+14	+10%
Targeted Industrial Energy Efficiency R&D	30	97	105	+8	+8%
Targeted Buildings Energy Efficiency R&D	34	49	55	+6	+12%
Advanced Electricity Technology	162	302	290	−12	−4%
Photovoltaics	35	60	64	+4	+7%
Superconductivity R&D	22	21	22	+1	+5%
Advanced Light Water Reactor R&D	26	63	59	−4	−6%
Advanced Reactor Concepts R&D	79	158	145	−13	−8%
Total, All activities	397	774	914	+140	+18%
Total, Energy	323	626	725	+99	+16%

cells or gas turbines. The effort will be aimed at producing technologies which lead to economical, environmentally friendly vehicles by the end of the century. If successful, it could also contribute to a technological and economic rejuvenation of the U.S. auto industry.

- *Improved Vehicle Propulsion Technology* through research on high temperature diesel engines and gas turbine engines. Conventional spark-ignited and diesel engines have efficiencies of up to 31 percent. Technologies are being developed, such as gas turbines, which could achieve efficiencies approaching 40 percent.
- *Advanced Transportation Fuels from Biomass* research programs will demonstrate use of industrial and agricultural waste feedstocks, including woody materials, to produce alcohol fuels on a scale which can verify the technology and its commercial costs. The production of ethanol from food crops is currently not cost effective without substantial Federal tax subsidies. The goal of this R&D initiative is to get the production cost of ethanol from non-food crops down to levels that are competitive with current fuels. In 1993 DOE will expand its research effort to include more industry involvement in order to study advanced conversion technologies. Additionally, DOE has signed a cooperative research and development agreement (CRADA) with a major oil company to demonstrate the economics of ethanol production from industrial waste.

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- *Alternative fuels utilization* will continue vehicle testing activities that will provide the information to facilitate greater use of alternative fuels. In addition to this testing program, in 1993 the Department of Energy is requesting $15 million for the purchase of alternative fuel vehicles by Federal agencies. These funds will be used to pay for the incremental cost of the vehicles. Several thousand vehicles for Government use are expected to be purchased, thus helping to create "market pull" for U.S.-manufactured, alternative-fueled vehicles.

- *Advanced/Enhanced Oil Recovery Technologies* research will improve reservoir understanding to better target oil drilling and develop better instrumentation, chemical injectants and reservoir interpretation techniques. Currently, up to two-thirds of oil resources remain in the ground after conventional production is completed. It is estimated that up to 3 million barrels per day in incremental production could be recovered through advanced/enhanced recovery techniques by the year 2010. In 1993, DOE will increase NES-related advanced oil recovery research to nearly $47 million, more than 25 percent over 1992.

- *Natural Gas Research and Development* will increase substantially in 1993, emphasizing advanced production and extraction from conventional reservoirs and improved utilization technologies. The NES concluded that expanded use of domestically abundant and environmentally acceptable natural gas resources could increase energy security and improve the environment. The new gas program will speed achievement of these goals by focusing on the recovery of the resource and developing ultra high efficiency technologies for its consumption. DOE will increase funding for gas-related R&D to $40 million, over 230 percent above 1992.

- *Energy Efficiency in Buildings and Industry* can be improved by developing advanced technologies. The industrial and building sectors account for about two-thirds of all U.S. primary energy consumption. DOE's R&D efforts are aimed at assisting the building sector in developing advanced technologies in lighting, heating and cooling, e.g., solar heating and lighting, advanced heat pumps, and more efficient lights, as well as to assist industry in developing advanced industrial processes which reduce both waste streams and energy use. Building and industry-related R&D is proposed to increase to $160 million, or 10 percent over 1992.

- *Photovoltaic Research* will continue to advance efforts to increase the cost-competitiveness of photovoltaic (PV) systems. Past research by industry and DOE has enabled today's PV systems to compete successfully with primary batteries, small engine generators, and utility line extensions in many remote applications. In 1993, $64 million is requested, an increase of 7 percent over 1992, to help U.S. industry develop photovoltaic technology and systems, particularly those materials and devices that will reduce electricity generation costs and serve a growing energy market in the process.

- *Advanced Light Water Nuclear Reactors* research will continue in 1993 to develop passive safety features in a standardized design. This will reduce the time needed to license new plants, while assuring that safety issues are adequately addressed. The Department of Energy is also using existing funds to continue first-of-a-kind engineering work that will assist companies in their efforts to achieve safety of new standardized designs that will meet the requirements of the Nuclear Regulatory Commission.

- *Advanced Reactor Concepts* will have safety features that go beyond the standardized designs currently before the Nuclear Regulatory Commission. High Temperature Gas Cooled Reactors use specially-coated fuel elements that will not fail even under the high temperatures that could occur during an accident. Liquid metal reactors use liquid sodium as the heat exchange medium. Researchers have demonstrated that both reactor types can shut themselves down safely under conditions that would be extremely serious for present-day reactors. The Department of Energy continues R&D support for both

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of these advanced concepts. In addition, the budget provides funding for DOE to continue its assistance to university nuclear engineering departments and students by providing fellowship and scholarship support.

The NES R&D initiatives are supported by increased investments in related areas of basic research. Basic research in areas such as advanced materials, superconductors, geo- and biosciences, and catalysis research will be continued in 1993.

The NES R&D initiatives encompass a broad range of new technologies that would permit the more efficient use of energy, or the substitution of petroleum with other energy sources. While these advances have the potential to make significant improvements in the Nation's energy secruity, it should be recognized that other significant, even larger, improvements can be achieved through more fundamental system changes in the transportation sector. Several of these changes, such as development of maglev and high speed rail as an alternative to air and surface transportation and improvement in airspace management are discussed elsewhere in this chapter and in Chapter 7, "Improving the Transportation Infrastructure."

In addition, other changes, such as telecommuting, offer great energy savings potential. The Federal Government, and others, such as the State of Washington, are experimenting with the use of telecommuting centers as alternative worksites to reduce commuting. Currently, about 50 percent of total U.S. vehicle miles traveled (VMT) is work-related, and there are estimates that telecommuting may be possible for about 46 million persons. The energy savings potential of telecommuting is enormous. For example, a 50 percent reduction in the miles traveled by a single individual represents the equivalent of a doubling of the fuel efficiency of his or her vehicle.

Moving Fusion Energy From Science to Engineering.—Fusion energy offers the potential to be a clean, plentiful fuel for the production of electricity for the longer term. Fusion is expected to be more environmentally benign relative to fission or fossil sources of electricity. The development of fusion as a power source is an important part of the National Energy Strategy.

The budget proposes $360 million for fusion, an increase of nearly 7 percent over 1992. Funding is included for conceptual design and R&D on a small tokamak experiment at Princeton University to understand basic physical principles of fusion. Much of the increase will support the strong U.S. commitment to the International Thermonuclear Experimental Reactor. This 6-year collaboration among four equal partners (U.S., European Community, Japan, and Russia) is a model for international cooperation in science and technology. Such a joint project has the advantages of sharing knowledge and personnel, reducing the financial burden for each party, and optimizing the use of special facilities and capabilities for the common goal of achieving energy from fusion.

Enabling New Products and Processes—Advanced Manufacturing R&D.—The budget proposes $1.1 billion for advanced manufacturing R&D, a key enabling technology. This includes an increase of over 27 percent for nondefense related manufacturing R&D. For the purposes of this initiative, advanced manufacturing R&D includes activities within two broad areas: (1) efforts designed to use technology to improve the efficiency or quality by which a product is brought from design to completion; and (2) activities directed at expanding the technical capability to bring a product (which is new and fundamentally different in character from existing products) from design to completion.

In an effort to focus on those programs which are exclusively devoted to manufacturing R&D, the budgetary resources shown for Advanced Manufacturing R&D exclude funding for projects included in other crosscutting efforts (e.g., Advanced Materials and Processing). As a result, these resources cannot be directly compared to resources reported for Advanced Manufacturing in the 1992 budget (which included all manufacturing-related R&D).

Improvements in U.S. manufacturing technology can increase productivity and quality, leading to new or more competitive products. While industry has the central role in R&D to improve manufacturing technology, an ap-

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propriate role in such R&D exists for the government as well. The Federal role in advanced manufacturing R&D lies in supporting (1) generic manufacturing technologies which have broad applications and (2) those technologies which are directly applicable to the procurement needs of government programs.

The budget proposes increases for several agencies, including a $25 million increase, to a total of $105 million, for the National Science Foundation for a new manufacturing R&D effort that will focus on the next generation of manufacturing systems. The results of this research will shift the present focus on automating and linking separate mechanical components to integrating entire new systems based on advanced computers and information technologies (e.g., sensors, visualization, information management systems, artificial intelligence, networks). This research will be conducted in concert with industry and other Federal agencies and will develop several state-of-the-art manufacturing experimental testbeds for research, education, and training. The budget also proposes a $27 million increase for manufacturing R&D at the National Institute of Standards and Technology. This increase will be devoted to generic manufacturing R&D such as development of standards for electronically communicating the design of products. In addition, a portion of the increase for NIST will provide matching funds for industry-led and performed R&D projects.

In addition, the Federal agencies have undertaken a new initiative to exchange manufacturing R&D information with industry, and to improve coordination of government-industry efforts. The initial step was a conference held in December, 1991 on Intelligent Processing Equipment. Other conferences are planned for 1992 in flexible computer integrated manufacturing; micro- and nanofabrication; and systems management technologies.

Improving the Efficiency of the Transportation Sector through New Technologies.—With increasing demands on the nation's highways and at airports, and with the high cost of building or expanding new facilities, the Federal Government is concerned with stimulating transportation technologies that can alleviate the burdened infrastructure. In addition, new transportation technologies offer significant opportunities to move people and goods more efficiently, reducing petroleum consumption.

Two agencies, the Department of Transportation (DOT) and the National Aeronautics and Space Administration (NASA), support the majority of transportation-related R&D. DOT's programs span the modes of transportation, both ground and air. NASA's aeronautics program focuses on research and technology for both civilian and military aircraft. The budget proposes a total of $1,433 million for both agencies, $498 million for DOT and $855 million for NASA, an overall increase of 17 percent, for transportation R&D activities.

Department of Transportation—The budget proposes $498 million, an increase of 12 percent, for all of DOT R&D. The *Federal Aviation Administration* (FAA) funds research to improve airport and airspace utilization. FAA research includes projects to explore and define the next-generation of aviation technologies, including the use of satellites in aviation navigation and communications. Nearer-term projects include research to determine if the separation between two heavy class aircraft from the current 4 miles can be reduced to 3 miles to increase efficiency without a degradation of safety. FAA is also conducting research aimed at improving communications with oceanic aviation traffic. With better oceanic communications, air traffic controllers could allow more wind efficient traffic patterns, saving time and fuel and improving safety. FAA will also emphasize energy-efficient air traffic control R&D as a part of the national effort to modernize the air traffic control system. The budget proposes $254 million for FAA R&D.

Intelligent Vehicle/Highway Systems (IVHS) are intended to increase highway safety, reduce congestion and decrease highway fuel consumption. IVHS uses state-of-the-art electronics, communications, and computer technology to improve traffic control systems, warn drivers of dangerous situations, and generally make more efficient use of the existing road system. IVHS can reduce conges-

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tion, improve traffic flow, reduce idling at traffic signals, and allow drivers to choose more efficient routes to their destination. The Department of Energy National Energy Strategy analysis showed that actual on-the-road fuel economy can be significantly lower than the theoretical potential due to congestion. A study by Mobility 2000, an expert group of Federal and State highway officials and corporate and academic technical experts, estimated that IVHS has the potential to save up to 20 million gallons per day of gasoline. The budget proposes a total of $138 million including $38 million for R&D, and $100 million for demonstration projects in this area.

High speed rail and Maglev systems offer opportunities to displace automobile and air travel with a concomitant increase in efficiency. A particularly promising technology is magnetic levitation trains, or "maglev." Current efforts include investigations into the economic and technical feasibility of maglev and the safety of maglev and high-speed rail. Maglev trains move above a guideway, supported and guided by powerful magnets and can achieve speeds of up to 300 miles per hour. In 1992, $20 million was provided to DOT and the Army Corps of Engineers for maglev and high-speed rail R&D. The budget proposes $28 million ($15 million for DOT and $13 million for the Corps of Engineers), an overall increase of 40 percent, for maglev and high-speed rail R&D.

National Aeronautics and Space Administration—The goal of NASA's aeronautics research and technology program is based on a strategy that calls for developing a broad technology base in support of the commercial aviation industry; enhancing the safety and capacity of the national airspace system; and helping assure U.S. aeronautical superiority for national security. Aeronautics R&D has traditionally been a highly successful close cooperative effort between the Federal Government and the private sector.

The budget proposes $855 million for aeronautics R&D (excluding High Performance Computing and Communications), an increase of 13 percent over the 1992 enacted level. Work in focused high-speed research will expand its emphasis on enabling propulsion materials necessary to develop future aircraft. In addition, the budget proposes increased funding for a program focused on advanced subsonic aircraft. This program will develop nondestructive evaluation technology to help ensure the safe operation of aging transport aircraft now in operation and will also provide the technology base for application by industry and certification by the FAA of fly-by-light and power-by-wire control systems.

In addition to the work proposed above, the budget proposes $80 million as NASA's share of the joint NASA/Defense National Aerospace Plane Program (NASP). Defense will provide $180 million in 1993. This program is focused on development of hypersonic technology, leading to a future decision on a flight research vehicle, the X–30 that can demonstrate airbreathing single-stage-to-orbit performance. The NASP industry contractors are uniquely organized under a joint-venture partnership that will permit technical innovation to be shared and will ensure a broad industrial base for future hypersonic programs. This singular focus has permitted relatively fast-paced advances in key enabling technologies such as air-breathing propulsion, advanced materials, actively cooled structures, dense fuel, and computational fluid dynamics.

Protecting the Public Health Through Biomedical and Behavioral Research

Federally supported research has helped Americans live longer, healthier lives by improving the quality of medical practice and by developing new preventive measures. The U.S. leads the world in biomedical research. Both the pace of new discoveries and America's continued dominance of scientific Nobel prizes attest to that pre-eminence.

The budget assures that the next generation will reap similar benefits by seeking substantial increases in the country's investment in basic and applied biomedical and behavioral research and development. In the Department of Health and Human Services alone, this increase amounts to $433 million, or 4 percent, over 1992 funding levels to a total of $10.6 billion.

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Advances in biomedical and behavioral research can improve the quality of health care while helping to control health care costs. One example is the research-induced changes in medical practice which reduced coronary heart disease death rates and the duration of heart diseases-related hospital stays—saving hundreds of thousands of lives and billions of dollars. Current path-breaking research, such as the human gene therapy experiments conducted at the National Institutes of Health (NIH), proffers the hope of similar advances in human health and cost efficiency in the future. Research at the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) into the causes of human addiction to drugs and alcohol offers hope of finding ways to reduce the human and societal toll caused by substance abuse.

The Federal investment in basic and applied biomedical and behavioral research is large. In total, the budget proposes $10.6 billion for the Department of Health and Human Services, an increase of 4 percent over 1992. While $5.8 billion of this research is basic, $4.8 billion is invested in applied research and development. The applied research and development helps ensure that basic research discoveries are translated into marketable therapies. Indeed, NIH funding of clinical trials, through which promising new therapies, preventive interventions and cures are examined for safety and efficacy, will total over $830 million in 1993. For example, since pharmaceutical companies traditionally have been slow to develop medications for substance abuse, the budget contains a $64 million initiative for medications development in ADAMHA, a 13 percent increase over 1992.

This Federal investment in biomedical and behavioral research has increased as a proportion of GDP from 0.12 percent in 1970 to an estimated 0.17 percent in 1993.

*NIH Strategic Plan.*During the past year, NIH has begun to develop its first long-range Strategic Plan, to be completed in the Spring of 1992. The Plan is focused on 15 promising areas of science that hold exceptional opportunities for future breakthroughs. The Plan will also address the major policy issues that relate to the efficient and responsible conduct of NIH-sponsored research. Broad public input is being sought on the Plan.

The Plan is not intended to direct the details of NIH-supported research, but rather to provide an overarching corporate framework—one that is dynamic and that can be changed in response to the extraordinary promise of future opportunities in biomedicine. It will help ensure that the promise of a healthier future for the citizens of tomorrow can be fully realized.

*Women's Health Initiative.*Three of the leading causes of death among women are cardiovascular disease, cancer and fractures related to osteoporosis. NIH has initiated a decade-long clinical trial to test three preventive approaches to reducing this toll through the adoption of low-fat dietary patterns, hormone replacement therapy, and calcium and Vitamin D supplementation. The budget proposes to increase this initiative by $20 million, or 80 percent over 1992.

In addition to testing the effectiveness of these therapies, the study will include an observational component to study the predictors of disease and a community trial to test strategies for organizing community resources to help individuals achieve healthy behaviors of established value, including smoking cessation and prevention, improved diet, increased physical activity, and early cancer detection.

The study, which will include a cross-section of American women of all races and economic levels, will give us scientifically validated advice for women, their physicians, and public health care workers concerning healthy behaviors and treatments, and ways of achieving these behaviors.

Relating Research Investments to Selected Diseases.—Although most HHS research funds are utilized for basic research which advances knowledge for combatting many diseases, some research can be loosely classified as related to one specific disease or another, as shown on Table 6–8. By comparing these data with the data in Table 5–14 in Chapter 5, it can be seen that this investment by disease roughly corresponds to the toll these afflictions take in terms of death, illness, and human suffering.

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Some have argued that a disproportionate share of health-related research dollars is being devoted to HIV/AIDS. It is true that spending per death from HIV/AIDS is high compared to that for heart disease, cancer, and stroke, the three leading causes of death in the country. HIV, however, often strikes early in life. More than 45 percent of AIDS sufferers are younger than 35, and a growing number are children. As a result, some suggest that research spending per year of potential life lost before age 65 for HIV and the three killer diseases is more comparable than that for spending per death, as shown in the following chart. In addition, a comprehensive assessment of relative funding levels must consider other factors, such as morbidity and quality of life. The chart also shows substantial investments in diabetes, a disease that is a major contributor to disability as well as the Nation's eighth leading cause of death.

Deaths and years of potential life lost attributable to the three major killers and diabetes are projected to grow, individually and collectively, by less than 5 percent over the 4 years between 1990 and 1993. In contrast, deaths and years of potential life lost due to HIV will increase much more quickly, rising by 30 to 80 percent. These projections further support the priority given to HIV research in the budget.

The Budget Includes a Major Investment to Confront Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS).—Since the greatest hope for devising better treatments, or even a cure or vaccines, for HIV/AIDS will come from advances in knowledge, the budget continues to place a priority on maintaining our investment in biomedical and behavioral research related to HIV/AIDS. As shown in table 6–9, governmentwide HIV/AIDS funding will increase by $565 million or 13 percent. This includes a 4 percent increase for research and a 20 percent increase for treatment.

The budget would enable the Nation to continue making progress in the battle against HIV/AIDS. Additional candidate therapies will be screened and tested, education programs will continue to discourage behaviors that lead to transmission of the virus, and treatment and income support funds will continue to be made available to those already afflicted. Indeed, the largest increase related to HIV/AIDS will come from Federal spending for Medicaid and Medicare, which are projected to increase by a total of 23 percent over 1992. Additional research and education are the best methods for ensuring that future generations will not bear so heavy a burden, and the budget, therefore, makes substantial efforts in these areas.

Expanding Civilian Applied R&D at the National Institute of Standards and Technology (NIST).—The budget proposes $311 million, an increase of 26 percent over 1992, for NIST. The R&D supported by NIST includes standards development and advanced measurement techniques, both of which are critical to improving product quality, enabling the effective use of new technologies, and en-

Table 6–8. **HHS RESEARCH FUNDING ATTRIBUTED TO SELECTED CAUSES OF ILLNESS**

(In millions of dollars)

Cause of Illness	Budget Authority	
	1992 Enacted	1993 Proposed
Cancer	1,984	2,042
Heart Disease	729	772
Stroke	94	100
Diabetes	279	292
Injuries	162	168
HIV/AIDS	1,164	1,211

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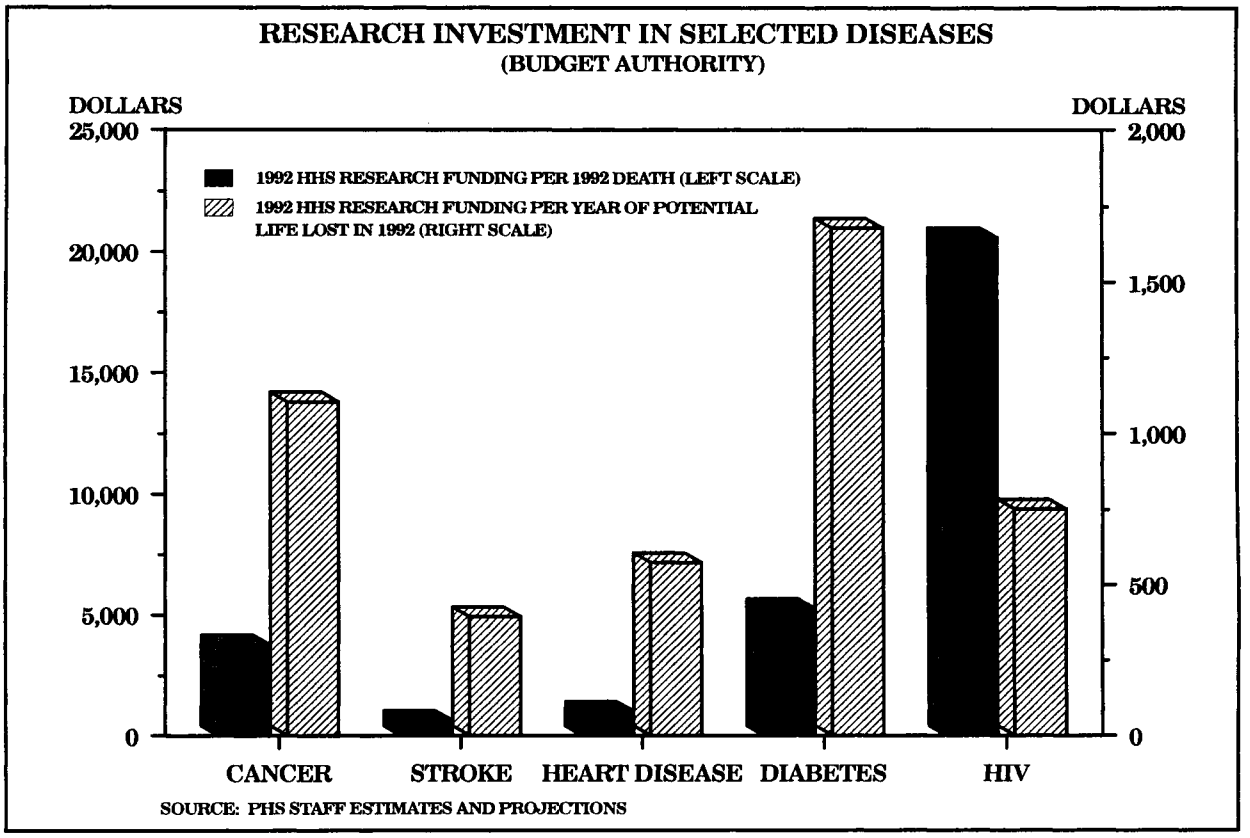


Table 6–9. THE BUDGET PROPOSES A 13 PERCENT INCREASE IN FEDERAL FUNDING FOR HIV AND AIDS [1]

(Dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
HIV/AIDS:					
Research	892	1,189	1,238	+49	+4%
Treatment	737	2,096	2,507	+411	+20%
Prevention	483	594	621	+27	+5%
Income Support	153	492	570	+78	+16%
Total [2]	2,265	4,371	4,936	+565	+13%

[1] These are preliminary estimates for programs in the Departments of Health and Human Services, Defense, Veterans Affairs, Education, Justice, State, Labor, and independent agencies. Total also includes estimated obligations for the Social Security Administration.

[2] In addition to the spending identified above, the budget includes other initiatives, most notably those related to drugs and infant mortality, that contribute to the fight against HIV and AIDS.

hancing public health and safety. In addition, NIST supports generic applied research and technology development, often in collaboration with industry, which has the potential to benefit the U.S. economy broadly. The budget proposal continues an effort begun in 1991 to expand NIST's ability to provide for generic applied research and technology development and to address a rapidly growing number of important standards and measurement issues.

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The R&D performed at NIST facilities covers a wide range of technologies including electronics, manufacturing, materials science, chemistry, physics and information systems. The budget includes $202 million, a 16 percent increase, for this in-house R&D. The research community and industry depend on NIST R&D for the precision measurement bases which form the foundation of R&D projects and industrial quality control. NIST transfers its metrology R&D to practical use through several means including sales of products, data and services. In 1991 NIST performed more than 11,000 calibration services and sold over 47,000 standard reference materials and 1700 standard reference databases (used by researchers and industry as a benchmark to calibrate their equipment). In addition, in 1991 NIST accredited 934 private laboratories to carry out specific types of tests in key areas of commerce, health and safety.

Due to the broad applicability to U.S. industry of NIST's metrology and other generic R&D, NIST often performs its research cooperatively with industry. Through 1991 NIST has signed over 150 cooperative research and development agreements and in 1991 received approximately $65 million in in-kind contributions from industry. Over 25 of NIST's agreements are with industry consortia that further increase the impact of NIST's R&D expenditures and highlight the generic nature of its research. While NIST emphasizes widespread dissemination of its research results, protection of intellectual property resulting from NIST R&D is frequently needed in order to facilitate commercialization of its research results through licensing agreements. Since 1989 NIST R&D has resulted in over 40 patent disclosures per year.

The budget proposes $23 million to maintain and refurbish NIST facilities, as well as to plan for the facility needs of the future. As a result of the technical obsolescence of many NIST facilities, experiments are often delayed or subject to costly reworking, and scientists often must accept levels of precision and accuracy below those desired. The budget provides for initiation of an architectural and engineering study and immediate amelioration of safety-related problems.

The budget also includes $68 million, a 36 percent increase, for the Advanced Technology Program (ATP). This program provides matching funds to U.S. business and R&D joint ventures for industry-led, generic, pre-competitive R&D. Projects must have the potential for a broad-based economic impact. In a broad sense, the goal of the program is to help make the transition between fundamental research and the more applied research and technology development that will enable commercialization of products and processes by the private sector. Many studies have suggested that, for a variety of reasons, U.S. industry often fails to make this transition effectively, and, thus, is often unable to commercialize technology as rapidly as competitors. While the ATP is still experimental, it is intended to stimulate increased R&D at the generic, pre-competitive stage, and, thus, holds promise for improving the ability of U.S. firms to compete in global markets. The increase will allow NIST to fund approximately 25 to 35 new projects in 1993 while continuing to monitor closely and evaluate the program's impact.

The NIST Manufacturing Technology Centers are intended to enhance U.S. competitiveness by transferring manufacturing technologies to small and medium-sized business. The budget proposes $18 million to support the continuation of the seven centers planned by the end of 1992. During 1992 NIST will contract for an in-depth study which will focus on how the centers should be structured to obtain the greatest leverage for Federal expenditures. Any decision on initiating new centers will be deferred until this study is completed.

Creating New Technology for Space and Earth: Space Technology. —A vigorous program to improve existing technologies and create new ones is essential for long-term progress in any major technological endeavor, but is particularly important in the space program. Reasons for this include the continuing need for new capabilities to support new missions and the long lead times needed to develop a new technology before it can be used with confidence in space. Consequently, the future success of the U.S. space program depends in part on near-term investments in a number of technological disciplines.

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There is considerable evidence that the funding of space technology activities has not kept up with the rest of the space program. Recent spending on space technology has fallen to 2 percent of the NASA budget in 1992 from the level of over 4 percent that was sustained throughout the 1960's. This trend was viewed with concern in the report of the Advisory Committee on the Future of the U.S. Space Program: "... unfortunately, NASA has not been permitted to sustain an adequate level-of-effort program in space technology due in recent years to externally imposed budget reductions. We believe that this is a consequence of a lack of appreciation of the key role that technology development plays in enabling future missions, reducing future systems' costs and increasing America's competitiveness."

To help remedy this deficiency, the budget proposes $305 million, an increase of 12 percent, for NASA space technology development that is not directly related to space exploration. The 1993 program emphasizes such areas as advanced materials, electronics and sensors, communications, life support, power, propulsion, and robotics. In addition, NASA is implementing a new strategic planning process to address more effectively space technology needs foreseen by potential users within NASA as well as in other government agencies and industry. The budget proposal is based on the results of the first cycle of this planning process.

Experience shows that technologies and products developed for the space program often find useful applications here on Earth in a wide variety of fields. Medical *Magnetic Resonance Imaging* uses image-processing techniques originally developed for analyzing data from earth observation satellites. Some *health monitoring equipment* in hospitals uses technology developed for monitoring crew health in manned space missions. A *low temperature laser* that opens clogged arteries without surgery is based on technology developed for satellite-based atmospheric studies. A *tornado detector* for homes was derived from NASA electronics research. *Fire resistant materials* originally developed for astronaut garments have found uses ranging from sheets and furniture in pressure chambers to protective clothing for race car drivers and their pit crews. A *lightweight shock-absorbing material* now used in some athletic shoes was originally developed for astronaut moon boots. A new *oil-saving seal* for automobiles uses synthetic rubber material developed for interplanetary spacecraft. A highly accurate *ice detection system* to prevent aircraft accidents and some *scratch-resistant coatings* for eyeglasses and cameras are also based on NASA research.

EXPANDING THE FRONTIER OF KNOWLEDGE THROUGH BASIC RESEARCH

Future innovation, productivity growth and economic performance depend on the constant creation of new knowledge.

As Vannevar Bush stated in "Science: The Endless Frontier":

> "New products, new industries, and more jobs require continuous additions to knowledge of the laws of nature, and the application of that knowledge to practical purposes. Similarly, our defense against aggression demands new knowledge so that we can develop new and improved weapons. This essential, new knowledge can be obtained only through basic scientific research.
>
> Science can be effective in the national welfare only as a member of a team, whether the conditions be peace or war. But without scientific progress no amount of achievement in other directions can insure our health, prosperity, and security as a nation in the modern world." [1]

Basic research provides new knowledge that leads to new products and processes. Basic research, especially at universities, is an essential investment in the Nation's scientific and technological future, including its future scientists and engineers. For this reason, the budget places a high priority on increasing basic research. In total, the budget proposes an increase of 8 percent, or $1 billion, above 1992 for Federal basic research support.

[1] Vannevar Bush. *Science, the Endless Frontier: A Report to the President.* U.S. GPO, July, 1945, p. 1.

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The strength of U.S. investment in basic research is illustrated by several recent achievements:

- Researchers at Stanford University have developed a miniaturized process using lasers to produce small-diameter fibers of high-temperature superconducting material. These fibers may be the precursor to superconducting wire needed for motor and magnet applications of high-temperature superconductors.
- Using a recently purified, naturally-occurring bone growth factor, scientists have succeeded in using muscle exposed to this factor to form bone in a mold. This opens the possibility, long dreamed of, that replacement bones in the precise shape needed by patients may one day be grown from muscle or other specialized tissues.
- Following on last year's success with the first-ever human gene therapy on a child with a severe genetic immune deficiency, NIH scientists have now used gene transplantation to initiate the first experimental gene therapy for cancer. A gene for a natural tumor-killing substance was inserted into white blood cells that are known to seek out tumors as a way of increasing the concentration of this antitumor substance at the tumor site.

The Vitality of Basic Research

Funding Trends.—The historical trend in Federal support for basic research shows that during the 1980s such support increased overall by 50 percent in real terms, with significantly larger increases in health-related basic research. Real support for basic research has continued to climb in the early 1990's, as a result of the increases recommended by the Bush Administration.

But as the Office of Technology Assessment (OTA) notes:

> "Given the extraordinary strength of the U.S. research system and the character of scientific research, there will always be more opportunities than can be funded, more researchers competing than can be sustained, and more institutions seeking to expand than the prime sponsor—the Federal Government—can fund. The objective, then, is to ensure that the best research continues to be funded, that a full portfolio of research is maintained, and that there is a sufficient research work force of the highest caliber to do the job."[2]

Measuring the Direct Economic Benefits.—Most basic research is performed in universities. Until recently, there has been no way to gauge reliably the impact of academic research on industrial innovation.

Research (Mansfield, 1991) carried out over the past two years has found that a significant proportion of new products or processes in several important sectors, including information processing, drugs, and instruments, would not have reached the market when they did without the contribution of academic research. Thus, the benefit of academic research appears to be considerable, even apart from its more traditional benefits to the education of students and to the acquisition of knowledge for its own sake.

Mansfield (1991) has estimated that the average annual social rate of return to past investments in academic R&D is about 28 percent. This finding, however, does not necessarily imply that investing more money in academic R&D will yield similarly high returns. Factors such as geographical proximity of interested industries and the strength of the research faculty in individual departments on individual campuses appear to play an important role, as noted in more recent unpublished work by Mansfield. A discussion of the specific contribution of academic institutions to the national R&D infrastructure appears later in this chapter.

Although support for university researchers is most often cited as the key indicator of the health of overall Federal support for basic research, a number of other measures have traditionally been used to measure research output (new knowledge). None of these are, by themselves, definitive indicators of the vitality of research, and none are universally accepted as an adequate output measure, since the "amount" of new knowledge contained in a research finding has no natural unit of measure. Taken together with information on support for researchers, these measures provide some insight into the overall strength of the national research enterprise. Several such measures are (1) numbers of

[2] Office of Technology Assessment, *Federally Funded Research: Decisions for a Decade.* U.S. GPO, May, 1991.

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publications, (2) "quality" of publications as measured by citation indices, (3) patents and (4) Nobel and other prizes.

By all of these measures, the U.S. continues to lead the world in the generation of knowledge. For example:

- The number of science articles published by U.S. academic researchers (which produce about two-thirds of all U.S. science and engineering articles in major journals) has increased markedly. By this measure, the U.S. is maintaining its large share of world scientific and engineering literature.
- The influence of publications as measured by the level of citation of U.S. papers by foreign researchers suggests that U.S. researchers continue to exert a substantial impact on foreign research, and thus on the world's store of scientific knowledge.
- U.S. universities received 2 percent of patents awarded to U.S. inventors in 1988, more than double the share in 1978, thus new ideas that have potential value in the marketplace are flowing from universities in even greater numbers.
- The U.S. continues to dominate the Nobel lists, and Americans often win other major, internationally-recognized prizes such as the Fermi, the Wolf and the Lasker. This provides evidence of the strong and consistent support for basic research over the last 30 years.

This lead can be lost without adequate investment in knowledge. The Administration's strategy of investing in basic research is designed to maintain and strengthen America's leadership in scientific innovation.

The budget recognizes that the level of support for individual and small groups of investigators, primarily at academic institutions, is an important indicator of the vitality of the Nation's basic research effort. These "individual investigators" are the wellspring of many of the Nation's discoveries and inventions and they form the backbone of American science. Therefore, the Administration has proposed significant 1993 increases for this group.

Budget Initiatives in Basic Research

The budget proposes a number of major increases or new programs reflecting the President's support for basic research. These increases are intended to bolster basic research funding, especially that which supports individual investigators, and to provide those researchers with state-of-the-art equipment and specialized world-class research facilities. Overall, the budget proposes over $14 billion for basic research, an increase of over $1 billion, or 8 percent, over 1992.

Doubling the Budget of the National Science Foundation by 1994.—The President remains committed to doubling the budget of the National Science Foundation (NSF) by 1994. The budget proposes $3,026 million, an overall increase of $454 million, or 18 percent, over 1992. Over 70 percent of NSF's budget supports basic research, primarily at universities and colleges. These funds provide support for individual investigators and small groups ($1,581 million), research centers ($148 million) and research instrumentation and specialized research facilities ($483 million), including the National High Field Magnet Laboratory, the Laser Inferometer Gravity Wave Observatory, and two matched 8-meter optical telescopes. Each of these elements are keys to maintaining the preeminent U.S. position in science and basic research.

The budget proposes $33 million for NSF's instrumentation initiative. This initiative, funded at about $17 million in 1992, will continue to provide state-of-the-art instrumentation, costing from $200,000 to $4 million, to university researchers through a merit-based competitive process. The Federal funding will be matched 50:50 from non-Federal sources.

NSF also plays a significant role in the government-wide initiative to improve the quality of science, mathematics, and engineering education, particularly at the precollege level. These education activities are highlighted in Chapter 4, "Reforming American Education and Investing in Human Capital".

Increasing the Support for Individual Investigators.—The budget proposes a significant increase for individual investigators located primarily at universities and colleges.

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Table 6–10. **THE BUDGET INCREASES FUNDING FOR BASIC RESEARCH**[1]
(Dollar amounts in millions)

Department or Agency	Budget Authority					Outlays				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Health and Human Services	4,413	5,459	5,800	+341	+6%	4,234	5,143	5,541	+398	+8%
(National Institutes of Health)	(4,052)	(5,019)	(5,328)	(+309)	(+6%)	(3,988)	(4,748)	(5,109)	(+361)	(+8%)
National Science Foundation	1,563	1,839	2,221	+382	+21%	1,455	1,730	1,917	+187	+11%
Energy	1,383	1,789	1,859	+70	+4%	1,377	1,695	1,771	+76	+4%
National Aeronautics and Space Administration	1,385	1,860	2,068	+208	+11%	1,346	1,715	1,851	+136	+8%
Defense-military	951	1,170	1,203	+33	+3%	929	1,134	1,230	+96	+8%
Agriculture	486	611	639	+28	+5%	477	576	589	+13	+2%
Other Agencies[2]	434	526	532	+6	+1%	438	498	505	+7	+1%
Total	10,615	13,254	14,322	+1,068	+8%	10,256	12,491	13,405	+914	+7%

[1] Amounts reported in this table are included in totals for conduct of R&D.
[2] Includes the Departments of Interior, Commerce, Veterans Affairs, Education, Labor, the Treasury, Justice, the Smithsonian Institution, Environmental Protection Agency, Tennessee Valley Authority, Agency for International Development, and the Corps of Engineers.

Three agencies support the majority of individual investigators: the National Science Foundation, and the Departments of Health and Human Services and Energy. In total, the budget proposes over $7.9 billion, an increase of over 9 percent, for these investigators.

For HHS, the budget proposes $5.9 billion, an increase of $389 million, or 2 percent real growth, for investigator-initiated research. This sizeable increase will allow a record total of 24,600 grants to be supported, an increase of 500 over 1992's record levels. For NSF, $1,581 million is being proposed in this area, an increase of $230 million or 17 percent over 1992. For Energy, the budget proposes a total of $482 million, an increase of 11 percent, for support of university-based basic research by the Office of Energy Research.

Increasing Basic Research in HHS.—HHS is the largest supporter of both government basic research and individual investigators in the Federal Government. The budget continues to focus on basic biomedical and behavioral research at HHS, and proposes $5.8 billion in 1993. Building on the record levels reached in 1992, this $341 million, or 6 percent, increase will allow HHS research agencies to further extend the frontiers of knowledge which will enable future life-extending and life-enhancing therapies to be developed. By focusing these additional resources on basic biomedical research, the budget helps to ensure that continued advances against disease will take place.

Unlocking the Secrets of Human Heredity—the Human Genome Project.—The budget proposes a 7 percent increase, to a total of $175 million, for the fourth year of this 15-year effort to decode the information locked in the chemical building blocks that form human genetic inheritance.

The Project is being conducted jointly by the Departments of Energy and Health and Human Services. The budget proposes a total of $175 million for the project, $65 million at Energy and $110 million at Health and Human Services. These funds are also included in the totals for the broader Biotechnology Research Initiative involving many other Federal agencies.

DOE and HHS are working together to develop capabilities and tools, to construct gene "maps", to discern the chemical sequence of human chromosomes, and to characterize disease-related genes.

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Concurrent with the project's efforts to advance the state-of-the-art in genetic "mapping," the project is also exploring safeguards that may be necessary as new genetic information is put to practical uses, addressing issues related to privacy of such information and fairness in its use.

Recent advances include completion of mapping of several large chromosome segments, isolation of genes for several genetic diseases, and establishment of an international Genome Data Base for maintaining and distributing genome data to researchers all over the world.

Future generations will benefit greatly from the knowledge gained through this investment. Future scientists will have tremendous amounts of new information about the molecular basis of human inheritance available to assist them in their search for therapies and cures for disease. The budget ensures that this project is able to forge ahead expeditiously.

Unlocking the Secrets of Matter and Energy—The Superconducting Super Collider and High Energy and Nuclear Physics:

The Superconducting Super Collider.—The Superconducting Super Collider (SSC) will provide a collision energy 20 times greater than the current capability, resulting in new fundamental knowledge of matter and energy. The SSC Laboratory, under construction in Ellis County, Texas, will comprise a 54-mile circular tunnel in which superconducting magnets will accelerate counter-rotating proton beams. The SSC will employ 2,500 scientists, engineers, and technicians, and host an additional 500 visiting scientists.

The budget provides $650 million for the SSC, an increase of $166 million over 1992. Much of the current effort focuses on research and development of the superconducting magnets. Work on other SSC components is also progressing. A segment of tunnel which will be used for magnet testing will be under construction by the end of 1992.

The total cost of the SSC has been estimated at slightly over $8 billion. One-third of the total is expected to be contributed by non-Federal sources. The State of Texas has committed up to $875 million for construction of on-site facilities and other SSC systems, as well as the land required for the SSC laboratory.

Foreign partners are expected to contribute substantially to the construction and operation of the SSC, as well as to the experimental program. During 1993, follow-up delegations will continue discussions already underway with Canada, Europe, India, Japan, Korea and Russia.

The SSC holds the potential for new breakthroughs in science, technology and education. Although the primary purpose of the SSC is to acquire new knowledge, such knowledge has always resulted in developments in technology and practical products which profoundly affect the quality of life for all Americans and which enhance the economic competitiveness of the Nation. U.S. world leadership in high energy physics will be maintained far into the next century by the scientific and technological advances emanating from the SSC. For example, the SSC will introduce the first massive, U.S. industrial manufacture of superconducting accelerator magnets. The experience gained will help in the development of magnetically levitated, high-speed trains, energy storage systems for fuel conservation and low loss electrical power systems.

High Energy and Nuclear Physics.—Research in high energy and nuclear physics is directed at understanding the nature of matter and energy at the most fundamental level and the basic forces which govern all processes in nature. Much of the research program is aimed at verifying and explaining the particles, or "building blocks", that comprise the interior of atoms and the forces acting on them.

Research is conducted at universities and national laboratories. Most university funding goes to individual investigators for support of graduate students and research at university facilities or at the national laboratories. Funding provided to the national laboratories allows construction and operation of large accelerator and collider facilities which are open to researchers from other national or international sites. Industry also uses the national laboratory facilities for non-proprietary testing and development.

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The budget proposes $1 billion for High Energy and Nuclear Physics programs (other than the SSC), an increase of 2 percent over 1992. The budget reflects planned decreases as construction projects such as the Continuous Electron Beam Accelerator Facility (Newport News, VA) for nuclear physics are completed, and as other research facilities are phased down. Support for ongoing nuclear physics projects such as the Relativistic Heavy Ion Collider (Brookhaven National Laboratory, NY) increases as these projects continue on schedule.

The budget proposes for high energy physics (other than the SSC) a new Main Injector Ring at Fermilab which is currently planned for completion in 1996. Scientists are confident that this new capability will enable them to discover evidence of the "top quark", the elusive final particle in verifying the theoretical model that predicts the interaction between matter and energy. The budget provides total funding of $246 million for all high energy physics programs at Fermilab, an increase of $18 million, or 8 percent.

Understanding the Earth: The U.S. Global Change Research Program (USGCRP).—The USGCRP is designed to assist efforts to understand more fully the earth's climate system in order to support national and international policymaking activities associated with global and regional environmental issues (e.g., ozone depletion, global warming). This FCCSET interagency research effort (eleven agencies) promises not only the information to aid today's policy decisions, but also to maintain the strong foundation of multi-disciplinary science required to address the unanticipated issues of tomorrow.

The budget proposes $1,372 million for the USGCRP, an increase of $262 million or 24 percent over 1992. The USGCRP addresses three parallel but interconnected streams of activities: 1) documenting global change through the establishment of long-term monitoring programs; 2) enhanced understanding of key physical, chemical, biological, and social processes that influence and govern the Earth's evolution, and 3) predicting global change through the development of predictive Earth system models.

Planning for the USGCRP has been shaped by a strategic and scientific priority framework that has been extensively reviewed by the scientific community. Over the past two years, this framework has been extended to include a set of integrating themes that address the scientific uncertainites identified by the U.N.-sponsored Intergovernmental Panel on Climate Change, and the economics research and important policy questions identified as a result of the 1990 White House Conference on Science and Economics Research Related to Global Change. The further integration of economics research into the USGCRP is particularly important since an understanding

Table 6–11. **THE BUDGET PROPOSES A 12 PERCENT INCREASE FOR A BALANCED PROGRAM IN HIGH ENERGY AND NUCLEAR PHYSICS**

(Dollar amounts in millions)

	Budget Authority				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Superconducting Super Collider	98	484	650	+166	+34%
High Energy and Nuclear Physics	815	988	1,003	+15	+2%
Relativistic Heavy Ion Collider	—	77	96	+19	+25%
Continuous Electron Beam Accelerator Facility	45	78	76	-2	-3%
Fermilab Main Injector Ring	—	15	30	+15	+100%
Other High Energy and Nuclear Physics	770	818	801	-17	-2%
Total	913	1,472	1,653	+181	+12%

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of the relationship between global change and the economy is fundamental both to assessing the magnitude of the potential impact on human society and to developing effective responses.

During the past year, and in response to the recommendations of an independent Earth Observing System Engineering Review Committee, NASA has restructured the Earth Observing System (EOS) to fly remote sensing instruments on a series of intermediate and small spacecraft, in contrast to the original plan for a series of large spacecraft. This reconfiguration will maintain the scientific objectives of the EOS program and will allow important scientific data to be acquired earlier than otherwise would have been the case. At the same time, the program's flexibility to respond to changes in data requirements and advances in technology will be greatly increased and will reduce risks associated with single large platforms. This reconfiguration has resulted in a different temporal sequence of measurements as well as potential changes in the volume of data. The National Academy of Sciences has been asked to examine the EOS Data and Information System (EOSDIS) to ensure that its architecture, management and distribution schemes are compatible and complementary to the restructured EOS program.

The ultimate success of the USGCRP requires progress and integration of data collection, process studies, and modeling across all the various disciplines. Central to this strategy is a balance between ground- and space-based research activities. Ground-based observations and theoretical process studies will be complemented by a comprehensive space-based program to provide global observations of key environmental parameters. For example, while NASA's Mission to Planet Earth (including the Earth Observing System) is a major contributor to the USGCRP, many of the ground-based data sets will be used to calibrate the complementary Mission to Planet Earth satellite data sets.

Landsat.—Acquisition of data from land remote sensing satellites is an important element in understanding global change and for national security purposes. The Administration is committed to a policy of the continued acquisition of Landsat-type data. The Administration proposes to operate the Land Remote Sensing Satellites (Landsats 4 and 5) until Landsat 6 is launched; to complete the procurement and launch of the next satellite (Landsat 6); and to initiate the procurement of the next follow-on satellite (Landsat 7).

Several agencies will provide a total of $17 million to cover the operation of Landsats 4 and 5 through the end of 1992. Landsat 6 is expected to become operational by early 1993. Landsat 6 will be operated by, and at the expense of, the Earth Observing Satellite Company. NASA and the Department of Defense are proposing a total of $111 million for Landsat 7, which is planned to succeed Landsat 6. The budget proposes $86 million for DOD, which will be responsible for the acquisition and launch of the spacecraft, and $25 million for NASA, which will be responsible for ground support for data acquisition and distribution of Landsat 7 data. These data will be used to support global change research and will be incorporated into the EOS Data and Information System (EOSDIS).

One area within global change research that has received special emphasis is Arctic research, although U.S. activities in the Arctic go well beyond the range of programs included in the USGCRP.

U.S. policy in the Arctic consists of four elements: protection of essential security interests; support for sound, rational development of the region; promotion of scientific research contributing to knowledge about the Arctic; and promotion of mutually beneficial international cooperation in the Arctic. Federal Arctic research is guided by a 5-year research plan developed by the Interagency Arctic Research Policy Committee (IARPC) in consultation with the Presidentially-appointed Arctic Research Commission and other interested groups. The most recent biennial revision of the plan was published in July 1991.

The budget includes $147 million for Arctic research, an increase of about $4 million over 1992. Within the total for 1993, $58 million is proposed to implement the four integrated programs covering the western Arctic: oceans research, geodynamics, studies of the Bering Sea and land mass, and

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Table 6–12. U.S. GLOBAL CHANGE RESEARCH PROGRAM

(Dollar amounts in millions)

Description	Budget Authority			
	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Program Component				
Ground-based	733	915	+182	+25%
Oceans	62	85	+23	+37%
Modeling	33	51	+18	+55%
Land Processes	80	92	+12	+15%
Human Dimensions	7	9	+2	+29%
Economics	4	13	+9	+225%
Other	547	665	+118	+22%
Space-based	378	457	+80	+21%
Earth Observing System (NASA)	188	308	+120	+64%
Other Programs (NASA)	190	139	-51	-26%
Energy	—	10	+10	—
Agency				
National Aeronautics and Space Administration	756	891	+135	+18%
National Science Foundation	109	163	+54	+50%
Energy	77	113	+36	+47%
Commerce (NOAA)	47	78	+31	+66%
Agriculture	44	48	+3	+7%
Interior	40	36	-4	-9%
Environmental Protection Agency	24	26	+2	+8%
Smithsonian	6	11	+4	+68%
Defense	6	7	+1	+5%
Health and Human Services	1	1	—	—
Tennessee Valley Authority	*	*	—	—
Total	1,110	1,372	+262	+24%

*Less than $500 thousand.

monitoring and data collection activities. Approximately $6 million of this amount is for ship and aircraft support in five agencies, NSF, Transportation, NOAA, Interior, and DOD/Navy. These programs support bilateral and multilateral environmental, space, oceans, and social science agreements and cooperative activities.

Observing the Universe: Astrophysics and Astronomy.—The programs of these two disciplines increase our understanding of the origin and evolution of the universe, the formation of stars and planets, and the fundamental laws of physics. Astronomy and astrophysics are currently supported by the National Science Foundation, the National Aeronautics and Space Administration, and the Smithsonian Institution. The budget proposes $890 million, an increase of $54 million or about 6 percent, for astronomy and astrophysics in the three agencies.

In 1991, the National Research Council commissioned a group of astronomers and astrophysicists to survey these fields and make recommendations concerning ground- and space-based astronomy and astrophysics for the next decade. This report, "The Decade of Discovery in Astronomy and Astrophysics", was the third in a series of decadal reviews of these two disciplines. It recommended

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Table 6–13. UNDERSTANDING THE ARCTIC

(Dollar amounts in millions)

Category	Budget Authority				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Resource development[1]	43	50	54	+4	+8%
Arctic as laboratory[2]	42	69	69	—	—
National security[3]	23	24	24	—	—
Total	108	143	147	+4	+3%

[1] Includes the Departments of Commerce, Agriculture, Energy, the Interior, Transportation, State, and the Environmental Protection Agency.
[2] Includes the Department of Health and Human Services, and the National Aeronautics and Space Administration, the National Science Foundation, and the Smithsonian Institution.
[3] Includes the Department of Defense. The 1992 enacted level includes a one-time increase for Defense of about $5 million specifically for upper atmosphere research and associated facilities including the High Frequency Active Auroral Research Program. For purposes of comparison with 1993 levels, this funding has been excluded.

as the highest priority increased support for operations and maintenance of existing astronomical facilities and individual grant programs. The report also recommended a balanced program of space-based observations and offered a prioritized list of future projects, consolidated from both space- and ground-based candidates. The budget addresses many of the Report's recommendations and these are highlighted below.

- *The National Aeronautics and Space Administration (NASA)* is the principal agency supporting space-based astronomy. NASA supports a broad range of astronomy and astrophysics missions, including instruments flown on large free-flying spacecraft, smaller Explorer spacecraft, the Space Shuttle, small sub-orbital rockets, balloons and aircraft. The budget proposes $732 million for NASA activities, an increase of $42 million or 6 percent over 1992. This will support continued development of the Advanced X-Ray Astrophysics Facility (AXAF). AXAF is the third of four NASA Great Observatories and is scheduled for launch in 1999. To date, AXAF has met or exceeded all of its design criteria. The first two Great Observatories, Hubble Space Telescope (launched in 1990) and the Gamma Ray Observatory (launched in 1991), continue to provide significant scientific breakthroughs despite some technical problems. All of these space-based observatories have presented significant technical and budgetary challenges. The budget includes $257 million for operations, servicing, and data analysis for the Hubble Space Telescope. The first servicing mission is planned for late 1993.

  The NRC Report recommended the initiation of the fourth Great Observatory, the $1 billion Space Infrared Telescope Facility (SIRTF), as its highest priority for a new start in the "large project" category. While the budget supports the NRC Report's recommendations for other large projects (i.e., AXAF and the 8-M telescopes mentioned under NSF), it defers a decision on SIRTF, while providing an increased emphasis on small and moderate missions. The budget proposes a 10 percent increase over 1992 to a total of $138 million for support for individual investigators.

- *The National Science Foundation (NSF)* is the principal agency supporting ground-based astronomy. NSF supports a broad range of astronomy programs and facilities, including the National Radio Astronomy Observatory, the National Optical Astronomy Observatories, and the National Astronomy and Ionosphere Center. The budget proposes $137 million for NSF's programs, an increase of about $13 million or 10 percent over 1992. This increase ad-

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dresses most of the priorities enumerated in the NRC report. Within this total, support for individual investigators will increase by nearly $4 million or 9 percent. Funding will also increase for operations and maintenance of existing facilities and for research on adaptive optics. Work will continue on research leading to the design of a millimeter array for radio astronomy, and construction of matched 8-meter optical telescopes in Hawaii and Chile and the new radiotelescope at Greenbank, WV will all proceed on schedule. In 1993, the Very Long Baseline Array (VLBA) will commence operations. VLBA is a coordinated set of radiotelescopes located from Maine to Hawaii, which is expected to open new vistas to radioastronomers and to contribute to other fields such as geodesy and theoretical physics.

- *Smithsonian Institution.*—The Smithsonian Astrophysical Observatory (SAO) conducts fundamental research in astronomy and astrophysics cooperatively with the Harvard College Observatory at the Center for Astrophysics located in Cambridge, Mass. SAO also operates the Oak Ridge Observatory in Massachussets and Fred Lawrence Whipple Observatory at Mt. Hopkins, Arizona. NASA has selected SAO to plan, develop, and operate an international center for AXAF data. The budget proposes $21 million for SAO activities, essentially the same as in 1992. Work will continue on the development of a submillimeter telescope array and the conversion of the Mt. Hopkins Multiple Mirror Telescope to a single 6.5-m mirror. SAO will also continue to work with NASA in planning the AXAF data center.

- *Federal Funding for Related Areas.*—Apart from these three agencies, there is support for astronomy and astrophysics within the Departments of Defense and Energy for activities that complement the programs of NSF, NASA and the Smithsonian. These include research on astrometry, optical interferometry, sensor development (especially in the infrared region), and cryogenic and adaptive optics.

- *Non-Federal Support for Astronomy and Astrophysics.*—Astronomy has enjoyed a long history of private and state support, including large philanthropic donations for the construction of major instruments, e.g., Hale 5–m telescope at the Palomar Observatory and the Keck 10–m telescope at Mauna Kea Observatory. The Keck telescope is the world's first computer-controlled segmented mirror telescope and embodies state-of-the-art technology in mirror design and computer alignment. Currently, it is estimated that private sources and the states provide about $190 million annually for astronomy. The Keck Foundation is planning to provide funding for a second 10–m telescope adjacent to the first. When operated together, these two telescopes will provide the resolution of an 85–m telescope, making it possible to search for planets around nearby stars.

- *International Efforts.*—Astronomy and astrophysics have long been characterized by extensive international collaboration. Europe, Canada, and Japan all support major astronomical facilities that are often used in conjunction with similar instruments in the U.S. For example, the Very Large Array Radiotelescope in New Mexico is often linked to other radiotelescopes in Britain for observations of extremely distant quasars and pulsars. In these cases, essentially the entire Earth becomes one large radiotelescope. Both Europe and Japan are currently constructing major optical telescopes embodying the newest technology.

Improving the Productivity of the Nation's Agriculture (The National Research Initiative).—The budget continues the Administration's commitment to the National Research Initiative by proposing $150 million, a $52 million, or 53 percent, increase over 1992. With the creation of the NRI in 1991, a $50 million increase each year was proposed to the extent that funds were awarded competitively and not earmarked for specific sites or institutions.

The National Research Initiative competitive grants program addresses research areas which are known to possess unique opportunities for improving agriculture in concert with social, economic and environmental needs. In 1991, the first year of the program,

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74 percent of the funding for NRI was directed toward the basic, fundamental end of the research spectrum. The remaining funding was directed to mission-oriented research—research that bridges the basic and applied sciences, resulting in practical outcomes. Of the $73 million appropriated for the NRI in 1991, 11 percent of total program funds were directed toward attracting new scientists into careers in high priority areas in agriculture. These funds provide support for postdoctoral fellows and new faculty and strengthen research capabilities of individuals at small and mid-sized institutions. The same pattern of distribution is expected for 1993.

Each of the six categories of research funded in 1992 will continue. Those areas include natural resources and the environment; nutrition, food quality and health; plant systems (including mapping of plant genomes); animal systems; markets, trade, and policy; and processes antecedent to adding value and developing new products. In 1993, increased emphasis will be placed on the areas of human nutrition research and research to find new non-food, non-feed uses for agricultural products. Human nutrition research will be expanded to include the areas of food choices and food survey methodology. Within the increase for new uses, research on alcohol fuels made from agricultural and forestry feedstocks and conversion technologies will expand.

The Administration is especially concerned about the amount of special project earmarks within the USDA budget, and believes that the NRI is a more effective mechanism to address the national needs of agriculture.

MAINTAINING NATIONAL SECURITY: DEFENSE R&D IN THE BUDGET

For all defense-related R&D, including R&D supported by the Departments of Defense and Energy, the budget proposes $43 billion, an increase of over $438 million, or 1 percent, above 1991. Defense-related R&D will comprise 59 percent of overall Federal R&D funding in 1992.

Table 6–14. **MAINTAINING NATIONAL SECURITY**

(Dollar amounts in millions)

Department	Budget Authority				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Defense—military functions	38,031	40,043	40,509	+466	+1%
Basic research	951	1,170	1,203	+33	+3%
Applied research	2,541	2,995	3,056	+61	+2%
Total, Technology Base	3,492	4,165	4,259	+94	+2%
Development	34,540	35,878	36,251	+372	+1%
Energy-atomic energy defense programs	2,321	2,668	2,640	-28	-1%
Weapons Research and Development	1,050	1,183	1,143	-40	-3%
Weapons Testing	518	458	430	-28	-6%
Naval reactors	555	600	634	+34	+6%
Arms Control Research	146	181	188	+7	+4%
Environmental Restoration Technology	52	246	245	-1	—
Total, Conduct of R&D	40,352	42,711	43,149	+438	+1%

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Department of Defense

A strong defense R&D program is a key element of national security strategy. As was shown in Operation Desert Shield/Desert Storm, the deployment of advanced weapons can save lives and lead to decisive victory. The Defense R&D program also provides important benefits to the nation's technology generally. In this budget, funding for conduct of DOD R&D totals $40.5 billion in 1993.

Technology Base.—The budget proposes $4.3 billion for the technology base, an increase of $94 million over the 1992 level. Basic and applied research programs provide options for future military capabilities and guard against technological surprise by potential adversaries. The basic research portion of the DOD technology base supports a wide range of scientific disciplines, including mathematics, chemistry, biochemistry, meteorology and solid-state physics. It is essential for the U.S. to develop and exploit advanced technologies to maintain superiority in fielded weapon systems as force levels decline. The weapon systems used in Operation Desert Storm were made possible by technology programs started decades ago in the areas of precision guidance and navigation, night vision and stealth.

DOD technology-base R&D programs have also led to many civilian applications. These include navigation systems used by civilian aircraft and ships, advanced structural materials used in commercial aircraft and such common devices as cellular radios and computers. Defense R&D plays a lead role in developing technology to increase computer performance dramatically. This continues the pioneering efforts of the Department of Defense that led to today's advanced parallel processors and digital communications networks.

Development.—The budget proposes $36.3 billion for development programs. This category includes funding to develop advanced systems for production and to improve existing systems. There will be special emphasis on technology development efforts and the fabrication of prototype systems.

Department of Energy

The budget proposes $2,640 million for conduct of R&D in support of Department of Energy (DOE) Atomic Energy Defense Programs, a decrease of $28 million, or about 1 percent below 1992, but $319 million or 14 percent above the 1989 level. This total is comprised of several program components, including:

Weapons Research and Development.—This activity includes a wide range of basic and applied R&D that is related to new weapons systems. Almost all of these R&D activities are performed by the three DOE National Laboratories: Los Alamos, Sandia and Lawrence Livermore. The budget proposes $1,143 million for this activity, a decrease of $40 million, or 3 percent from 1992. Within this total, there is increased emphasis on improving the safety of nuclear weapons.

Weapons Testing.—This activity involves the testing of nuclear weapons devices. The budget proposes $430 million for these activities, a decrease of $28 million, or 6 percent from the 1992 level.

Naval Reactors.—This activity involves R&D related to reactor systems for nuclear-powered submarines. The budget includes $634 million in 1993, an increase of $34 million or 6 percent over 1992.

Arms Control Research.—The budget proposes $188 million, an increase of $7 million for research related to verification of arms control agreements.

Environmental Restoration Technology.—The environmental cleanup of atomic energy defense facilities is one of the fastest growing programs in the Federal Government. Technology development activities play a major role in the clean-up effort, resolving major technical issues related to effective waste management and cleanup and advancing technologies to attain and maintain compliance with current laws and regulations. The budget proposes to maintain this investment in technology development at $245 million in 1993.

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The Changing Role of the National Weapons Laboratories.—The decreases in funding for nuclear weapons research, development, and testing are consistent with the declining number and types of nuclear weapons in the U.S. stockpile and reduced requirements for new nuclear weapons. This decline, however, could adversely affect the DOE National Laboratory system, principally the three weapons laboratories. These labs have historically received 40–50 percent of their funds for nuclear weapons research, development and testing. The laboratories possess a core set of unique scientific and technical capabilities that could be applied to a wide variety of civilian R&D needs.

Over the past year, an effort has been underway within the Administration to assess the laboratories' capabilities and to examine expanded civilian missions for them. In particular, it appears likely that the National Laboratories can play a key role in a number of civilian R&D initiatives, including materials research, advanced manufacturing R&D, biotechnology and space exploration. The specific roles to be performed by the laboratories in each technology area would be determined based on: (1) the unique technical capabilities offered by the laboratories (so as to avoid duplication with work that better can be performed in industry or universities) and (2) industry-led proposals, so as to ensure that the results of the R&D will be applied by the private sector in new products and processes. In particular, the National Laboratories could serve as catalysts to form R&D consortia with industry and universities, following the general criteria discussed earlier in this chapter. Under this approach, the laboratories would be receiving increased funding from the domestic programs as direct funding from the Atomic Energy Defense programs decreases.

Two initiatives now underway include:

- *High Performance Computing*—Energy is developing a model Cooperative Research and Development Agreement (CRADA) with the Computer Systems Policy Project (CSPP) to enable CSPP member companies (e.g., IBM, Cray, Apple) to cooperate with the National Laboratories on R&D projects in high performance computing technology.
- *Space Exploration*—Defense, NASA and Energy are developing cooperative R&D programs at the Laboratories to develop nuclear power and nuclear propulsion technologies to support space exploration. The Energy Laboratories have recognized competency in nuclear propulsion, radiation-hardened microelectronics and robotics, which are all key technologies for space exploration missions.

It is likely that the laboratories will play an important role in other applied civilian R&D initiatives, including advanced materials and processing, advanced manufacturing, and other critical technologies. In addition, the laboratories are continuing to move aggressively to transfer new, non-sensitive, dual use technologies, funded by Atomic Energy Defense programs, to commercial use. The budget includes $91 million, an increase of $41 million, or 82 percent, for technology transfer activities in DOE defense programs. This funding will support cost-shared, collaborative technology transfer activities with the private sector.

IMPROVING TECHNOLOGY TRANSFER TO INCREASE THE RETURN ON FEDERAL R&D INVESTMENTS

During the past decade there has been increasing public concern about U.S. scientific and industrial strength and competitiveness in the world economy. One consequence of this concern has been enhanced efforts to encourage the transfer of technology developed in Federal laboratories to the private sector.

As new policies have been put in place to promote technology transfer, the Administration's emphasis has shifted to implementation. This section reports on progress to date in technology transfer by Federal agencies. The Aministration plans to intensify

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its efforts in technology transfer over the coming months.

OMB has begun a comprehensive effort to measure the extent of Federal technology transfer activities. By collecting data on technology transfer on an annual basis. For purposes of collecting this data, technology transfer has been defined as those efforts and activities intended to result in the application or commercialization of Federal laboratory-developed innovations by the private sector, State and local governments, and other domestic users. These activities may include, but are not limited to:

- Technical/cooperative interactions (direct technical assistance to private sector users and developers; personnel exchanges; and cooperative research and development agreements);
- Commercialization activities (patenting and licensing of innovations and identifying markets and users, including payment of royalties and cash awards to inventors); and
- Information exchange (dissemination to potential technology users of technical information: papers, articles, reports, seminars, etc.).

Twelve Federal agencies provided data on technology transfer activities undertaken and proposed for 1991, 1992 and 1993. The agencies submitting data include: the Departments of Agriculture (Agricultural Research Service and Forest Service), Health and Human Services (National Institutes of Health, Centers for Disease Control, Public Health Service, Food and Drug Administration), Housing and Urban Development, Transportation (Federal Aviation Administration), Commerce (National Institute of Standards and Technology), Interior, Energy, and Defense (Army, Navy and part of Air Force); NASA (Office of Commercial Programs), the Environmental Protection Agency, the Tennessee Valley Authority and the Army Corps of Engineers.

It should be noted that most of the data for 1992 and 1993 are projections that are inherently difficult to make since they are based, in part, on inventions, patents, etc. that are "in the pipeline" but not yet fully realized. As a consequence, comparison of the data for the same year between subsequent budgets may show significant differences. Over time, however, these data should yield an historical database that can be used to measure the impact of government policies to enhance the value of government technology to the private sector.

Funding for Technology Transfer Activities.—In general, the data show significant increases in all aspects of technology transfer from 1992 to 1993. The budget proposes to allocate about $579 million to direct support of technology transfer activities in 1993, up 3 percent over 1992, but 16 percent over 1991. Funds allocated to departmental and agency Offices of Research and Technology Applications are projected to rise 19 percent from 1992 to 1993 to a total of about $32 million.

Cooperative Research and Development Agreements.—Cooperative Research and Development Agreements (CRADAs) are contracts between one or more Federal laboratories and one or more non-Federal parties under which a laboratory provides personnel, services, facilities, equipment or other resources to conduct specific R&D efforts that are consistent with the missions of the laboratories. All agencies were given the authority to use CRADAs in the Technology Transfer Act of 1986, although some agencies, e.g., NASA, already had statutory authority to conduct research and technology development cooperatively with industry.

Since 1986, the use of CRADAs has been on the rise. In the Department of Health and Human Services, the National Institutes of Health has entered into over 400 with private industry, primarily in biotechnology. In addition, the National Institute of Standards and Technology has entered into over 150 agreements in a broad range of technical areas.

The actual number of active CRADAs is projected to grow by 10 percent from 1992 to 1993 to a total of 1,689. The number of CRADAs with small business is projected to reach 389 in 1993, an increase of 20 percent, which accounts for 44 percent of the total increase in numbers of active CRADAs. The dollar value of active CRADAs is projected to grow 22 percent from 1992 to 1993, to $466 million.

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Table 6–15. **TECHNOLOGY TRANSFER ACTIVITIES ARE INCREASING IN 1993**

(Dollar amounts in millions)

	1991 Actual	1992 Enacted	1993 Proposed	Change: 1992 to 1993	Percent Change: 1992 to 1993 [1]
Direct funding for technology transfer activities:					
Funds allocated to technology transfer	498	561	579	+18	+3%
Funds allocated to ORTAs	22	27	32	+5	+19%
Cooperative Research and Development Agreements:					
Number of active CRADAS	1,215	1,538	1,689	+151	+10%
Number with small businesses	203	323	389	+66	+20%
Dollar Value (cash and non-cash) of all CRADAs	283	380	466	+85	+22%
Measures of Productivity:					
Number of invention disclosures	3,275	3,128	3,313	+185	+6%
Number of patent applications	1,423	1,515	1,546	+31	+2%
Number of licenses (exclusive and non-exclusive) awarded	283	358	446	+88	+25%
Royalties and other income from all licenses	9	11	13	+2	+24%
Royalties and cash awards paid to federally-employed inventors	1	2	2	—	+19%
Royalties and cash awards paid to non-federal employee inventors	8	9	10	+1	+15%
Number of new companies formed	24	31	35	+4	+13%

[1] Percent change is calculated on dollar amounts in thousands.

Measures of Productivity.—There are several indicators of the productivity of government researchers and the value of government inventions. Productivity can be measured by the numbers of invention disclosures and numbers of licenses of existing patents. The value of government inventions can be measured by the amounts of royalties collected from licensing activity and, to a lesser extent, cash awards paid to government-employed and contractor inventors. By all these measures, the technology transfer process is a healthy one, with projected increases in patents, licenses, royalties and cash awards.

Scientific and Technical Information.—The Federal Government supports the largest R&D complex in the world, which, in turn, generates the largest volume of Scientific and Technical Information (STI) from any single funding source. The information produced takes numerous forms including technical reports, journal articles, and research in progress listings. In 1991 alone the five largest Federal R&D performing agencies (DOD, DOE, NASA, NIH and USDA) generated well over 150,000 STI items. This information represents one of the most identifiable "products" of Federal R&D and acts as a conduit for enabling the private sector to use the results of Federal R&D more effectively.

The scientific and technical knowledge base made available by the five largest R&D agencies together with the National Technical Information Service is impressively large. Through the network of agency databases, over 23 million summaries of the results of R&D can be searched to allow industry to make informed decisions based upon what is known and where future research may be needed. This includes approximately 5 million foreign STI items (obtained through exchange and translation programs) for which the Federal Government is virtually the only domestic source. This knowledge base rep-

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resents the product of a multi-billion dollar investment made in the original research.

Access to the STI knowledge base maintained by Federal agencies has been considerable. Nearly 8 million items were disseminated in 1991 alone. Of those items, almost 6 million went to non-Federal users in the U.S. In addition, access through electronic databases continues to increase dramatically. Researchers gained access to references of over 81 million STI items during searches of on-line data bases provided by Federal agencies in 1991—over 10 million more than just three years earlier. Each item referenced in a search is a potential source of information which the researcher can either order directly from the Federal Government or, as is often done, simply obtain a copy from his or her company, university, or public library.

Advances in information system technology are rapidly changing the way in which STI is created, stored and disseminated. A world once firmly linked to paper and microfiche has been rapidly shifting to electronic formats. For example, two years ago the Federal Government had never disseminated any STI on CD ROMs, while in 1991 over 1,100 were disseminated. The infrastructure for electronic storage and dissemination of Federal STI will be critical to continuing and enhanced access by Federal and non-Federal users alike. The National Research and Education Network being funded through the High Performance Computing and Communications Initiative will be an essential part of the future STI infrastructure. With such a vast knowledge base being generated and managed by numerous Federal agencies, and with the rapid changes in technology, interagency coordination in STI is critically important. For this reason, the Administration has recently moved to reinvigorate interagency coordination of STI.

STIMULATING INCREASED PRIVATE SECTOR R&D INVESTMENTS

The budget proposes making permanent the research and experimentation tax credit and an 18-month extension of the tax rules governing the allocation of foreign and domestic R&D expenditures.

Industry is the largest supporter of R&D, providing slightly over 50 percent of the total national R&D investment. It also performs much of the R&D funded by the Federal Government. In total, over 70 percent of all R&D is performed by industry.

From the early 1960s through the mid-1980s, total real industrial R&D expenditures increased significantly, mostly in development. Since the mid-1980s, however, the rate of growth in industrial R&D spending has leveled off, dropping from a rate of more than 7 percent average annual percent real growth between 1980–1985 to less than 2 percent between 1985–1991. For 1992, the Industrial Research Institute forecasts that industrial investment in R&D is likely to experience no growth, and will decline as a percentage of revenues for the first time since the mid-1980s. However, this slowdown may be due to factors other than a simple reduction in funding for R&D. These factors could include greater efficiency in the private R&D process (embodied in a much greater use of concurrent design and engineering), and the shifting of private investment in R&D from products to process technologies.

The Federal Government can stimulate R&D in the private sector directly with increased government R&D spending. The Federal Government can also stimulate R&D in the private sector indirectly through tax incentives. The use of tax credits for R&D has been a net near-term revenue loser to the Treasury. It is anticipated, however, that in the longer-term these losses will be more than offset by the revenues from new products and processes resulting from the private investment stimulated by the credit. However, since only the short-term losses can be estimated (the long-term benefits are simply too diffuse), these incentives are essentially a form of increased Federal R&D spending in areas of greatest potential benefit to

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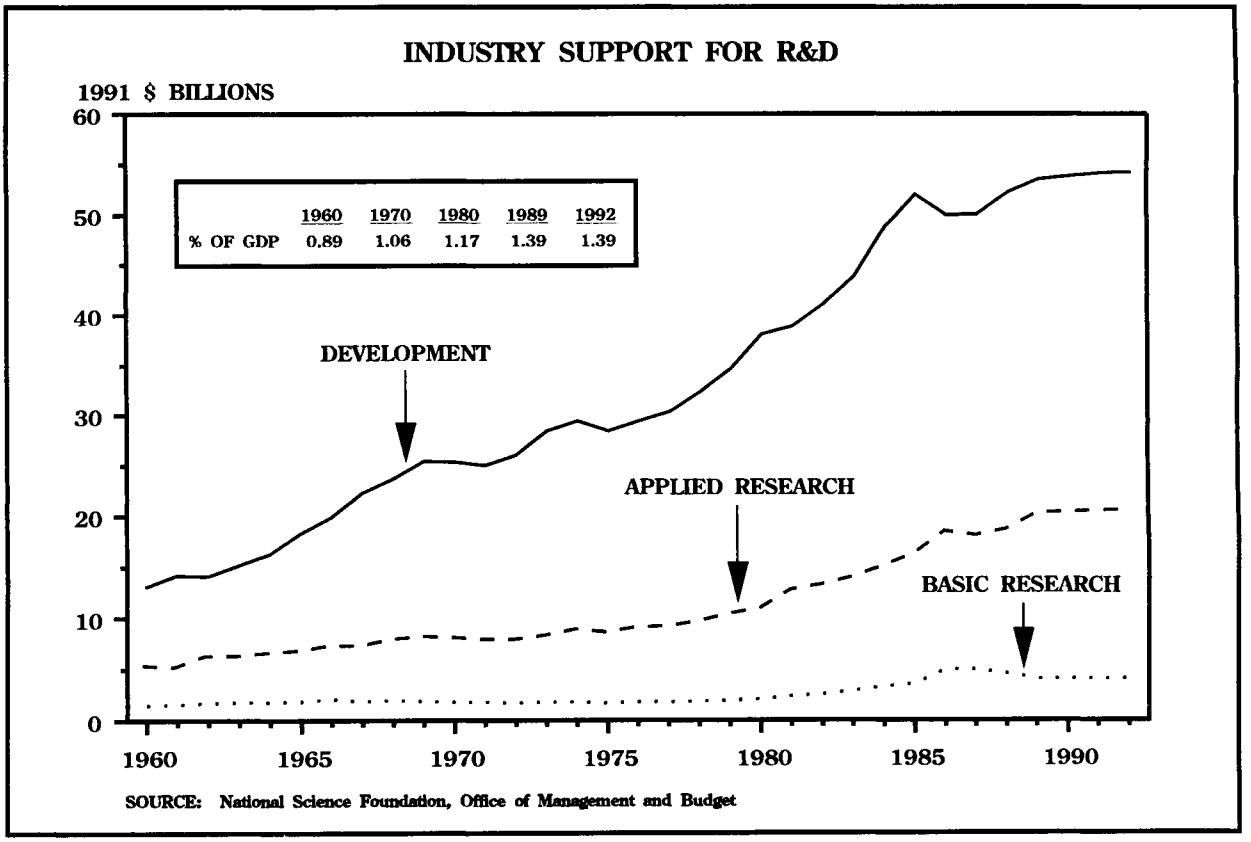
the economy as identified by the private sector.

Tax Credit and Allocation Rules

The Research and Experimentation (R&E) tax credit was originally adopted in 1981 to encourage increased private R&D spending. The credit was never made permanent, but was renewed in 1986, 1988, 1989, 1990, and 1991 (only until Spring, 1992) at a lower rate than originally granted.

Tax credits prior to 1989 reduced the cost of increments to R&D for most qualifying firms by about 6 to 9 percent. In 1989 the incentives provided by the credit were improved. The version of the credit enacted in 1989, and extended in the 1990 Omnibus Budget Reconciliation Act, reduces, for most qualifying firms, the cost of increments to R&D by 20 percent. Bailey and Lawrence have estimated that this version of the tax credit should increase corporate R&D spending in the 1990s by about 4 percent. Making the credit permanent would help reverse the recent trend toward leveling off of corporate R&D spending.

The budget proposes two changes in the tax code designed to provide additional incentives for industry to increase its investment in R&D. The budget proposes to make the 20 percent tax credit permanent. In addition, the budget proposes to extend for 18 months the rules, as extended in the Tax Extension Act of 1991, for the allocation of foreign and domestic R&D expenditures for companies with foreign operations. This proposal would apply to all tax years beginning after the current rules expire on June 30, 1992.



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THE CONTRIBUTION OF ACADEMIC INSTITUTIONS TO THE NATIONAL R&D INFRASTRUCTURE

Following the end of World War II, the Federal Government adopted a set of policies that propelled academic institutions into the forefront of the national research enterprise. These policies (1) identified the Federal Government with the primary responsibility for the quantity and quality of basic research in the U.S. and (2) identified academic institutions as the primary performers of basic research which would be directly coupled to graduate education. Thus, the Federal Government invested its future in science, both in terms of discovery and talent, in universities and colleges.

This arrangement has led to nearly 5 decades of unprecedented success in scientific discovery and to world preeminence of the U.S. academic research and education system.

Today, however, new questions are being raised about both the adequacy of academic institutions to carry out forefront fundamental research and the education of new scientists and engineers, as well as the adequacy of the special partnership developed between the Federal Government and universities. These questions include: how big should the academic research and education enterprise be? How diversified, both geographically and otherwise, should the enterprise be? What is the fundamental role of universities in science and technology in a world of global economic competitors? Should other sectors assume an even greater role in funding academic research (based on perceived payoffs), and, as a corollary, how much should the Federal Government actually pay for academic research and training, both directly and indirectly?

The answers to these questions are not clear. What is clear is that the nation's future in science and engineering continues to be inextricably tied to the vitality of academic research and education. This part of the chapter will discuss the status of funding for and issues surrounding the funding of academic R&D, the education of future scientists and engineers, the provision of the tools, both equipment and facilities, for world-class research, and the management of R&D at academic institutions.

The total number of research grants made to individual researchers has been growing for two decades. However, the ratio of new awards made annually to the total number of proposals ("funded rate for new awards") by the two largest Federal supporters of university research, the Department of Health and Human Services (National Institutes of Health) and the National Science Foundation, has declined over the 1980's from around 40 percent to 33 percent in 1991 (adjusted to exclude both multiple submissions by any one individual and for awards for research centers, which may serve many investigators).

This decline is due, in part, to the rapid growth since 1970 in the pool of researchers seeking funding, which has outpaced the sizeable, real growth in basic research funding to academic institutions. In addition, average award sizes (both direct and overhead components), award lengths, or both, have tended to increase. This trend, while providing increased stability and productivity for a given investigator, tends also, within a relatively fixed total, to depress the number of subsequent new awards that can be made. The increases in the number of staff supported on each grant have also affected the number of grants that could be made by NIH. At least in the case of NIH, the move to longer grants was an explicit choice, made in response to the biomedical research community's calls for more stability.

Awards to groups of investigators (either small groups or larger centers) have also been increasing, driven primarily by the need for interdisciplinary approaches to scientific problems. Each of these group or center awards is counted as a single grant, even though these awards support many researchers. Thus, considering only the absolute numbers of awards is misleading. A more appropriate consideration should be the total number of researchers supported. By this measure, there are more researchers supported by

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research grants today than at any previous time.

Funding for R&D at Universities and Colleges

Over the past 35 years, academic institutions have assumed a more prominent role in basic research within the nation's R&D system. Academic institutions' share of basic research expenditures (from all sources) has doubled from about 25 percent in 1953 to 50 percent since the early 1970's. In addition, total academic R&D expenditures as a percent of the GDP have risen sharply over this same period, from about 0.07 percent in 1953 to 0.30 percent in 1989. Federal academic R&D expenditures have also risen as a share of the GDP, from 0.04 percent in 1953 to 0.18 percent in 1989.

The budget proposes $11.5 billion for Federal support for R&D at universities and colleges. This is an increase of almost $600 million, or 5 percent over 1992, and 31 percent over 1989.

Modes of Support for Educating the Next Generation of Scientists and Engineers

The U.S. system of scientific education, particularly at the graduate level, continues to be best in the world. Foreign students flock in increasing numbers to U.S. universities seeking degrees in science and engineering, many of them choosing to stay for the rest of their professional careers. The markets for the "products" of this system, the students, include both industry and academia itself. But these students are important participants throughout our society.

The path from grade school to Ph.D. is commonly referred to as the "pipeline". Today, one-third of college graduates earn a baccalaureate degree in a field of science or engineering. Over the past 15 years, the number of Ph.D.s awarded annually increased from about 17,000 to over 20,000. However, the number of foreign students on temporary visas earning Ph.D.s has nearly doubled over that same period, to almost 5,000. Within the total of U.S. nationals awarded degrees in science/engineering fields, the number of women earning Ph.D.s has increased dramatically and the numbers of Asian and Hispanic students have also increased, but there has

Table 6–16. **THE BUDGET INCREASES FUNDING FOR R&D IN ACADEMIC INSTITUTIONS**[1]

(Dollar amounts in millions)

Department or Agency	Budget Authority				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Health and Human Services	4,584	5,804	6,071	+267	+5%
(National Institutes of Health)	(4,008)	(4,922)	(5,181)	(+259)	(+5%)
National Science Foundation	1,260	1,597	1,917	+321	+20%
Defense	1,329	1,417	1,445	+28	+2%
Energy	507	629	591	-38	-6%
National Aeronautics and Space Administration	434	632	675	+43	+7%
Agriculture	315	425	417	-8	-2%
Other Agencies[2]	343	407	387	-20	-5%
Total	8,772	10,910	11,501	+591	+5%

[1] Amounts reported in this table are included in totals for conduct of R&D.
[2] Includes the Departments of Commerce, the Interior, Veterans Affairs, Education, Labor, the Treasury, Justice, Transportation, Housing and Urban Development, Environmental Protection Agency, Tennessee Valley Authority, the Corps of Engineers, Nuclear Regulatory Commission, and Agency for International Development.

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been no gain in the number of Ph.D.s awarded to Black students.

Since the late 1940's, the Federal Government has been the primary supporter of graduate training. There are three primary forms of such support: fellowships (awarded to students for study at the institution of their choice), traineeships (awarded to institutions to build capacity for graduate education), and research assistantships (awarded to established individual investigators as part of their research grants—the student is "employed" by the grant). Over the past 35 years, the balance between these has changed. Today, research assistantships are the dominant form, accounting for 64 percent of all students for whom the Federal Government is the major source of support.

There have been conflicting views over the past several years as to whether the supply of Ph.D.s entering the workforce, either academic or industrial, will be adequate to meet future demand. Some have predicted large "shortfalls" (relative to demand), with concomitant "shortages" in many fields, while others have projected the supply and demand for scientists and engineers to be in rough balance. However, many experts in the field of labor utilization in science and engineering have called into question the wisdom of using these projections to develop Federal policies to affect the supply of researchers—such projections are notoriously unreliable, and predicting the demand for scientists/engineers is extremely complex.

There is already some evidence–although no firm conclusions–that the production of researchers in the biomedical sciences may have outstripped the demand. Some preliminary National Institutes of Health estimates indicate that the number of post-doctoral students supported on certain types of research grants has increased 5-fold since the early 1980's. While post-doctoral study for 1–2 years is commonplace in these fields, the large increase in numbers supported on grants indicates that these young researchers are extending their "apprentice" period, perhaps partly because the demand in academia has lessened. There is also anecdotal evidence that the same situation is developing in computer science, a field once believed to suffer from serious personnel "shortages".

Part of the problem, at least in many fields, is that the academic model is the only one that most students are exposed to in the course of their training. A faculty member supports graduate and post-doctoral students in order to launch those students into academic research careers as faculty members training a second generation of students, and so on. However, over the past 20 years this has had the result of putting more and more researchers in competition for what must necessarily be a limited—although increasing—supply of research funds.

One way that the Federal Government can respond to this is by encouraging different models of training, such as by increasing the emphasis on interdisciplinary, team-oriented research (the industrial model), through programs such as the NSF-sponsored Engineering Research Centers (ERCs). The budget proposes to continue support for ERCs, for Science and Technology Centers and for programs in other agencies that encourage this interdisciplinary approach to science and engineering.

Even if the projections of Ph.D. supply and demand are inconsistent and, perhaps, flawed, there is no question of the need for a workforce of the future that is highly skilled, and literate in the language, if not the practice, of science and technology. Thus, it may be more prudent for the Federal Government to concentrate its science education efforts not on increasing the number of Ph.D.s, particularly American citizens, but rather on increasing the preparedness of the "pipeline" to produce Ph.D.s, i.e., the undergraduate years. This approach would appear to offer the flexibility needed for the market to respond in a timely way to demands for science/engineering skills in all sectors, as well as provide college graduates who could offer the perspectives of science and technology to other vocations.

In any case, there continues to be a compelling rationale for the Federal Government, in concert with the Nation's universities, to effect changes not so much in the size of the pipeline as in its composition. The objective should be to prepare more of our

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best graduates, for industrial and non-academic careers. The scientific community and the Nation would benefit greatly by the diversity of research interests that results from continuing to increase the number of new entrants, particularly those from traditionally underrepresented groups.

Providing the Tools for World-Class Research: Equipment and Facilities

To sustain a strong national research capability and to enable expansion of research capacity, R&D infrastructure must be maintained and replenished.

Federal Support for University Research Facilities.—The Federal Government directly funds facilities and equipment necessary for the conduct of R&D at Federal facilities. Private industry and universities have primary responsibility for the R&D infrastructure under their respective jurisdictions. However, since the Federal Government supports basic research at universities, it directly funds university R&D facilities and equipment where they are closely related to federally funded research. In 1988–89, the latest period for which estimates are available, private institutions initiated $738 million of new construction and public institutions initiated $1.73 billion of new construction. The Federal Government provided an estimated 11 percent and 16 percent of these funds, respectively.

Expenditures for the repair and renovation of research facilities totalled an estimated $1 billion in 1988–89, with private institutions accounting for one-third of this total ($311 million). Direct Federal funding accounted for 9 percent of repair and renovation activity at private institutions, and 4 percent at public institutions. Added to this direct funding is indirect support for academic research facilities through payments of use allowances, depreciation and operations and maintenance expenses in allocated overhead. This funding has increased dramatically over the decade of the 1980s to almost $1 billion in 1988.

Even with this large Federal expenditure for academic research facilities, the perception of a large "backlog" of unfilled desires for research facilities has led to increased calls from the institutions and many members of Congress for an expansion of direct Federal support for academic research facilities. There has been Congressional action in two areas:

- "Earmarking" of Federal funds to construct new research facilities at particular institutions. The Office of Science and Technology Policy, as part of its continuing evaluation of the state of university research facilities, estimates that about $276 million was appropriated for such projects in 1991. (The issue of earmarking is discussed in more detail in a later section of this chapter.)
- Providing direct grants for academic research facilities repair and renovation through the National Science Foundation, funded at about $17 million in 1992.

The budget does not contain funding for either of these practices. Earmarking that does not involve merit review of any kind is an inefficient use of scarce resources. Further, it has the effect of weakening the Nation's overall R&D effort. Funds earmarked for academic research facilities by Congress in 1992 and previous appropriations bills not only were without the benefit of merit-based review, but most often came at the expense of needed increases in support for academic researchers and in other key activities at Federal laboratories.

For example, the NASA construction of facilities budget has been burdened in 1992 by over $60 million in unrequested, unreviewed, earmarked projects. These projects came at the expense of high priority construction, repair and renovation projects at critical space launch and support facilities. In another instance, the 1992 budget proposed $25 million for university research facilities to be awarded by the Department of Agriculture in conjunction with its National Research Initiative. Instead, the Congress not only earmarked all of that money for special interest projects, but actually *increased* the funding to $75 million and earmarked that entire increase, all to projects with little or no relevance to the NRI.

The Administration will continue to support direct Federal funding for construction or renovation of academic research facilities where such facilities are presented as an integral part of merit-based, competitive re-

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search projects. In addition, the Federal Government will continue to provide funds that universities should invest in new facilities through payments of allocated overhead.

Federal Support for University Research Equipment.—Forefront research at academic institutions is increasingly dependent on state-of-the-art equipment. The most recent triennial survey by NSF (1991) indicated that total expenditures (Federal and non-Federal) for research equipment (costing $500 or more per item) increased rapidly over the 1980's from about $400 million in 1982 to about $830 million in 1989. The amount of research equipment stock that was Federally-funded increased 46 percent in real terms between 1985 and 1989. The survey also revealed that there is substantial turnover in academic research equipment, with 40 percent of the equipment in use in 1989 had been acquired since 1985. The mean time to obsolescence is also decreasing.

The NSF survey noted that the mean purchase price of academic research equipment has increased modestly. It should be noted, however, that the mean purchase price for computing equipment has declined, but it has increased for other types of instruments, particularly in life sciences and chemistry.

Equipment is usually provided for as a part of research grants. The purchase price of equipment provided by grants, however, is generally less than $50,000. In many fields, notably biological sciences and chemistry, there is an increasing demand for state-of-the-art instruments such as electron microscopes, surface chemistry analyzers, and DNA sequencers that are considerably more expensive, in the range of $200,000 to $4 million. This is far more than can be provided for in the average research grant. In addition, the purchase price represents only a part of the total "cost" of equipment. Expenditures for personnel to operate equipment and maintenance over the life of the instrument now represent a significant portion of the total "cost" of equipment.

Most Federal agencies that support R&D at academic institutions also provide funding for instrumentation. The 1993 budget proposes $33 million for NSF to continue its initiative begun last year to provide state-of-the-art equipment costing from $200,000 and $4 million.

Managing the Costs of Research at Academic Institutions

Few systematic analyses have been done to elucidate the underlying reasons why the expenses incurred by universities and researchers in conducting academic research have been increasing faster than the rate of inflation. Some justify these increases by arguing that the scientific questions that must be answered are increasingly complex, e.g., modelling completely integrated global climate phenomena instead of just oceans, or just atmosphere. Academic institutions also cite the increased cost of complying with more layers of regulation, ranging from animal care to human subjects protection to hazardous waste disposal.

It is also true, however, that some items that previously were high-cost (either the item itself or the labor needed for it) have dropped in unit cost dramatically. The best example is computing resources (both equipment and time), where computer capability costing tens of thousands of dollars just a few years ago is now available for a few thousand or less. Other examples include many laboratory chemicals and other reagents that can now be purchased off-the-shelf instead of being made laboriously by each individual researcher.

The average grant is composed of two major categories of expenditures:

- *Direct costs.*—Salaries (principal investigators, student research assistants, technicians); equipment; supplies; other direct costs (travel, services); and
- *allocated overhead payments (payments for that portion of grantee overhead that universities allocate to research supported by the Federal Government, commonly referred to as indirect costs).*—Facilities depreciation, operations and maintenance, student services, libraries, administrative expenses.

Of these, allocated overhead payments as a percentage of the total have been rising faster than have direct costs, although that growth has leveled off in recent years. Within

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direct costs, salaries are, by far, the fastest growing component. This category has risen faster than the CPI for several years. In 1988, personnel expenditures accounted for an estimated 65 percent of the direct costs budgeted for individual investigator awards (RO1) at NIH. The result of all of this is that constant dollar expenditures (1988 dollars) per FTE investigator (as noted by the Government-University-Industry Research Roundtable in 1989) have risen from about $155,000 in 1980 to about $225,000 in 1988.

Allocated overhead payments, both the total amounts and the elements, have been a continuing source of controversy and friction between the Federal Government and academic institutions. Each institution proposes and receives a rate for these payments that is the result of often long and difficult negotiations with the cognizant Federal agencies. The rates vary widely among institutions with, on average, higher rates for private and lower rates for public institutions. In many cases there has not seemed to be an analytic basis for the difference in rates, particularly in the administrative expense category.

The controversy over allocated overhead has not only caused friction between academic institutions and funding agencies, but has also caused friction between the researchers and administrators at the institutions themselves. Researchers argue that higher allocated overhead payments increase the total cost of research but add nothing to the actual performance, while reducing the number or sizes of awards. Administrators assert that even at the negotiated rate, the expenses the institution incurs (whether by choice or necessity) in conducting Federally-supported research are not fully covered by the allocated overhead payments. The Federal Government and academic institutions could both benefit from a simpler, less contentious system for determining allocated overhead.

Current Proposals.—In 1991, the Administration implemented changes to OMB Circular A–21, which sets out guidelines for determining allocated overhead payment rates for academic institutions. These changes will be phased in over the next year as institutions begin their fiscal years. They were designed to: (1) clarify that a number of items would not be eligible for payment, e.g., entertainment, alumni activities, donations and contributions, civic, community, or social organization memberships; and (2) set an upper limit of 26 percent on the administrative expenses portion of allocated overhead payments. This latter change was made to encourage and provide greater incentives to academic institutions to examine their adminstrative expenses very closely and reduce unnecessary internal bureaucracy. This change is consistent with the spirit of the Federal Demonstration Project, which seeks to reduce the Federal bureaucracy (and thus expenses) for the administration of academic research.

Future Issues.—There are still a number of issues regarding allocated overhead payments that will be examined by an interagency group over the next year. Academic institutions and organizations will be consulted during this process. The issues include:

- a further examination of administrative expenses; of current incentives for administrative efficiency and how these can be strengthened; and, whether differences among institutions and geographic regions have a bearing on allocated overhead payment policies;
- whether payments for facilities or equipment should reflect different academic fields of research and/or rates of obsolescence;
- whether there could be a better balance between elements assigned as direct costs and elements placed in the allocated overhead pool, i.e., should specific elements be reassigned from the allocated overhead pool to direct costs?

The Federal Government and academic institutions have together built a research enterprise that is without peer in the world. This enterprise has been based on the concept of a partnership, where each partner contributes and each benefits. But, as in any partnership, a periodic and thorough reexamination is both healthy and necessary, if only to revalidate the original conditions of the partnership.

To some extent, the issue of allocated overhead is a symptom of the need for

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a more fundamental reexamination of the funding incentives of the academic research enterprise. The challenge for academic institutions is to consider the future in terms of the prospective funding environment and adjust their expectations accordingly. The challenge for the Federal Government is to understand and cope with rising expenditures while maintaining a strong national research capability in academic institutions. The challenge for both partners is to manage these issues in ways that will strengthen the partnership and expand the future benefits accruing to each partner. As was noted at the beginning of this section, the scientific future of the Nation rests with academic institutions. In continued strong partnership with the Federal Government, that future should be a bright one.

EARMARKING OF R&D FUNDING

The hallmark of the Federal Government's support for R&D has been the awarding of R&D grants and contracts through a competitive process. This merit-based approach is intended to maximize the potential return on these investments by selecting only the highest quality research for support.

This merit-based approach, however, has been increasingly eroded in recent years due to the Congressional practice of "earmarking", i.e., requiring that funds for R&D and R&D-related facilities be awarded to particular institutions or even to particular researchers. This practice is most visible in the area of new buildings, particularly those specified for individual academic institutions. However, the practice of earmarking is actually much more pervasive, reaching down to individual research projects.

The Office of Science and Technology Policy recently revised its detailed analysis of earmarking in appropriation bills and reports to reflect final action for 1992. The major findings of the analysis and a comparison to the results from 1991 follow.

- The analysis identified 566 "earmarks" for both facilities and research, totaling $993 million, an increase of 23 percent over 1991. Of these 334 (totaling $180 million) were in Agriculture, where specific earmarking by Congress has historically been common.
- In other areas, R&D earmarking is on the rise, with 66 separate actions in Energy and 20 to 40 each in Defense, Interior, Commerce and the Environmental Protection Agency. Noteworthy in 1992 was the large increase in earmarks for NASA, and the first appearance in some years of earmarks in NSF. In fact, the VA, HUD and Independent Agencies Appropriations bill experienced the greatest increase over 1991 in dollar value of earmarks (+$187 million) and nearly the greatest increase in number (+79 percent), second only to the Commerce, State, Justice and the Judiciary bill. The NASA example is particularly noteworthy since a number of the projects have little or no connection to space research or technology.
- Earmarks for facilities at academic institutions appear to have increased relative to 1991. Included in the total of $346 million is an increase of $95 million, to a total of $177 million, for research projects at academic institutions. This is a dangerous trend because it represents a much more serious long-term threat to the merit-based system for selection of research projects than does earmarking for facilities.
- OSTP estimates that these R&D earmarks have put an extra burden of nearly $500 million on the R&D programs proposed in the President's 1992 budget, because the earmarks were made in programs where the overall funding level was the same or less than the President's 1992 request. The most serious impacts appear to be in Defense, NASA, NSF, and some parts of Agriculture. The other $489 million of R&D earmarks were covered, at least in part, by Congressional increases in the affected R&D accounts, which presumably means that a corresponding reduction was taken elsewhere in the budget.
- Many of the earmarks appear to establish new centers, institutions, or other organizations. In most of these cases, continued Federal support in future years seems clearly implied. Thus, the 1992 earmarks have put a built-in burden on the 1993

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and future budgets, an effect that will be compounded if additional earmarks are made in future years.

As the Office of Science and Technology Policy has noted, its information was based only on a review of the often vague information in Congressional appropriations bills and reports. Therefore, the analysis does not identify the sponsorship of the earmarks and does not provide a basis for judgments on the merits of the earmarked items or on the motivations of the earmarking. However, a recent press report (*Science,* November 1991) examined the fate of several earmarked projects from previous years. The report noted that the projects examined: (1) have supported R&D, but not the original claims that were made for them; (2) have changed in response to technical difficulties encountered; (3) were simply outright promotion of local interests disguised as R&D projects. A more in-depth case-by-case review of other such projects, with agency and Congressional staff directly involved, would be helpful in determining to what degree each earmark was (1) a response to advocacy by a particular institution; (2) a parochial initiative of the Congress or a Federal agency; or (3) a recognition by Congress of a significant national or programmatic need.

EXPANDING THE GEOGRAPHIC FRONTIER: SPACE

The exploration of space provides tangible benefits to the Nation in the form of new materials and other scientific and technological discoveries that will stimulate economic growth and improve life on Earth. Space also provides large intangible benefits to

Table 6–17. **CONGRESSIONAL EARMARKING OF R&D FACILITIES AND RESEARCH IN 1992 APPROPRIATIONS BILLS** [1]

(Dollars in millions)

Agency	1991		1992	
	Number	Amount	Number	Amount
Defense	28	253	36	263
Energy	48	186	66	197
Agriculture	325	182	334	180
Commerce	14	14	38	36
Interior	25	18	42	31
Health and Human Services	2	3	1	8
Education	5	8	3	3
General Services Administration	21	61	—	—
Environmental Protection Agency	20	67	24	55
National Aeronautics and Space Administration	4	18	11	191
National Science Foundation	—	—	2	20
Housing and Urban Development	—	—	4	2
Federal Emergency Management Agency	—	—	1	3
Transportation	—	—	3	3
Office of Science and Technology Policy	—	—	1	2
Total, All Agencies	492	810	566	993
Facilities	(111)	(428)	(116)	(402)
Operations	(381)	(382)	(450)	(590)
Academic Institutions	(101)	(348)	(139)	(346)

[1] Source: Office of Science and Technology Policy

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the Nation with activities that lift the spirit of people everywhere. The will to explore the unknown frontier of space, both with robotic probes and manned missions, is one measure of the vision and maturity of the Nation.

The key to the successful exploration of space is stable and sustainable funding of a balanced program of science, applications and manned space activities. The budget provides clear evidence of the President's continued commitment to his long-term space goals, and to active American leadership in space science and exploration.

The budget proposes to allocate a total of almost $15 billion for the National Aeronautics and Space Administration (NASA). This represents an increase of nearly 5 percent over 1992. The budget continues to support the strategy laid out by the Advisory Committee on the Future of the U.S. Space Program. The budget provides increases for space activities, including research, development, and operations, to continue to explore the frontier with both manned and unmanned missions. Resources in the budget will improve access to space by supporting critical elements of space transportation (which provides the enabling infrastructure for all other space activities) and by encouraging innovative commercial ventures that will provide increased access.

SPACE EXPLORATION

This part of the space program includes Space Station Freedom and activities leading

Table 6–18. **THE BUDGET CALLS FOR A 5 PERCENT INCREASE FOR MAJOR SPACE ACTIVITIES**

(Dollar amounts in millions)

Objective	Budget Authority				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Space Exploration	1,433	2,646	2,836	+190	+7%
Space Station Freedom	900	2,029	2,250	+221	+11%
Exploring the Frontier	533	617	586	-31	-5%
Lunar Exploration	—	—	29	29	—
Planetary Exploration	417	536	487	-49	-9%
Mission Studies	5	5	3	-2	-40%
Technology for Future Exploration	111	76	67	-9	-12%
NASA	23	31	27	-4	-13%
Energy	88	45	40	-5	-11%
Improving Access to Space	4,411	5,312	5,412	+100	+2%
Space Shuttle	4,342	4,965	4,867	-98	-2%
New Launch System	—	93	250	+157	+169%
Expendable Launch Vehicles	67	195	218	+23	+12%
Commercial Programs	2	59	77	+18	+31%
Tracking and Data Acquisition	820	918	921	+3	—
Research and Program Management	1,927	1,578	1,660	+82	+5%
Construction of Facilities	275	525	319	-206	-39%
Other NASA Programs [1]	2,192	3,441	4,010	+569	+17%
Total, All Agencies	11,058	14,420	15,158	+738	+5%
Total, NASA [2]	10,969	14,320	14,993	+673	+5%

[1] Includes funding for all other NASA activities including space science and applications, space technology (excluding exploration), academic programs and aeronautics.

[2] Program amounts for 1989 do not reflect revised NASA budget structure instituted in 1992. Program amounts for 1992 and 1993 include funds for institutional support previously shown in Research and Program Management.

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to robotic and manned exploration of the Moon and planets. Together, these programs support the long-term goal of expanding human presence and activity beyond Earth's orbit into the solar system. The budget proposes a total of $2.8 billion, an increase of 7 percent, for space exploration. The strategy for these activities has four major elements: (1) build and operate Space Station Freedom to provide unique capabilities for life sciences and microgravity research; (2) continue robotic missions to explore the other planets in our Solar System; (3) begin several small near-term robotic missions to increase knowledge of the Moon and to provide data for planning future exploration activities; and (4) continue work on "long pole" technology building blocks that will be needed for future manned and robotic exploration of the solar system.

Space Station Freedom.—This program, the largest international R&D project ever undertaken, will enable the performance of life sciences and materials research in a premier space laboratory for extended periods. Specific experiments during the initial operation of Freedom will lead to new knowledge in semiconductor and biotechnology fields, and may lead to eventual production of unique commercial products from space. When Freedom's crew is aboard full time, emphasis will shift to life sciences research, necessary for the long-term space flights of the next century.

With core Station elements being provided by U.S. firms, Freedom will drive advancements in aerospace technology that will maintain U.S. leadership in this important area. Technologies and systems that will be advanced as part of Space Station Freedom development and operations include environmental control and life support, power generation, data storage and management, thermal control, crew health care, data processing and distribution, structures and materials, robotics and automation, and operations and maintenance techniques and logistics support. As in the past, many of the advances made in the course of this program will be quickly used in Earthbound applications.

This past year NASA instituted major adjustments in the program as a result of a restructuring activity that simplified the design, focused on providing a quality facility for users, maintained agreements with international partners, and placed the program on a more sustainable budget path. The program is now designed to provide early use with a man-tended capability consisting of Shuttle visits and free-flyer support, and, later, a permanently manned capability with a crew of four. This phased approach with a simplified design will better enable Space Station Freedom to accomplish successfully its major objectives as a life sciences and materials research facility in space.

The budget provides $2,250 million for Space Station. This includes an increase of 10 percent over the 1992 enacted level for development, and initial funding for Space Station operations. This amount will support finalization of detailed designs, and allow fabrication, qualification, and assembly tests of various critical components in preparation for first element launch in 1996, the attainment of a man-tended capability in 1997, and a permanently manned capability in late 2000.

Also included is funding for detailed design, schedule and cost studies for an Assured Crew Return Vehicle (ACRV). NASA will examine a wide range of options for providing this capability as an expedient means of returning Space Station crewmembers to Earth during the permanently manned phase of the program. In addition to the ACRV studies, an independent panel (the Aerospace Safety Advisory Panel), will review the justification and requirements for an ACRV in anticipation of a decision on whether to proceed with development.

Exploring the Frontier.—The President remains firmly committed to his long-term goal, articulated in 1989, of manned and unmanned exploration of the solar system. The budget reflects this commitment by proposing $586 million for exploration activities in NASA and the Department of Energy. For 1993, the budget is based on a strategy of (1) supporting near-term small missions that will take advantage of the unique proximity and characteristics of the Moon; (2) supporting exploration of the near and outer planets in the Solar System; and (3) supporting research focused on key, long-lead technologies that will be nec-

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essary for any future exploration endeavors. These technologies include: space nuclear and conventional propulsion, life sciences and life support technologies, and space surface nuclear power.

Planetary Exploration.—The objectives of these programs are to determine the nature of planets, comets, and asteroids as a means for understanding the origin and evolution of the solar system, to examine how the appearance of life is related to the chemical history of the solar system, and to provide the scientific basis for the future use of available resources in the solar system.

U.S. planetary exploration programs are guided by recommendations of NASA's scientific advisory council. These recommendations outline exploration missions through the year 2000 (i.e., inner planets, small bodies, and the outer planets). The Magellan (Venus), Galileo (Jupiter), and Ulysses (Sun) missions have been launched in the last two years and are providing exciting new scientific information. The Mars Observer mission designed to examine the geologic and climatic evolution of Mars will be launched in late 1992.

For 1993, the budget proposes $487 million for planetary exploration, a decrease of $49 million or 9 percent below 1992. Most of this decrease is due to planned reductions in development funding as missions are launched. The 1993 funding level will also provide for the operation of Mars Observer, Galileo, and Magellan and for support of university researchers to analyze data from planetary missions.

In the current constrained budget environment, it is unlikely that multi-billion dollar planetary exploration missions, which often span a decade or more, can continue to be sustained over the long-term. This is particularly true because these missions are often linked to immutable planetary launch "windows" in order to achieve their objectives. Long delays caused by budgetary reductions, launch constraints or technical problems, or all three, often mean that graduate students are well along in their professional careers before instruments they helped develop actually collect any data.

Thus, the budget proposes that development of the Cassini mission to Saturn be continued, but that it undergo a thorough review in 1992 which will focus on the technical and schedule risk remaining in this program. However, the budget proposes to terminate the Comet Rendezvous/Asteroid Flyby mission because the scientific benefits of this mission no longer justify the investment. In order to contain cost growth, the scope of the CRAF mission was recently reduced by deleting the comet penetrator and several other instruments. Thus, much of the planned science was already lost.

In the longer term, a robust planetary science program should emphasize more, smaller, and less costly missions. In order to give the planetary science community an opportunity to consider its future direction in a structured fashion, the budget proposes to initiate studies and research on future small planetary missions (i.e., with total costs of less than $150 million per mission). All of these decisions are generally consistent with the recommendations of NASA's scientific advisory council.

Robotic Exploration of the Moon and Mars.—The budget proposes $99 million, an increase of 22 percent, for exploration activities that focus on the Moon and Mars. The initial emphasis will be on the Moon for several reasons. The Moon is accessible because of its proximity and will be a useful mid-point in a long-term plan to send people to Mars. Further lunar exploration is also attractive because it offers opportunities for scientific research, and the possibility that its mineral and energy resources could one day be harnessed for use in the space program or back on Earth. The Synthesis Group, an independent advisory panel on the exploration program chartered by the Vice President, considered these factors last year when it recommended that the U.S. plan an active program of robotic and manned missions to the Moon before sending people to Mars.

As a first step, the budget proposes to start work on two small, low-cost, robotic exploration missions to the Moon. These spacecraft, to be launched in 3–4 years, will carry instruments for mapping the Moon and surveying lunar resources. NASA and

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other participating agencies will continue architecture and mission studies focused on longer-term options for both robotic and manned exploration of the Moon and Mars.

Technology for Exploration.—Some future robotic exploration missions are feasible using technology that is already available. However, more ambitious missions—particularly manned exploration of the Moon and Mars—will require significant improvements and breakthroughs in space transportation and other areas. Advancing U.S. capabilities in these areas will likely require many years of focused research and engineering, so coherent long-term technology development efforts should be implemented as future needs are identified.

Some priorities for exploration-related technologies have already been identified by NASA and the Synthesis Group, which produced a comprehensive report on the Space Exploration Initiative. The budget proposes $67 million to address many of these established priorities, particularly "long pole" technologies required to make key exploration missions feasible, or to significantly reduce their cost.

One such area is nuclear propulsion, which offers shorter travel times and more payload mass compared to conventional propulsion technologies. Technologies and mission applications for nuclear propulsion will be addressed by both NASA and the Department of Energy (DOE) in 1993. In addition, NASA will continue technology development for advanced chemical propulsion, life support and radiation protection. The budget proposes a total of $45 million in funding by Energy and NASA for space nuclear reactor power system technology (specific allocation of this funding will be made in the Spring of 1992 after a reassessment of potential applications and technology alternatives).

IMPROVING ACCESS TO SPACE

Space transportation is the foundation for all U.S. space activities because space missions require launch vehicles to get off the ground. Consequently, the Nation's space transportation capabilities must be adequate to meet both near-term and long-term national needs. At present, the U.S. has one manned launch system, the Space Shuttle, and a fleet of expendable launch vehicles with a broad range of payload capabilities. Many of the latter are now operated on a commercial basis for use by both the government and private customers.

The budget proposes $5.4 billion, an increase of 2 percent, for civil space transportation. The strategy reflected in the budget is founded on three underlying principles: (1) enhance the Space Shuttle's efficiency and schedule predictability while increasing the reliability and lifetime of the existing fleet; (2) develop a new launch system to offer operational improvements over existing vehicles and to reduce the long-term burden on the Shuttle; and (3) encourage the commercial space sector to provide goods and services that will increase access to space for all sectors.

New Launch System.—All sectors of the U.S. space program, including scientific, exploration, national security, and commercial applications, would benefit greatly from reductions in launch system operating costs and improvements in reliability, responsiveness, and mission performance. To this end, the budget proposes $250 million, nearly a three-fold increase, for the joint NASA/Department of Defense program to develop a new launch system with several configurations, including a heavy lift capability. The Advisory Committee on the Future of the U.S. Space Program recommended developing this capability to take pressure off the Space Shuttle and to enable new types of future space missions. In addition, developing this new family of vehicles will strengthen the technical base for improvements in commercial launch vehicles. The first launch of this new system is planned for 2002. Funding for common program elements will be shared between NASA and DOD on a 50:50 basis. Planned 1993 activities focus on continued development of a new liquid-fueled rocket engine for the vehicle. Vehicle design studies will also continue. During 1992, Defense and NASA will initiate a review of the NLS program plan to identify opportunities to reduce the total cost of the program.

Space Shuttle.—The budget proposes $4.9 billion, a decrease of 2 percent, for the Space Shuttle, including operations. The Shuttle will continue to be important to the civil space program through at least the next decade because

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Table 6–19. **THE BUDGET INCLUDES FUNDING FOR 8 SHUTTLE FLIGHTS AND INVESTMENTS TO IMPROVE THE NATION'S ACCESS TO SPACE**

(Dollar amounts in millions)

	Budget Authority				
	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
New Launch System	—	93	250	+157	+169%
NASA	—	38	125	+87	+229%
DOD	—	55	125	+70	+127%
Space Shuttle	4,342	4,965	4,867	-98	-2%
Space Shuttle production and operations	3,549	3,851	3,989	+138	+4%
Advanced Solid Rocket Motor	51	315	—	-315	-100%
Assured Shuttle Availability	68	105	139	+34	+32%
Space transportation capability development	674	694	739	+45	+6%
Expendable launch vehicle (ELV) services	67	195	218	+23	+12%
Commercial Programs	2	59	77	+18	+31%
SpaceHab	—	39	51	+12	+31%
Commercial Experiment Transporter (COMET)	—	18	22	+4	+22%
Other	2	2	4	+2	+100%
Total	4,411	5,312	5,412	+100	+2%

of its unique abilities to retrieve satellites, carry people and material to build the Space Station, and serve as a short-term orbiting laboratory for scientific research. However, the budget also recognizes that the Shuttle system has proven to be very expensive and complex to operate, and that development of new launch systems will be needed to meet long-term U.S. needs.

Because the Shuttle is a precious resource that should be conserved, its use will be limited to payloads requiring manned presence or other unique capabilities. The planned flight rate has been reduced to 8 missions per year through 1996, a level that is both realistic and prudent. The budget also proposes $139 million, an increase of 32 percent, for the Assured Shuttle Availability (ASA) program. ASA projects are intended to prevent component obsolescence and extend the useful life of the current fleet of orbiters. Taken together, these measures will reduce the long-term risk exposure of continued use of the Shuttle system.

Several measures are proposed that will reduce the Shuttle's funding requirements while continuing the program's strong commitment to safety and mission success. Cost reduction targets of 3 percent per year, resulting in a 15 percent reduction by 1996, have been established to improve the efficiency, and thus reduce the cost, of Shuttle operations, without compromising flight safety or the Shuttle manifest.

Termination of the development of the Advanced Solid Rocket Motor (ASRM) program as well as the construction of its production facility is proposed. The ASRM project represents major funding requirements, nearly $500 million in 1993, over $400 million in 1994, with a total of $2.5 billion to reach flight status. Unlike other projects competing for these scarce budget resources, alternatives exist to offset the loss of the ASRM capability. The Redesigned Solid Rocket Motor (RSRM), which entered service after the ASRM was initiated, has already flown successfully in 20 Shuttle missions, with no safety or reliability problems. The impact on the Space Station Freedom program can be compensated for by adding several Shuttle flights using the current RSRM. It is estimated that two additional assembly flights plus

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one additional utilization flight would be required to achieve the Permanently Manned Capability milestone, which would slip 9 months (from early 2000 to late 2000).

In recent years the President has requested significant increases for NASA, including funding for the ASRM program. Congress has been unable to fund fully these requests. In the Senate and Conference Reports accompanying NASA's 1992 appropriations, Congress directed that increases in the NASA budget be limited to 3–5 percent in 1993. ASRM has been recommended for cancellation, in part, to accomodate the Congressionally-imposed cap. If a higher budget allocation were to be provided for NASA in 1993 by the Appropriations Committees, the Administration would be prepared to work with the Congress toward the possibility of continued support for ASRM.

When the ASRM was proposed for development four years ago in the 1989 budget to Congress, its first use was planned for early to mid-1994, and the estimated cost up to first use was $1.9 billion. According to the most recent plans, first use of ASRM would occur no earlier than February 1997, and estimated cost up to first use including prior year funds would be $3.4 billion. Thus, ASRM would be available three years later than originally proposed, at 80 percent higher cost.

It should also be noted that when development funding for the ASRM was proposed four years ago, 14 Shuttle missions per year were planned after the ASRM entered service. The projected Shuttle flight rate in the late 1990's has since fallen to 9 missions per year. Thus, while it was originally thought that more than 70 Shuttle missions in the 1990s would use ASRMs, fewer than 30 would do so now if the program were continued.

Production of additional Shuttle orbiters is not planned. However, production of spare parts will continue in the near term to support the existing Shuttle fleet and to help preserve an option to acquire a replacement orbiter in the event of orbiter loss or other demonstrable need.

Commercial Space.—In the National Space Policy and its implementing guidelines, the commercial sector is encouraged to provide goods and services that will improve access to space for all sectors. A result of this policy is that NASA and other agencies are increasing their use of commercial launch services. A noteworthy milestone in late 1992 will be the first launch of the Commercial Experiment Transporter (COMET), which is being procured through the NASA-sponsored Commercial Centers for the Development of Space.

Another important planned milestone in 1993 is NASA's first use of SpaceHab, a commercially-developed, reusable module that will enable the Space Shuttle to carry more experiments. NASA has contracted to use part of this module for multiple missions, and its developer is marketing the remaining capacity to commercial customers.

The commercial sector can also benefit from launch technology activities that are planned by NASA and DOD for 1993. While planned technology work is focused on meeting future needs and objectives identified by government agencies (e.g., increasing the cost-effectiveness of space launch systems), some results of this work will also be applicable to commercially-operated systems. In addition, development of new launch vehicles (such as the new launch system being built by NASA and DOD) for the government may provide new opportunities for commercial operators in the long term.

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Investing in the Future:

7. Improving Transportation and Other Infrastructure

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7. IMPROVING TRANSPORTATION AND OTHER INFRASTRUCTURE

The Federal Government conducts directly and assists the States in a wide variety of public infrastructure investment activities. This chapterdiscusses the highlights of this investment in transportation and other areas. In 1993, Federal capital outlays for major physical capital infrastructure will grow from the 1992 level of $46.5 billion to $50.4 billion, an increase of eight percent. A more complete discussion of Federal capital spending is provided in Table 7–8 and in Part Three, Chapter 29, "Physical and Other Capital Presentation."

HIGHLIGHTS—TRANSPORTATION

Building for Tomorrow.—The transportation system of the 21st Century will carry more people to their destinations faster, safer, and more efficiently than ever before. The foundation of this system will be investments made today. To this end, key elements of the transportation budget proposal include the following:

- $19.2 billion, a $2.2 billion or 13 percent increase over 1992, for highway construction and rehabilitation; which will finance over 1 million jobs in 1993;
- $2.7 billion, a $306 million or 13 percent increase over 1992, for continued modernization of the air traffic control system; and
- $437 million, a $108 million or 33 percent increase over 1992, for new weather satellites and $177 million a $21 million or 14 percent increase, for Weather Service modernization, which will improve weather forecasts and storm warnings. (Key Federal funding for transportation infrastructure is shown in Table 7–1.) A discussion of other Federal infrastructure investments is presented at the end of this chapter.

The next century's transportation system also will be built upon investments in new transportation technologies. In the future, magnetically levitated or other high-speed trains may move passengers directly between major city centers at speeds up to double that of today's conventional railroads. "Intelligent" vehicles operating on "intelligent" highways will permit monitoring of congestion, speed and vehicle spacing to reduce accidents and delays. The budget requests $498 million for Department of Transportation research supporting possible deployment of these and other future systems.

Stimulating Economic Growth.—Transportation infrastructure improvements will pay

Table 7–1. **KEY FEDERAL INVESTMENTS IN AMERICA'S TRANSPORTATION AND SAFETY INFRASTRUCTURE**

(Budget authority; dollar amounts in millions)

Initiative	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Federal-Aid Highways (Obligations)	13,507	16,986	19,198	+2,212	+13%
FAA Modernization	1,384	2,394	2,700	+306	+13%
Weather Satellites	330	329	437	+108	+33%
Weather Service Modernization	62	156	177	+21	+14%
Total	15,283	19,865	22,512	+2,647	+13%

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growth and productivity dividends today, as well as tomorrow. Virtually every good produced uses transportation services. Almost 20 percent of consumer spending goes to transportation. One-tenth of the American workforce is employed by transportation or transportation-related businesses.

A growing economy and population will increase demand for transportation services. Americans are expected to become increasingly mobile, with highway traffic growth estimated at 2.5 percent annually. Airline passenger growth is estimated to grow even faster, at more than 4 percent annually. The Nation needs to be able to respond to this increased travel demand.

Renewing the Transportation Partnership.—A solid foundation for the next century's transportation system has been built through a strong partnership among the Federal government, State and local governments and the private sector. To support and renew this partnership, the Administration will pursue policies designed to use public resources more wisely, unleash private investment and remove barriers to a more efficient transportation system.

IMPROVING THE NATION'S HIGHWAYS

Economic growth and productivity increases can be constrained by deteriorating highways and bridges. Recognizing this, the Administration proposes $19.2 billion in 1993 obligations for Federal-aid highways. This reflects a 13 percent increase over 1992 and a 114 percent increase since 1981. Within the $19.2 billion in Federal-aid obligations, States primarily determine the funding mix among the following major programs: the National Highway System (NHS), State Block Grant program, Interstate Maintenance and Bridge Rehabilitation. The $2.2 billion increase in the budget will finance a significant increase for each program. These programs, either created or expanded in the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), each provide States different means to address local highway infrastructure needs and are described below. (Federal funding for Federal-aid highways is shown in Table 7–2.)

Together with the new tools provided in the Surface Transportation Act, the 1993 request will ensure that the physical condition of the Nation's highways and bridges will continue to improve, the most critical highway infrastructure needs of the nineties will be addressed, and jobs will continue to be created.

Creating New Jobs

Americans are put to work through the Federal investment in constructing and repairing the Nation's highways and bridges. The $19.2 billion included in the budget for Federal-aid highways spending is a $2.2 billion increase over 1992. This increase would support more than 120,000 jobs, bringing total employment supported by Federal highway infrastructure investments to over one million in 1993.

The National Highway System (NHS)

The new Surface Transportation Act enacts the Administration proposal to designate a National Highway System. The 155,000 mile NHS concentrates Federal resources on the rehabilitation and improvement of those highways most critical to interstate commerce

Table 7–2. **THE FEDERAL COMMITMENT TO AN IMPROVED HIGHWAY SYSTEM**

(Dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Obligations	13,507	16,986	19,198	+2,212	+13%
Outlays	13,306	15,803	16,909	+1,106	+7%

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and travel. Comprising only four percent of the country's public road mileage, the NHS will carry 40 percent of all vehicle miles traveled and 75 percent of all intercity truck miles traveled. An efficient NHS will keep prices of American goods down, thereby benefiting both consumers and manufacturers whose products, in turn, will be more competitive overseas.

More Flexible State Block Grants

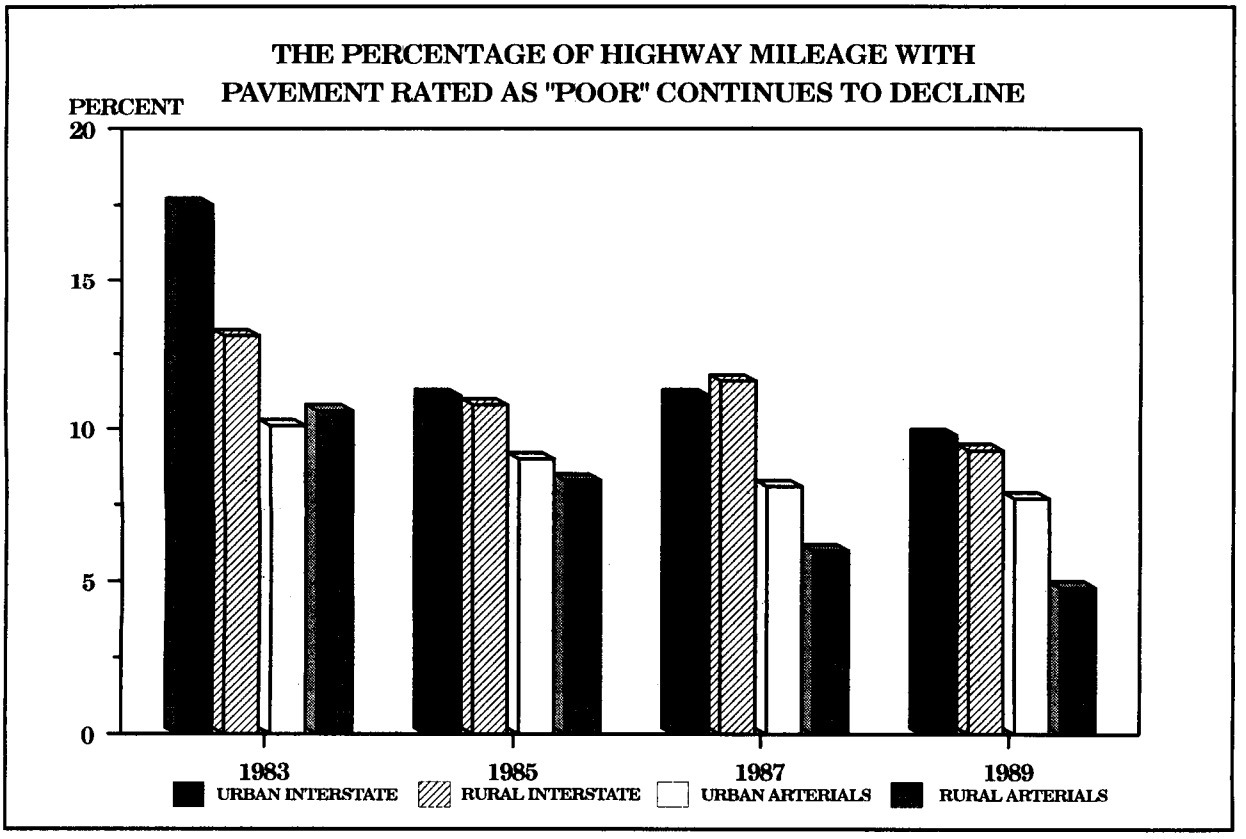
The Surface Transportation Act incorporates the Administration's proposal to consolidate an array of existing narrow, categorical highway programs into a new Surface Transportation Program (STP). The STP will give States greater flexibility in the use of funds to solve local transportation problems in ways that best meet local needs, whether the States choose traditional highway construction or other forms of support for the ground transportation infrastructure.

A Focus on Maintenance

Since 1983, there has been a dramatic decline in the percent of highway miles rated in poor physical condition. For example, between 1983 and 1989 the percent of urban interstate highway miles rated in poor physical condition was cut almost in half. This achievement stands in contrast to the common assertion that the Nation's infrastructure is "crumbling". (Improvement in highway pavement quality is shown in the accompanying chart, "The Percentage of Highway Mileage With Pavement Rated as 'Poor' Continues to Decline"). The new Surface Transportation Act builds on this progress through a new Interstate Maintenance program and addresses bridge needs through an expanded Bridge Rehabilitation program. Furthermore, States are required to develop and implement bridge and pavement management systems to assure that Federal investment in these areas is well utilized.

The Public/Private Partnership and Toll Roads

For the first time since 1916, States will have broad discretion to use Federal funds for the construction and reconstruction of toll roads. They will also be allowed to



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Table 7–3. **FEDERAL HIGHWAY SPENDING WILL EXCEED USER PAYMENTS**

(In billions of dollars)

	1992	1993
Trust Fund Outlays	16.2	17.3
Trust Fund Receipts	16.3	15.8

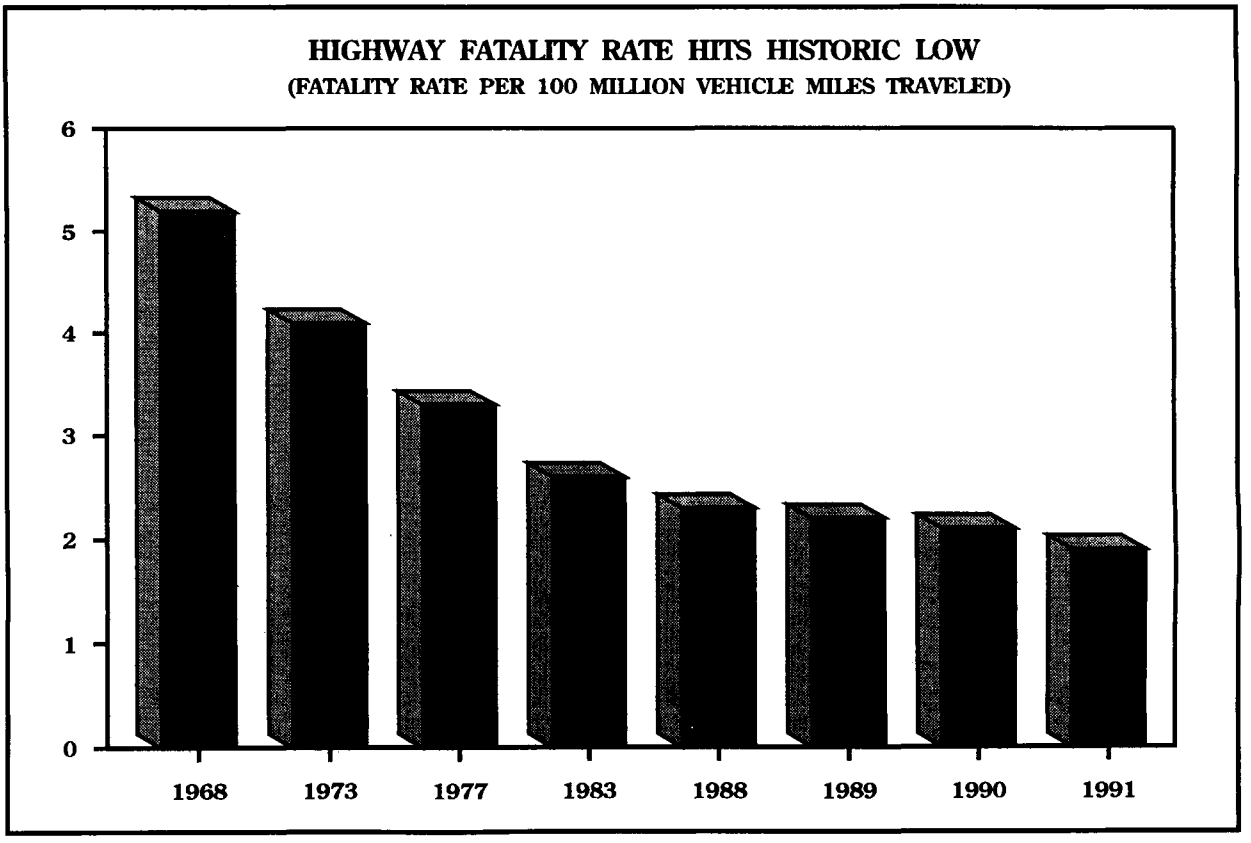
mix tolls and Federal funds to upgrade certain existing Federal-aid highways. States will now have access to an entirely new source of funding to expand capacity and improve and maintain existing highways.

Financing the Highway System

The Administration proposes to spend more in 1993 on highways, including safety programs, than users will pay into the Highway Account of the Highway Trust Fund—$17.3 billion in outlays compared to $15.8 billion in receipts. This trend is proposed to continue. (A comparison of Highway Trust Fund outlays and receipts is shown in Table 7–3.)

Mass Transit

As a companion and complement to needed highway investment, capital funds will also be provided to permit a sustained level of effort in mass transportation. Transit patronage continues to grow and transit systems will be called upon to carry even more passengers in the future as States and localities develop strategies to meet new environmental standards for air quality.



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Improving Highway Safety

The U.S. traffic fatality rate in 1991 achieved an all-time low of 1.9 deaths per 100 million vehicle miles traveled. (The highway fatality rate trend is shown in the accompanying chart, "Highway Fatality Rate Hits Historic Low"). Highway crashes account for 95 percent of transportation deaths, and one out of every two crashes is alcohol-related. The budget includes $459 million, an increase of 20 percent over 1992, to improve highway safety. The Administration will continue to work in partnership with State and local governments, the private sector and the general public to ensure a safer transportation infrastructure. Among the Administration's safety goals are keeping drunk and drugged drivers off the road, increasing safety belt use, and improving public awareness of the need for safe driving behavior.

MODERNIZING THE AVIATION SYSTEM

Continuing growth in air travel will place unprecedented demands on the National Airspace System (NAS) from now through the turn of the century. Significant investment, by all involved, is necessary to ensure that the aviation system continues to be safe, efficient and reliable. Many parts of the aviation infrastructure need to be modernized and expanded to handle increasing air traffic.

The budget includes $9.4 billion, a $564 million or 6 percent increase, for aviation programs. (Federal funding for aviation programs is shown in Table 7–4.) This will continue modernization of aviation facilities and equipment and will expand airport capacity. The proposal also provides increased funding for air traffic controllers, security staff, and research and development. In 1993, the Administration is proposing an aviation reauthorization that will provide the flying public a safe and efficient aviation system.

Completing the Modernization Program

The budget includes $2.7 billion for FAA's facilities and equipment account, an increase of $306 million or 13 percent over 1992, to continue the modernization and consolidation of air traffic control facilities. The modernization plan will provide near-term improvements to solve immediate problems and will result in greater operating efficiency and safety. It also provides the foundation for sustained improvements for the future.

The modernization effort includes:

- $805 million, a 33 percent increase over 1992, for the Advanced Automation System (AAS) and Voice Switching and Control System (VSCS). AAS and VSCS will provide new air traffic controller screens and communications processors which will improve air traffic management and accommodate increased air traffic in the 1990's and beyond.
- $160 million, a 23 percent increase over 1992, for radar and communications equipment modernization for the en route aviation sector. This will improve communications and tracking of aircraft movement which will enhance aviation safety.

Table 7–4. **TOTAL FEDERAL COMMITMENT TO AVIATION**
(Budget authority; dollar amounts in millions)

Initiative	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Operation of the Aviation System	3,445	4,360	4,606	+246	+6%
Modernization Program	1,384	2,394	2,700	+306	+13%
Airport Improvement	1,600	1,900	1,900	—	—
Research and Development	160	218	230	+12	+6%
Total	6,589	8,872	9,436	+564	+6%

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- $48 million, a 14 percent increase over 1992, to deploy weather tracking systems that will detect dangerous windshear conditions and warn aircraft away from violent storms.

Reaping the Benefits of Modernization

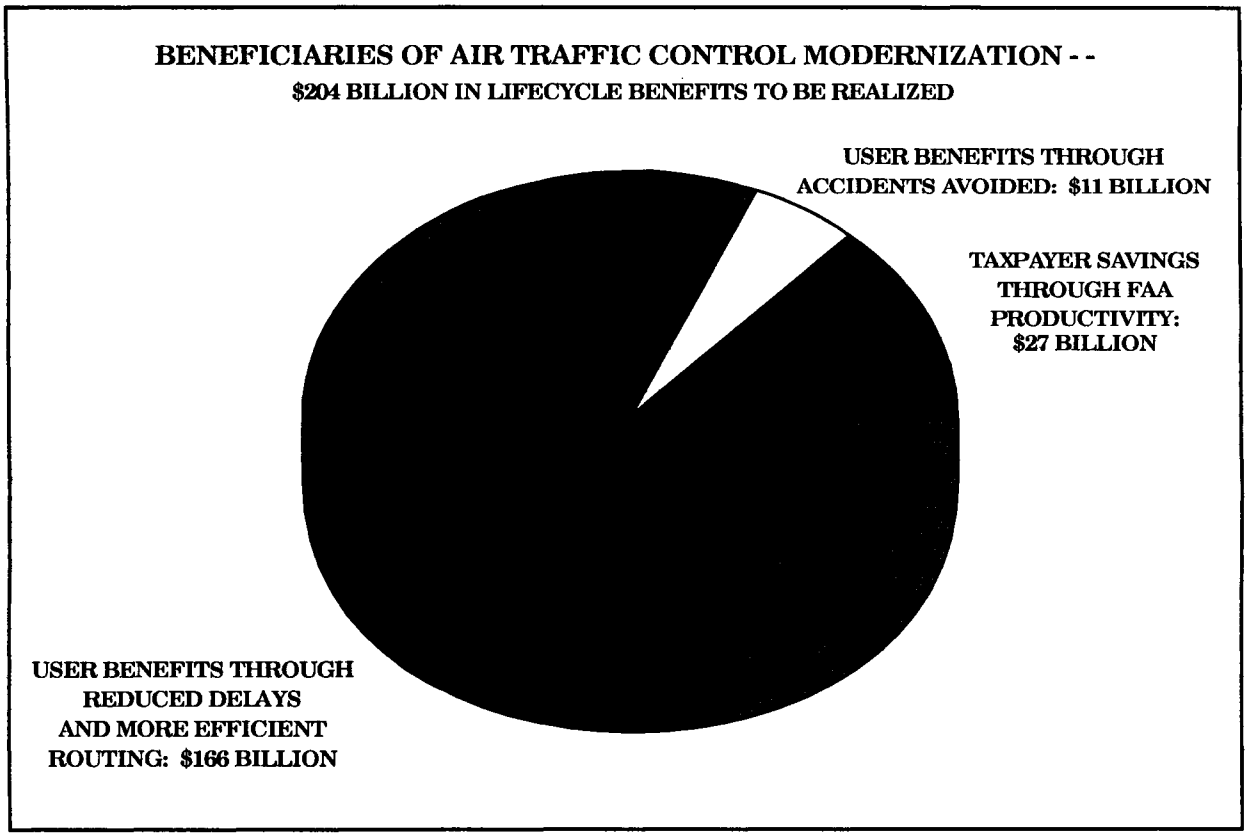
Together, system users and the general taxpayer will realize more than an estimated $204 billion in lifecycle benefits through the year 2025 from the modernization effort. System users, including passengers and airlines, will enjoy some $166 billion in benefits from reduced airline delays and more efficient aircraft routing. Users also will benefit from improved safety, realizing some $11 billion in benefits through fewer accidents, largely due to improved weather-related equipment. Taxpayers will benefit from the more efficient operation of the air traffic control system. For example, savings will be achieved from improving air traffic controller productivity through the use of better equipment and by reducing maintenance requirements. (The distribution of modernization benefits is shown in the accompanying chart, "Beneficiaries of Air Traffic Control Modernization").

Keeping the Skies Safe and Secure

The budget includes $4.6 billion, a $246 million or 6 percent increase over 1992, to support, operate, maintain and ensure the security of the aviation system. This includes the air traffic control system and FAA's programs to ensure safety and security in aviation. This level of funding will add 150 air traffic controllers and 25 security staff over estimated 1992 levels. Additional staff are needed because of forecasted growth in aviation activity and security workload.

Researching Today's Needs and Tomorrow's Opportunities

Aviation research, proposed to grow by 6 percent to $230 million in 1993, will focus on developing state of the art technologies and techniques to make air travel of the future faster, safer, and more efficient. A significant portion of the research, $68 million in 1993, will incorporate next generation computer-based traffic management capa-



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bilities into the air traffic control system, resulting in reduced operating costs, fewer delays and increased airport capacity. Other 1993 aviation research and development projects include:

- $27 million, a 17 percent increase over 1992, for research on next-generation aviation communications and navigation technology to increase capacity through the more efficient use of the National Airspace System. This includes using satellites instead of ground-based radar to track and route aircraft and using satellites instead of ground-based radio links for communications between pilots and air traffic controllers.
- $38 million, a 12 percent increase over 1992, for research to improve aircraft safety, including fire prevention, airframe crash worthiness, and aging aircraft issues.
- $36 million, a 13 percent increase over 1992, for research to improve aviation systems security technology, including explosives and weapons detection on passengers and in baggage. Research also will explore increasing aircraft survivability by reducing damage caused by an onboard explosion.

Expanding Airport Capacity Through the Transportation Partnership

Over 20 major airports each currently experience more than 20,000 hours in annual flight delay. Flight delays cost the economy and passengers an estimated $5 billion annually. Anticipated increases in airline travel will cause the number of airports with these delays to double by the year 2000 unless action is taken to address capacity problems.

As discussed below, the budget proposes a comprehensive program to increase capacity through the combined efforts of the Federal government, the aviation industry, and State and local governments.

Federal Funding for Capacity Projects.—The budget provides $1.9 billion in new spending for Federal airport grants. Together with State and local government matching funds, these funds will be used to construct capacity enhancements such as runways, taxiways and terminal expansions. The program funds grants for airport development projects at large commercial airports, as well as grants to improve smaller airports.

The State Block Grant program permits States to administer grants for their smaller airports. Based on the success of a three State pilot program, the Administration will propose that the program be expanded to allow participation by all States. This will permit States, rather than the Federal government, to allocate grant funds to better meet local needs for increased capacity.

Enhanced Local Revenues.—The Administration's proposal to permit airports to raise revenues through a passenger facility charge (PFC) was enacted in 1990. A PFC is a charge levied on departing passengers for the use of aviation facilities. This put the United States on par with 138 other countries which already provide for such charges.

PFCs allow locally generated revenue to go directly towards reducing delays at the facilities where charged, and to open competitive opportunities for airline expansion that will hold fares down for the consumer. It is estimated that PFCs could generate an estimated $1 billion per year for U.S. airports. This will provide a new, stable source of additional revenue for airport development less encumbered by Federal regulations and restrictions. Currently, 16 airports have applied for permission to charge PFCs, with a total of 200 expected to do so by the end of 1993.

Encouraging More Public/Private Projects.—More public/private airport projects are being encouraged as another means to enhance capacity. For example, Alliance Airport, owned by the City of Fort Worth, is a new facility designed to ease crowding at the Dallas-Fort Worth International Airport. A partnership between private business and State, local and Federal governments allowed the airport to be built quickly. A creative financing arrangement combined private land donation, State-local-Federal construction funding, and ad valorem taxes on business revenues to cover airport operating and maintenance costs.

Another public/private partnership involves the FAA working with two private companies

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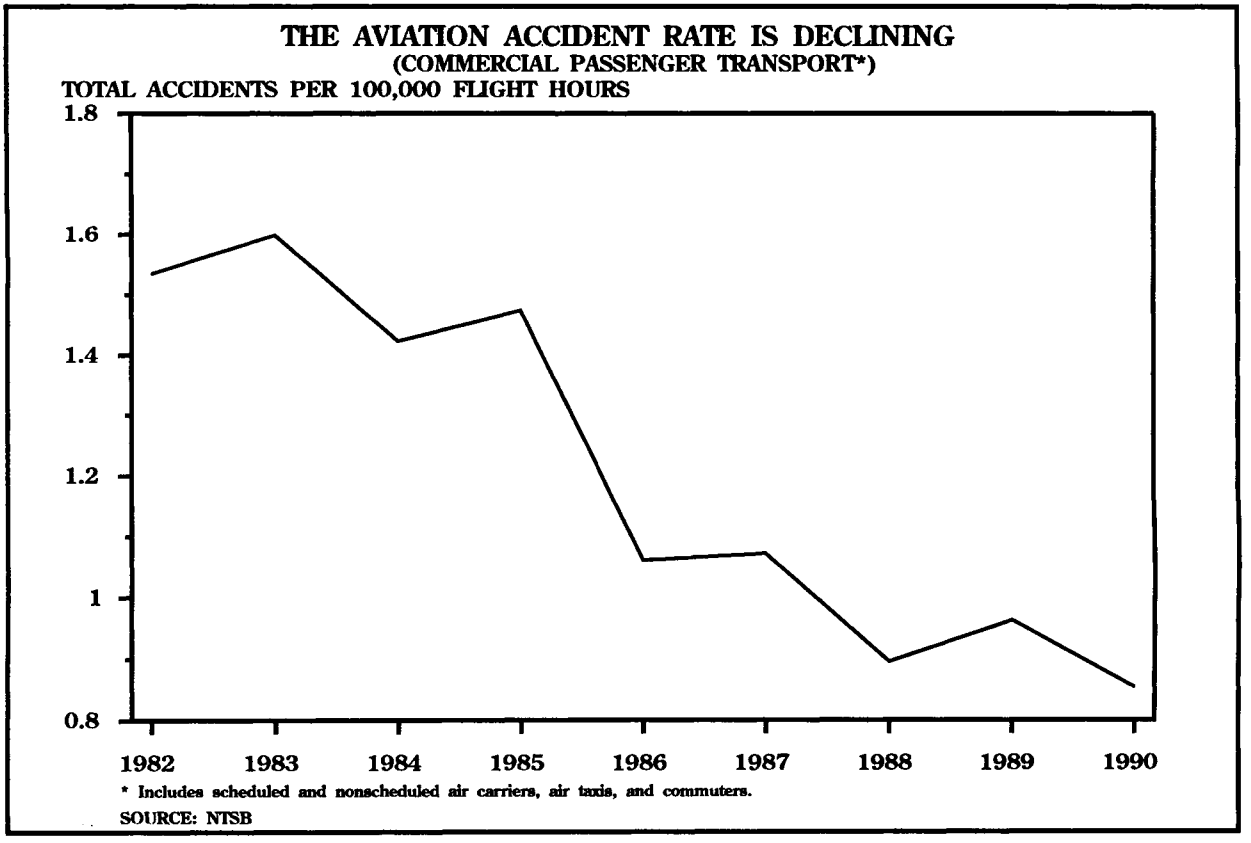
Table 7–5. **FEDERAL SPENDING FOR AVIATION EXCEEDS RECEIPTS**
(In billions of dollars)

	1984	1986	1988	1990	1992 Estimate	1993 Proposed
Aviation Outlays	3.8	4.7	5.2	6.4	8.0	8.7
Aviation User Fees	2.5	2.7	3.2	3.7	5.2	5.7

to explore the use of satellites as a precision landing tool. Current earth-bound landing systems define a limited number of safe flight paths into and out of an airport. A more flexible satellite system could permit a significantly larger number of safe paths, thereby improving safety and expanding capacity.

Peak Period Pricing.—The Administration will encourage peak period pricing by airports to ensure that existing capacity is used as efficiently as possible. This entails charging higher landing fees during periods of peak demand and offering discounts to encourage off-peak use. This would shift demand that would otherwise require additional capacity to other periods when facilities are underutilized.

In addition, the Administration is exploring other ways to increase existing capacity. These include improved air traffic procedures, encouraging general aviation aircraft to use smaller, reliever airports and converting existing military facilities, in whole or in part, to public use.



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Financing the Aviation System

The aviation system has been financed in large part through user fees deposited in the Airport and Airway Trust Fund. In this way the aviation user is a partner in financing a safe and efficient system. Proposed spending on aviation programs in 1993 will exceed the fees paid by users of the aviation system—$8.7 billion in spending compared to $5.7 billion in fees. This continues the trend in place since the Airport and Airway Trust Fund's inception whereby Federal spending on FAA programs has far exceeded aviation receipts. (Aviation spending is compared to receipts in Table 7–5.) Users should finance their fair share of aviation spending, including equipment modernization, research, airport grants, and a portion of the staffing costs necessary to keep flying safe and secure.

Continuing Aviation Safety

Aviation has the safest record of any mode of passenger transportation in the nation, with aviation accidents decreasing dramatically over the last 20 years. This is due in large part to past Federal investment in both people and systems. (The trend in aviation accidents is shown in the accompanying chart, "The Aviation Accident Rate Is Declining".)

The budget requests $619 million, a 4 percent increase over 1992, for aviation safety programs to ensure continued high levels of safety in the face of aviation traffic growth.

MODERNIZING WEATHER FORECASTING CAPABILITIES

Weather plays a critical role in transportation, through its impact on aviation, shipping and overland commerce. Sixty percent of all aviation delays are caused by weather. By the year 2000, weather related aviation delays will cost airlines an estimated $1.7 billion annually. (The causes of aviation delays are shown in the accompanying chart, "Weather Related Delays are FAA's Biggest Air Traffic Challenge"). Modernizing the Nation's weather forecasting infrastructure is essential to obtaining the most efficient use of the existing transportation system. More timely and accurate forecasts will increase system capacity by permitting all modes of transportation to accommodate more accurately severe weather events.

The budget proposes $614 million, an increase of $129 million or 27 percent over 1992, to modernize the Nation's weather forecasting system. (Federal funding for weather systems modernization is shown in Table 7–6.) The impetus for modernization is twofold. First, obsolete equipment must be replaced and gaps in weather data observations reduced. Secondly, modernization will permit the National Weather Service to take advantage of technological advances in the detection and prediction of severe weather patterns, such as wind shear, which can prove deadly to aircraft and passengers.

Table 7–6. **FEDERAL SPENDING ON WEATHER FORECASTING INFRASTRUCTURE**

(Budget authority; dollar amounts in millions)

Initiative	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Weather Service Modernization	62	156	177	+21	+14%
Weather Satellites	330	329	437	+108	+33%
Total	392	485	614	+129	+27%

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Modernizing the Weather Forecasting System

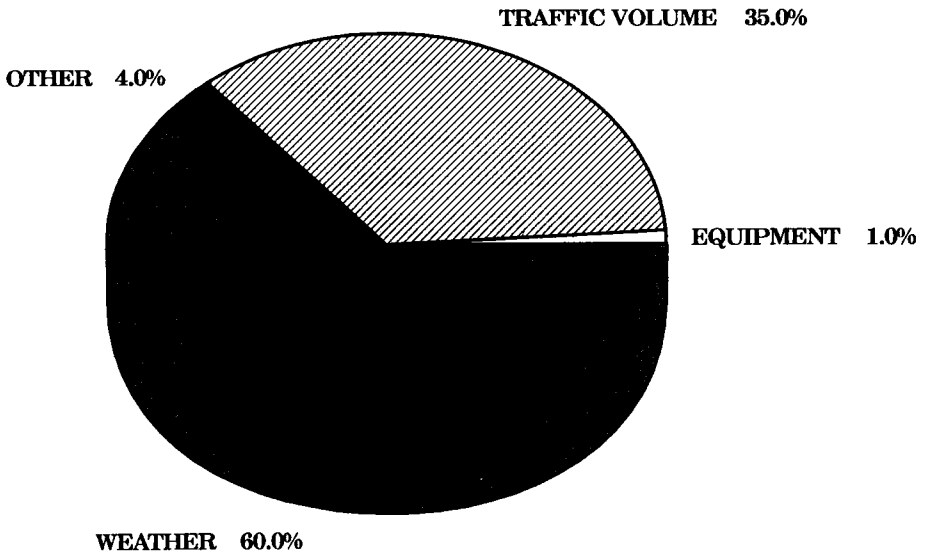
The modernization plan includes several key elements as follows:

- NEXRADs, next generation weather radars, will employ Doppler radar technology not only to identify severe weather events, but also to look inside developing storms to calculate speed, direction and composition. The budget requests $132 million, a $25 million or 23 percent increase over 1992, to deploy 159 operational NEXRADs to provide virtual nationwide coverage.
- Automated weather observation systems provide continuous weather readings, replacing the current manual readings. The budget requests $19 million, a $5 million or 36 percent increase over 1992, to continue deploying a nationwide weather observation network.
- $26 million is requested in 1993 for advanced forecaster computer workstations, communications links, and supercomputer capacity which will greatly improve meteorologists' ability to analyze weather events rapidly and accurately.
- Next generation weather satellites will vastly increase the critical data which forms the basis of the nation's weather forecasting models. These satellites will have approximately twice the resolution and three times the accuracy of those now in use. The budget includes $437 million, a $108 million or 33 percent increase over 1992, for continued satellite operations and development of next generation satellites.

Benefits of Modernization

The modernized weather infrastructure will generate significant benefits for both the traveling and general public. For example, severe weather detection capability will increase from 65 percent today to over 90 percent in ten years. (The projected improvement in weather forecasting is shown in the accompanying chart, "Modernization Will Improve Severe Weather Detection"). Advance warning of severe storms will improve significantly because the new systems will be

WEATHER RELATED DELAYS ARE FAA'S BIGGEST AIR TRAFFIC CHALLENGE
(CAUSES OF AVIATION DELAYS AT MAJOR AIRPORTS)



SOURCE: FAA Air Traffic Operations Management System (ATOMS)

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able to detect the precursors of such events. Weather forecasts also will be more precise in terms of size, location and duration. These improvements will allow users of transportation systems to plan better for and, if necessary, avoid severe weather events. By the mid-1990s, the National Weather Service will operate one of the most advanced warning and forecast systems in the world.

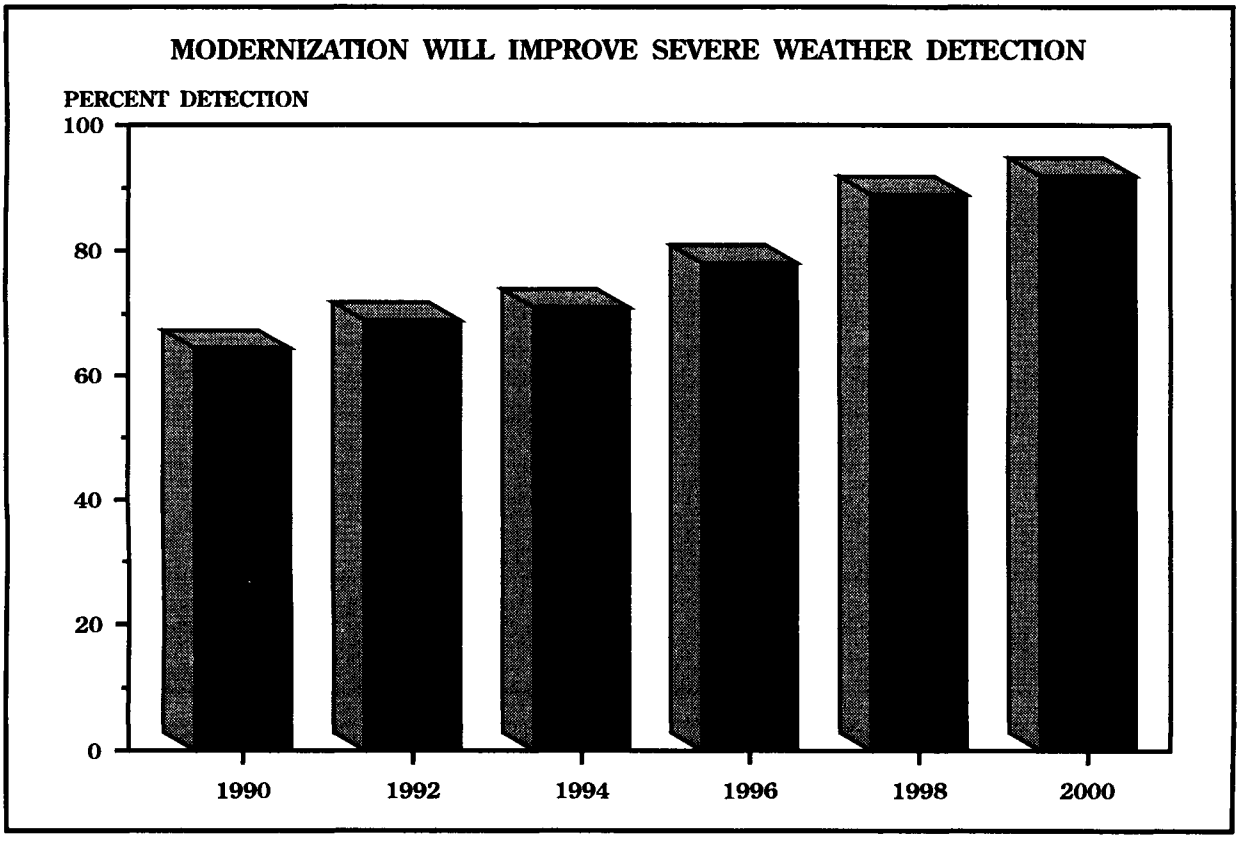
DEVELOPING INNOVATIVE SOLUTIONS TO MEET TOMORROW'S NEEDS

To spur development of new transportation systems for the future, the Federal government will act as a catalyst for research and innovation. Innovative technologies will be part of the solution to increased capacity needs. The budget requests $498 million, a $51 million or 12 percent increase over 1992, for transportation research and development. Examples of projects include:

- ***Maglev/High-Speed Rail.***—Magnetically levitated trains, or "maglev", might serve to augment existing air and highway transportation. Maglev trains move above a guideway without contact, supported and guided by magnets, achieve speeds of up to 300 miles per hour, and are environmentally clean.

  The budget includes $28 million, an $8 million or 40 percent increase over 1992, to fund maglev and high-speed rail research and development. This work will assess the technical and economic potential of maglev in the nation's transportation future, as well as maglev and high-speed rail safety. While there is funding for maglev prototype development included in the new Surface Transportation Act, the Administration believes it is prudent to complete the research currently underway and make a full and fair evaluation of the technology before moving to the prototype phase.

- ***Intelligent Vehicle/Highway System (IVHS).***—The budget includes $138 million to continue the ongoing partnership



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with auto manufacturers and others developing IVHS. IVHS, often referred to as "smart cars/smart highways", will improve traffic control systems, warn drivers of dangerous situations and make more efficient use of the existing highway infrastructure. It will combine state-of-the-art communications, warning systems, electronic displays, and computer technology.

- ***Advanced Driving Simulator.***—The budget requests $9.5 million to begin construction of a state-of-the-art simulator to be used for research to improve highway safety through research on crash avoidance and driver performance and more efficient use of highways through support of IVHS research. It will permit studying potentially risky situations without putting people at risk, including the effects of drugs and alcohol on driving.

OTHER FEDERAL INFRASTRUCTURE INVESTMENT

EPA Waste Water Treatment Grants.—The budget includes $2.5 billion for wastewater treatment grants, a $100 million or 4 percent increase over 1992. Under this proposal, 95 percent of the program's authorized funding will be appropriated by the end of 1993.

Too many of America's largest cities lack adequate secondary sewage treatment, the level generally considered the minimum necessary to protect human health and the environment. The budget will expedite achievement of secondary treatment standards while prompting economic growth and employment. Americans will be employed both constructing treatment facilities as well as through new business creation and expansion allowed by providing sufficient water treatment capacity. A more detailed discussion of this request is contained in Chapter 10, "Preserving America's Heritage, Protecting the Environment, and Providing For a More Secure Energy Future."

Improving Access to Space (NASA/DOD).—The Nation's space transportation capabilities must continue to meet both near-term and long-term national space needs. The U.S. presently has one manned launch system, the Space Shuttle, and one expendable lauch vehicle fleet with a broad range of payload capabilities. Many of the latter are commercially operated with both government and private customers.

The budget proposes $5.4 billion for civil space transportation, a $100 million or two percent increase over 1992. The budget reflects three underlying principles: (1) enhance the Space Shuttle's efficiency and schedule reliability and life span; (2) develop an operationally improved launch system that will also reduce the long-term burden on the Shuttle; and (3) encourage the commercial space sector to provide goods and services to increase access to space for all. A more detailed discussion of this request is contained in Chapter 6, "Enhancing Research and Development and Expanding the Human Frontier."

Army Corps of Engineers.—Outlays for the Army Corps of Engineers construction activities will increase by $198 million over 1992. Included are eight new traditional construction projects and five major hydropower and inland waterway rehabilitation projects. In addition, the Corps will continue several significant infrastructure research initiatives, including maglev and construction productivity.

Table 7–7. **SELECT OTHER PUBLIC INFRASTRUCTURE INVESTMENT**
(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
EPA Wastewater Treatment Grants	1,950	2,400	2,500	+100	+4%
Access to Space (NASA/DOD)	4,411	5,312	5,412	+100	+2%
Corps of Engineers New Construction Starts	—	—	27	+27	N/A

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Table 7–8. FEDERAL OUTLAYS FOR MAJOR PUBLIC PHYSICAL CAPITAL

(Dollar amounts in millions)

	1992 Estimate	1993 Estimate	Percent Change: 1992 to 1993
Grants:			
Surface transportation	18,859	19,775	+5%
Air transportation	1,556	1,759	+13%
Pollution control and abatement	2,540	2,509	-1%
Other natural resources and environment	231	170	-26%
Other community and regional development	3,987	4,114	+3%
Other construction	382	634	+66%
Other physical assets	591	641	+9%
Subtotal, grants	28,145	29,602	+5%
Direct Federal Programs:			
National defense	5,316	7,028	+32%
Water resource projects	2,401	2,231	-7%
Other natural resources and environment	2,020	2,171	+8%
Energy	2,658	3,562	+34%
Transportation	392	415	+6%
Veterans hospitals and other health facilities	1,149	1,232	+7%
Postal Service	1,777	780	-56%
Federal Prison System	250	442	+77%
Federal Buildings Fund	874	1,345	+54%
Other construction	1,565	1,543	-1%
Subtotal, direct Federal progams	18,402	20,748	+13%
Total	46,547	50,350	+8%

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Investing in the Future:

8. Providing Hope to Distressed Communities

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8. PROVIDING HOPE TO DISTRESSED COMMUNITIES

INTRODUCTION

The Administration's policies over the past three years have been designed to increase opportunity, choice, and hope for all Americans. The budget includes proposals that will

- create opportunity and hope for economically and socially distressed neighborhoods and communities;
- change the welfare system to help low-income families escape dependency, build assets, and generate wealth;
- give parents more choice in both child care and education;
- give low-income Americans who, traditionally, have not been able to generate assets, a chance to own the places where they live;
- reform the way the Federal government assists poor renters—families, disabled, or elderly—to ensure that they have more choice in where they live and that they live in well-managed, decent housing; and
- provide shelter, services, and hope to the homeless.

A summary of these initiatives is provided in Table 8–1.

THE PROBLEMS OF ECONOMICALLY DISTRESSED FAMILIES AND COMMUNITIES

From 1982 through the beginning of 1990, the United States enjoyed a record economic expansion. The number of jobs increased by more than 19 million. Manufacturing productivity rose at an average annual rate of 4.5 percent over the same period. Incomes increased and poverty declined for white families and black families, and for urban, suburban, and rural families alike. White employment rose 15 percent, from 87.9 to 102.1 million, and black employment rose 29 percent, from 9.2 to 12.0 million.

The proportion of Americans forced to live in substandard housing was reduced as a result of this progress. A 1991 report by the Department of Housing and Urban Development (HUD), found that between 1974 and 1989, the proportion of very-low-income renters (those whose incomes are at or below 50 percent of the local median income) who lived in severely inadequate housing dropped substantially. The percentage of households living in such housing declined from 11 percent to 4 percent, and the number of such units was halved, dropping from 850,000 to 425,000.[1]

Yet poverty was by no means abolished during the economic expansion. It remains especially persistent in some inner city neighborhoods with high percentages of nonworking adults, high-school dropouts, and single-parent families. In neighborhoods defined by the Bureau of the Census as central city poverty areas,[2] 38 percent of all residents were poor in 1990, nearly three times the national poverty rate.

In all poverty areas, whether central city or not, 41 percent of related children live in families with a female head. In other (non-poverty) areas, only 17 percent do. In poverty areas, 42 percent of all persons aged 25 and older did not complete high school. In other areas, the number is 18 percent. In poverty areas, a higher percentage of working-age males does not work at all during the year compared to working-age males in other areas.

[1] Department of Housing and Urban Development, *Priority Housing Problems and "Worst Case" Needs in 1989, a Report to Congress*, June 1991.

[2] In its publications, the Bureau of the Census defines "poverty areas" as census tracts or minor civil divisions with poverty rates of 20 percent or higher in the most recent decennial census data available. Poverty areas may be found in central cities, other metropolitan areas, or non-metropolitan areas.

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Table 8–1. PROPOSALS FOR INCREASING OPPORTUNITY, CHOICE, AND HOMEOWNERSHIP

Enterprise Zones—Creating Solid Economic Foundations in Distressed Communities
- Offer a wage tax credit to encourage the employment of low-income inner-city and rural residents.
- Defer income taxes for small investors who purchase stock in businesses located in enterprise zones.
- Implement a zero capital gains tax rate for investments in businesses located in enterprise zones.

Weed and Seed—A New Effort to Reclaim Impoverished and Embattled Communities
- Eliminate the fear of drugs and violence with enhanced law enforcement.
- Provide hope and assistance through job training, drug treatment and prevention, educational activities, health care, and transportation.
- Complement Enterprise Zones, which will help to create jobs and opportunities in these areas.
- Improve the housing stock and physical infrastructure.

Expanding Opportunities and Building Assets for Low-Income Families
- Raise the AFDC assets limits to $10,000 for families already on the rolls.
- Establish, through a demonstration, "escrow" savings accounts for long-term AFDC recipients working their way off the rolls.
- Expand use of electronic benefit transfer cards for Food Stamp recipients
- Extend application of the Plan for Achieving Self-Sufficiency (PASS).
- Offer financial incentives to private welfare-to-work firms.
- Demonstrate choice in unemployment insurance.
- Expand State flexibility through Federal waiver authority.
- Give low-income families help if they wish to move from high poverty areas to mixed income areas through the "Moving to Opportunity" demonstration.

Implementing the President's Comprehensive Health Reform Program

Increasing Choice in Child Care and Education
- Implement higher tax credits for parents.
- Increase parental choice in child care grant programs.
- Increase educational choice for low- and middle-income families.
- Provide educationally disadvantaged children with more educational choice.
- Increase choices available to students pursuing higher education.

Expanding Homeownership Opportunities Among Low-Income Families
- Enable low-income families to achieve homeownership through HOPE grants.
- Preserve low-income housing by discouraging prepayment by landlords of FHA-insured mortgages.
- Permit the penalty-free withdrawal of IRA funds for the purchase of a first home.
- Provide up to a $5,000 tax credit for eligible first-time home buyers.
- Allow voucher recipients to apply rental subsidies toward the purchase of a home and not just toward rent.

Enhancing Choice, Quality, and the Availability of Housing
- Provide low-income tenants portable rent subsidies in the form of housing vouchers.
- Help the frail elderly retain their independence through HOPE: Elderly Independence.
- Widen opportunities for public housing tenants to change the management of troubled projects through "*Perestroika* for Public Housing."
- Reduce operating subsidies paid for vacant public housing units.
- Eradicate unsafe and unhealthy conditions for tenants through the Restore program for FHA-insured projects.
- Abate lead-based paint in low- and moderate-income housing.
- Furnish HOME grants to cities and States to construct or rehabilitate low-income housing, or to provide rent subsidies to low-income tenants.
- Reduce barriers to affordable housing for low- and moderate-income tenants and homeowners, e.g., by extending the Low Income Housing Tax Credit, Mortgage Revenue Bonds, and eliminating needless housing regulations.

Addressing the Needs of the Homeless
- Provide over $1 billion in housing and supportive services to the homeless.
- Increase the availability of support services in combination with housing.
- Reach out to the homeless who are mentally ill and unwilling or unable to commit to existing programs.
- Request all Federal agencies to produce and implement a Federal Plan to Help End Homelessness.

Impoverished and embattled communities are a problem not only for the people who live there, but for all of American society. The high incidence of crime, drug use, and wasted human potential translates into a lower quality of life and lower productivity for the entire country.

Maximizing the potential of America's economy and of its society requires that the tools and the hope for a better life for

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these communities be restored. In purely economic terms, America's workforce needs are such that it cannot afford to lose the potential contributions of entire generations of people who are raised in these communities. But in larger moral terms, the country has an obligation to tap the potential of every citizen. America needs all hands on deck if it is to continue to lead the world in the next century.

High poverty neighborhoods may already account for a disproportionate share of government spending for social programs, welfare, and police protection. However, the effectiveness of such services is dissipated in fragmented, uncoordinated delivery.

The problems facing America's most distressed neighborhoods are complex and intertwined. The policies outlined in this chapter constitute a multi-faceted attack on those problems that contribute to the spiral downward into hopelessness and despair. They are specifically designed to avoid the problems associated with certain previous government programs that fostered a culture of dependency. Instead, they are intended to create opportunities for low-income individuals to work and own their own homes, to begin to build assets and wealth as a means of achieving self-sufficiency.

The Administration's approach is to eliminate joblessness, drugs, crime, and other causes of hopelessness and barriers to progress, and to replace them with additional opportunities for jobs, education, homeownership, and supportive services.

ENTERPRISE ZONES—CREATING A SOLID ECONOMIC FOUNDATION IN DISTRESSED COMMUNITIES

The budget proposes tax incentives to create jobs and entrepreneurial activity in blighted urban neighborhoods and poor rural areas. Fifty zones in total are proposed over the next four years.

The Administration's Enterprise Zone proposal will promote entrepreneurship and job creation in distressed urban and rural communities. It includes three tax incentives:

- A five percent refundable credit on personal income taxes for the first $10,500 of wages earned in an enterprise zone by workers with total annual wages below $20,000. The proposed wage tax credit is designed to encourage low-income inner-city and rural residents to obtain employment, become self-supporting, and leave welfare.
- Deferral of personal income taxes for small investors who purchase stock in businesses located in enterprise zones. With this incentive, investors would be able to deduct on their personal income taxes amounts up to $50,000 in equity investment in enterprise zone businesses in the year the investment is made, with a $250,000 lifetime limitation. (The entire amount of the investment will be taxed, however, as ordinary personal income at the time the investment share is sold, so taxes are deferred rather than eliminated.) This incentive will make zones attractive to new capital by giving an immediate tax saving to individuals who invested in the zones. It is also designed to provide inner-city entrepreneurs with seed capital to start small businesses.
- A zero capital gains rate for gains on investment in tangible property located within an enterprise zone for at least two years. This is another incentive to create more seed capital for investment in new enterprises within the zone area. To qualify for this proposed exemption, the capital gains must accrue during the time the asset is used in an enterprise zone business, and the business must have operated in the zone for at least two years.

The evidence suggests that Enterprise Zones will be a critical factor in helping poorer cities and rural areas become economically more vital. Enterprise Zones established by States, but without Federal tax incentives, appear to have had a significant economic impact. *Business Facilities Magazine* reported in May 1989 a survey showing that "... the Nation's State-level enterprise zone programs have generated approximately 184,600 new jobs, have been instrumental in retaining 169,600 existing jobs, and have brought in $18.1 billion in new capital investment."

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More rigorous efforts to evaluate State Enterprise Zone programs have also demonstrated the efficiency of various tax incentives:

- *New Jersey.*—State officials say that more than $1 billion has been invested in State zones and that more than 14,000 jobs have been created by this investment since Enterprise Zones were enacted in the mid-1980s.
- *Indiana.*—About 12,000 jobs have been created in Indiana's enterprise zones. A 1989 study of growth of jobs and use of incentives in the zones reported that the average "tax expenditure" per new job created in 1987 was just over $4,000—a figure that compares favorably with costs per job assisted by direct loan or grant incentives.

State experience with Enterprise Zones demonstrates the flexibility and adaptability of this concept. This experience also suggests that Enterprise Zones offer a mechanism for marshalling the energies and potential of the urban and rural poor.

WEED AND SEED—A NEW EFFORT TO RECLAIM IMPOVERISHED AND EMBATTLED COMMUNITIES

Weed and Seed is a new initiative designed to help reclaim and rejuvenate embattled neighborhoods and communities. It can benefit from the economic foundation that would be created by the Administration's Enterprise Zone proposal.

The budget proposes $500 million in new and earmarked Federal funding to support this comprehensive initiative in 1993, a $491 million increase over 1992. In concert with other cabinet officials, the Attorney General will lead this effort to combine the might of Federal law enforcement with the expertise and resources of Federal and local social services and community assistance programs.

Weed and Seed uses a neighborhood-focused, two-part strategy to control violent crime, and to provide social and economic support to areas where high crime rates and social ills are prevalent. Consistent with the President's Drug Strategy, the initiative first seeks to remove or "weed" gang leaders, violent criminals, and drug dealers from the neighborhoods. Second, the initiative attempts to prevent a reinfestation of criminal activity by "seeding" the neighborhoods with public and private services, community-based policing, and the tax incentives of Enterprise Zones. Weed and Seed is built on the premise that community organizations, social services providers, the criminal justice system, and community residents must work together to regain control and revitalize crime-ridden and drug-plagued neighborhoods.

Existing Weed and Seed Program.—In 1991, the Department of Justice (DOJ) spent about $500,000 on two Weed and Seed demonstrations in Trenton, New Jersey and Kansas City, Missouri. In 1992, DOJ expects to spend an additional $9 million on eight to ten new Weed and Seed neighborhoods. In a similar effort, an additional four to six sites around the country will be funded through a joint program supported by DOJ, New York University, and non-profit foundations.

DOJ has sought to assure that the projects funded to date have the full, unqualified backing of the local communities. In general, DOJ has required that certain minimum commitments be in place, including: multi-agency leadership; coordination of law enforcement and social service activities; partnerships between police and residents to implement community policing; and concentrations of residents and organizations with an active interest in the Weed and Seed effort.

The Weed and Seed Initiative in 1993.— The budget proposes a new and substantially expanded Weed and Seed effort in 1993. The initiative will take advantage of the economic revitalization and job generation incentives in Enterprise Zones and will offer a more comprehensive set of social services.

The 1993 initiative includes:

- A combination of Federal, State and local resources and stiff Federal laws and mandatory sentencing are used to remove drug dealers, violent criminals, and gang leaders from the neighborhoods.
- Coordinated social services will be provided to improve residents' health, edu-

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Table 8–2. PROGRAMS CONTRIBUTING TO WEED AND SEED

(Obligations in millions of dollars)

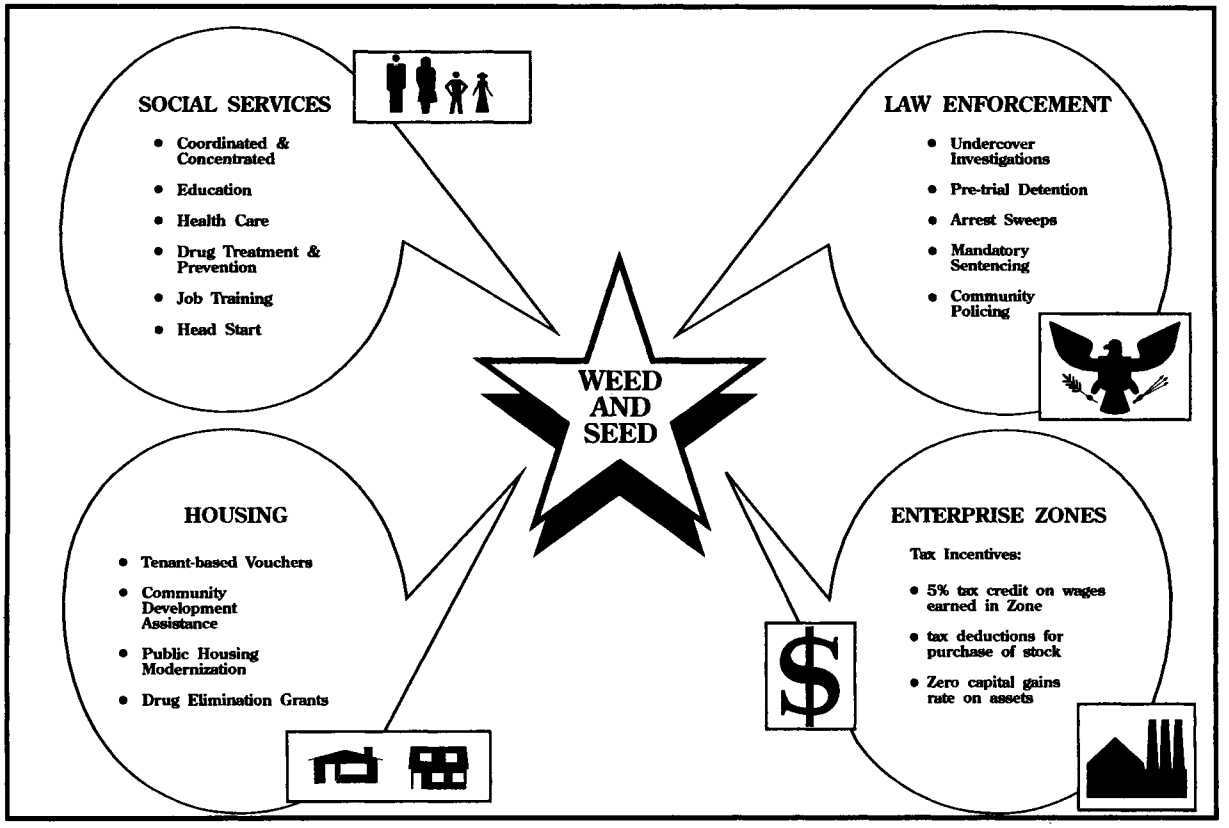
Programs	1993 Obligations
Department of Justice:	
US Attorneys	20
Office of Justice Programs (OJP) Demonstrations	10
Subtotal, Justice	30
Department of Labor:	
Job Training Partnership Act	28
Youth Opportunities Unlimited	5
Senior Community Service Employment	9
Job Corps	50
Subtotal, Labor	92
Department of Health and Human Services:	
Treatment Improvement Grants	36
Capacity Expansion Grants	47
High Risk Youth/Pregnant Women Prevention	7
Community Partnership Grants	4
Aid to Families with Dependent Children (AFDC) JOBS	43
Head Start	54
Community Health Centers	35
Subtotal, HHS	226
Department of Housing and Urban Development:	
Public Housing Modernization	20
Housing Vouchers	20
Community Development Block Grants	44
Public Housing Drug Elimination Grants	6
Subtotal, HUD	90
Department of Education:	
Compensatory Education	16
School Improvement/Pre-College Outreach	30
Family Literacy and Adult Education	10
Subtotal, Education	56
Department of Transportation: Reverse Commute Demonstration Grants	1
Department of Agriculture: Women, Infants, Children (WIC) Nutrition	5
Total for 1993	500

cation, and job skills and prepare them for employment.

- Tax incentives provided by Enterprise Zones will stimulate economic growth and create jobs. Weed and Seed areas will frequently be sited in Enterprise Zones to take maximum advantage of these incentives.
- Improved housing and community infrastructure will create a better physical environment.

The combination of intensive law enforcement, concentrated social services, housing assistance, and Enterprise Zone tax incentives will have a synergistic effect on the opportunities available to residents of targeted neighborhoods. The goal of the program is to attract

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potential employers through the tax incentives, through the safer environment provided by law enforcement and community policing, and through the more ready-to-work labor force. Residents will gain from social services, such as job training, when there are jobs available to make use of newly learned skills.

Under the Attorney General's leadership, the Office of National Drug Control Policy and the Departments of Education, Health and Human Services, Housing and Urban Development, Labor, and Transportation will coordinate social services and community assistance programs, including those to expand drug treatment, provide job training, keep schools open in the afternoon and evening, offer adult classes, modernize public housing, and improve local community infrastructure. This coordinated agency initiative will enhance the linkages between law enforcement and social service programs and, thereby, increase the prospects for positive results from any individual program.

Of the total $500 million in Federal resources, up to $400 million will go to neighborhoods that are designated as urban Enterprise Zones by the Secretary of Housing and Urban Development. Fifty Enterprise Zones are proposed over the next four years, with two-thirds of them in urban areas. Up to $100 million will go to Weed and Seed neighborhoods that are not designated as Enterprise Zones.

Weed and Seed: A Coordinated Initiative

1. Law Enforcement: Eliminating Crime and Violence.—The efforts of too many neighborhoods to fight against crime have been frustrated by inadequate policing, lengthy delays in prosecution, and mild punishment of narcotics cases. Narcotics traffickers and violent criminals, once arrested, often immediately return to the streets to continue distributing drugs and terrorizing local residents. Weed and Seed is designed to begin to break this disturbing cycle of despair and frustration.

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Table 8–3. WEED AND SEED FUNDING GROWS IN 1993
(Budget authority; dollar amounts in millions)

Initiative	1989 Actual	1992 Enacted	1992 Proposed	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Weed and Seed	—	—	9	500	+491	+5,456%

Under Weed and Seed, a total of $30 million in specially targeted DOJ 1993 funds will help finance State and local law enforcement activities in over 30 neighborhoods. In addition, Federal law enforcement activities will be redirected and targeted to supplement this effort. The United States Attorney will coordinate with local and other Federal law enforcement agencies to prosecute drug and violent crime offenders in Federal court. In total, the budget proposes an increase of $93 million or 13 percent over 1992 to enable the U.S. Attorneys to prosecute crime. Twenty million dollars of the total 1993 request for U.S. Attorneys is targeted to Weed and Seed communities to focus resources on the hardest hit communities. Federal law enforcement methods such as extensive case building, pre-trial detention, and mandatory minimum sentencing will be used to overcome often inadequate local procedures. The features of this approach are:

- Immediate removal of offenders from the streets, providing visual proof to the community that law enforcement is effective.
- Longer sentences for offenders, preventing further criminal acts in years to come and allowing communities to rebuild the social and economic infrastructure of their neighborhoods.
- Use of sophisticated case-building techniques such as audio/visual evidence gathering, wiretaps and witness protection—substantially increasing the efficiency and effectiveness of case development and prosecution of offenders and destruction of criminal organizations.

Under the President's Weed and Seed proposal, law enforcement will be delivered in a planned, powerful, and efficient manner, which will better enable communities to accommodate job training, recreational, health care, drug treatment, and educational activities.

2. Social Services: Providing Hope and Assistance.—Law enforcement alone cannot accomplish a lasting revitalization of socially troubled and drug-infested neighborhoods. The revitalization effort must also address underlying social and economic problems to prevent a reinfestation of drug trafficking and crime and to assist residents and neighborhoods in attaining economic self-sufficiency. Weed and Seed seeks to do this by providing a comprehensive and focused framework for public agencies to improve the targeted community's overall quality of life. A broad range of social program resources will be available for use in targeted neighborhoods, including:

- *Educational and Prevention Activities* such as school drug use prevention, after-hour tutoring, adult education, GED programs, dropout prevention, preparation for college, and teacher training.
- *Job Training* for youths and adults including counseling, skill assessment and training, day care assistance, referral to Job Corps, and job search and placement.
- *Drug Treatment* including central intake and referral; a full range of treatment services; specialized treatment for adolescents and pregnant women; aftercare; and referrals to education, literacy training, job training, and other social services.
- *Access to Health Care* including primary and prenatal care, appropriate referrals to specialized treatment, and to nutrition assistance, HIV counseling and testing, and transportation services.

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- *Head Start* for one year for eligible children.
- *Transportation* services that link inner city workers with suburban jobs.

Based on published guidelines and designation of targeted Weed and Seed sites, these social services will be administered by six Cabinet agencies, all of which will work closely with the Department of Justice to: (1) review and approve the single, consolidated plans submitted jointly by States and local communities; (2) provide funding for social services identified in these plans; (3) provide technical assistance to public agencies and community organizations in these neighborhoods; (4) coordinate available services to maximize the return on each (e.g., link drug treatment and job training to give recovering addicts a means of support when they leave treatment).

3. Creating Jobs and Economic Opportunity.—Weed and Seed areas will benefit from the tax incentives in the Administration's Enterprise Zone proposal that has been carefully designed to create jobs and entrepreneurial activity. Up to $400 million of the money available under Weed and Seed will be targeted to Enterprise Zones in urban areas. Enterprise Zones can lay the foundation for successful supportive service programs.

4. Housing and Community Development.—Public housing developments in Weed and Seed areas will be eligible for targeted funds for drug elimination grants to help rid the complexes of drug users. They will also be able to receive specially designated modernization funds to make necessary repairs and make them more viable. A special setaside of housing vouchers will be available for very-low-income families in need of assistance in these areas.

To improve the physical infrastructure in these neighborhoods, community development block grant funds will be available for such purposes as street and sidewalk repair, streetlighting, rehabilitation of private housing, park and recreational area improvements, as well as economic development activities.

How Weed and Seed Will Work

State and local applicants will designate a local official to be responsible for all aspects of program implementation and operation. This will ensure the integrated approach, which is the key to Weed and Seed. The nominated local manager will coordinate job creation, social services, and law enforcement at the local level. Community plans will permit "one-stop shopping" for the social services described above.

States and localities will apply jointly for Weed and Seed designation by putting together consolidated applications that:

- Target to previously designated Enterprise Zones with documented drug, gang and violent crime problems;
- Identify existing Federal, State, and local resources for the targeted community that will be dedicated to the Weed and Seed effort;
- Demonstrate a strong commitment of community groups in the targeted community to the Weed and Seed plan and community policing activities;
- Explain how social service providers will be accountable to the local manager, how the community will measure success, and how progress will be reported to the public;
- Identify private sector resources, including corporate contributions, and individual commitments, to be included in the Weed and Seed effort; and
- Demonstrate a balanced, comprehensive plan, which addresses getting violent offenders off the streets, supports drug and crime prevention, and includes other efforts at neighborhood revitalization through strategies to create jobs and opportunities.

Drug use and crime are often deeply rooted in and act as barriers to the success of social service programs in poor or economically deprived central city neighborhoods. Weed and Seed is a concerted effort to assist these areas by stripping away crime and drugs and replacing them with the tools

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to create opportunity. By evaluating carefully what happens through this effort, the foundation can be laid for the future.

EXPANDING OPPORTUNITIES AND BUILDING ASSETS FOR LOW-INCOME FAMILIES

The budget contains several initiatives to help low-income families escape welfare dependency, build assets, and generate wealth. The current welfare system relies on income transfers and may encourage day-to-day consumption, rather than savings, enterprise, and investment for the future. These proposals were developed by a special Presidential Task Force. They represent the beginnings of a new and different approach to help families achieve self-sufficiency.

- ***Raise the AFDC assets limits to $10,000 for families already on the rolls.***—Currently, when countable assets exceed $1,000, families are no longer eligible for AFDC. For those families willing to save some of their income to achieve independence from welfare, educate their children, or start a business, this assets limit can present a barrier.

  The proposal gives States the option to increase to $10,000 the assets limit the Aid to Families with Dependent Children (AFDC) program applies to families who are already on the rolls. The assets limit for families applying for AFDC would remain at the current $1,000, so this proposal does not increase the number of people initially eligible for AFDC. The intent of raising the assets limit is to encourage self-support by families on AFDC, not make it easier for families to join the rolls of welfare recipients.

- ***Establish, through a demonstration, "escrow" savings accounts for long-term AFDC recipients working their way off the rolls.***—Many families who receive AFDC do so for only a relatively short period. However, a large share of total AFDC costs are devoted to families who remain on the rolls for long spells. The JOBS program targets long-term and potentially long-term recipients for education, training, and support services to promote their independence from welfare. This proposal would demonstrate the effects of a monetary incentive in encouraging long-term recipients to obtain jobs and become independent of welfare.

  When the head of an AFDC family takes a job, the AFDC benefit the family receives generally is reduced. This may act as an effective tax on work effort, discouraging families from leaving welfare to work. Some studies show effective tax rates on people leaving welfare may approach 100 percent or more. The proposal would test the effects of setting aside the amount by which a long-term AFDC family's benefits are reduced once the family head takes a job, then paying it in a lump-sum to the family if they succeed in working their way off the rolls. Well-designed demonstrations would show whether this approach could induce long-term recipient families to leave the rolls through employment.

  This proposal is similar to HUD's Family Self-Sufficiency Program enacted into law in 1990 as part of the National Affordable Housing Act. Assisted housing tenants participating in this program have escrow accounts established for them that they can receive once they leave public housing. These escrow savings accumulate when tenants increase their earned income while the subsidized rents charged to them remain stable. The difference between what they would have paid (30 percent of their higher income) and the frozen rents (30 percent of their pre-employment income) is put into an escrow account. The escrow savings can be used for buying a home or as a downpayment under the homeownership voucher program.

- ***Expand use of electronic benefit transfer cards for Food Stamp recipients.***—The Department of Agriculture has developed regulations to allow any State to operate electronic benefit transfer systems for food stamp recipients assuming the results of current pilots prove positive.

- ***Extend application of the Plan for Achieving Self-Support (PASS).***—PASS was designed for blind and disabled SSI recipients determined to achieve self-sup-

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port. Based on an individual's plan to achieve economic independence, the income or resources related to carrying out the plan can be disregarded when SSI benefit amounts are calculated. The recipient's benefits are not lowered by the disregarded income or resources.

The billion dollar JOBS program provides AFDC families with education, training, and support services to promote their self-support. However, JOBS is not designed to promote entrepreneurial activities among AFDC families.

The proposal is to extend the concept of the PASS to AFDC, with a focus on self-employment. At the State's option, income and resources related to achievement of a recipient's approved plan to move from dependency to self-employment could be excluded when calculating AFDC eligibility and the amount of AFDC benefits. This would also be true in calculating a family's food stamp eligibility.

- ***Offer financial incentives for private welfare-to-work firms.***—Early experience with private-sector welfare-to-work firms has been promising. Welfare recipients have moved into employment and left the rolls, and the firms have received payments based upon the welfare savings.

  The Administration supports several new demonstrations of this model involving more than $20 million in welfare payments. These demonstrations will be evaluated rigorously, to provide more reliable information on how effective these firms are.

- ***Demonstrate choice in unemployment insurance.***—Currently, unemployed workers who prefer to become self-employed or relocate for employment rather than remain on Unemployment Insurance (UI) rolls are not permitted to receive their bi-weekly UI benefits in a lump-sum for those purposes. Demonstrations have shown that some UI recipients will follow the entrepreneurial course if allowed. These demonstrations should be expanded to those with different options, including payment of UI lump-sums to workers with plans to relocate where employment is available.

  At this point, demonstrations, rather than a national program change, are proposed because more needs to be learned about how workers would respond to these sorts of incentives and what the costs would be. Different targeting plans, such as targeting those with permanent layoffs or plant closings, and different lump-sum amounts will be tested in a controlled setting.

- ***Expand State flexibility through Federal waiver authority.***—Where they have been provided with flexibility, States have shown great interest in making more effective use of current resources. This proposal would expand existing authority to waive Federal requirements to permit States to demonstrate more effective use of funds. This proposal is described more fully in Chapter 19.

- ***Give low-income families help if they wish to move from high poverty neigh-***

Table 8–4. **PROPOSALS TO BUILD ASSETS AND EXPAND OPPORTUNITIES FOR LOW-INCOME FAMILIES**

- Raise the AFDC assets limits to $10,000 for families already on the rolls.
- Establish, through a demonstration, "escrow" savings accounts for long-term AFDC recipients working their way off the rolls.
- Expand use of electronic benefit transfer cards for Food Stamp recipients.
- Extend application of the Plan for Achieving Self-Support (PASS).
- Offer financial incentives for private welfare-to-work firms.
- Demonstrate choice in unemployment insurance.
- Expand State flexibility through Federal waiver authority.
- Give help to low-income families to move from high poverty neighborhoods to mixed income areas through the "Moving to Opportunity" demonstration.

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borhoods to mixed income areas through the "Moving to Opportunity" demonstration.—The budget supports a four-year demonstration, called "Moving to Opportunity." Counseling and other kinds of assistance (e.g. help in finding an apartment or home in these new neighborhoods) will be provided to 1,500 families who wish to make such a move.

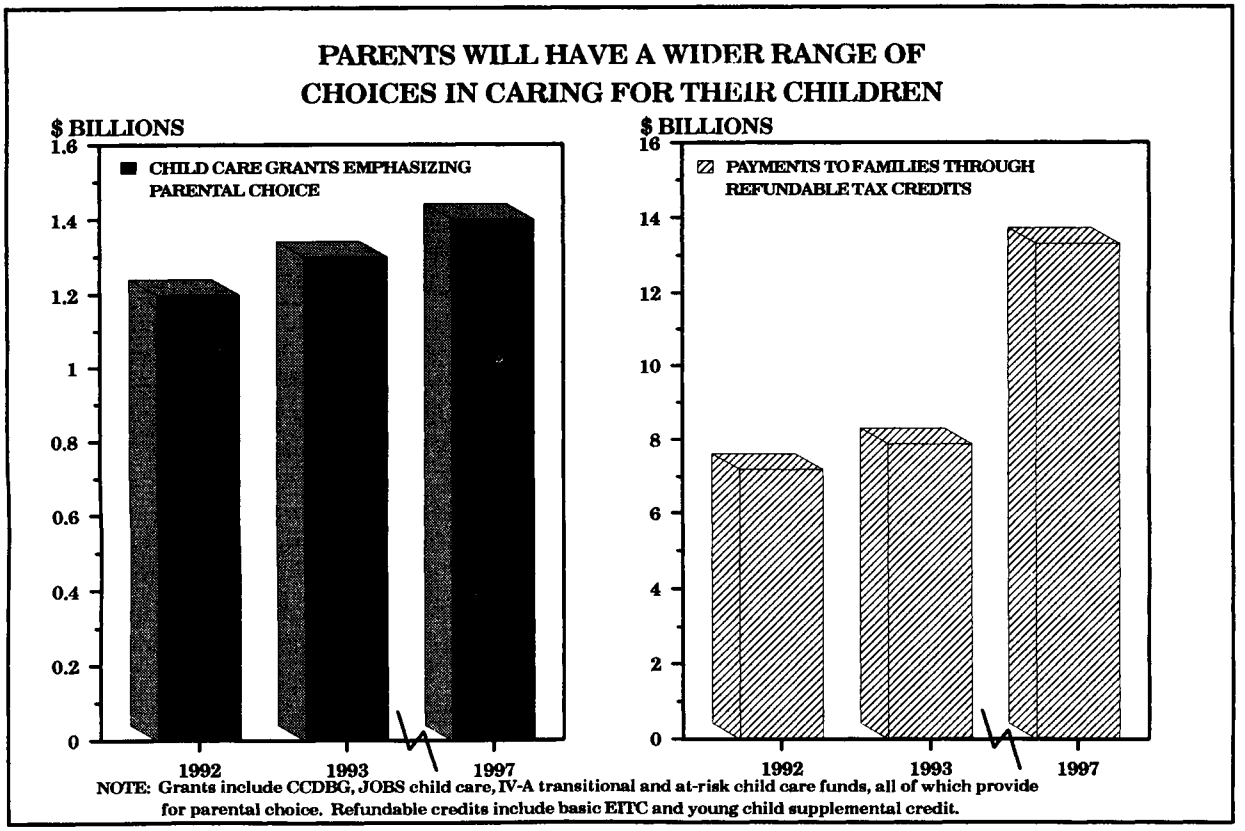
This demonstration is similar to the court-ordered Gautreaux program in Chicago where the same kind of assistance is provided to tenants in Chicago public housing who move to private housing in neighborhoods.

Families participating in the Chicago program, most of whom are single-parent households with children, have clearly benefitted from these moves. Of those who moved to suburbs, almost two-thirds of the family heads had jobs within five years after the move. More significantly, of those family heads who had never before worked before moving, 46 percent were employed within five years.

INCREASING CHOICE IN CHILD CARE AND EDUCATION

The principle of parental choice shaped the President's child care legislation, which became law in 1990. Over the next five years, refundable tax credits enacted in the child care legislation will increase the income of low-income families by $31 billion in payments and lower taxes. By insisting that the new assistance be provided through refundable tax credits and vouchers, the President assured that parents, not government employees, have maximum control over the necessary care arrangements for their own children. This makes it possible for parents to receive credits and vouchers to make care more affordable even when the care is provided by relatives, neighborhoods, or churches, which is how the majority of child care in America is provided.

- ***Implement higher tax credits for parents.***—The child care legislation increased the amount of the refundable Earned Income Tax Credit for working families with one child, and introduced an adjustment



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that provides a higher credit for families with two or more children. (This tax credit provides $22 billion in payments and $4 billion in lower taxes to families over the 1993 to 1997 period.)

In addition, a new credit for families with young children was enacted. Over the next five years, this additional five percent credit will result in $1 billion in payments and lower taxes for eligible families.

To help working parents defray the costs of their children's health insurance, a new six percent credit will add another $4 billion in payments and tax reductions over the 1993–97 period.

- ***Increase parental choice in child care grant programs.***—The 1990 child care legislation created the first Federal child care grant program giving control over child care arrangements to parents. Under the Child Care and Development Block Grant ($4 billion over the next five years), parents must be given the option of receiving a voucher that allows them to select the care-giver of their choice.

  One of the most important choices parents will make is the choice of the schools their children will attend. Increasingly, parental choice is becoming the engine of education reform. Each year, more States approve educational choice legislation. As part of the President's AMERICA 2000 initiative, the Budget includes several proposals to promote educational excellence through expanding parental choice.

- ***Increase educational choice for low- and middle-income families.***—

  —**The Choice Grants for America's Children Act:** This new program, which is being proposed by the Administration in this budget as part of its broader education reform effort, would make at least $1 billion available to fund the education of elementary and secondary students. States would match $500 million in Federal funds for demonstrations of education choice programs for children from low- and moderate-income families. Eligible children could receive up to $1,000 or more for use at the public or private school of their choice.

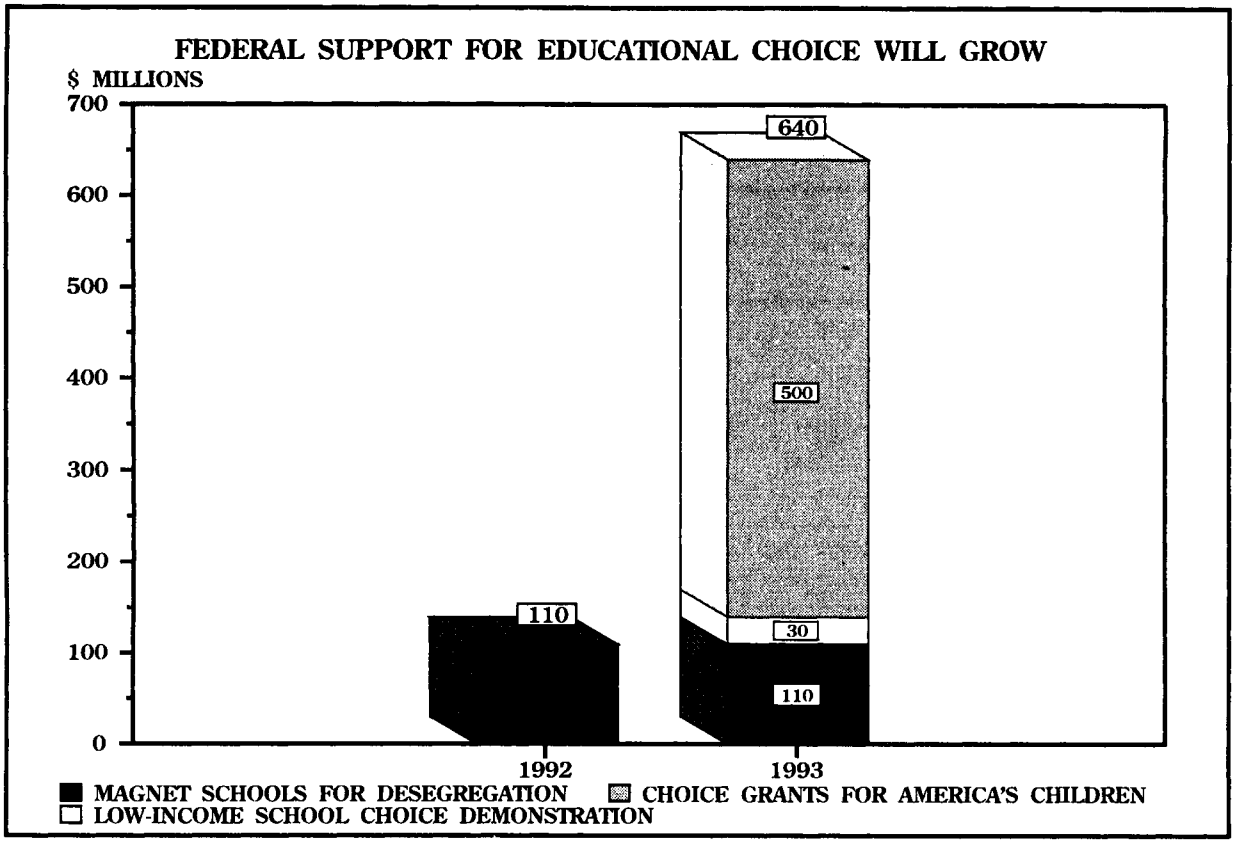
  This program would increase Federal support for the growing number of State choice programs. In 1991, ten States approved choice legislative programs.

  —**The Low-Income School Choice Demonstration Act:** The budget proposes $30 million for comprehensive public and private school choice experiments. Under this proposal, States and local districts would have flexibility to develop models for providing low-income families with full-cost educational vouchers. These demonstrations would address concerns about the effects of providing full-cost choice programs to low-income families.

- ***Provide educationally disadvantaged children with more educational choice.***—The President proposes to amend the authority for basic grants for remedial education under the Chapter 1 compensatory education program to permit funds to "follow" educationally disadvantaged children who change schools under a local choice program. The budget proposes $6.2 billion for basic grants within the $6.8 billion compensatory education account. These funds will be allocated among about 90 percent of the Nation's school districts.

- ***Increase choices available to students pursuing higher education.***—The budget proposes a 22 percent increase in Pell Grants over 1992 levels. For 1993, outlays for Pell grants, the largest Federal higher education grant program, would total $5.8 billion. Along with Guaranteed Student Loans, Pell Grants have been the core of a successful voucher system for higher education assistance that has operated for many years. Pell Grants and Guaranteed Student Loans are flexible, portable, and provide students with maximum choice while helping them to meet the rising costs of higher education.

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EXPANDING HOMEOWNERSHIP OPPORTUNITIES AMONG LOW-INCOME FAMILIES

One of the more successful asset-based antipoverty programs in American history got underway over a hundred years ago: Abraham Lincoln's Homestead Act of 1862. Homeownership remains today a fundamental building block of prosperity in America and a stabilizing force in its communities. The ownership of private property is a powerful incentive for developing an individual's skills and talents, and the responsibilities of citizenship.

The opportunity to own one's home, therefore, should be available to all Americans, not just to those of middle and upper income. The budget continues and expands the Administration's strong support for expanding homeownership opportunities to low-income families and first-time homebuyers. Resident management and homesteading offer solutions to the troubles endemic to certain public housing communities.

- ***HOPE Homeownership Grants.***—The budget requests $1 billion for Homeownership Opportunities for People Everywhere (HOPE) Grants, a 185 percent increase over the 1992 enacted level of $351 million.

  The goal of HOPE is to give low-income families a stake in their community by providing funding and other assistance for resident ownership of public housing, Federally insured multifamily housing, Federal Government-held vacant and foreclosed properties, and financially distressed properties currently held in the Federal Government's portfolio or owned by State or local governments.

- ***HOPE: Preservation/Prepayment.***—HOPE for Preservation/Prepayment of Assisted Housing is primarily directed at the preservation of privately-owned federally assisted housing. About 360,000 of these units will become eligible over the next 15 years to prepay FHA-insured mortgages and terminate HUD-controlled and subsidized rents.

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Table 8–5. **THE BUDGET PROPOSES A 102-PERCENT INCREASE IN THE HOMEOWNERSHIP OPPORTUNITIES FOR PEOPLE EVERYWHERE (HOPE) PROGRAM**

(Budget authority; dollar amounts in millions)

Budget Authority	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Federal:					
HOPE Homeownership Grants	—	351	1,000	+649	+185%
Elderly Independence [1]	—	46	48	+2	+4%
Low Income Housing Preservation	—	619	[2]1,159	+540	+87%
Shelter Plus Care for the Homeless	—	111	266	+155	+140%
Family Self-Sufficiency [3]	—	—	—	—	—
HOPE Vouchers [4]	—	—	356	+356	n/a
Enterprise Zones Tax Incentives (receipt loss)	—	—	50	+50	n/a
Low Income Housing Tax Credit (receipt loss)	400	1,060	1,337	+277	+26%
IRAs for first-time homebuyers (receipt loss)	—	—	79	+79	n/a
Total Federal	400	2,187	4,295	+2,108	+96%
State/Local Match:					
HOPE Grants	—	104	288	+184	+177%
Shelter Plus Care	—	111	266	+155	+140%
Total Resources	400	2,402	4,849	+2,447	+102%

[1] 1992 and 1993 include $10 million in supportive services and the remainder in vouchers.
[2] About $280 million of this amount is offset through the recapture and rescission of budget authority for subsidies previously tied to these projects.
[3] At least 10 percent of incremental Section 8 vouchers and certificates and public housing development must be set aside for Family Self-Sufficiency in 1992; all incremental units must be set aside in 1993.
[4] These vouchers are for tenants who do not wish to buy their units when a building converts to homeownership. They also are used to meet the statutory requirement to replace converted units with other subsidies.

Under the National Affordable Housing Act of 1990, HUD has been authorized to negotiate extensions of existing subsidy contracts on these units. If owners of these buildings do not want to accept financial incentives to maintain their properties as affordable rental housing, they will be required to provide the residents with a right of first refusal to purchase the property. HUD may authorize grants to tenant councils to purchase and rehabilitate the properties for homeownership.

The budget requests $1.2 billion for Preservation/Prepayment, almost double the $618.5 million enacted in 1992.

- ***HOPE: IRAs for First-Time Homebuyers.***—The Federal Government provides substantial support for homeownership through the tax code and Federal credit programs. However, some potential first-time buyers have difficulty accumulating the savings necessary for a down payment. The Administration is reproposing that Individual Retirement Accounts (IRAs) be allowed to be used for buying a home. Beginning February 1992, first-time homebuyers could withdraw funds in their tax-deferred IRAs without penalty. They would be allowed to withdraw up to $10,000, and the maximum house price would be 110 percent of the average area purchase price.

In addition to the HOPE proposals, the budget contains new initiatives to support homeownership for low-income families and first-time buyers.

- ***Vouchers to Help Own a Home.***—The budget proposes a homeownership voucher (or certificate) providing even more opportunities to low-income households for

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homeownership. Currently, housing vouchers and certificates can only be used to help low-income tenants pay rent. If the Administration's proposal is adopted, they will be able to use them to pay the rent or the mortgage payment on a home.

Currently, about 1.2 million households have Section 8 certificates or vouchers which they use to help pay their rent. Under this proposal, these existing subsidized tenants, as well as any new vouchers or certificates funded by Congress, could be used toward mortgage payments.

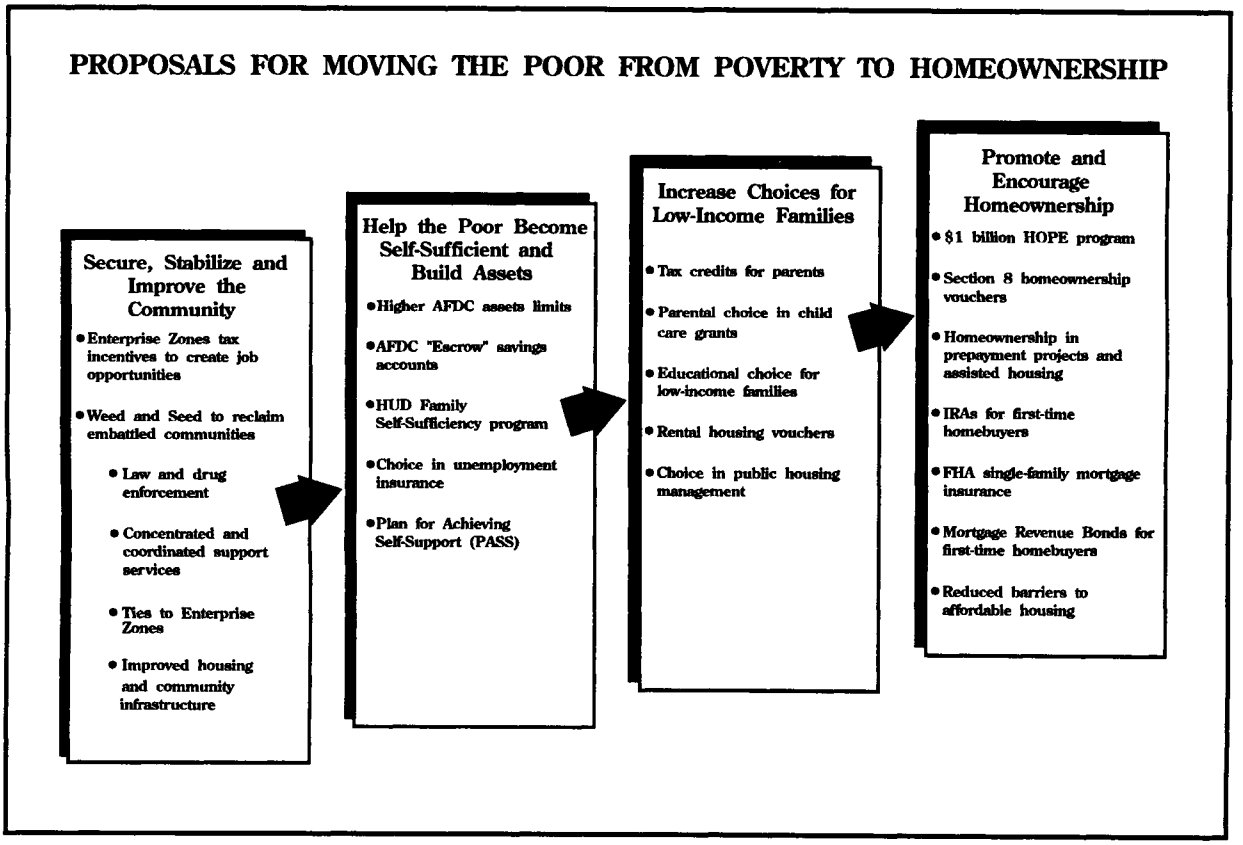
The budget proposes 82,699 new (incremental) vouchers in HUD, a 74 percent increase over 1992's enacted level. All of these would be available for buying a home if low-income families so decided and could meet program requirements for personal equity contributions.

ENHANCING CHOICE, QUALITY, AND AFFORDABILITY OF HOUSING

In addition to promoting homeownership opportunities for low-income families, the Administration's 1993 proposals also reform existing low-income housing programs and address problems raised by regulations that significantly affect the cost of homes and rental apartments.

- ***Perestroika for Troubled Public Housing: New Choices for Residents.***—Unfortunately, a relatively small but very visible percentage of the 1.3 million units in the public housing inventory is inadequate in many respects—in poor physical condition, with high vacancies, and a host of other problems (e.g. vandalism, gang control, drugs).

  The Administration is committed to improving public housing by supporting those public housing authorities (PHAs) that provide decent housing to their tenants and keep vacancies low. The Administration is also committed to dramatic re-



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form in the case of highly substandard public housing. The budget requests $4.7 billion for public housing: $2.292 billion for modernizing it; $2.282 billion for operating subsidies to cover the gap between tenant rents and operating costs; and $165 million for grants to help rid public housing projects of drug dealers and help tenants with drug use problems.

The initiative, Perestroika for Troubled Public Housing: New Choices for Residents, focuses on the limited number of severely troubled public housing developments where either a change in management may be desirable or where there may be better uses for the buildings. To help these troubled projects, $292 million in public housing modernization funds will be set aside for two components of this initiative: (1) "Choice in Management" for which $100 million is set aside; and (2) "Operation Take The Boards Off," for which $192 million is set aside.

"Choice in Management:" Public housing residents in substantially occupied public housing developments would be able to choose whether they want their project (1) turned over to a private entity for management or (2) sold to a private entity for continuation as a rental project. Under the private management option, both for-profit entities and non-profit entities, including States and cities, would be eligible to manage the development. Under the private ownership option, purchase would be limited to non-profit entities, in order to ensure that owners would be committed to operating and maintaining the development as low-income housing.

Under this proposal, the non-profit, alternative public owner or private manager would receive the development's operating subsidies and modernization funds directly from HUD and would maintain the same income targeting and rent rules as public housing.

Projects whose titles would be transferred to private ownership would be exempt from current statutory provisions requiring one-for-one replacement of such units. These units would continue as low-income housing. These developments will be eligible for a special pool of $100 million in modernization funds to ensure that the properties are physically improved before title is transferred.

In either case, the development would remain as low-income housing, receiving both operating subsidy and modernization funds from HUD and serving very-low-income families who pay public housing statutory rents (generally 30 percent of their adjusted income.)

"Operation Take the Boards Off:" The Administration is proposing that substantially vacant public housing developments, which are dragging down their neighborhoods, can be removed from the public housing inventory and sold to community-based non-profit organizations (including tenant groups) for substantial rehabilitation, rental reoccupancy, or tenant ownership.

These developments will be eligible for a special pool of $192 million of modernization funds and for short-term transitional funding—the equivalent of operating subsidies for up to five years to cover lease-up and stabilization of the development. These funds would be awarded competitively.

The current or former residents of partially occupied developments will have a "right of first refusal" to retain the development as low-income housing. If the development is sold to a Community Housing Development Organization, (CHDO), or a State or city, the housing authority will receive replacement vouchers.

- ***Housing Choice Through Vouchers.***— Giving low-income families housing vouchers offers them more choice and opportunity than consigning them to live in a particular unit in a particular neighborhood. It is also more efficient and effective, as the chart on New HUD-Assisted Housing Units shows. Given the budget authority requested in 1993 for new housing subsidies administered by HUD, $3.0 billion, the Administration is able to serve 87,241 new households. (Almost all of these are vouchers; 4,542 subsidies for the elderly and disabled are tied to buildings.) With

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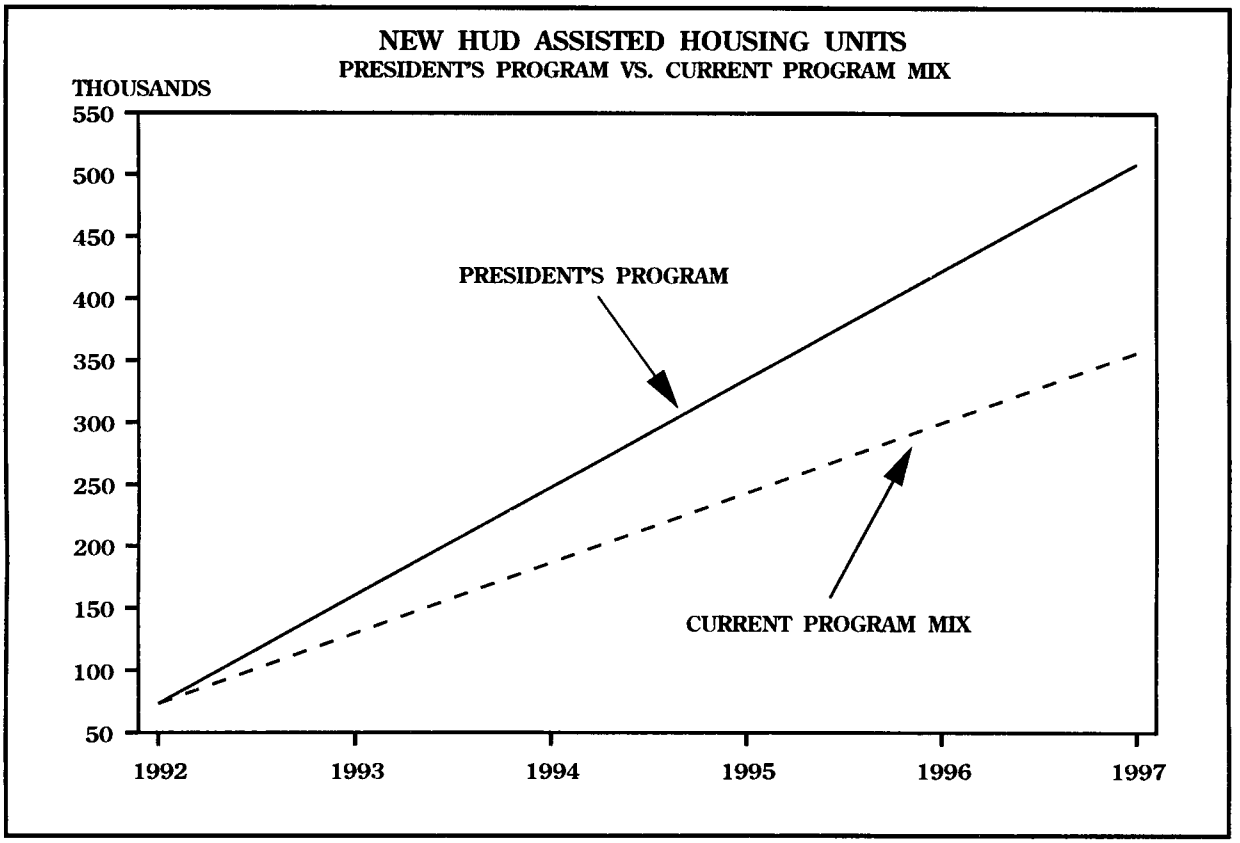


Table 8–6. **THE BUDGET PROPOSES A 67-PERCENT INCREASE FOR CHOICE-BASED NEW HOUSING ASSISTANCE**

(Budget authority; dollar amounts in millions)

Budget Authority	1989 Actual	1992 Proposed	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
HUD Vouchers	1,840	2,416	1,693	2,681	+988	+58%
FmHA Vouchers	—	190	—	140	+140	n/a
Total Vouchers	1,840	2,606	1,693	2,821	+1,128	+67%

this same amount of budget authority, the current "market basket" approach used in 1992 for HUD would serve 56,691 new households, 35 percent fewer. Extrapolating these differences through 1997, the total additional families served under the Administration's housing choice approach is almost 153,000. As shown in Table 8–6, the budget authority requested in 1993 for HUD vouchers is 58 percent higher than enacted in 1992.

Additionally, 5,895 housing vouchers are proposed for rural areas. Vouchers administered by the Farmer's Home Administration (FmHA) will give rural residents more freedom to choose where they live than the current project-specific FmHA Rental Assistance program. Many rural areas suffer from vacant housing stock problems

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that a new construction rental program only exacerbates. Vouchers will address affordability problems in these areas without limiting new construction in areas short of adequate, decent housing.

- ***HOPE: Elderly Independence.***—This demonstration program, funded in the budget at $48 million, will test the effectiveness of combining housing vouchers with supportive services to assist frail elderly persons to continue to live independently rather than be institutionalized. Of the $48 million, $10 million will be for supportive services appropriate to the needs of the frail elderly; $38 million will cover the costs of the vouchers. Funds for supportive services will have to be matched. HUD will contribute 40 percent of the services cost, with State/local entities contributing 50 percent, and the elderly recipients, themselves, responsible for 10 percent. The $10 million in HUD funds for services will, therefore, leverage $15 million additional for such services.

- ***Operation Occupancy.***—The Administration intends to publish proposed regulations in 1993 that discontinue the current practice of full Federal operating subsidies to housing authorities for vacant public housing units. The Department of Housing and Urban Development proposed this rule in September 1991, but Congress placed a provision in HUD's 1992 appropriations bill that prevented any further action by the Department in 1992.

  Currently, over 100,000 public housing units are vacant. The current practice does not make policy sense given the large number of poor families in desperate need of housing assistance, and the adverse uses to which vacant units are too often put.

- ***Restore.***—While the Administration regards housing vouchers as the subsidy of choice, it is still protecting the interests of tenants who live in projects developed under older FHA multifamily housing programs. Restore is a $412 million Administration initiative to improve the housing conditions, financial health, and affordability of an estimated 1,800 troubled projects insured by FHA that are in danger of defaulting on their mortgages. Like *Perestroika,* Restore maximizes resident involvement in managing and owning these projects.

- ***Lead Abatement.***—The budget also proposes $24 million in grants to States and localities so they can assist low- and moderate-income homeowners and landlords with low-rent properties to abate lead-based paint. Preference for financial assistance will be given to households with children.

  The $2.292 billion requested in the budget to renovate or repair public housing units can also be used to test for and abate lead paint. It is estimated that $50 million of these funds will be used for this purpose.

- ***HOME.***—The budget also proposes $700 million for HOME grants, which can be used to rehabilitate housing, provide tenant subsidies to very-low-income households, or less often, construct new housing. The Administration is very concerned that the requirement that States and locals provide a matching amount for HOME grants, originally contained in the National Affordable Housing Act of 1990, and agreed to by Congress on a bipartisan basis at that time, was waived in the VA, HUD, Independent Agencies appropriations bill for 1992. The Administration strongly opposes any 1993 waiver of this matching requirement, which was a key feature of the HOME program. In fact, if the match is restored, the Administration would be willing to submit a budget amendment to increase funding for HOME to $950 million.

- ***Reducing barriers to creating more affordable housing in all communities.***—In 1990, the Administration established a bipartisan commission to study the impact of government regulation on housing affordability. In July 1991, the Commission submitted its report, *Not in My Back Yard: Removing Barriers to Affordable Housing,* to the President and Secretary Kemp.

  Nationally, affordability for homebuyers improved in the 1980s and 1990s, after deteriorating during the 1970s. The im-

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provement occurred largely because of economic policies, which reduced inflation and mortgage interest rates. Mortgage interest rates were below 9 percent in 1970. They increased up to 13 percent in 1980, and 15 percent in 1982. Today, mortgage interest rates are below 9 percent, their lowest level in 15 years.

Over time, however, barriers to housing affordability were erected that countered the trend of improving affordability. Foremost are government housing regulations that drive up the cost of building and buying a home.

The Commission's report concluded that millions of Americans are being priced out of buying or renting the kind of housing they otherwise could afford were it not for this web of government regulations.

Low-income and minority persons have an especially hard time finding suitable housing. Middle-income workers, such as police officers, firefighters, teachers, and others, often live many miles from the communities they serve, because they cannot find affordable housing there. Workers who live far from their jobs commute long distances by car, which contributes to clogged roads and highways and air pollution.

Examples of regulations that can add to costs or reduce the potential supply of housing include:

—Exclusionary zoning, one of the most common actions taken by local governments that wish to preserve exclusivity;
—Subdivision controls, which ensure that the physical and design characteristics of communities meet overly demanding standards;
—High impact fees that bear little resemblance to the cost of services that subdivisions require;
—Burdensome permit approval processes that can add years to the time required to build a home;
—Rent control, while having short-term benefits of helping hold down the cost of housing, can also contribute to the housing supply problem in the long run. First, it can act as a disincentive to building new rental properties. Second, much of its benefits go to middle- and upper-income households rather than low-income households. Third, in some situations, it can result in poorly maintained properties because other costs are rising faster than rent.

To address these issues, the Barriers Commission made several recommendations to the President and Secretary Kemp. Most of these recommendations have been adopted by the Administration and are summarized in Table 8–7.

Table 8–7. **PROPOSALS ADOPTED FROM THE ADVISORY COMMISSION ON REGULATORY BARRIERS TO AFFORDABLE HOUSING**

- Provide $10 million to fund planning grants to States for barrier-removal.
- Require HUD's approval of State and local barrier-removal plans as part of their Comprehensive Housing Affordability Strategy (CHAS).
- Reduce the burden on localities of complying with CHAS requirements.
- Extend the Low-Income Housing Tax Credit and Mortgage Revenue Bond programs for one-and-a-half years and require HUD approval of CHAS.
- Establish an Interagency Affordable Housing Regulatory Review Board to expedite waivers to Federal regulations.
- Work with public interest groups to build support for regulatory reform.
- Create a Regulatory Reform Clearinghouse in HUD for States, localities, and others interested in reform.
- Encourage the development of model zoning and other types of housing regulations for States and localities to follow.
- Appoint a Barrier Removal Officer within HUD to assist States and localities to initiate barrier-removal programs.

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ADDRESSING THE NEEDS OF THE HOMELESS

Helping the homeless has been a major goal of the Administration. Few issues have touched upon the sensitivities of the American people more than the presence of homeless men, women, and children in communities across the country.

For those who are homeless, providing food and emergency shelter is important but usually not enough to help them achieve or regain self-sufficiency. Temporary shelter, while allowing people to escape from the elements, does not address the root causes of why individuals become homeless. For those able to benefit, job-training must be available. Homeless families often need an array of support services, without which, homeless recidivism is likely. For those homeless individuals suffering from severe, disabling conditions, such as severe mental illness, different responses are necessary to ensure these individuals receive requisite housing, counseling and other supportive services.

For the past three years, the Administration has worked diligently to reduce the number of homeless persons and to alleviate the burdens of those who remain homeless. In 1989, the Federal government spent slightly more than $600 million on homeless programs. The recommendations contained in this budget represent a 76 percent increase over 1989 enacted levels. The effectiveness of this dramatic increase in spending is difficult to quantify, in part because some of the assistance afforded by this increase aims to prevent persons from ever becoming homeless.

In the budget, the Administration demonstrates its continuing resolve to end the tragedy of homelessness by:

- ***Proposing over $1 billion for 1993.***—This request represents a 6 percent increase above funding enacted by Congress for homeless programs in 1992. Table 8–8 delineates by Federal agency this request for increased assistance for the homeless. For HUD homeless programs, the budget recommends an increase of $87 million, or 19 percent, above 1992 enacted levels. The chart on HUD's homeless programs points out Congress's consistent underfunding of the Administration's request for funding for HUD's homeless programs.
- ***Increasing the availability of support services in combination with housing.***—The Administration requests $266 million for HUD's Shelter Plus Care, more than a 140 percent increase over the amount appropriated by Congress in 1992.

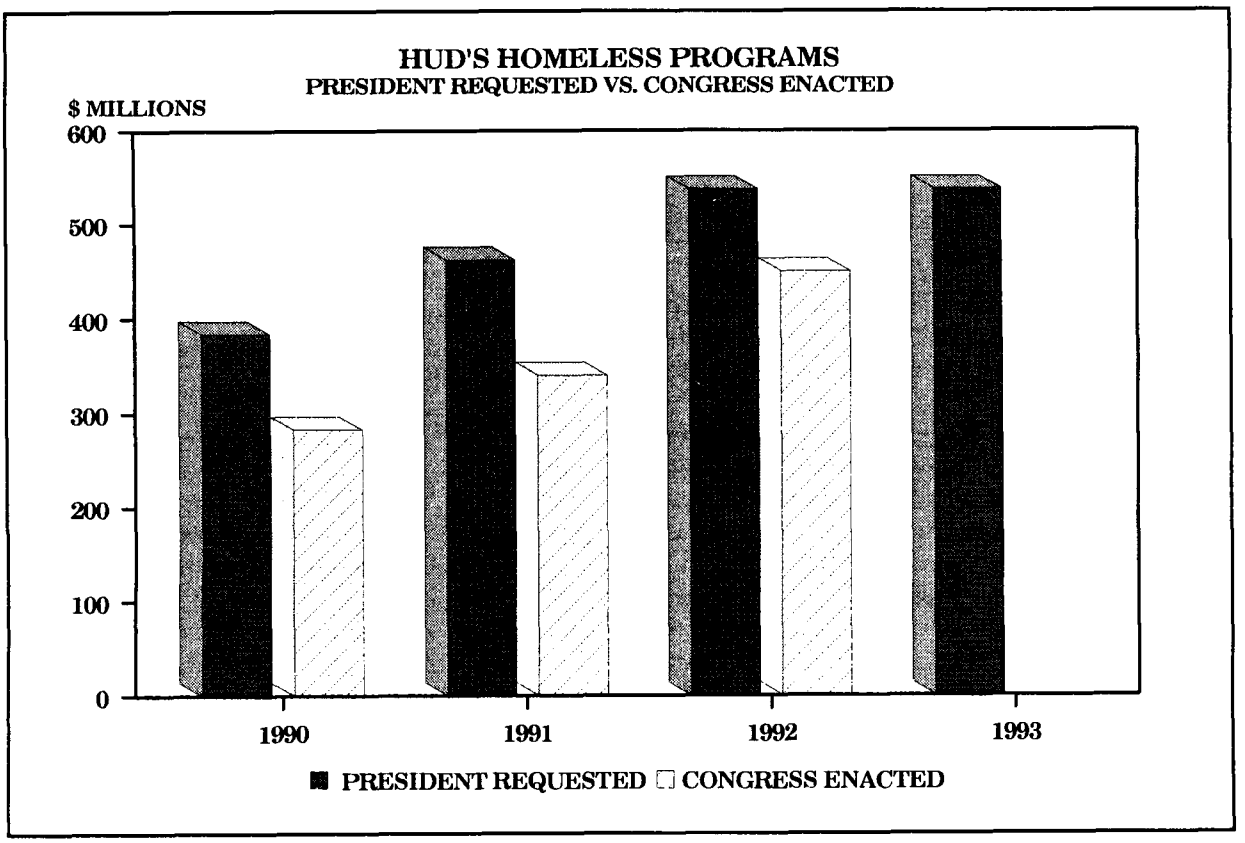
Table 8–8. **THE BUDGET PROPOSES A SIX-PERCENT INCREASE FOR HOMELESS ASSISTANCE**

(Budget authority; dollar amounts in millions)

Budget Authority	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Housing and Urban Development	172	450	537	+87	+19%
Health and Human Services	140	223	209	-14	-6.5%
Agriculture	117	119	128	+9	+8%
Federal Emergency Management Agency	126	134	100	-34	-25%
Veterans Affairs	24	33	35	+2	+5%
Education	12	35	35	—	—
Labor	9	9	17	+8	+83%
Defense	3	3	3	—	—
Interagency Council on the Homeless	1	1	1	—	[1]+20%
Total	604	1,008	1,064	+56	+6%

[1]The 1993 proposed level is $200,000 more than the 1992 enacted level.

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- ***Reaching out to the homeless who are mentally ill and unwilling or unable to commit to existing treatment programs.***—Safe Havens, a new $50 million Administration initiative in 1993, offers a stable living environment and the opportunity, but not the requirement, to participate in mental health services for those individuals who are unable or unwilling to commit to existing programs, such as HUD's Shelter Plus Care or HHS' Transition From Homelessness.
- ***Requesting that all Federal agencies produce and implement a Federal Plan to Help End Homelessness.***—The goal of the plan is to reduce homelessness by improving the coordination and delivery of assistance.

The Administration's homeless program strategy recognizes that there are many homeless individuals with problems not amenable to a solution by a short-term infusion of housing and support services. The Shelter Plus Care Program provides rental assistance and appropriate resources and treatment to homeless persons who are mentally ill, chemically dependent, or afflicted with AIDS. Safe Havens is a new initiative designed to reach those mentally ill homeless who do not want or are afraid to commit to the long-term, comprehensive treatment offered by Shelter Plus Care. Both initiatives highlight the Administration's commitment to meeting the varied and multiple needs of the homeless.

The Stewart B. McKinney Homeless Assistance Act of 1987 has been the major Federal vehicle specifically targeted to help the homeless. McKinney Act programs fund housing, job training, food and nutrition assistance, health care, mental health, and supportive services for the homeless and demonstration treatment projects for the large number of homeless who are chronically mentally ill or substance abusers. The Departments of Veterans Affairs and Labor fund programs for veterans and job training demonstrations. The Department of Education provides funds to enable States to establish educational programs for homeless children and adults.

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In addition to McKinney Act programs, the homeless receive assistance through other Federal programs such as the Community Support Program of HHS and at least 70 more traditional Federal programs such as AFDC and Supplemental Security Income (SSI), and block grants for community development and social services.

Substantial efforts have been undertaken to increase participation of the homeless in these programs. For example, Secretary Kemp has pledged that up to 10 percent of all units in HUD's single-family acquired-property inventory will be targeted to the Single Family Homeless Initiative. In total, about 1,800 homes are now under lease and HUD has sold over 230. Secretary Sullivan of HHS has supported demonstration projects and other outreach strategies for the Supplemental Security Income Program and has made it a Department priority to help homeless children and their families.

The solution to homelessness must, of course, involve more than the Federal government. Communities, non-profit groups, and State and local governments must be a part of any viable solution. Fortunately, all sectors of the Nation have been responding to the homelessness problem. A 1988 National Survey of Shelters for the Homeless showed that 9 of every 10 shelters are operated by private non-profit groups, aided by many volunteers. In 1987-88, private philanthropic foundations provided $28.5 million while the United Way raised an additional $118.6 million directly for homeless programs. State and local governments have also been supporting programs to provide emergency health care, social services, emergency shelter, and transitional housing to homeless individuals and families. These programs were funded by State and local governments at $430 million in 1988.

CONCLUSION

Many of the proposals discussed in this chapter are new. Some maintain or expand resources for proposals in previous Administration budgets. Together, they represent a comprehensive, coordinated, and creative package to enable this Nation's low-income families and low-income communities to become safe, productive and self-sustaining.

The key themes underlying these proposals are "opportunity" and "choice." One of the main attractions of this country to citizens of other nations is that America is a "land of opportunity," where they are able to choose how and where they wish to live. The proposals discussed in this chapter go a long way to ensure this is true for all Americans.

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Investing in the Future:

9. Ending the Scourge of Drugs and Crime

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9. ENDING THE SCOURGE OF DRUGS AND CRIME

HIGHLIGHTS

Ending The Scourge of Drugs

The Administration's drug control funding request is $12.7 billion, an increase of $776 million, or a 6.5 percent increase over 1992, and nearly double the amount appropriated when President Bush took office.

The budget reflects the Administration's continuing commitment to ending the scourge of drugs and drug-related crime by expanding drug law enforcement programs, improving drug use prevention efforts, and increasing the availability of substance abuse treatment. It builds on the success made thus far, and it directs new funding to the toughest problems—dismantling drug trafficking organizations, preventing drug use by the hardest to reach users, and treating those most damaged by drug use.

- To attack drug trafficking organizations at the source and on the street, interdict the flow of illicit drugs into the country, and deny traffickers the profits from their illegal activities, the budget proposes $8.6 billion for expanding and targeting drug law enforcement, an increase of $443 million, or 5.4 percent over 1992. This is $4 billion or 88 percent more than was spent for drug law enforcement in 1989.
- To prevent people from becoming users—especially our youth—and persuade current users to stop, the budget proposes $1.8 billion for expanded and targeted drug use prevention programs, an increase of $77 million, or 4.5 percent over 1992. This is nearly $1 billion or 121 percent more than was spent for drug prevention programs in 1989.
- To treat and rehabilitate those whose lives and families have been disrupted by drug use, improve the quality of treatment, and to focus treatment on those with special needs, the budget proposes $2.3 billion to provide drug treatment services, an increase of $256 million, or 12.3 percent. In 1993, drug treatment will be provided to over 311,000 drug users, an increase of nearly 19 percent over 1992. This is over $1.1 billion or 94 percent more than was spent for drug treatment in 1989.

Fighting Crime

The Administration's request to help fight crime is over $15.8 billion, an increase of $1.2 billion, or 8.3 percent over 1992, and 59 percent larger than 1989. (These figures include some of the drug law enforcement programs discussed above.) The last section of this chapter discusses all Federal law enforcement expenditures, of which the drug control programs are one component. Law enforcement spending targets all criminal activity and reflects the Administration's commitment to strengthen all aspects Federal law enforcement.

- To investigate, arrest, and prosecute criminal enterprises, the budget proposes $9.0 billion in 1993, an increase of $653 million, or 7.7 percent over 1992. This is $2.9 billion or 48 percent more than was spent in 1989.
- To make neighborhoods safe from criminal gangs and violent armed criminals, the Departments of Justice and Treasury have created numerous special task forces in cities across the country to target the activity of these dangerous criminals.
- To ensure that criminals are punished for their crimes, the budget proposes $2.2 billion to house Federal prisoners and expand Federal prison capacity, an increase of $185 million, or 9 percent over 1992. These efforts will ensure that violent criminals serve their full sentences. This is $638 million or 44 percent more than was spent for prisons in 1989.
- To insure that criminals are held fully accountable, Federal criminal statutes should be reformed to protect law abiding citizens and not the criminals preying upon them.

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ENDING THE SCOURGE OF DRUGS

The Administration's total request for drug control programs for 1993 is over $12.7 billion, a $776 million increase over 1992, or 6.5 percent, and nearly double the amount spent in 1989 (see Table 9–1).

The National Drug Control Strategy represents an integrated attack on the problem of drug use and drug-related crime—law enforcement, prevention and education, and drug treatment. Through expanded and focused law enforcement programs, Federal, State, and local law enforcement entities are better able to attack the drug distribution chain from the source countries where drugs are grown to the street corner vendor where they are sold. Through expanded and improved prevention and education programs, Federal agencies, private organizations, and corporations are getting the word out to children and the workforce on the dangers of drug use. Through the expansion of public and private care facilities, more and more victims are receiving rehabilitative care and are returning to society drug-free. The Federal funding split between law enforcement funding and prevention and treatment funding is shown in the chart "Drug Control Rises with Increasing Emphasis on Treatment and Prevention."

BUILDING A STRONG DRUG LAW ENFORCEMENT SYSTEM

The Administration's drug law enforcement request is $8.6 billion, an increase of $443 million, or 5.4 percent, and nearly double the amount spent in 1989.

A strong law enforcement system is essential if the availability of and demand for illegal drugs in this country are to be reduced. Since the publication of the first National Drug Control Strategy, spending on efforts to reduce the supply of illicit drugs on the streets has increased substantially (see accompanying Table 9–2). Much of the increased funding was needed to: put pressure on drug traffickers by stemming the flow of drugs over U.S. borders; put more agents and investigators into the field; equip them with state-of-the-art tools to do their jobs and; create the communications and intelligence systems to assist in focusing law enforcement efforts. This pressure deters would-be users and dealers, and removes drug criminals from the streets. The budget builds on the progress made to date.

The American people want and deserve the protection of effective law enforcement, swift prosecutions of those arrested, and the surety of punishment of those convicted of crimes. Federal law enforcement agencies continue to attack the drug trafficking industry in many ways: by working cooperatively in joint anti-drug task forces; by creating specialized drug law enforcement entities that target drug trafficking organizations at all levels; and by providing assistance to state and local law enforcement agencies. As a result, arrests for drug violations have esca-

Table 9–1. **FIGHTING THE SCOURGE OF DRUGS**
(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
War On Drugs:						
Law Enforcement	4,584	8,166	8,609	+443	+5%	+88%
Prevention	806	1,707	1,784	+77	+5%	+121%
Treatment	1,202	2,080	2,336	+256	+12%	+94%
Total Drugs	6,592	11,953	12,729	+776	+7%	+93%

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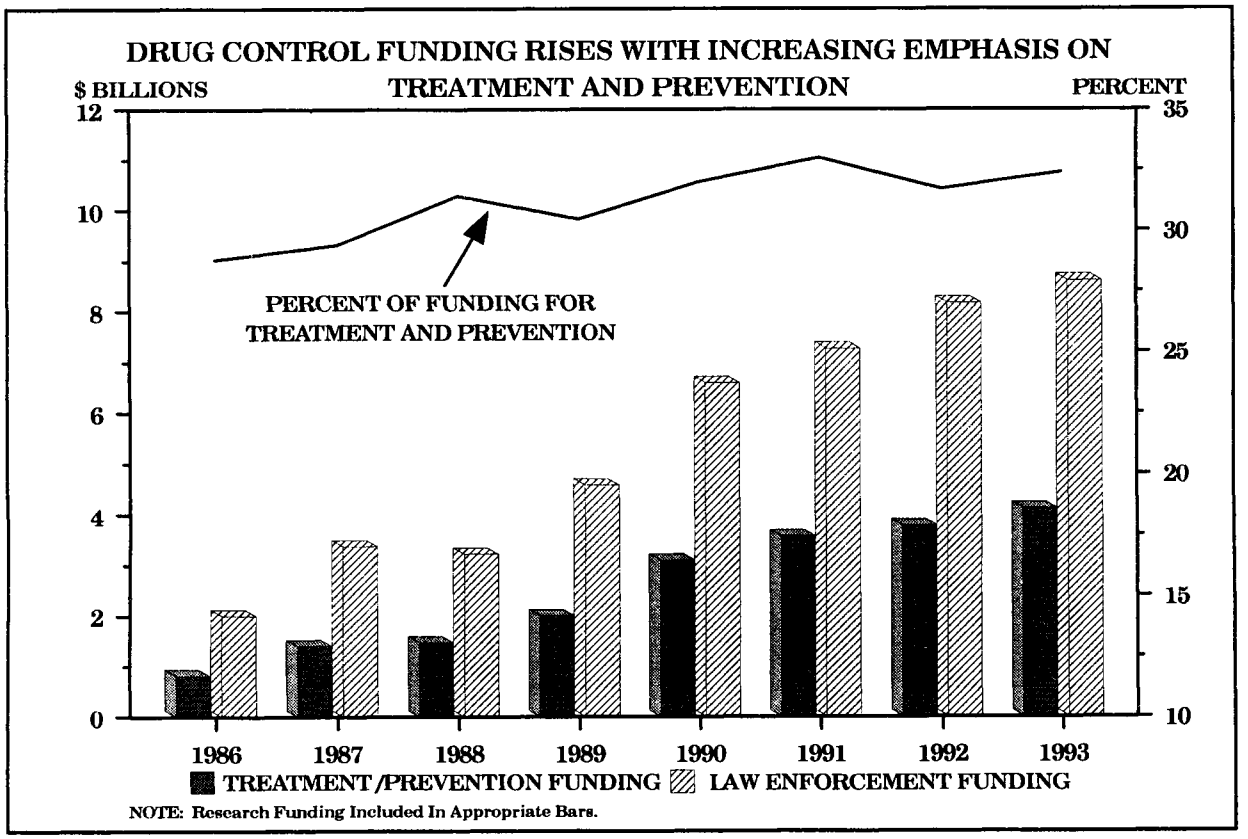


Table 9–2. **DRUG LAW ENFORCEMENT RESOURCES GROW BY ALMOST $450 MILLION**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Law Enforcement	4,584	8,166	8,609	+443	+5%	+88%

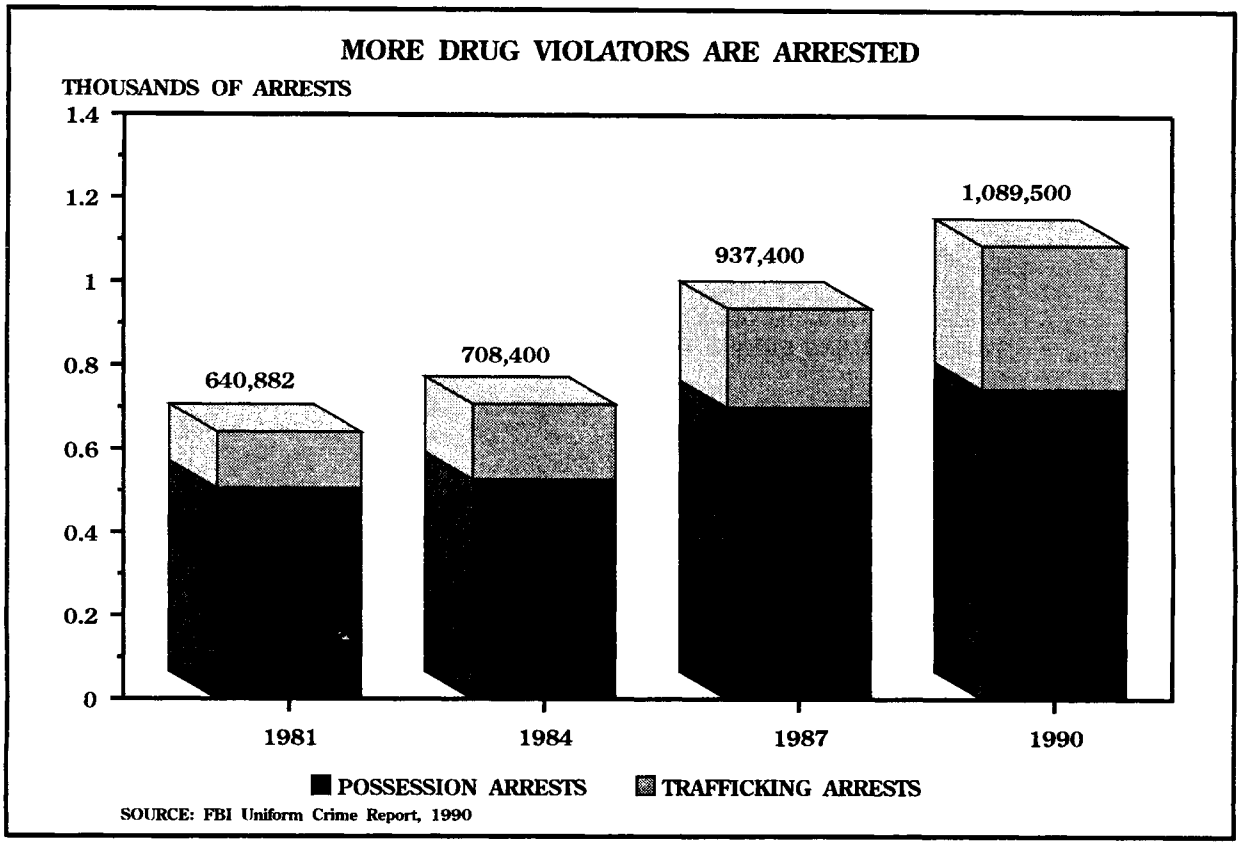
lated rapidly, increasing by 70 percent between 1981 and 1990. (See accompanying chart, "More Drug Violators Are Arrested.")

Targeting Street Sales and Violence

The Department of Justice has expanded its domestic anti-drug efforts significantly to meet the challenge to law and order posed by drug trafficking and drug-related crime.

- To fight drugs at home, the budget requests $7.7 billion in domestic drug-related funding, an increase of $470 million over 1992 and almost double the amount spent in 1989.
- To focus Federal law enforcement efforts on locations most affected by drug trafficking, the budget provides $50 million to the Office of National Drug Control Policy for High Intensity Drug Trafficking Areas. These resources are targeted to support Federal law enforcement activity in Miami, Houston, New York, Los Angeles, and the Southwest Border.

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- To attack organized crime's participation in drug crime, the Organized Crime Drug Enforcement Task Force (OCDETF) was established. By sharing assets and information, OCDE Task Forces have been responsible for the conviction of 16,658 members of criminal organizations and the forfeiture of considerable drug assets. The 1993 budget requests $399 million for OCDETF, an increase of $36 million, or 9.9 percent over 1992.

- To prosecute drug dealers and users, the budget proposes $235 million for the drug components of U.S. Attorneys and the Criminal and Tax Divisions of the Department of Justice, an increase of $27.4 million, or 13.2 percent over 1992. These increases allow for the efficient prosecution and processing of the growing number of arrestees.

Stemming The International Flow Of Drugs

The Administration is requesting nearly $3 billion in 1993 for international and interdiction programs to stem the flow of drugs into the United States, nearly double the amount spent in 1989.

Drug smuggling organizations have become sophisticated criminal enterprises. Major drug trafficking organizations are most susceptible to disruption at their organizational center, the traffickers' foreign base of operations. Investment in international cooperation and expanded detection, monitoring, and interdiction has begun to pay off. Interdiction successes have forced traffickers to shift their tactics, alter routes of entry, and try bolder moves of large quantities of cocaine and other drugs. The recent seizure of 12 tons of cocaine concealed in imported concrete fence posts testifies to the magnitude of financial loss being forced upon trafficking organizations. Since 1989, the Medellin Cartel has been incapacitated and the Cali Cartel has come under attack.

- To take the war to the drug traffickers' home territory, the budget proposes $768 million to support the Administration's Andean Strategy and other international

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narcotics-related assistance programs. Funding for international counter-drug efforts has more than doubled since 1989.

- To protect U.S. borders from the inflow of illcit drugs, the budget proposes a total of $2.2 billion for interdiction activities, including the addition of 200 Border Patrol agents on the Southwest border.
- To stop smugglers and seize their illicit cargo, interdiction operations by the Coast Guard, U.S. Customs Service, and the Immigration and Naturalization Service are supported by detection and monitoring assistance from the Department of Defense.

Targeting Illicit Financial Operations

The Administration is requesting $117 million in 1993, $12 million over 1992, to attack the flow of illegal drug profits. Halting money laundering is essential to the overall strategy of dismantling drug trafficking organizations. The laundering of illegal drug profits through domestic and international banking organizations continues to be a lucrative target for Federal investigators. Recently, in a joint agency effort, Customs, IRS and the U.S. Attorneys arrested a major money launderer and broke his nationwide organization which is believed to have laundered over $750 million in drug proceeds. The Treasury Department's recently created Financial Crimes Enforcement Network (FinCEN) has principal responsibility for providing information to aid law enforcement agencies in attacking illegal cash flows and confiscating drug cash assets.

- To assist in the interception of funds and to help deny trafficking organizations the use of international banking systems, the budget proposes $18.2 million for Treasury's FinCEN operations, an increase of $2 million over 1992.
- To conduct money laundering investigations, enforce Federal government regulations, and to detect and deter money laundering through the domestic banking system, the budget proposes $111 million for Internal Revenue Service drug money laundering investigations, an increase of $8.3 million over 1992.

INCREASING EMPHASIS ON PREVENTION

To help curb drug use in America, the budget proposes $1.8 billion for drug prevention and associated research, an increase of $77 million, or 4.5 percent over 1992, and over twice the amount spent in 1989. For example, Drug Free Schools Emergency Grants which target localities with the most serious drug problems are increasing by 100 percent over 1992.

The costs imposed on society by the drug using population run into the tens of billions of dollars—over $60 billion annually by one recent calculation. Successful prevention programs keep people from ever using drugs and, for those who have started, get them to stop. The Administration continues to be committed to an aggressive drug abuse prevention strategy.

Drug Use Continues To Fall

According to the National Institute on Drug Abuse (NIDA) 1991 Household Survey, "current use of illicit drugs"—use within the past 30 days—has continued to fall. In 1985, an estimated 36.8 million Americans age

Table 9–3. **THE INVESTMENT IN DRUG PREVENTION GROWS BY $77 MILLION**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Prevention	806	1,707	1,784	+77	+5%	+121%

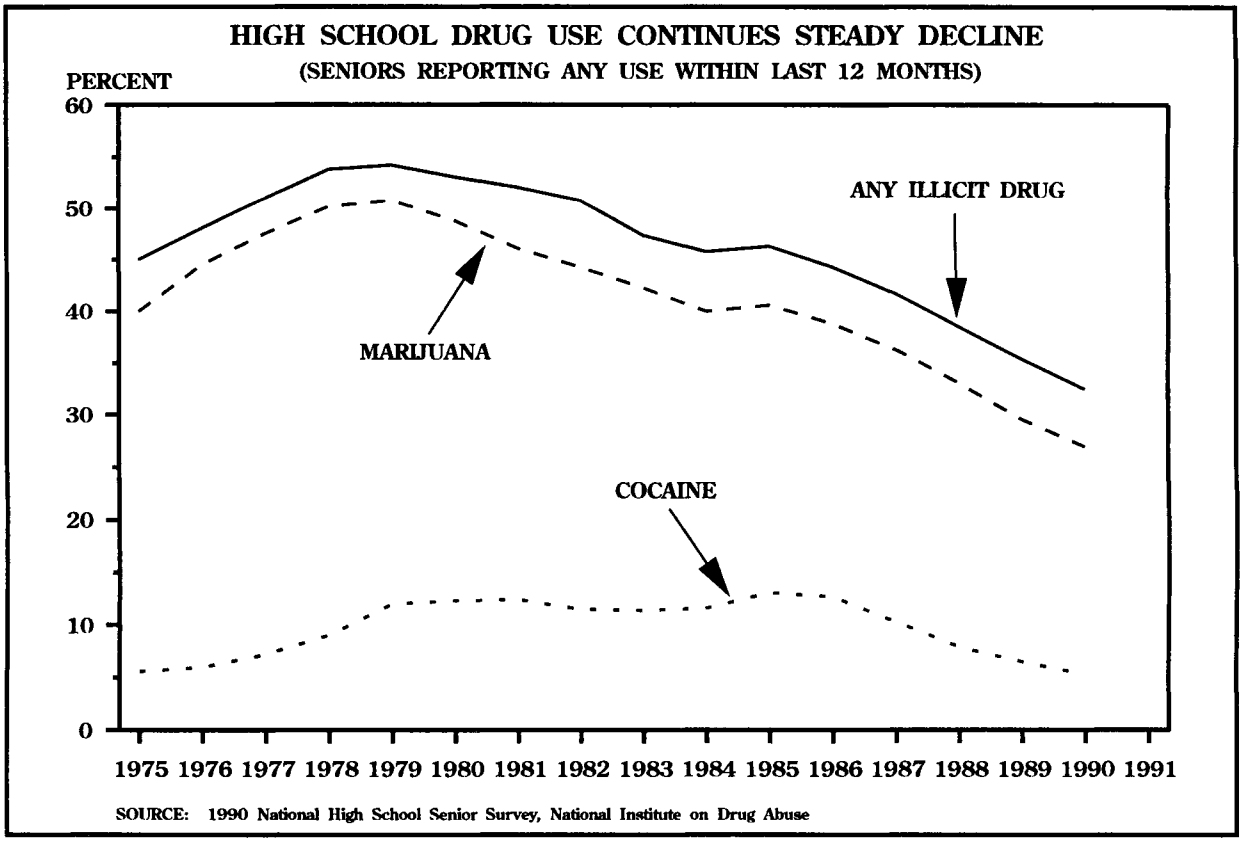
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12 and older (19.3 percent of the population) had used marijuana, cocaine, or some other illicit drug at least once in the past year. In 1991, that estimate was down to 26 million Americans (12.8 percent of the population)—still too high, but progress nonetheless.

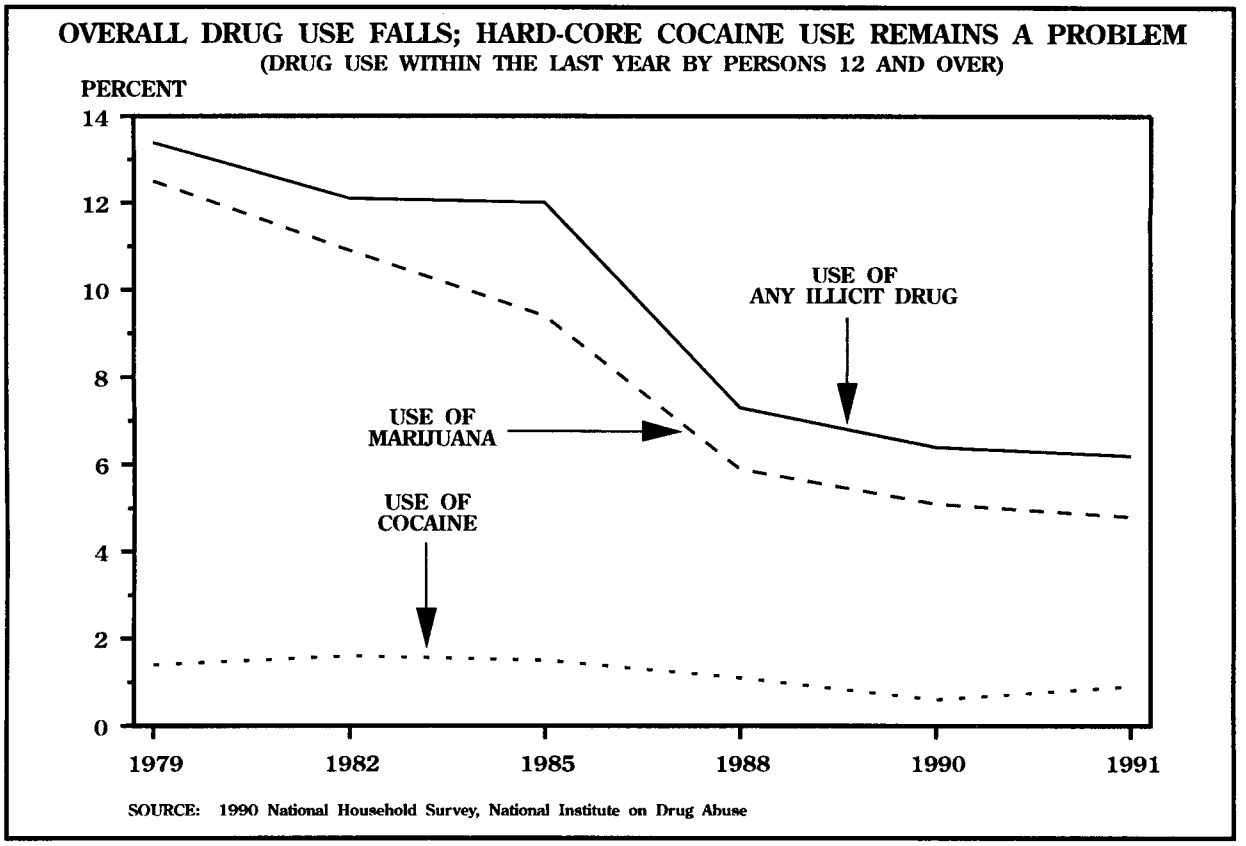
Particularly promising gains have been made among youth aged 12 to 17 years old. Current use among this group fell from 8.1 percent in 1990 to 6.8 percent in 1991—less than half the level of 1985 according to the 1991 Household Survey. These results indicate that the best chance of prevailing over drug use, preventing use by the youngest population, has so far been successful. Other major indicators of drug use, such as the High School Senior Survey and the Partnership for a Drug Free America's Attitude Tracking Survey, support these findings. The accompanying charts show these favorable overall trends.

The Partnership For A Drug Free America Survey shows similar results. When the Partnership Survey asked pre-teens if "smoking marijuana is OK sometimes," 8.6 percent responded "Yes" in 1987, while far fewer, 4.9 percent, responded "Yes" in 1991. These results indicate that the message about the dangers of drug use is getting out.

Although drug use in the population generally has fallen, some difficult-to-reach segments of society have made much less progress in ridding themselves of drugs. In 1991, the rate of current cocaine use among the age twelve-and-over population was 0.9 percent—essentially unchanged from 1990. However, the results show increased cocaine use among older age groups. One possible explanation for the increased use among individuals over age 35 is the aging of the high drug-using generation which may have begun taking drugs during the 1970's and early 1980's, or a relapse of hard-core users. This also points out one of the tragic facts of drug use—once you start using drugs, it is very difficult to get off and stay off.



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While the 1991 Household Survey shows that casual use by the population as a whole continues a downward trend, other evidence suggests that hard-core drug use is largely unchanged. The Drug Abuse Warning Network (DAWN) collects data on the number of drug-related medical emergencies and deaths from hospitals across the country. After an encouraging period of declining reports since the third quarter of 1989, DAWN is reporting a slight upturn in emergency room "mentions" in the first two quarters of 1991. The results of these surveys indicate that fewer people are starting to use drugs, while some of those who started are having difficulty stopping.

Expanding and Targeting Prevention Efforts

Of the $1.7 billion requested for prevention programs, a substantial portion is targetted to specific key areas. Drug prevention programs target children and adolescents, seek to prevent the onset of substance abuse among non-users, encourage current users to quit, and seek to discourage current users from progressing to more dangerous practices (e.g., from experimentation to regular use or from non-intravenous to intravenous use).

Many of the Federal government's prevention programs are aimed at the high-risk segments of our society.

- To prevent drug use among high-risk youth, the budget includes $63.3 million, a 9 percent increase over 1992, for demonstration projects that identify and improve protective factors and diminish risk factors among youth at risk for drug abuse.
- To help local government agencies and community organizations coordinate drug prevention strategies, the budget proposes to increase funding for HHS's Community Partnership Grants by $15 million to $114 million in 1993, or 15 percent over the 1992 level.
- To educate the young about the evils of drug use, the Education Department's

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Drug-Free Schools and Communities Grants will provide funds for programs which reach 90 percent of the eligible school aged children. Total Drug-Free Schools funding is being proposed at an all time high, $654 million in 1993.

- To reach communities most devastated by drug use, the targeted emergency grants in the Drug Free Schools and Communities program are proposed to increase 100 percent from the 1992 level, from $30 million to $60 million.
- To protect citizens living in public housing, the Department of Housing and Urban Development will provide $165 million, including $69 million for drug use prevention activities in and around public and assisted housing projects.

Preventing Drug Use in the Workplace

The workplace presents special opportunities to reduce drug use. Of the estimated 13 million current drug users in America, about 68 percent are employed. Employers have a vested interest in deterring drug use because drug users are more likely to miss work, have health problems, be involved in accidents, and either quit or be terminated.

The Administration has led the way in workplace prevention, by implementing drug testing of Federal employees to insure that the Federal workplace is drug-free and safe, encouraging States to assume a greater leadership role in deterring workplace drug use, requiring Federal grantees and contractors to maintain drug-free workplaces, and encouraging implementation of drug-free workplaces throughout the private sector. In 1991, legislation was enacted which requires expanded drug and alcohol testing of safety-related employees in the transportation sector. Increased testing will be required for safety-related aviation, railroad, trucking, and mass transit employees.

TREATING DRUG USERS

The budget provides over $2.3 billion for drug treatment and associated research, an increase of $256 million or 12 percent over 1992 and 94 percent over 1989. This funding will provide drug treatment to approximately 311,000 people in 1993, an increase of 49,000 or 18.6 percent over 1992, and 116,000 more annually since 1989.

To provide more drug treatment services, HHS Capacity Expansion Grants will be funded at $86 million, or eight times the amount provided in 1992. These grants supplement other funding received by the States to increase the number of treatment slots. Additionally, to enhance the quality of drug treatment, HHS Treatment Improvement Grants funding would grow to $124 million, an increase of 48.9 percent over 1992. These grants help States expand capacity and provide higher quality treatment services as well as better facilities and staff. They also finance "treatment campuses," where researchers and practitioners work together to provide patients with new treatment methods and associated social services.

Focusing On Children, Families, And Those With Special Needs

The budget provides treatment assistance to select groups, as follows:

- To treat inmates of Federal prisons, the 1993 budget provides $28 million, an in-

Table 9–4. **FEDERAL RESOURCES FOR DRUG TREATMENT RISE BY OVER 12%**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Treatment	1,202	2,080	2,336	+256	+12%	+94%

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crease of $5 million over 1992. These programs provide aftercare services for up to six months to over 1,000 inmates participating in the Bureau of Prisons' drug treatment programs.

- To treat persons awaiting trial, the Judiciary requests $44 million for substance abuse services.
- To treat the Nation's veterans with drug and alcohol related problems, the budget provides $591 million to the Department of Veterans Affairs, an increase of $46.3 million over 1992.
- To provide treatment services directly to residents of public housing, the budget includes $20 million for treatment as part of the Department of Housing and Urban Development's Public and Assisted Housing Drug Elimination Grants.

Treatment services for individuals within the criminal justice system—prisoners, parolees, and probationers—are beneficial to the extent that they reduce criminal behavior and help these drug abusers lead productive, drug-free lives. According to the Institute of Medicine, "... pressure from the criminal justice system is the strongest motivation for seeking public treatment." Drug users who are on probation or parole have an added incentive to stay in a treatment program if they face the threat of being returned to prison.

Drug use by pregnant women and young mothers imposes great costs on their children, families, and society. Infants exposed to drugs can suffer from numerous ailments and disabilities, including fetal damage, premature delivery, malnutrition, and behavioral disorders which are difficult and costly to treat. The HHS Office of the Inspector General estimated in 1990 that the cost for hospital care, prenatal care, and foster care through age 5 was over $55,000 per "crack baby." The number of crack babies has been estimated at one to two percent of all live births, or 30,000 to 50,000 babies annually.[1]

The budget funds several programs that specifically address drug abuse problems associated with pregnant women, infants, children, and families:

- To prevent and reduce drug use among pregnant women, the budget includes $57.8 million, a 10 percent increase over 1992, for demonstration projects that provide pregnant women and their children with a full range of coordinated health and social services (e.g., intensive outreach, nutrition assistance, prenatal care, parenting skills training, and child care) to help them resist pressure to use drugs and to help them stop using drugs.
- To help the most disadvantaged in society, it is anticipated that $30 million more will be provided for treatment services for the poor and medically needy by the Health Care Financing Administration, primarily through Medicaid.
- To accelerate and help sustain the recovery process for those who receive drug treatment, the budget requests $72 million for the Vocational Rehabilitation State Grant program, an increase of 5.7 percent over 1992. These funds will assist those with serious drug dependencies to develop vocational skills.

Drug Treatment Research

The budget for treatment research will increase by $9 million, from $204 million in 1992 to $213 million in 1993. Treatment should address multiple dependencies (such as drugs and alcohol), mental illness, and other medical complications. Research sponsored by the National Institute on Drug Abuse (NIDA) has found that the longer drug users stay with a treatment program, the higher the probability they will remain drug-free.

The Administration continues to support research efforts to learn more about the nature and extent of addictive disorders: causes and consequences of drug abuse; the costs, benefits, and overall effectiveness of treatment methods; and new medications to treat drug abuse. This is evidenced in three ways:

- To expand efforts to improve drug treatment, the budget proposes $211 million for National Institute of Drug Abuse treat-

[1] Breshalov, Douglas , "The Children of Crack," *Public Welfare*, Fall 1989, pp. 6–11.

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ment research, an increase of $9 million, or 9 percent over 1992.

- To track and evaluate the effectiveness of treatment resources, the budget allocates $17 million within the Alcohol, Drug and Mental Health Services (ADMS) block grant for the development of State data collection and information systems.
- Research funding will continue to provide for research into the relationship between drug use and the spread of HIV/AIDS.

Improving Accountability

To improve State accountability in the financing of drug treatment the budget includes funds for the second year of the State Systems Develop Program (SSDP), administered by the Department of Health and Human Services. The technical assistance that HHS will provide to the States through this program will help States measure more accurately the demand for and supply of drug abuse treatment, as well as assess and improve treatment quality. If the States have better information about who needs treatment and the quality of available treatment, they will be able to spend drug treatment resources—including Federal block grant funds—more effectively. The General Accounting Office recently recommended that the Federal government use the SSDP to improve accountability in the financing of drug abuse treatment.[2]

HHS will also improve accountability by requiring States to write Statewide drug treatment plans that describe how the State intends to spend Federal drug treatment funds. While continuing to pursue legislation for this purpose, the Administration proposes to effectuate as much of this change as possible through notice-and-comment rulemaking. Statewide drug treatment plans will allow HHS to ensure that States are spending their treatment resources effectively and to offer technical assistance where it is needed.

FIGHTING CRIME

The Administration's request to help fight crime in 1993 is $15.8 billion, over $1.2 billion or 8 percent more than 1992, and 59 percent higher than 1989. (See Table 9–5.)

[2] General Accounting Office, *ADMS Block Grant: Drug Treatment Services Could Be Improved by New Accountability Program*, GAO/HRS–92–27, October 1991, p. 3.

Table 9–5. **FEDERAL SPENDING TO FIGHT CRIME GROWS BY $1.2 BILLION**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Fighting Crime:						
Criminal Investigations	2,214	3,389	3,625	+236	+7%	+64%
Border Enforcement	2,459	2,767	2,939	+172	+6%	+20%
Prosecution	1,476	2,285	2,530	+245	+10%	+71%
Corrections	1,553	2,051	[1] 2,236	+185	+9%	+44%
Judiciary and Other	2,261	4,109	4,477	+368	+9%	+98%
Total Crime	9,963	14,601	15,807	+1,206	+8%	+59%

[1] Excludes $49 million in receipts from proposed fee.

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Fighting crime requires an effective law enforcement system to investigate and arrest criminals, prosecute and adjudicate their cases, and fine and imprison convicted offenders. The key elements of the Administration's fight against crime are:

- To ensure that criminals are held accountable for their crimes, Federal laws should be reformed to protect law abiding citizens rather than criminals.
- To attack organized and violent criminals, the Administration will invest $589 million for Federal law enforcement agencies to focus their resources on violent criminal activity through cooperative task forces.
- To remove violent street gangs from U.S. cities, special FBI, Bureau of Alcohol Tobacco and Firearms (BATF), and State and local task forces have been established.
- To fight white-collar crime, the Administration will invest $864 million for the Departments of Justice and Treasury to coordinate their efforts to investigate and prosecute financial, insurance, Medicaid, and bankruptcy fraud, as well as computer crime.
- To provide adequate prison space to insure convicted felons serve the full term of their sentences, the Bureau of Prisons will add 4,200 new prison beds in 1993, a 9 percent increase over the bedspace available in 1992.
- To provide assistance to the Federal partners, State and local governments, in fighting crime.

While State and local law enforcement shoulders most of the burden of fighting violent crime, there is much the Federal Government can contribute. Federal resources and Federal law attack the organizations that are often the root source of violent and drug crime. For example, racketeering laws strike at the heart of the most well established criminal organizations. In addition, Federal agents work side-by-side with State and local officers to counter the rising influence of drug and other inner city gangs.

The budget contains a first, but bold, step to marry law enforcement operations with programs to support social regeneration in inner cities neighborhoods. A new "Weed and Seed" program which is discussed further in Chapter 8, "Providing Hope To Distressed Communities," will root out the violent criminals and provide investments to revitalize neighborhoods.

Strengthening Criminal Statutes

Strong Federal statutes that protect citizens, rather than the criminal, are at the foundation of effective law enforcement. Violent criminals must be taken off the streets and kept off the streets. The Administration has invested substantial resources in the criminal justice system, and sentencing guidelines have been adopted that ensure violent criminals pay the full price for their crimes; but more needs to be done. Federal laws must be reformed:

- To remove loopholes that allow convicted murderers to escape justice through repetitive delays in the carrying out of their sentences;
- To allow the use in court of evidence obtained in good faith by law enforcement officers performing their duties; and
- To ensure an appropriate punishment is meted out for the most heinous acts of violence, murder, and attempted murder.

Attacking Organized and Violent Crime

To fight violent crime, the Administration is devoting over $589 million, an increase of $99 million or 20 percent over 1992, and double the amount spent on violent crime in 1989.

Crime statistics show that while overall crime rates are edging down, rates for certain violent crimes, particularly in cities, continue to rise. There is still much to do in these areas of the country. Among the principal expanded activities are:

- To get violent criminals off the street, the Federal Bureau of Investigation (FBI) will field over 2,000 agents, devoting 385 to a national network of violent crime task forces working with BATF and State and local law enforcement agencies. These task forces are to target criminal street gangs and other violent criminals. This task force initiative will add $46.7 million by

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1993 to FBI resources, reflecting an 83 percent increase in FBI's spending on violent crime since 1989.

- To identify fugitive felons and other violent criminals apprehended for often minor violations, the budget includes $100 million for the FBI to continue development of a state-of-the-art Fingerprint Identification System, double the amount spent in 1992. The system, which will be operational in 1995, will provide Federal, State and local law enforcement agencies with the ability to identify within hours fugitive rapists, murderers, and other violent criminals and get them off the streets.
- To prosecute violent offenders and increase the certainty that they are held accountable for their offenses, and to prosecute other crimes as well, $814 million is requested for the U.S. Attorneys, an increase of $93 million over 1992. The 1993 increase will add 161 new prosecutors to deal with more violent crime cases, weapons offenses, and drug cases generated by crime task forces.
- To apprehend and incarcerate criminal aliens, the Immigration and Naturalization Service (INS) will add 73 criminal investigators to expand law enforcement. The budget for INS will increase by $174 million over the 1992 level of $1.3 billion.
- To assist Federal and State and local law enforcement agencies to rapidly identify illegal aliens who are arrested for criminal activity, the Immigration and Naturalization Service will establish a National Enforcement Operations Center.
- To respond to increasing crime with other than additional personnel, an infusion of research and development and high-tech investigative equipment is also needed. In 1993, $32 million is requested to advance new FBI law enforcement technologies. The initiatives are necessary as a result of technological advances in the target environment and expanding countermeasures capabilities. Investigative efforts require advanced technological support for undetectable effective surveillance and other forms of information collection. This 1993 funding will assure that agents have the tools to investigate organized criminal structures.
- To remove violent repeat offenders from the Nation's streets, the budget proposes $103 million for BATF's Armed Career Criminal program. This adds $2.1 million and 67 new agents in 1993.
- To provide for the protection of judges, the transportation of prisoners, and the management of an expanded witness protection program, the budget proposes an 8.6 percent increase for the U.S. Marshals Service, from $314 million in 1992 to $341 million.
- To try and to sentence violent criminals, the Judiciary is requesting a $452 million increase over 1992, from $2.2 billion to $2.7 billion in 1993. By 1993, a total of 85 new judgeships, authorized by Congress in 1991, will be fully staffed and operational.

New Efforts To Control Criminal Gangs

Criminal gangs and gun violators terrorize inner city neighborhoods and inflict death and injury on thousands of law abiding citizens each year. Gang control over "turf" virtually eliminates opportunities for youth to avoid their influence, stifles efforts to renovate blighted urban areas, and discourages new businesses from entering these areas. Where local groups working with law enforcement agencies have stood up to drug dealers and drug-financed gangs, progress has been made in making those neighborhoods safer. Much more, however, can be done.

Since 1989, the Administration has become increasingly involved in fighting violent crime through programs specifically designed to remove the most violent offenders from the streets.

- To rid cities of the influence of criminal street gangs and the violence associated with their activities, the FBI and the Bureau of Alcohol, Tobacco, and Firearms (BATF) have established a joint anti-gang task force with squads in cities most heavily plagued by violent gang activity. Since 1989 the number of these squads has increased from 15 to 31.

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- To assist and enhance Federal, State, and local law enforcement agencies in their fight against criminal gang activity, the FBI and BATF will establish a Gang Analysis Center. The center will provide Federal, State and local law enforcement officers with the information they need to investigate, arrest, and prosecute criminal gang members.
- To get the most dangerous criminals off the street and keep them off, the FBI, DEA, U.S. Attorneys, and BATF established Project Triggerlock in 1991, a comprehensive cooperative effort to use Federal firearms laws to target the most dangerous criminals in each community and put them in Federal prison. Through Triggerlock armed career criminals face mandatory 15-year prison terms. Since its first operation in 1991, Triggerlock has sent over 500 gun felons to prison to serve a total of over 2,500 years behind bars.
- To target the illicit movement of firearms, explosives and ammunition, and to deny these dangerous weapons to international narcotics dealers, terrorists, and international criminals the BATF will devote $8.1 million and 101 agents to its International Trafficking in Arms program.
- To enforce Federal laws pertaining to firearm violence, an increase of $6 million and 37 attorneys is requested. This will permit the U.S. Attorneys to target the most violent criminals in each community and incarcerate in Federal prisons. Also, $3.4 million more is requested to design a prototype system for identifying, through a fingerprint check, felons who attempt to purchase firearms.
- To go after violent gang members, the BATF will devote $38 million and 48 agents to its National Violent Gang Enforcement Program. This will add 58 new agents devoted to investigating gang members who are weapons violators. The total BATF request for 1993 is $352 million, an increase of $16 million or 5 percent over 1992.

Fighting White-Collar Crime

The Administration will devote $864 million to white-collar crime investigations, an increase of $70 million, or 8.8 percent over 1992.

So-called "white-collar" crime robs the public through increased costs, and attacks the financial institutions which hold the nation's savings. The financial strength of America is weakened by financial institution fraud; insurance, bankruptcy, pension, and health care fraud; and fraud by wire. These economic crimes have eroded public confidence and placed an added burden on the American taxpayer.

By 1993, the Administration will have more than doubled the resources devoted to white-collar crime since 1989.

- To attack the white-collar criminal, the FBI's white-collar crime program will grow to over 2,600 agents with the addition of 136 new agents in 1993. The budget proposes $371 million, over twice the 1989 figure for white-collar crime investigations.
- To address financial institution fraud, the budget proposes a force of over 1,440 FBI and Secret Service agents to investigate an estimated 700 failed financial institutions.
- To strengthen investigations, the Internal Revenue Service and the Secret Service have joined with FBI agents and U.S. Attorneys to form Financial Fraud Task Forces to target these sophisticated criminals.
- To investigate losses sustained by the American public through fraudulent activities in the $1 trillion health care industry, the FBI will add 100 new investigators to health care fraud cases. A total of over 170 agents will be assigned to cases involving billing scams by health care professionals, hospital and clinic fraud, and Medicaid fraud.
- To target other fraud, such as bankruptcy fraud, wire fraud, and computer crime, the FBI has formed special fraud task forces,

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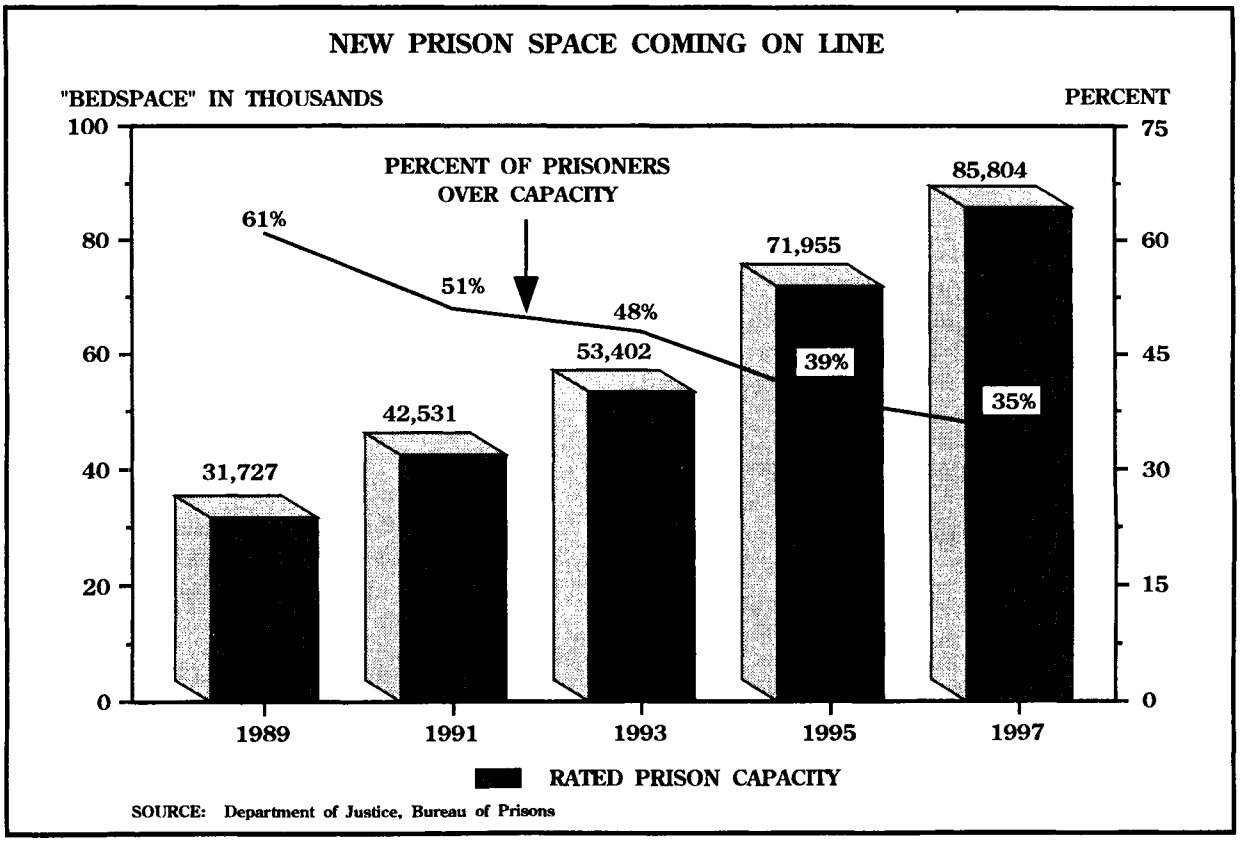
primarily in the Southeast and West. These task forces, which primarily address telemarketing scams, are in place across the country with over 400 agents devoted to wire fraud alone.

Jailing Criminals And Assisting Their Victims

The budget proposes $2.2 billion for Federal prisons, an increase of $185 million, or 9 percent over 1992, and 43.8 percent more than was spent in 1989.

It does little good to apprehend and convict criminals if prison space does not permit their incarceration for the full term of their sentence. To insure that adequate space is available, so violent criminals will stay locked up, the Federal Government has invested over $2 billion in prison construction since 1989. This investment is now paying off as many new prisons open in the next five years. In 1993, space for an estimated 4,200 prisoners will be added to the Federal prison system.

- To continue construction of new prisons, the 1993 budget proposes to spend $339 million for prison construction and rehabilitation projects. When completed, these new prisons will add nearly 3,400 new prison beds to the prison system.
- To operate existing prison facilities and activate new prisons coming on line, the budget proposes $1.9 billion, an increase of 19 percent over 1992, and more than three times the amount spent in 1989.
- The budget proposes levying a fee on certain newly sentenced prisoners. In effect, it would require that prisoners pay a part of the cost of their incarceration. It is estimated that it costs $18,000 per year, exclusive of construction costs, to house a Federal prisoner. It is estimated that the newly proposed fee will save U.S. taxpayers $48 million annually.
- To provide for expedited deportation proceedings against criminal aliens, an increase of $26 million is proposed for a 1,000 bed detention facility in southern



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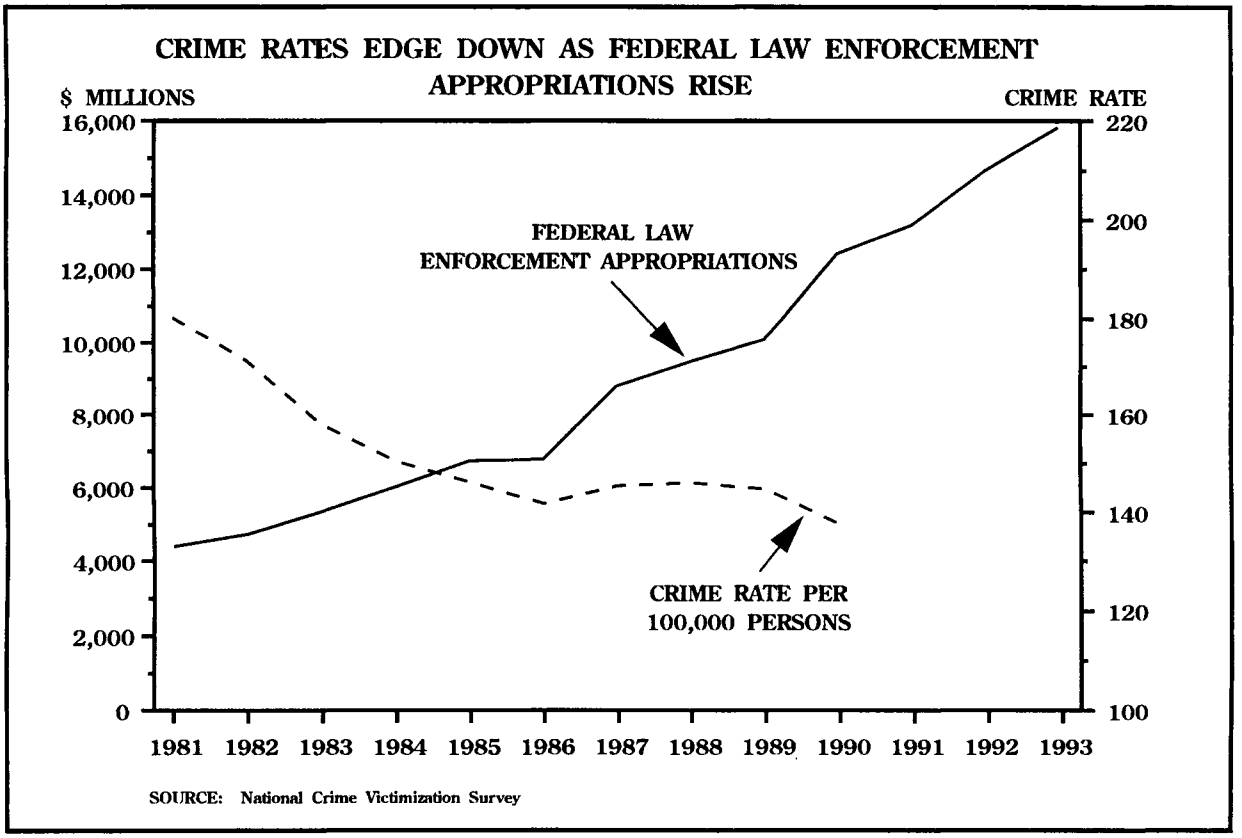
California. In addition, to meet the requirements of the Immigration Act of 1990, $3.2 million is requested for new immigration judges and INS attorneys to expedite deportation proceedings for criminal aliens currently servicing sentences in Federal, State and local prisons and jails.

- To address the processing of Mariel Cubans awaiting release from Federal detention, $8.5 million is requested for the Community Relations Service. Without the availability of halfway house resources and hospital spaces, these individuals remain in Federal custody, thereby increasing the tension in these facilities.

Ensuring that justice is done requires more than apprehending and incarcerating criminals; it also requires assisting the innocent, law-abiding victims—particularly those who are the victims of violent crime. Every year nearly 6 million people are victims of violent crimes—murder, rape, robbery or assault. In 1993, the Department of Justice will provide $144 million to assist such victims and to fund programs that offer support to overcome the traumas caused by violent criminals. The funds for this assistance come not from the pockets of hard-working, decent citizens, but from the pockets of the criminals convicted of crimes through fines imposed on them.

Assisting State and Local Law Enforcement

The budget proposes almost $1 billion in State and local assistance. Federal law enforcement agencies work directly and cooperatively with State and local law enforcement agencies to concentrate law enforcement where it is needed most—inner city gangs, organized criminal activity, and major drug trafficking operations. Each year the Federal Government provides assistance to State and local law enforcement agencies, through direct involvement in State and local task forces, drug law enforcement assistance grants, and the sharing of proceeds from forfeited assets from drug and other crimes.



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- To help States expand and improve local law enforcement, the Federal government provides funds directly to local law enforcement agencies. The budget proposes to spend $496 million for State and local drug law enforcement grants. This program has tripled since 1989.
- To use the spoils of crime against the criminal, nearly half of the assets seized by Federal law enforcement agencies working with State and local law enforcement are shared with those agencies. In 1993, an estimated $252 million of Federally forfeited assets will be shared with State and local governments. Since 1989 over $2.2 billion in assets have been forfeited by convicted felons, and almost $1 billion of these funds have been shared with State and local law enforcement agencies.

The Administration's fight against crime will be long and costly. As the chart below shows, the overall crime rate in the past decade has declined as Federal law enforcement appropriations have increased. In major cities, where fighting crime is the most difficult, crime rates are still far too high, especially for the most violent crimes.

Table 9–6. **JUSTICE FUNDING TO FIGHT CRIME AND DRUGS INCREASES BY 10%**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted [1]	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993	Percent Change: 1989 to 1993
Bureau of Prisons	1,562	2,061	2,246	+185	+9%	+44%
Drug Enforcement Administration	534	717	788	+71	+10%	+48%
Federal Bureau of Investigation	1,439	1,926	2,143	+217	+11%	+49%
Immigration & Naturalization Service	1,135	1,355	1,529	+174	+13%	+35%
Legal Activities	247	384	420	+36	+9%	+70%
Organized Crime Drug Task Forces	—	363	399	+36	+10%	N/A
U.S. Attorneys	460	721	814	+93	+13%	+77%
U.S. Marshals	205	314	341	+27	+9%	+67%
Other Justice	1,150	1,968	2,115	+147	+8%	+84%
Total Department of Justice	6,732	9,809	[2] 10,795	+986	+10%	+60%

[1] Excludes transfer of appropriations from other agencies for drug trafficking.
[2] Excludes $49 million in receipts from proposed fee.

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Investing in the Future:

10. Preserving America's Heritage, Protecting the Environment, and Providing For a More Secure Energy Future

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10. PRESERVING AMERICA'S HERITAGE, PROTECTING THE ENVIRONMENT, AND PROVIDING FOR A MORE SECURE ENERGY FUTURE

The budget reflects the President's commitment to protect and enhance America's natural resources and environment in a way that is consistent with the Administration's efforts to promote economic growth. The budget marks the fourth year in a pattern of increased investment in parks, forests, outdoor recreation, pollution control, and hazardous waste cleanup. Within the context of an overall freeze in domestic discretionary spending, the budget includes a $3.2 billion (21 percent) increase in priority environmental investments. The budget also creates a more secure energy future by harnessing the power of the marketplace and accelerating investment in energy R&D as called for in the National Energy Strategy.

HIGHLIGHTS

- Protect and expand America's national treasury of parks, forests, wildlife refuges, and other public lands;
- Nearly triple the Federal government's contributions to the partnerships with State governments to enhance State parks and other outdoor recreation facilities;
- Target special funds to protect the natural resources in America's "crown jewel" national parks;
- Significantly increase funding to clean up Federal facilities, both nuclear and nonnuclear, in order to ensure that the Federal government meets the legal requirements of various signed agreements, court decrees, statutes, and regulations;
- Provide increases in pollution control and resource protection for a range of programs along the U.S.-Mexican border in support of a North American Free Trade Agreement;
- Accelerate the construction of sewage treatment plants in major coastal cities—New York, Boston, Baltimore, Los Angeles, San Diego, and Seattle;
- Continue the full and timely implementation of the recently enacted Clean Air Act;
- Accelerate the cleanup of superfund hazardous waste sites;
- Emphasize a targeted effort to reduce contamination in specific geographic areas such as the Great Lakes;
- Fully implement the President's strategy to protect and enhance the Nation's wetlands without unduly interfering with needed economic growth or private property rights;
- Expand research into the causes of global change, thereby extending America's leadership in this critical area;
- Improve the efficient use of energy in the Federal Government and assure development of even more energy efficient technologies in the future by increasing the budget for conservation research and development by 24 percent;
- Implement initiatives in the National Energy Strategy to increase the availability and use of abundant and clean natural gas. The Administration proposes initiatives to change outmoded regulations that discourage natural gas use and increase funding for gas related R&D by over 200 percent;
- Propose environmentally responsible development of America's domestic oil and gas resources which would save $250 billion in payments to foreign oil producers; and

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- Increase Government purchases of alternative fueled vehicles by about 5,000.

THE BUDGET INCLUDES AN INCREASE OF 17 PERCENT TO EXPAND AND PROTECT AMERICA'S NATIONAL PARKS, WILDLIFE REFUGES, FORESTS, AND OTHER PUBLIC LANDS.

America's treasury of public lands is among her most important assets. The budget reflects the President's commitment to the outdoors by providing the resources to expand, improve, and maintain these assets, and to increase the access of all Americans to them.

The budget continues to build upon the joint Department of the Interior (DOI) and Department of Agriculture (USDA) initiative, *America the Beautiful (ATB),* introduced in 1991. The budget provides nearly $2 billion (17 percent above the enacted 1992 level and over 100 percent above 1989) for improved stewardship of national parks, wildlife refuges, forests, and other public lands. America the Beautiful resource protection and recreation activities are increased by $150 million, or 13 percent above 1992. Reforestation is increased by $73 million (+111 percent). Land and Water Conservation Fund (LWCF) State grants are proposed to increase by $37 million over 1992 (+158 percent). The budget for Federal acquisition of park, refuge, forest,

Table 10–1. **THE BUDGET INCLUDES $3.2 BILLION IN NEW FUNDING FOR ENVIRONMENTAL PROTECTION INITIATIVES**

(Budget authority; dollar amounts in millions)

Summary of Major Initiatives	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
America the Beautiful	863	1,491	1,653	+162	+11%
Reforestation	12	66	139	+73	+111%
State LWCF: Partnership with States for Parks and Outdoor Recreation	17	23	60	+37	+158%
Federal Facility Cleanup:					
Department of Energy	1,762	4,407	5,534	+1,127	+26%
Department of Defense [1]	1,155	2,761	3,718	+957	+35%
Other Agencies	106	203	236	+33	+16%
Border Pollution: Pollution Control Along the U.S.-Mexico Border in Support of NAFTA	34	103	201	+98	+95%
Providing Clean Waters for America's Cities:					
Boston	25	100	100	—	—
New York	—	70	70	—	—
Baltimore	—	40	40	—	—
Los Angeles	—	55	55	—	—
San Diego	—	40	40	—	—
Seattle	—	35	35	—	—
EPA Operating Budget	1,752	2,578	2,698	+120	+5%
Superfund	1,410	1,616	1,750	+134	+8%
Protecting America's Wetlands	295	600	812	+212	+35%
Army Corps of Engineers: Protection and Restoration of Environmental Resources	196	361	408	+47	+13%
Global Change Research	—	1,110	1,372	+262	+24%
Total [2]	7,388	15,132	18,292	+3,160	+21%

[1] Does not include anticipated $1 billion 1992 supplemental for the Department of Defense.
[2] Total has been adjusted to eliminate double counting, including DOI wetlands and federal facility cleanup already included in America the Beautiful; and global change research, border pollution, and wetlands activities included in EPA's operating budget and the Army Corps of Engineers.

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and other public lands is 4 percent over 1992.

The initiative includes the following features:

Enhancing Recreation and Restoration of Natural Resources.—America the Beautiful focuses Federal funding and expertise on a wide range of threatened natural resources and key recreation areas in need of improvement. The DOI budget includes $358 million (23 percent above 1992) for improved resource protection, including wetlands conservation and restoration, endangered species activities, and enhanced recreational opportunities in national parks, wildlife refuges, and other public lands.

Included in the program will be the establishment of a new America the Beautiful Passport specially designed to provide 12 months of access to the wide variety of federally administered outdoor recreation facilities available in federally managed parks, forests, refuges, and other special designated recreation areas. Revenues generated by Federal and private sector sales of this 12-month, $30 entry passport will be used to improve federally managed lands and waters and expand the recreational opportunities they provide to every American. The initiative will increase the number of boat ramps, campsites, trails, and interpretive centers for America's growing population of outdoor enthusiasts; improve the access of disabled Americans to public lands; and ensure that key environmental features of these lands are not threatened.

Important new components of America the Beautiful in 1993 include 1,000 more seasonal rangers to enhance visitor assistance and resource protection in national parks during peak-use ($8 million over 1992), Parks as Classrooms to transport thousands of school children to parks to learn about the Nation's natural and cultural wonders ($3 million over 1992), and establishment of a strategic planning office to develop long-range options for the National Park Service to more effectively carry out its vital mission through the 1990s and into the next century.

Land and Water Conservation Fund (LWCF).—The budget continues the President's commitment to the protection of nationally significant natural and cultural resources. Proposed 1993 funds for Federal acquisition and LWCF State park and outdoor recreation grants are $366 million, an increase of $49 million, or 15 percent over 1992.

Table 10–2. **AMERICA THE BEAUTIFUL**

(Budget authority; dollar amounts in millions)

Funding Summary	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Acquisition of Park, Forest, Refuge, and Other Public Lands	190	294	306	+12	+4%
Partnership with the States to Create State Parks and Enhance Outdoor Recreation (LWCF State Grants)	17	23	60	+37	+158%
Reforestation	12	66	139	+73	+111%
Enhanced Resource Protection/Recreation:					
National Forests	—	77	109	+32	+42%
National Parks, Wildlife Refuges, and Other Public Lands	161	291	358	+67	+23%
Improved Environmental Infrastructure (DOI)	513	829	880	+51	+6%
Subtotal	674	1,197	1,347	+150	+13%
Total America the Beautiful	892	1,580	1,852	+272	+17%

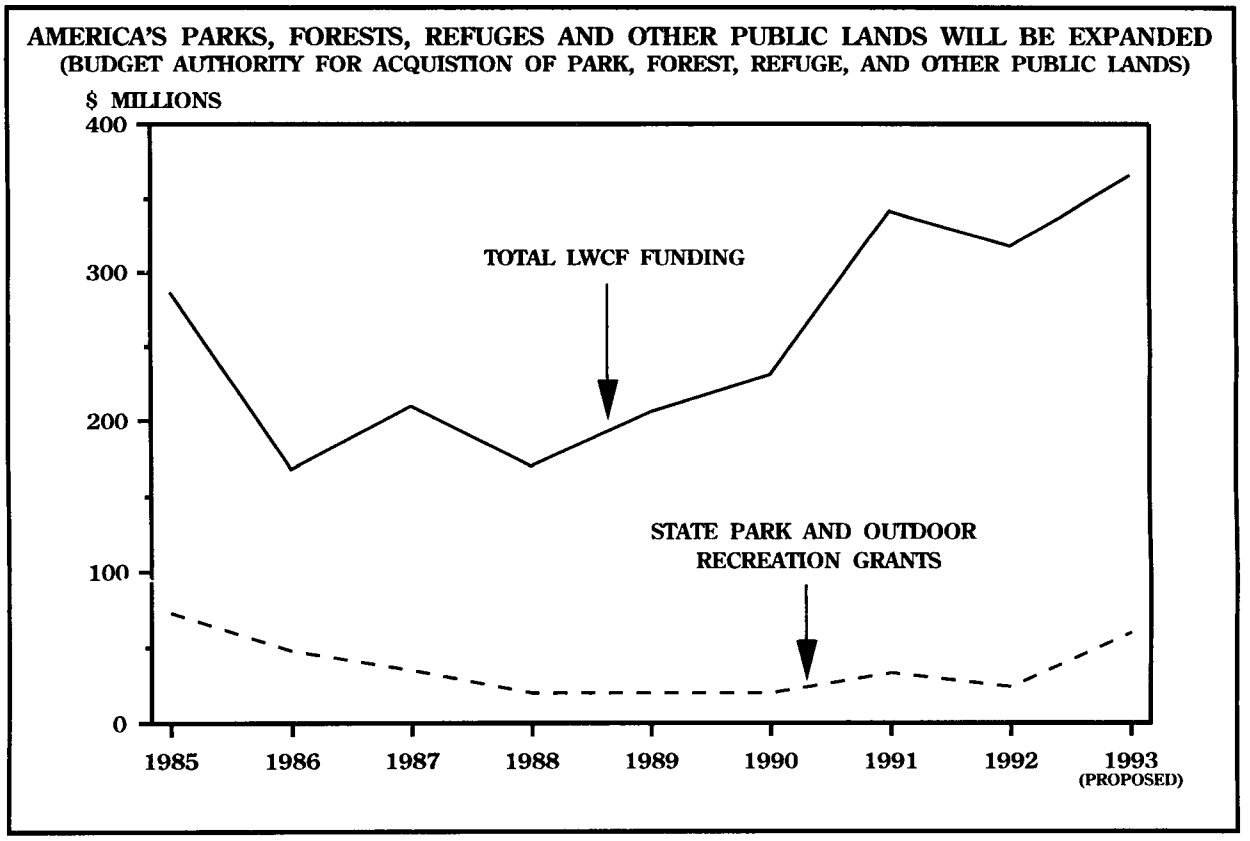
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The budget increases the vital funding and acquisition partnership with States through the LWCF State park and outdoor recreation grant program. 1992 was the first time in 10 years that funds for these grants were requested. Proposed 1993 funding of $60 million would provide States with increased Federal matching funds for the acquisition of parks and open spaces, and for the development of outdoor recreation resources. These lands and facilities are important to States because of their regional and local significance. Expanded LWCF State grants are proven cost-effective alternatives to Federal acquisition and operation. The State grant partnership represents the type of collaboration that can leverage the maximum return on Federal dollars.

Concurrent with the submission of the budget, the Administration will also propose to Congress a list of priority lands to be acquired by the National Park Service, the Fish and Wildlife Service, the Forest Service, and the Bureau of Land Management. This list has again been developed through a competitive rating system in which particular importance is placed on proximity to population centers, increased recreational opportunities to the public, valuable wetlands, protection of endangered species, and other characteristics of such national significance that the land's early acquisition for public purposes is of special importance.

The President's outdoor recreation program reflected in this budget includes full funding for efforts such as protection of lands in the Santa Monica Mountains (CA), continued implementation of legislation to expand and protect Everglades National Park (FL) and initial funding for a joint Federal/State effort to protect the Headwaters Forest in California, a 4,500 acre stand of old growth virgin Redwoods.

Targeted Parks Initiative.—Last year, over 265 million visitors visited America's national parks. To help meet the increasing public interest in experiencing and understanding America's natural wonders and rich history



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preserved in national parks, the budget again proposes a Targeted Parks initiative. In 1992, Congress did not fund the program. The President proposes a $10 million program that establishes special identification and monitoring of critically significant resources that have been placed under stress by over use, and will develop management methods for long-term resource recovery and preservation that provide for continued public access and enjoyment.

The following national parks are under consideration for inclusion in the program:

—Acadia National Park (ME)
—Big Bend National Park (TX)
—Cape Cod National Seashore (MA)
—Death Valley National Monument (CA)
—Everglades National Park (FL)
—Grand Canyon National Park (AZ)
—Great Lakes Parks (including Indiana Dunes National Lakeshore (IN), Isle Royale National Park (MI), and others)
—Olympic National Park (WA)
—Sequoia and King's Canyon National Parks (CA)
—Southern Arizona Parks (including Organ Pipe Cactus and Montezuma Castle National Monuments, Fort Bowie National Historic Site, and others)
—Yellowstone National Park (WY, ID, MT)
—Yosemite National Park (CA)

Protecting American Battlefields.—The budget contains $10 million for a five-fold expansion of a 1992 initiative, the American Battlefield Protection Program. While some Battlefields are managed by the National Park Service, many important sites remain unprotected and threatened by economic development without their historic values being taken into account. In order to meet this challenge, the Administration is proposing to expand this initiative to develop partnerships with Federal, State, regional, and local governments and private conservation organizations to provide permanent protection for these threatened sites. Efforts will be made to explore all options for their protection. These include creative use of public and private land-use tools, such as zoning, historic district designation, non-Federal land and easement acquisition, technical assistance, and land-banking, while maintaining economic growth and private property rights.

The Department of the Interior has identified several potential Civil War battlefields that could be part of the initiative's second phase, including:

—Gettysburg (PA)
—Antietam (MD)
—Wilderness (VA)
—Shenandoah Valley (VA)
—Harpers Ferry (WV)
—Kennesaw Mountain (GA)
—Corinth (MS)
—Franklin Battlefield (TN)
—Glorietta Pass (NM)

Challenge Cost-Share Programs.—The America the Beautiful initiative also encourages expanded partnerships with private parties and State and local governments through a new challenge cost-share program for the National Park Service. Federal funds will be matched by non-Federal contributions for the protection and enjoyment of national parks. Modeled after successful programs already underway in the Forest Service, Bureau of Land Management, and Fish and Wildlife Service, this program will involve the public in improving natural resources by increasing direct citizen efforts and financial contributions.

Reforestation: Planting Trees for America's Future.—The budget contains funds to expand the reforestation initiative begun in 1991 and increased in 1992. The budget proposes $139 million to expand tree planting and care activities on privately-owned rural lands and Indian trust lands, and in the Nation's 40,000 rural communities. The President's goal remains to plant, maintain, and conduct timber stand improvements affecting one billion trees per year.

The President's proposal for 1991 was authorized in law in the 1990 Farm Bill, and $70 million was appropriated to begin tree planting activities. Although the legislation did not provide full funding for the President's goal of planting 1 billion trees per year, each State now has a coordinating committee to develop a network of leadership, expertise and corporate and private sector involvement in tree planting activities. Also in 1991, the President's proposed National Tree Trust Foundation was enacted and capitalized with a one-time appropriation of $20 million. The Foundation will direct its

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efforts to mobilize individuals, businesses, governments, and community organizations to plant and care for trees in cities and towns throughout America.

Funding for 1993 will ensure that the program continues its fast start. The program commitment also recognizes the remarkable value of trees as a resource. In addition to their use for wood products and wildlife habitat, trees sequester carbon dioxide from the atmosphere; reduce energy consumption by providing shade in summer and wind abatement in winter; and reduce erosion and the flow of pesticides into the Nation's lakes and streams.

The National Forest: America's Great Outdoors.—The budget includes $109 million for the second year of a 4-year effort to enhance outdoor recreation opportunities on national forest lands, thereby meeting the increasing demands and helping to reduce the current overcrowding of other Federal recreational facilities, including the national parks. This initiative will help to implement the Secretary of Agriculture's 1990 Forest and Rangeland Resources Planning Act (RPA) program to begin reducing a nearly 50-year backlog of recreation enhancement needs.

1993 funding will allow the Forest Service to reopen 40 or more campgrounds and picnic sites that have been previously closed to the public. An additional 882 miles of the agency's highest priority trails will be reconstructed to reduce the deferred maintenance and reconstruction backlog. About $4 million will be provided for new trails linking existing trails to other jurisdictions. Approximately 14,000 miles of additional trails will be maintained under the initiative to arrest further deterioration. Funding to complete river studies on 50 Wild and Scenic rivers, management plans on 40 rivers, and operation and maintenance on another 27 rivers will also be provided.

Recreation visitor days at national forest facilities will increase from 218 million in 1989 to approximately 255 million in 1993, with projections of over 280 million by the year 2000. This 4-year Recreation Initiative will be critical in providing a quality experience for all recreation visitors.

Legacy '99: Rehabilitation and Improvement of Park, Refuge, and Public Land Infrastructure.—The budget continues and expands the Department of the Interior's "Legacy '99" effort, begun in 1991, to leave a legacy of improved conditions at national parks, wildlife refuges, and other public lands by the end of the century. It also incorporates the effort into America the Beautiful since enhanced resource protection and improved infrastructure are complementary.

The budget proposes funding of $880 million, an increase of $367 million or 72 percent over 1989 and $51 million or 6 percent over 1992, to repair and rehabilitate facilities and to reduce the backlog of facility rehabilitation projects. The increases also make possible an acceleration of dam safety work and the cleanup of hazardous materials.

Higher funding levels will provide for the restoration of important facilities in existing parks and recreation areas and improve the day-to-day operating maintenance of DOI facilities such as visitor centers, campgrounds, roads, boat ramps, and other recreational facilities. This increased funding will also allow Interior to upgrade its infrastructure on a periodic basis to prevent long-term deterioration that could increase costs and ultimately threaten public safety.

Included in Legacy '99 for 1993 are funds for certain facilities and areas of special importance:

- $9 million to begin sharing maintenance responsibility with Department of the Army at the Presidio (CA).
- $7 million to restore natural waterflows to Everglades National Park (FL).
- $2 million to rehabilitate and restore to their original appearance the historic buildings and surrounding yards that make up Martin Luther King's home block on Auburn Avenue at the Martin Luther King, Jr., National Historic Site (GA).
- $11 million to continue stabilizing and repairing the Lincoln Memorial built in 1922 and the Jefferson Memorial erected in 1943.

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- $21 million to continue implementation of the Yosemite National Park General Management Plan (CA).
- $1 million to expand campground facilities, recreational trails, and interpretive displays at the Bureau of Land Management Steens Mountain Special Recreation Management Area (OR).
- $11 million for continued cleanup of hazardous materials at Crab Orchard National Wildlife Refuge (IL).

Exxon Valdez.—The budget fully incorporates the receipts and mandatory spending associated with the October 1991 Exxon Valdez settlement, the largest natural resource damage settlement ever. Receipts and spending for 1992–2001 are currently estimated to total over $400 million as the Federal part of the restoration program for Prince William Sound and surrounding adversely affected areas. The State will also receive in excess of $400 million as its part of the restoration program. If after ten years funding is found to be insufficient to restore the sound and surrounding areas, the Federal and State trustees are also entitled to an additional recovery of up to $100 million for injuries caused by the spill that were not foreseeable at the time of the spill. These estimates are tentative and subject to approval by all Federal and State trustee agencies of a specific restoration plan and projects.

Of the $125 million criminal fine and restitution payment levied against Exxon as part of the October settlement, $12 million has been deposited into the North American Wetlands Conservation Fund to be used to protect and restore the Nation's highest-priority wetlands, and $100 million will be used by the Federal trustees and the State of Alaska for restoration projects within Alaska. In addition, $13 million has been deposited into the Department of Justice's Victims of Crimes Fund.

The civil part of the settlement provides $900 million, and possibly as much as $1 billion, to the Federal Government and the State of Alaska from Exxon over the next

Table 10–3. **LEGACY '99—DEPARTMENT OF THE INTERIOR**

(Budget authority; dollar amounts in millions)

Funding Summary	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Maintenance	347	481	515	+34	+7%
Rehabilitation	50	156	167	+11	+7%
Dam Safety[1]	78	122	119	-3	-2%
Hazardous Material Cleanup	38	70	80	+10	+14%
Total	513	829	880	+51	+6%

[1] Funding reflects reduced project needs in the Fish & Wildlife Service for 1993.

Table 10–4. **EXXON VALDEZ: RESTORATION OF PRINCE WILLIAM SOUND AND THE GULF OF ALASKA**

(Federal offsetting collections; dollar amounts in millions)

	1992	1993	1994	1995–2001	Total
Criminal Fines and Restitution	62	—	—	—	62
Civil Restoration	18	45	45	250	358
Total	80	45	45	250	420

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10 years for natural resources restoration and reimbursement of past costs. Based upon an assessment of damages, this recovery will provide sufficient funds to undertake and complete the needed restoration of Prince William Sound and other Gulf of Alaska areas affected by the March 1989 oil spill.

Natural Resource Damage Assessment Fund.—The budget proposes continuation and expansion of DOI's Natural Resource Damage Assessment Fund. The fund will support timely, comprehensive, high-priority damage assessment activities, litigation strategies, coordination with other agencies, and negotiations with parties potentially responsible for damage to DOI's lands and natural resources.

This identified funding will allow Interior to fulfill its obligation to this and future generations to protect natural resources and the public's use of these resources; increase the likelihood that polluters, not taxpayers, will pay for the costs of restoring injured resources; and help prevent hazardous substance and oil spill incidents from occurring in the future.

The Presidio.—During 1993, the Presidio, located in San Francisco (CA), will begin its transition from an active U.S. Army installation to a component of the Golden Gate National Recreation Area managed by the National Park Service. In 1993, the Army will provide $34 million for operations and maintenance at the Presidio. To provide for an orderly transition, the budget includes an additional $15 million for the National Park Service to begin sharing operational and maintenance responsibilities with the Army and to accelerate planning as well as other preparation required to have the Presidio ready for complete transfer to the Park Service in 1995.

Phoenix Indian School Land Exchange.—After agreement of mutually acceptable Indian Trust Fund payment arrangements to be completed by June 1992, the Administration will consumate one of the largest land exchanges in the history of the Department of the Interior ($80 million in land and cash contributions from the private sector). This Arizona-Florida land exchange offers enhanced wetlands protection for one of the Nation's most vital national parks (Everglades) and one of its most vital national wildlife refuges (Florida Panther), increased educational opportunities for Native Americans, improved Department of Veterans Affairs facilities, and expanded local economic development and recreational amenities in the Phoenix, Arizona area.

National Recreational Trails.—The budget proposes to provide $15 million in 1993 to implement the National Recreational Trails Fund provisions of the 1991 Intermodal Surface Transportation Efficiency Act. This discretionary program administered by the Department of Transportation (DOT) will make grants to States to establish and maintain new multiple-use recreational trails on Federal and non-Federal lands. The State grant program will complement an ATB increase that the budget proposes for the National Park Service Rivers and Trails technical assistance program. In 1993, the budget will provide $8 million, an increase of $3 million over 1992, for such technical assistance.

Federal Lands Highways.—In addition to America the Beautiful-related infrastructure improvements, the budget in 1993 includes a total of $445 million ($74 million or 20 percent over 1992) for DOT funding of roads through Federal recreational lands and Indian reservations: $83 million for Parkways and Park Roads, $171 million for Forest and Public Lands Highways, and $191 million for Indian Reservation Roads. The budget also includes $13 million for DOT Federal-Aid Highway grants to States to develop Scenic Highways.

POLLUTION CONTROL

EPA's Operating Program is at the highest level in history.—The budget provides an all-time high level of funding and staffing for EPA's operating program: nearly $2.7 billion and more than 14,000 employees. Since the Bush Administration took office, EPA's operating program will have increased by 54 percent, and the workforce involved in research, regulatory, and enforcement responsibilities will have expanded by 22 percent. This commitment to environmental protection will fulfill statutory mandates and allow EPA to fund the most cost-effective ways to reduce risk to human health and the environment while fos-

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tering environmentally sound economic growth.

- **Achieving the goals of the Clean Air Act.**—Clean Air Act implementation continues with increases of $42 million in 1993. This is on top of the $187 million in Clean Air Act increases provided in 1991 and 1992. The budget provides all the funds and staff EPA needs to achieve the objectives of the 1990 Amendments in the most cost-effective manner possible.
- **Emphasizing enforcement of existing laws.**—EPA's enforcement efforts will increase by $15 million, with increased emphasis on multimedia enforcement, which is a cross-media approach to identifying and enforcing against polluters. This approach allows for more efficient use of agency resources. The enforcement budget in EPA's operating program has increased by 72 percent since President Bush took office.
- **Developing an improved knowledge base for better environmental decisions.**—EPA needs a strong research capability so that regulatory decisions are based on sound science allowing cost effective risk management solutions to be identified. More than a $26 million increase will allow EPA to make needed improvements in the quality of information it uses. During the past two years, EPA has formulated a framework for a program on ecological research, taking into account work already underway in other federal agencies. This increase will allow EPA to expand the ecological research program, the Environmental Monitoring and Assessment Program (EMAP), and obtain an overall picture of the ecological health of the nation's natural resources. This increase also improves EPA's information systems infrastructure to allow for better data management.

Geographically targeted efforts to address high human health and ecological risks.—The budget provides funding to expand and intensify multi-media initiatives to protect areas such as the Great Lakes, Chesapeake Bay, Mexican Border, and the Gulf of Mexico. These four high profile programs will share increases of more than $95 million. This builds on a $20 million increase requested last year for the Great Lakes, to aggressively implement the Great Lakes Water Quality Initiative and the Great Lakes Critical Programs Act.

Great Lakes efforts will target cleanup of "hot-spots" of contaminated sediments, which may have been created long ago but are still posing unacceptable risks today. There will also be a major thrust to enlist the private sector's cooperation in pollution prevention—preventing problems before they are created.

The Chesapeake Bay effort will bolster Baltimore's sewage treatment capabilities with a $40 million targeted construction grant, investigate the connection between air pollution and water quality, and help control the significant pollution loadings from live-

Table 10–5. **EPA's OPERATING BUDGET WILL INCREASE BY 5 PERCENT**
(Budget authority; dollar amounts in millions)

Funding Summary	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Implementing Clean Air Act changes	—	187	229	+42	+22%
Enforcing environmental laws	126	201	216	+15	+8%
Improved Knowledge Base	125	237	264	+26	+11%
Geographic/Ecological Targeting	176	243	247	+4	+2%
Other operating programs	1,325	1,710	1,742	+32	+2%
Total EPA operating program	1,752	2,578	2,698	+120	+5%
Operating program workyears	11,649	13,929	14,217	+288	+2%

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stock operations in the northern Chesapeake Bay drainage area.

Mexican border activities will address air, water, and hazardous waste issues consistent with the U.S./Mexican Border Environmental Plan and the proposed North American Free Trade Agreement.

In the Gulf of Mexico, EPA will work closely with the States to achieve better control of toxic and hazardous pollutants, which impair the quality of life of the residents of the Gulf region, and threaten the high biological productivity of the Gulf itself.

In addition, each EPA regional office will emphasize high-priority targeted areas, such as the Long Island Sound, the Puget Sound, the San Francisco Bay Delta Estuary (including the Sacramento/San Joaquin River Basins), the Everglades, and the Merrimack River Basin in New England. These regional efforts will involve all of EPA's relevant media programs and be cooperative ventures with affected States.

Enhancing Mexican Border Anti-Pollution Initiatives.—The budget includes $201 million governmentwide for environmental projects along the Mexican border. This is a 95 percent increase over 1992 which will enable the Administration to continue to carry out the initiatives in the Environmental Action Plan it provided to the Congress on May 1991. The United States and Mexico have worked intensively throughout 1991 to develop a joint U.S.-Mexico Environmental Border Plan that will address major environmental problems in the border region, including air and water quality, hazardous waste management, and emergency planning. This detailed plan will guide the activities carried out in response to commitments made in connection with negotiations on the North American Free Trade Agreement (NAFTA). The U.S. and Mexico will begin implementing the Border Plan in 1992 and maintain and substantially enhance these efforts in 1993.

The proposed resource level will assure funding for wastewater treatment at major shared population centers, provision of drinking water and wastewater treatment to communities along the U.S. side of the border that currently lack such services, expedited action on air quality problems in twin border towns, and a more aggressive enforcement posture against illegal hazardous waste and

Table 10–6. **GEOGRAPHIC TARGETING OF RISK REDUCTION FOR A HEALTHIER ENVIRONMENT**

(Budget authority; dollar amounts in millions)

Targeted Area	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Mexican Border (EPA budget)	21	57	139	+82	+144%
San Diego	—	40	40	—	—
Boston Harbor	25	100	100	—	—
Long Island Sound/New York Bright	—	71	71	—	—
Chesapeake Bay	12	63	66	+3	+5%
Great Lakes	11	59	61	+2	+3%
Los Angeles	—	55	55	—	—
Puget Sound	—	36	36	—	—
Gulf of Mexico	1	12	20	+8	+67%
San Francisco Bay Delta Estuary	—	2	2	—	—
Merrimack River Basin	—	—	1	+1	N/A
Other	151	137	126	-11	-8%
Total (Operating Program and Construction Grants)	221	632	717	+85	+13%

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disposal as well as other environmental violations.

- *Sewage treatment plants.*—In keeping with the U.S.-Mexico Environmental Border Plan, the budget includes $80 million to continue construction of the new Tijuana sewage treatment plant near San Diego, to expand treatment capacity at the plant at Nogales, Arizona, and to initiate work on improvements which will clean up the New River, in California. These projects will dramatically improve water quality along the border with Mexico.
- *Wastewater grants.*—The budget includes $50 million in state grants to address wastewater treatment needs in "colonias" (unincorporated sub-divisions) along the border in Texas. These border communities lack the health and environment infrastructure enjoyed by other areas of the country.
- *Drinking water grants.*—The budget proposes $25 million in new resources for Rural Development Administration grants to "colonias" to improve the quality of drinking water by installing the necessary infrastructure.
- *Air quality.*—Additional resources will be allocated to air quality monitoring programs. The air emissions inventory in Ciudad Juarez/El Paso will be completed and air quality monitoring programs and emissions inventories will be initiated in Mexicali/Calexico and Tijuana/San Diego.
- *Enforcement and Inspection.*—The budget includes $6 million for increased enforcement and inspection by EPA and the Food and Drug Administration of hazardous waste and sanitary and phytosanitary regulations, and for joint enforcement activities with the Mexican authorities. Efforts will be targeted on potential hazardous waste violators, and on more efficient tracking of hazardous materials used by border area industries.

Providing Clean Water for all Americans.—The budget includes $2.5 billion for wastewater treatment grants, a $100 million increase over the 1992 level. If Congress approves the budget, 95 percent of the authorized

Table 10–7. **THE BUDGET PROPOSES TO DOUBLE RESOURCES TO IMPLEMENT THE MEXICAN BORDER PLAN**

(Budget authority; dollar amounts in millions)

Funding Summary	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Sewage Treatment Plants	24	49	80	+31	+63%
Wastewater Grants for Colonias	—	—	50	+50	N/A
Drinking Water Grants for colonias	—	—	25	+25	N/A
Air Quality	1	2	3	+1	+50%
Enforcement and Inspection	—	6	6	—	—
Other	9	46	37	—9	-20%
Total	34	103	201	+98	+95%
Mexican Border by Agency:					
EPA	21	57	139	+82	+144%
USDA	—	—	25	+25	N/A
DHHS	—	2	2	—	+13%
IBWC	13	26	30	+4	+15%
Export Import Bank	—	18	[1]5	-13	-72%
Total	34	103	201	+98	+95%

[1] Program level remains constant in 1993; decrease reflects change in subsidy scoring.

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funding for the program will have been appropriated by the end of 1993.

An unacceptably high number of America's largest cities do not yet have adequate secondary sewage treatment, generally considered the minimum acceptable level of treatment necessary to protect human health and the environment. The Administration's proposed funding will expedite achievement of secondary treatment standards while promoting economic growth and employment. Jobs will be created not only by the physical construction of the facilities, but also by providing sufficient water treatment capacity to allow new businesses to enter areas and existing firms to take advantage of opportunities for expansion.

- *State Revolving Funds.*—More than $2 billion will be devoted to capitalizing State Revolving Funds. This will allow States to assume full responsibility for providing wastewater treatment infrastructure.
- *Coastal City Grants.*—For the second consecutive year, the budget requests cost-shared grants targeted at specific municipalities. The budget provides $340 million in grants for secondary or advanced treatment of municipal sewage to six of the cities with the Nation's largest, unmet treatment needs—Boston, New York, Los Angeles, San Diego, Seattle, and Baltimore. These cities are located in coastal areas with significant recreational and ecological resources where expedited construction can have significant impact on coastal water quality.

Superfund.—For the fourth year in a row, the Administration is requesting a substantial increase to clean up hazardous waste sites. The budget requests $1.75 billion, $134 million

Table 10–8. **STATUS OF WATER QUALITY IN AMERICA'S 25 LARGEST CITIES**

(Budget authority; dollar amounts in millions)

City	Status of Sewage Treatment	Administration Proposed Grant for 1993
New York, NY	Not Yet Secondary	70
Los Angeles, CA	Not Yet Secondary	55
Chicago, IL	Secondary	—
Houston, TX	Secondary	—
Philadelphia, PA	Secondary	—
San Diego, CA	Not Yet Secondary	40
Detroit, MI	Secondary	—
Dallas, TX	Secondary	—
Phoenix, AZ	Secondary	—
San Antonio, TX	Secondary	—
San Jose, CA	Secondary	—
Indianapolis, IN	Secondary	—
Baltimore, MD	Not Yet Secondary	40
San Francisco, CA	Secondary Fully Funded	—
Jacksonville, FL	Secondary	—
Columbus, OH	Secondary	—
Milwaukee, WI	Secondary	—
Memphis, TN	Secondary	—
Washington, DC	Secondary	—
Boston, MA	Not Yet Secondary	100
Seattle, WA	Not Yet Secondary	35
El Paso, TX	Secondary	—
Nashville-Davidson, TN	Secondary	—
Cleveland, OH	Secondary	—
New Orleans, LA	Secondary	—
Total		340

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more than Congress appropriated for 1992. The budget maintains the Administration's enforcement emphasis, requiring polluters to clean up the problems they created but continues the shift of resources begun under the Bush Administration from support activities to actual cleanup.

As shown on the chart depicting Superfund budget authority since 1989, Congress has repeatedly cut the President's requested funding for Superfund, despite the ongoing need to eliminate the risks hazardous waste sites pose to public health.

CLEANING UP FEDERAL FACILITIES

Department of Energy (DOE)

The President is committed to ensuring that Federal facilities live up to the same environmental standards that apply to private facilities. Since coming to office, he has tripled funding for the cleanup of wastes at Federal facilities and for bringing them into compliance with applicable environmental laws and regulations.

The amounts requested in 1993 for both the defense and civilian components of DOE's Environmental Restoration and Waste Management (ERWM) program total $5.317 billion in new budget authority. This represents an increase of $1.034 billion, approximately 24 percent above the amount appropriated by Congress for 1992 for this program. When combined with amounts in the uranium enrichment account for ERWM activities, the total available for ERWM program activities in 1993 is $5.534 billion, an increase of 26 percent above enacted 1992 levels.

For forty years, the agencies conducting the atomic weapons production activities of the government were not adequately attentive to the environmental consequences of this necessary but nevertheless hazardous activity. There were several causes of this underattention. For much of this time, the country did not have either the detailed knowledge base or the sophisticated environmental cleanup and compliance laws that exist today. There was sometimes an excessive bias toward production of materials and weapons at the expense of prudent environmental management in the allocation of resources.

Whatever the causes, the Administration has been determined to reverse the imbalance between production and cleanup since coming into office in 1989. In June 1989 the Secretary issued a 10-point initiative requiring resetting of priorities so that environment, safety, and health objectives now take precedence over production objectives. This budget represents the continuance and acceleration of the President's efforts to bring all Federal facilities into compliance with the nation's environmental laws and to clean up the legacy of past neglect.

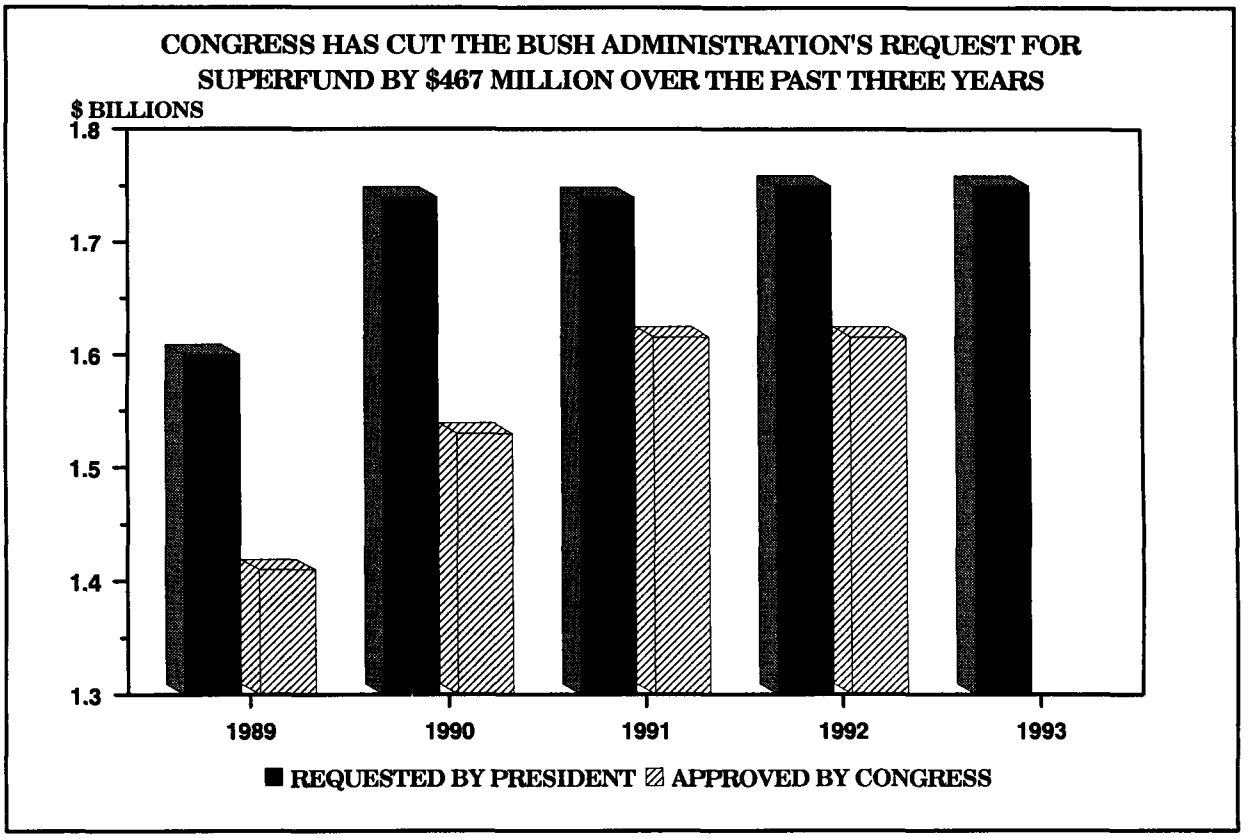
The level of funding in the budget was the result of an extensive interagency effort designed to ensure that budgetary resources provided in 1993 would be adequate to:

—allow the Federal government to meet required milestones and legal requirements included in compliance agreements, consent orders, and Federal and State statutes and regulations;

Table 10–9. **FOCUSING SUPERFUND ON CLEANUP**
(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Cleanup	562	742	896	+154	+21%
Enforcement	178	217	225	+8	+4%
Support	670	657	629	-28	-4%
Total Superfund	1,410	1,616	1,750	+134	+8%

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—fully implement required DOE Orders related to environment, safety, and health (ES&H); and

—fund all DOE management orders and a prudent amount of discretionary activities.

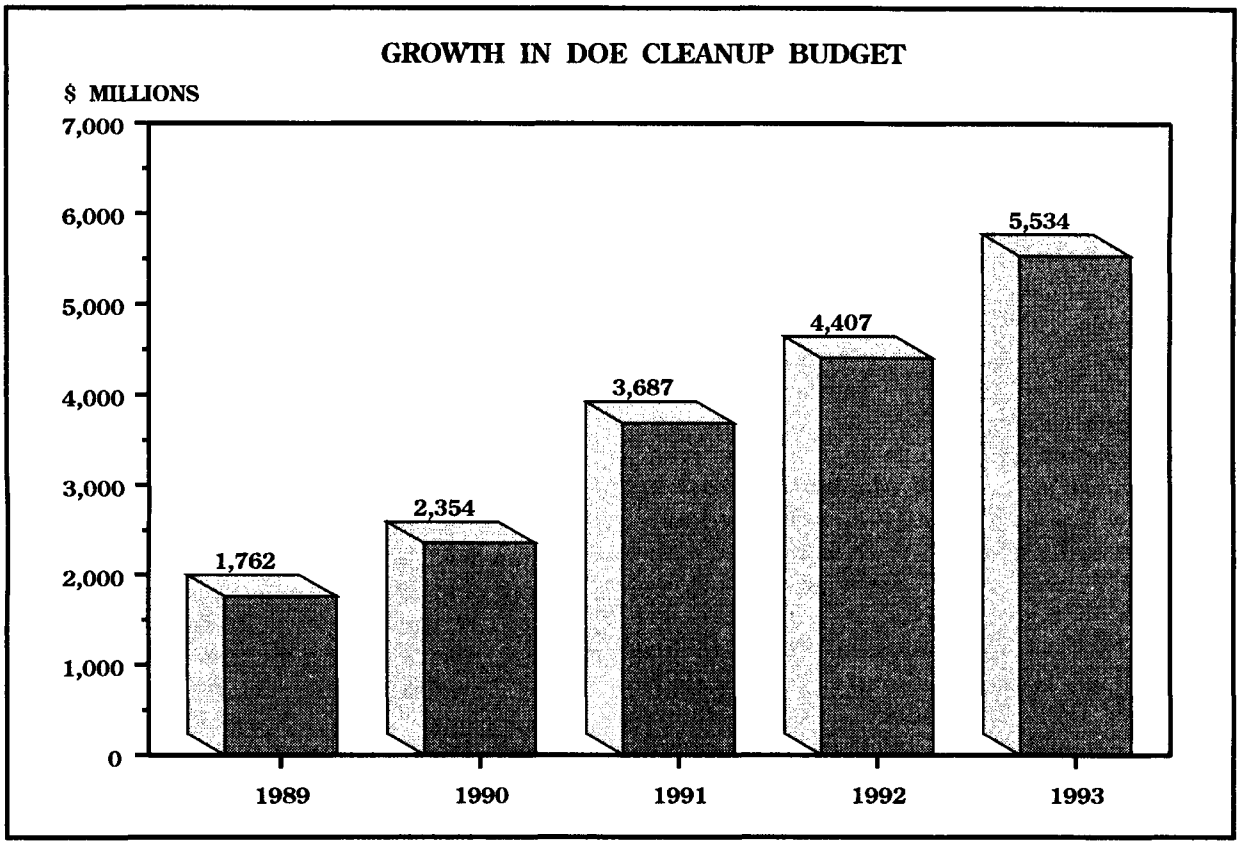
The OMB and Army Corps of Engineers organized joint review teams which visited DOE Headquarters and all field offices at which ERWM activities are being conducted. The teams met and consulted with DOE site personnel, EPA regional personnel, and representatives of the relevant State governments. The teams reviewed all of the more than 2,000 Activity Data Sheets (ADSs) which summarize work in the ERWM programs and each sub-activity contained within each ADS.

Each team's findings were presented to a senior interagency review panel which included the Department of Energy, the EPA, the OMB, the Department of the Army, the Department of Justice, and the Department of Defense. The supporting analysis was subsequently examined by DOE and EPA personnel, and adjustments to the teams' findings were made in all instances in which additional documentation of legal requirements or urgent needs was provided. The $5.534 billion in the budget request for environmental restoration and waste management activities accommodates every appeal received from DOE or EPA in the detailed follow-up process. Table 10–10 provides the distribution of funding by category of activity.

After reviewing the results of this extensive effort, each agency represented on the interagency panel expressed confidence that all legal requirements, DOE ES&H Orders, DOE management orders and necessary and prudent discretionary activities in the environmental restoration and waste management program, including the uranium enrichment account, can be funded at the $5.534 billion level for 1993.

The OMB/Corps review teams also presented recommendations to the interagency review panel addressing long-term management improvements to the ERWM program. These issues will be addressed in a separate report.

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The key issues are summarized later in this Chapter.

The Department of Energy cleanup program encompasses four major categories of program activities: environmental restoration, waste management, corrective activities, and technology development.

Environmental restoration activities include assessment, cleanup, and decontamination and decommissioning at contaminated facilities and sites that are no longer a part of active operations, to meet the requirements of applicable environmental laws, regulations, and standards.

The program consists primarily of activities related to corrective actions upon closure of waste treatment, storage, and disposal facilities, and remediation of inactive waste disposal sites, uncontrolled release sites, and underground storage tanks. Currently, assessment activities are in progress at all facilities, and remedial actions are underway at hundreds of locations nationwide. The scopes, schedules, and cleanup standards for these activities are negotiated with the EPA and the States and are the subject of Resource Conservation and Recovery Act (RCRA) permits, Consent Orders, Compliance Agreements, and Federal Facility Agreements under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Proposed funding in 1993 for environmental restoration is $1.940 billion, a 34 percent increase over 1992.

The increase for environmental restoration reflects the Department's commitment to meeting the requirements of compliance agreements it has entered into with EPA and affected States. These compliance agreements contain aggressive schedules for assessment and cleanup. During 1991 the Department signed 11 agreements, and an additional agreement was completed in early 1992, bringing the total to 71 agreements completed to date. An additional 27 agreements will be signed shortly or are under negotiation. In addition, significant increases in funding

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for the environmental restoration program are required in 1993 as program activities continue to shift into the detailed investigation, characterization, and cleanup phases of remediation. A large portion of the 1993 funding will be for investigation and feasibility studies leading to the selection of actual remediation actions.

The environmental restoration program also includes the Formerly Utilized Sites Remedial Action Project (FUSRAP) and the Uranium Mill Tailings Remedial Action Project (UMTRAP). The FUSRAP program provides for remedial action at privately owned former nuclear processing facilities that became contaminated as a result of Manhattan District or Atomic Energy Commission work, or have been specifically assigned to DOE by Congress. There are currently 33 sites in 10 States under this project, including six sites on the EPA National Priorities List. The Uranium Mill Tailings Radiation Control Act of 1978 authorizes DOE to conduct a mill tailings stabilization and control program at 24 inactive uranium mill tailings sites and an estimated 5,000 associated vicinity properties. In addition, the Uranium Mill Tailings Groundwater Restoration Project will restore, as necessary, the groundwater of 24 designated uranium mill tailings sites.

Waste management operations provide for the management of wastes generated as a result of ongoing operations at active facilities. This is accomplished through minimization, treatment, storage and disposal of various waste types including radioactive, hazardous, mixed and sanitary wastes, in compliance with applicable local, State and Federal requirements and internal DOE requirements. Funding for waste management activities comprises the largest portion of the proposed environmental restoration and waste management budget, totaling $3.145 billion in 1993, a 28 percent increase over 1992.

The large increase for waste management includes major initiatives in the management of high-level radioactive waste (HLW) and transuranic waste. For high-level wastes, two treatment facilities have been constructed, the Defense Waste Processing Facility at Savannah River, South Carolina, and the West Valley Demonstration Project in West Valley, New York. In addition, facilities are being planned and designed at Hanford, Washington (the Hanford Waste Vitrification Plant), and at the Idaho National Engineering Laboratory. These facilities will convert high-level waste into a stable form that is acceptable for permanent disposal in a Federal repository. The HLW management program also includes the operation of waste storage tanks at Savannah River, Hanford, and Idaho and waste calcining facilities at Idaho. The waste management budget also includes $185 million for the Waste Isolation Pilot Plant in New Mexico, a pilot facility to test whether transuranic waste can be safely disposed in a geologic repository.

Significant increases are also associated with low-level radioactive waste (LLW) management and DOE's waste minimization program. LLW treatment will occur at a number of sites. Two incinerators are operating, the Waste Experimental Reduction Facility incinerator at the Idaho National Engineering Laboratory and the Toxic Substances Control Act Incinerator in Oak Ridge, Tennessee, and one more is planned at Savannah River. In addition, the Savannah River Saltstone Facility and the Grout Treatment Facility at Hanford will solidify liquid LLW and mixed LLW into stable waste forms for disposal. The waste minimization program is working to reduce waste generation through source reduction, recycle of materials that cannot be eliminated, and treatment of waste to reduce volume, toxicity and mobility prior to storage.

Corrective activities include those actions needed to bring currently operating and standby facilities into compliance with applicable air, water, and solid waste regulatory requirements, negotiated agreements, other local, State and Federal requirements, and internal DOE requirements in an expeditious manner. Most of the corrective activity requirements are in the near term, reflecting the need for prompt action to bring operational facilities into compliance with existing standards, such as the Clean Air and Clean Water Acts. Significant progress has been made in achieving compliance. As a result, many activities will be completed by the end of 1992. This is reflected in the decreased funding request for

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corrective activities, totaling $84 million in 1993.

Technology development provides for research and development activities which will develop and apply more effective technologies to help meet the Department's environmental restoration and waste management goals. To support environmental restoration goals, emphasis is on improved or new technology for characterization of sites to determine the magnitude and extent of contamination spread and its physical and chemical nature and on soil and groundwater remediation technologies. To support waste management operations, emphasis is on waste retrieval and processing, creating waste forms suitable for disposal, and minimizing production of future wastes through process changes, materials substitution and recycling. The budget proposes to increase the investment in technology development more than six-fold over 1989 levels, to a total of $315 million.

An additional $49 million for transportation management and program direction brings the total Administration proposal for 1993 cleanup activities at DOE sites to $5.534 billion, as noted above.

Uranium enrichment.—Of the $5.534 billion total, the budget proposes $217 million, an increase of $93 million or 75 percent over 1992, for environmental restoration, waste management, and corrective activities funded by the DOE Uranium Enrichment Program. These activities are funded from a separate account that collects the proceeds from the sale of uranium enrichment services. The funding requirements are based on an overall cost allocation to this account of approximately 50 percent of the total environmental restoration costs, with the remaining 50 percent allocated to the government, to be funded from the Defense Environmental Restoration and Waste Management account. This 50–50 split reflects the historical allocation of costs within the Uranium Enrichment program between National Defense and Commercial applications. Corrective action and waste management activities at the operating enrichment sites are fully funded by the URE program.

The budget proposes to establish a new environmental cleanup fee, to be applied to all U.S. nuclear power plants which at any time utilized DOE uranium enrichment services, whose proceeds would be used exclusively for remediation and decontamination and decommissioning (D&D) at the uranium enrichment sites. A fee of one-third mill per kilowatt-hour of electricity generated would be assessed to each domestic nuclear power reactor. The proposed fee would not apply to the cost of activities needed to permit currently operating uranium enrichment facilities to achieve compliance with current emission limitations, i.e., it would not apply to corrective actions and waste management activities.

For 1993, the fee is proposed at a level to cover the projected average five-year (1993–97) cost of remediation and D&D activities attributable to commercial users, based on historical cost allocation assumptions (i.e., based on the quantity of enrichment services delivered to non-government customers over the life of the facilities). It is intended that the proposed level be maintained for at least three years. The actual level of the fee does not prejudge the development and adoption of a revised estimate of total costs for remediation and D&D of the uranium enrichment facilities, including any possible revision of the historical cost allocation assumptions. The Administration would propose to adjust the fee to reflect any such changes that may be adopted in the future.

Long-term recommendations.—The budget's recommendation of a 26 percent increase to $5.534 billion for DOE Federal facility cleanup reflects the commitment to clean these facilities up on an accelerated basis and provide the funds necessary to meet all legal requirements. Nevertheless, the Administration is concerned about management and overhead expenses which inevitably plague a program experiencing this type of cost growth. To address emergent problems in this rapidly growing program, the members of the interagency review panel have developed a set of long-term recommendations for the ERWM program. They are summarized below.

Tracking budgets to legal requirements.—The interagency review found that the current budget and management systems do not relate estimates to legal requirements, do not track expenditures to legally-required

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milestones, and do not measure accomplishments against those milestones. In the President's 1992 budget, the Administration proposed the establishment of a management tracking system to ensure that resources and planned funds were targeted in actual use toward meeting legal requirements and milestones, and to measure progress against those milestones. DOE has taken initial steps towards implementing such a system. A fully operational progress tracking system should be in place in the near future.

Reducing excessive overhead costs.—The review found apparent excessive overhead costs at many sites, and wide variability by site, unrelated to programmatic factors. Excessive overhead costs reduce the amount of funding available for actual cleanup and compliance. As a result of this finding, the DOE is initiating a more detailed review of management procedures and overhead policies at all its field office sites, led by the Chief Financial Officer. This problem nevertheless remains an issue of serious concern to the interagency group—current overhead and program management costs far exceed those for comparable Federal or private sector activities.

Improving DOE ERWM cost estimating.—The review identified a number of estimates that included individual items with excessively high costs. There are several factors that lead contractors and ERWM site personnel to include cost estimates in the budget that probably exceed the amount that will be required. Contingencies are often a major part of the estimate due to major unknowns and uncertainties regarding the scope of clean-up requirements, threat of enforcement actions, and personal liability, among other reasons. The review identified a number of contingency estimates that were excessively high. These must be brought into line with normal practice for major construction projects. This, too, is an area of major concern identified by the interagency group.

Improving contractor oversight.—The review teams found numerous instances of a lack of effective Federal oversight of contractors at the ERWM field sites. In response to this finding, the budget contains funds to permit a large increase in FTE levels from 1991 to 1992 and a further increase in 1993, with most of the increase going to field offices. As a result, the ERWM program will have adequate FTE levels to effectively manage its program. In part, another concern of the interagency group was the disproportionate growth of ERWM headquarters FTE relative to field personnel. The group concluded that both current and future FTE should be re-allocated with emphasis on field oversight of contractors.

Department of Defense (DOD)

The Defense Department continues making major progress in environmental cleanup and compliance. Over the past year significant advances have been made in environmental planning, compliance, pollution prevention,

Table 10–10. **TOTAL DOE CLEANUP BUDGET**
(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Total Cleanup Programs: [1]					
Environmental Restoration	466	1,453	1,940	+487	+34%
Waste Management	1,105	2,463	3,145	+682	+28%
Technology Development	52	303	315	+12	+4%
Corrective Activities and Other	139	188	133	-55	-29%
Total DOE Cleanup Program	1,762	4,407	5,534	+1,127	+26%
FTEs	373	1,551	1,598	+47	+3%

[1] Includes both ERWM and URE programs.

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and restoration. The budget provides $3.7 billion, an increase of 35 percent above the enacted 1992 level for cleanup and compliance with environmental laws. In addition, the Administration anticipates a $1 billion supplemental for the DOD in 1992 to enable the DOD to accelerate cleanup of contaminated sites and bring all of its operations into full compliance with Federal, State, and local environmental laws.

Including the anticipated 1992 supplemental, the DOD plans to spend $2.0 billion in both 1992 and 1993 to clean up existing contaminated Defense facilities. In addition to cleaning up existing contamination, the DOD plans to spend another $1.8 billion in 1992, and $1.7 billion in 1993 to comply with Federal, State, and local environmental laws. Environmental program initiatives begun in 1987 have reduced DOD's hazardous waste generation by over 40 percent to date, and by over 50 percent by the end of 1992.

These actions are coupled with thousands of initiatives at local installations, ranging from basewide recycling programs to massive reductions in energy use. Taken together, these steps will help ensure environmental compliance at all Defense facilities.

Department of the Interior (DOI)

The budget proposes $80 million, a 14 percent increase above 1992, for environmental compliance and hazardous materials management activities, such as assessment and remediation of potentially contaminated DOI sites, emergency responses to illegal disposal, and accidents involving hazardous materials. This will allow DOI to implement prevention and minimization of wastes, management of wastes to protect natural resources and the users of DOI lands and facilities, and aggressive cleanup and restoration of DOI sites that may be contaminated. There will be 260 assessments and investigations in 1993. The budget also fully funds all remedial actions scheduled for 1993. DOI hazardous materials sites include authorized and unauthorized landfills, potential discharges from abandoned mining operations, illegal drug labs, contaminated irrigation drainage, and leaking underground storage tanks.

Department of Agriculture (USDA)

The budget proposes $39 million, an increase of 3 percent above 1992, for hazardous waste management activities in USDA. USDA operates a centrally managed Hazardous Waste Management program, which is responsible for coordinating and monitoring all compliance actions. The Forest Service, the Agriculture Research Service, and the Commodity Credit Corporation account for over 90 percent of all hazardous waste compliance activities within USDA. Problems consist mainly of leaking underground storage tanks, potential discharge of toxic wastes from abandoned mines,

Table 10–11. **THE BUDGET INCLUDES AN ADDED $3.15 BILLION IN 1992 AND 1993 TO SPEED THE CLEANUP OF FEDERAL FACILITIES**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Department of Energy	1,762	4,407	5,534	+1,127	+26%
Department of Defense	1,155	2,761	3,718	+957	+35%
Department of Agriculture	8	38	39	+1	+3%
Department of the Interior	41	70	80	+10	+14%
Department of Transportation	29	54	59	+5	+9%
NASA, DOJ, and DOC	28	41	58	+17	+41%
Total	3,023	7,371	9,488	+2,117	+29%
DOD 1992 Anticipated Supplemental	—	+1,034	—	N/A	N/A

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and potential contamination from past discharges of chemicals from research facilities.

Department of Commerce (DOC)

The budget requests $2 million to continue a program of environmental cleanup and compliance at National Oceanic and Atmospheric Administration (NOAA) facilities. NOAA is monitoring the cleanup of environmental problems at its facilities nationwide and has begun replacing leaking underground storage tanks on its properties.

Department of Transportation (DOT)

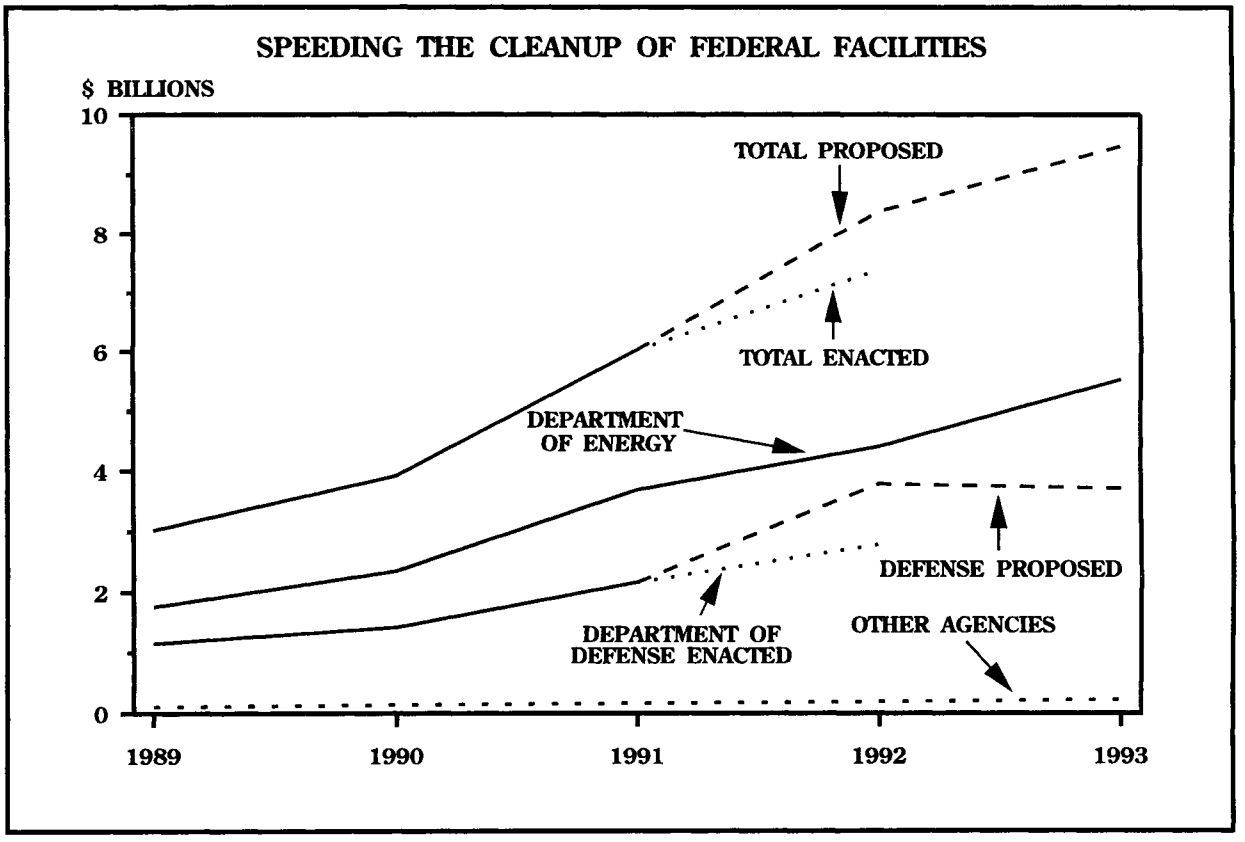
The budget provides $59 million, a 9 percent increase above 1992, for hazardous waste cleanup and compliance activities in DOT. The Federal Aviation Administration (FAA) and the Coast Guard account for nearly all of DOT's cleanup and compliance needs. Much of the work involves replacement of underground fuel storage tanks.

National Aeronautics and Space Administration (NASA)

The budget requests $40 million, an increase of 11 percent above 1992, for cleanup and compliance activities in NASA. NASA cleanup projects include soil and groundwater remediation, upgrade of various facilities, leaking underground storage tanks, and addressing facilities' deficiencies and corrective action requirements.

Department of Justice (DOJ)

The budget requests $16 million for environmental cleanup and compliance activities at DOJ facilities. The Bureau of Prisons accounts for most of the DOJ's activities, with resources devoted to RCRA and Superfund cleanups, and compliance with the Clean Air Act and Clean Water Act. In addition, in 1993 the Immigration and Naturalization Service will continue projects to replace existing underground storage tanks before leakage occurs.



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MAINTAINING THE ADMINISTRATION'S COMMITMENT TO THE PRESIDENT'S GOAL OF "NO NET LOSS" OF WETLANDS

In his August 9, 1991, statement, the President announced a comprehensive plan that seeks a balance between wetlands protection, enhancement, and restoration and sustained economic growth and the protection of private property rights. The budget implements the programs announced in the wetlands plan, and represents an increase of $212 million (+35 percent) over 1992 for wetlands protection, enhancement and restoration. Since 1989 the Administration has proposed more than a 170 percent increase in wetlands funding.

- The budget funds USDA's Wetlands Reserve Program at 1 million acres through 1995 for a voluntary program of conservation easements. The budget proposes nearly $800 million during 1993–1995 to encourage farmers to remove higher-priority wetlands from production through these easements.
- The budget again proposes $15 million in discretionary funding to fully fund the North American Wetlands Conservation Act. This will accelerate implementation of the North American Waterfowl Plan to restore declining migratory bird populations. Under this program Federal/State/private partnerships are formed to match Federal funds to acquire, restore, and enhance wetlands in Canada, Mexico, and the United States. Congress failed to fund this program in 1992.
- The budget proposes $50 million to fully fund the Wetlands Protection and Restoration Programs managed by the Department of the Interior and the Army Corps of Engineers for the conservation and restoration of coastal wetlands.
- The budget also funds various multi-agency programs for the conservation and management of wetlands habitat for migratory bird populations and endangered species, conservation and restoration of other high-priority wetlands, and ongoing wetlands research, education, and development.
- The Administration will continue to make wetlands a priority in the allocation of Land and Water Conservation Funds (LWCF) to Federal agencies. In addition, the Administration proposes to target a portion of LWCF State grant funds to non-Federal wetlands enhancement.
- The budget proposes the continuation of the Coastal America program within existing funding levels. EPA, Commerce, the Army Corps of Engineers, and DOI will focus on the preservation and cleanup of polluted coastal estuaries and eroding coastal wetlands. This program is a practical, action-oriented approach for the protection and restoration of the Nation's coastal resources.
- The budget proposes a total of $15 million to keep construction and land acquisition for the Everglades National Park on schedule to further carry out the Administration's commitment to restoring waterflows at the park.

All of the actions listed above are designed to protect habitat or enhance restoration. At the same time, the Administration will continue to pursue program reforms to streamline the permit approval process, increase flexibility for States and harness market mechanisms in wetlands protection so that the objectives of the wetlands program can be met in a way that is consistent with a dynamic, growing economy.

WATER RESOURCE AGENCIES WILL EMPHASIZE ENVIRONMENTAL PROTECTION, MITIGATION, AND RESTORATION

Protecting and Restoring Environmental Resources—Army Corps of Engineers.—The budget above includes $93 million to strengthen environmental protection while streamlining the regulatory program. In order to reduce delays and the cumbersomeness of the regulatory process, the budget provides for an increase in staffing to improve performance and speed in both permit evaluation and compliance monitoring. There will be $35 million for cooperative wetland projects in the State of Louisiana, authorized under the Coastal Wetlands Planning, Protection and Restoration Act

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Table 10–12. **FUNDING FOR WETLANDS RESEARCH, PROTECTION AND ENHANCEMENT WILL INCREASE BY 35 PERCENT**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Wetlands Funding by Activity:					
Research/Education	19	33	34	+1	+3%
Conservation/Restoration	39	238	383	+145	+61%
Coordination/Regulation	102	152	164	+12	+8%
Mapping	37	33	38	+5	+15%
Construction	27	3	8	+5	+167%
Water Rights	2	6	9	+3	+50%
Land Acquistion	69	135	176	+41	+30%
Total	295	600	812	+212	+35%
Wetlands Funding by Agency:					
USDA	79	152	276	+124	+82%
DOI	93	223	291	+68	+32%
EPA	9	29	33	+4	+14%
ARMY	98	173	190	+17	+10%
NOAA	16	23	22	-1	-4%
Total	295	600	812	+212	+35%

of 1990. Nationwide, Corps wetlands restoration implementation studies, projects, and research will be funded at $57 million.

The budget for the Corps includes about $75 million and $56 million, respectively, for the protection and restoration of environmental resources other than wetlands.

Mitigating Environmental Impacts of Projects.—The Army Corps of Engineers' budget includes $108 million to continue mitigating substantial environmental impacts of specific water resources projects. Examples of mitigation projects include land purchases for the Tennessee-Tombigbee Waterway ($10 million), Richard B. Russell Dam and Lake ($12 million), and the Missouri River ($6 million). The Corps will acquire and develop lands to mitigate for wildlife habitat lost from construction of the projects. When completed, 88,000, 22,000, and 30,000 acres respectively will be acquired. In addition, existing publicly-owned lands will also be managed for wildlife mitigation at these projects.

Significant work on the Columbia and Snake Rivers is included in Corps mitigation efforts. Completion of fish hatcheries to provide 27 million juvenile salmon and steelhead annually, construction of wildlife compensation facilities, and purchase of 24,000 acres of land along the lower Snake River for fisherman access, wildlife habitat, and hunting access are funded at $12 million. The Columbia River Juvenile Fish Mitigation project, funded at $45 million, will continue construction of fish bypass facilities at six existing locks and dams, and various mechanisms to improve downstream migration of juvenile salmon. These fish bypass projects, with a total cost of over $300 million, will assist the passage of juvenile fish around the turbines at Lower Granite, Lower Monumental, Little Goose, McNary, The Dalles, and Ice Harbor Dams.

Bureau of Reclamation—Protecting and Restoring Environmental Resources.—Studies will evaluate the potential for improving fish and wildlife habitat and preserving and restoring wetlands in cooperation with the Fish and Wildlife Service and State and local partners. Site specific studies have been identified in areas affected by the development of

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Table 10–13. ARMY CORPS OF ENGINEERS (CIVIL WORKS); PROTECTION AND RESTORATION OF ENVIRONMENTAL RESOURCES

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Protection and Restoration:					
Increase the Responsiveness of the Regulatory Program	64	86	93	+7	+8%
Wetland and Other Aquatic Habitat Creation (Section 307a)	—	—	5	+5	—
Project Modification for Improvement of Environment (Section 1135)	—	8	10	+2	+25%
Protection and Restoration Activities	83	126	139	+13	+10%
Other Enviromental Programs [1]	—	47	53	+6	+13%
Total—Protection and Restoration	147	267	300	+33	+12%
Mitigation:					
Columbia River Juvenile Fish Mitigation	10	32	45	+13	+41%
Tennessee-Tombigbee Waterway Mitigation	—	15	10	—5	-33%
Other Mitigation Projects	39	47	53	+6	+13%
Total—Mitigation	49	94	108	+14	+15%
Total Environmental Program	196	361	408	+47	+13%

[1] Wetlands Research Program, Coastal Wetlands Restoration Trust; and Evironment R&D.

Federal projects to determine how current operations could be modified to restore fish and wildlife habitat, and for sediment control, water quality improvement, flood control, and groundwater recharge. Reclamation will complete a general wetlands inventory on 8.5 million acres of Reclamation lands, begin data collection at demonstration sites, and continue activities to ensure an adequate water supply for wetlands.

Bureau of Reclamation—Mitigating Environmental Impacts of Projects.—The budget proposes $84 million to mitigate adverse impacts of water resource projects. Proposed activities include modification of project facilities and operational changes to improve anadromous fisheries, migratory waterfowl habitat, and other environmental resources, including:

- Environmental restoration activities at the Central Valley Project in California, including restoration of fish and wildlife resources along the Trinity and Sacramento Rivers.
- Work on the Yuma Desalting Plant in Arizona as part of a commitment by the United States to meet certain water quality standards for Colorado River water entering Mexico.
- Land acquisition and mitigation development at the Audubon and Arrowwood Wildlife Refuges, the Kraft Slough, and the Lonetree Wildlife Management Area in North Dakota.
- Continued implementation of the provisions of the Truckee-Carson-Pyramid Lake water rights settlement legislation.

This budget places greater emphasis on the improved management, use, and conservation of the water and land resources associated with Reclamation projects, thus significantly reducing their future adverse environmental impacts.

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CONSERVING, PROTECTING, AND MANAGING MARINE AND COASTAL RESOURCES AND HABITAT

National Marine Fisheries Service (NOAA)—Protecting and Restoring Fisheries.—The budget provides a total of $219 million to strengthen the Federal role in fisheries management and conservation. "Our Living Oceans," the first annual report on the status of U.S. living marine resources, published by the U.S. Department of Commerce, shows that the majority of the Nation's fish stocks are in poor condition. The budget supports the restoration of living marine resources through major strategic initiatives to: rebuild U.S. fisheries by reducing overfishing, stabilizing currently productive fisheries, and improving stock assessment; promote recovery of endangered or threatened species, including marine mammals and sea turtles, by integrating conservation of species and fisheries management; protect and restore coastal and estuarine fishery habitats; and improve seafood safety.

National Ocean Service (NOAA)—Protecting and Managing the Coastal and Marine Environment.—The budget provides over $7 million (a 46 percent increase over 1992) for the designation of national marine sanctuaries. A total of $17 million is provided for the Coastal Ocean Program (a 48 percent increase over 1992) to continue to strengthen and provide focus for NOAA's coastal programs. Coastal ocean research will improve predictions of human influence on fisheries productivity, environmental quality, and coastal hazards, within the context of natural variability.

GLOBAL CLIMATE CHANGE

The U.S. Global Change Research Program (USGCRP) is designed to produce a predictive understanding of the entire Earth system to support the national and international policymaking activities associated with global and regional environmental issues such as ozone depletion and global warming. This interagency research effort (eleven agencies) promises not only the information to support today's policy questions but the maintenance of a strong foundation of multi-disciplinary science required to address the unanticipated issues of tomorrow.

The budget proposes $1,372 million for the USGCRP, a $263 million or 24 percent increase over the 1992 funding level. The USGCRP addressed three parallel interconnected streams of activities: 1) documenting global change through the establishment of a long-term monitoring program; 2) enhanced understanding of key physical, chemical, biological, and social processes that influence and govern the Earth evolution, and 3) predicting global change through the development of predictive Earth system models.

Planning for the USGCRP has been driven by a strategic and scientific priority framework that has been extensively reviewed by the science community. Over the past two years, this framework has been extended to include a set of integrating themes that address the scientific uncertainties identified by the U.N-sponsored Intergovernmental Panel on Climate Change, and the economic research and important policy questions identified as a result of the 1990 White House Conference on Science and Economics Research Related to Global Change. The further integration of economics research into the USGCRP is particularly important since an understanding of the relationship between global change and the economy is fundamental to assessing the magnitude of the potential impact on a society, as well as to developing effective responses.

The critical role of economics in understanding and responding to global change was widely acknowledged by world leaders, including President Bush, at the 1990 White House Conference on Science and Economics Research Related to Global Change.

The ultimate success of the USGCRP requires progress and integration of data collection, process studies, and modeling across all the various disciplines. Central to this strategy is a balance between ground- and space-based research activities. Ground-based observations and theoretical process studies will be complemented by a comprehensive space-based program to provide global observations of key environmental parameters. For example, while NASA's Mission to Planet Earth (including the Earth Observing System)

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is a fundamental contribution to the USGCRP, many of the ground-based data sets will be used to calibrate the complementary Mission to Planet Earth satellite data sets.

The USGCRP is described in further detail in the Enhancing Research and Development and Expanding the Human Frontier chapter of the budget.

HISTORIC PRESERVATION PROGRAMS

The budget requests $41 million for the Historic Preservation Fund Program of the National Park Service, $5 million more than enacted in 1992. The Historic Preservation Fund provides matching grants to States and the National Trust for Historic Preservation for historic preservation planning, projects, and activities.

The budget requests an additional $1 million for the National Trust for Historic Preservation for comprehensive planning and technical assistance to preserve and restore Montpelier located in Orange County (VA). Montpelier was the ancestral home of James Madison, one of America's founding fathers, the Nation's fourth President, and primary architect of the Bill of Rights.

Also, the DOI and the United Negro College Fund have reached an agreement in principle to jointly sponsor a preservation effort on the campuses of Historically Black Colleges and Universities (HBCU) across the Nation. For 1993, the budget proposes an increase of $4 million in Historic Preservation Grants to implement this Federal/non-Federal partnership.

Table 10–14. **U.S. GLOBAL CHANGE RESEARCH PROGRAM**
(Budget authority; dollar amounts in millions)

	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
By Space/Ground Compoment	1,110	1,372	+263	+24%
Ground-based	733	915	+182	+25%
Space-based	377	457	+80	+21%
NASA-EOS	188	308	+120	+64%
NASA-EOS Precursors	189	139	-50	-26%
DOE	—	10	+10	NA
By Integrating Theme	1,110	1,372	+263	+24%
Climate Modeling and Prediction	123	143	+20	+16%
Global Water and Energy Cycles	385	463	+79	+20%
Global Carbon Cycle	202	252	+49	+24%
Ecological Systems and Population Dynamics	174	246	+72	+41%
Economics	4	13	+9	+225%
Other	222	256	+34	+15%
By Agency	1,109.8	1,372.4	+263	+24%
National Aeronautics and Space Administration	755.9	890.8	+135	+18%
National Science Foundation	108.5	162.5	+54	+50%
Energy	77.0	113.0	+36	+47%
Commerce	47.0	78.2	+31	+66%
Agriculture	44.3	47.6	+3	+7%
Interior	39.4	35.8	-4	-9%
Environmental Protection Agency	24.0	26.0	+2	+8%
Smithsonian	6.3	10.6	+4	+68%
Defense	6.3	6.6	—	+5%
Health and Human Services	1.0	1.2	—	+20%
Tenessee Valley Authority	0.1	0.1	—	—

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Advisory Council on Historic Preservation.—Advisory Council on Historic Preservation (ACHP) advises the President and Congress on historic preservation matters, and formally comments on Federal, federally-assisted, and federally-licensed undertakings that may affect historic properties. The budget requests $2.8 million, an increase of 7 percent over 1992. The increase will allow ACHP to meet increasing project review caseloads and to consider long-term improvements in the historic preservation program.

Energy: Fueling Economic Growth

The Administration's National Energy Strategy (NES), released by the President February 20, 1991, lays the foundation for increasing U.S. competitiveness and future economic growth through a more efficient, less vulnerable and environmentally sustainable energy future. The objective of the NES is to assure reliable supplies of clean and affordable energy to fuel an expanding economy.

The Administration believes that market mechanisms should determine the allocation of resources and investments. Unlike many energy plans which have been proposed in the past, a fundamental assumption in the NES is that capital investment in energy technologies and supplies should be voluntary rather than the result of mandated constraints on American businesses and households.

The budget proposes investments to help implement the NES and achieve its energy policy objectives. The budget initiatives are intended to balance energy conservation and energy production in a way that enhances international competitiveness. Two of the keys for achieving this balance are regulatory reform and development of new technology. In the last decade, deregulation initiatives in the energy sector have provided substantial benefits to energy producers and consumers alike. Building upon these initiatives, the National Energy Strategy seeks to remove institutional and regulatory barriers to the efficient use of the Nation's energy resources. The budget proposes almost $1 billion a year in NES-related R&D investments, which, combined with the initiatives in the NES, will spur more efficiency and productivity throughout the energy sector.

Implementation of these initiatives is expected to add more than half a new million jobs to our economy over the next fifteen years, while substantially reducing the economic risks of future oil supply disruptions and price shocks.

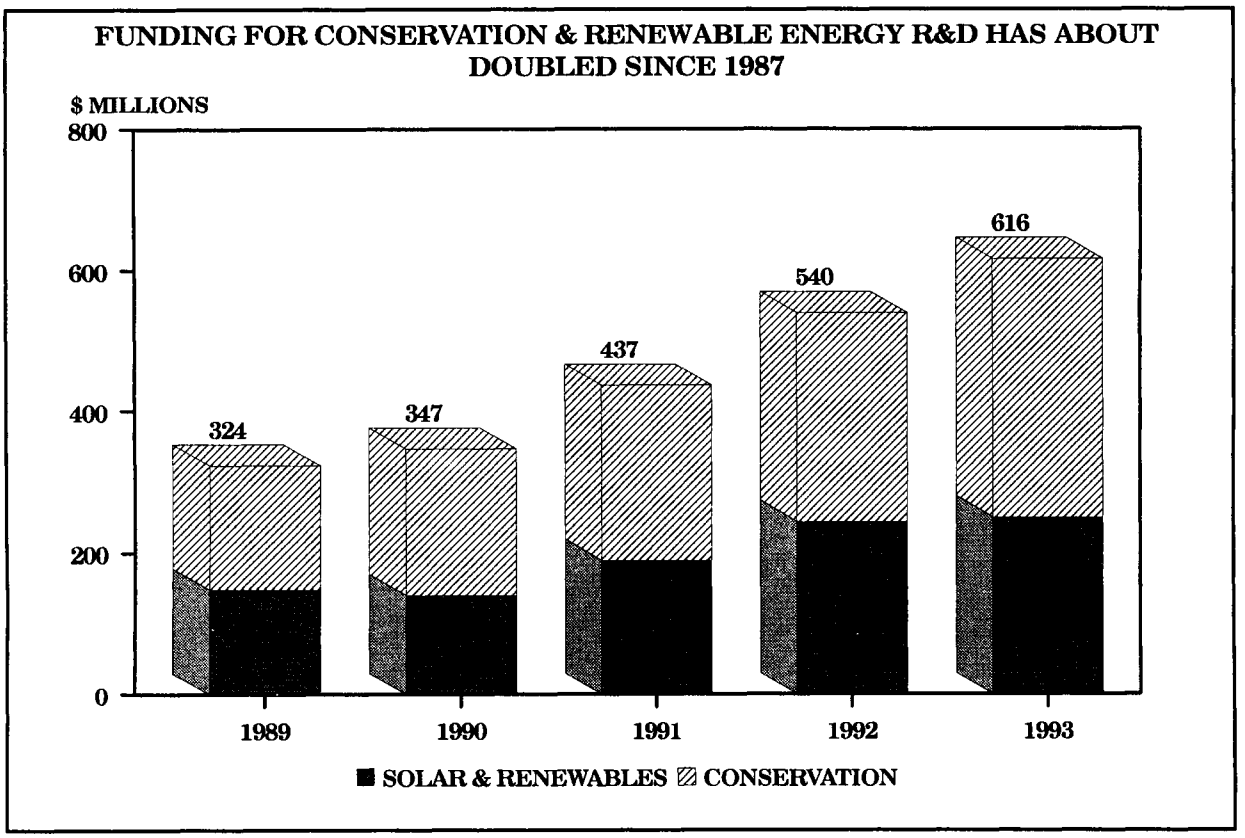
Increasing Energy and Economic Efficiency

The Administration's energy initiatives reflect a national commitment to greater efficiency in every element of energy production and use. Greater energy efficiency can reduce energy costs to consumers and increase the productivity and competitiveness of U.S. industry. The Administration has proposed regulatory reform measures aimed at increasing efficiency in electricity generation and use. The principal measure is to amend the Public Utility Holding Company Act of 1935 to eliminate barriers to entry into the wholesale electricity generation market, while ensuring continued protection of consumer interests. The Administration also is working with the Federal Energy Regulatory Commission to expand access to electricity transmission services. In addition, the budget provides increasing funding to assist State regulatory authorities and utilities in implementing integrated resource planning, a process in which both supply and demand resources compete to satisfy electricity needs in the most efficient way.

The budget proposes over $350 million for conservation research and development, an increase of about 25 percent over 1992 levels and more than double the 1989 levels when this Administration took office. These investments will spur the development of new technologies to increase efficiency in residential and commercial buildings, in industry and in the transportation sector.

Of particular note, the budget proposes $162.4 million for research and development of cleaner, more efficient transportation technologies that will improve U.S. economic competitiveness and create jobs in this important manufacturing sector. This budget initiative represents a 47 percent increase over comparable 1992 levels, and includes funding for:

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- *U.S. Advanced Battery Consortium,* a four-year, $260 million joint research venture with the Nation's three largest automobile manufacturers, the electric utility industry and others. This consortium, begun last year, will work to develop a new generation of batteries to make electric vehicles attractive and available by the year 2000.
- *Increased purchase of alternative-fueled vehicles (AFVs).*—DOE will fund the incremental cost and allow the purchase of at least 5,000 additional AFVs. When combined with already announced Government purchases, the Federal government will be two years ahead of the AFV purchase schedule required by the Clean Air Act.

The NES also contains an extensive list of cost effective measures to promote energy efficiency and conservation that are being implemented administratively. These include:

- Clarification by the IRS in Revenue Ruling 91–36, issued July 1, 1991, that utility efficiency incentive payments provided in the form of discounts on electric bills are not taxable income to the recipient.
- Improved building efficiency standards and guidelines.
- Expansion of appliance efficiency labeling to permit more informed consumer choice at time of purchase.
- Expansion of DOE-supported Energy Analysis and Diagnostic Centers for improving energy efficiency in business and commerce sectors.
- Improved Transportation energy efficiency througha modification to Treasury regulations increasing the amount of mass transit subsidies that employers may provide to employees up to the maximum allowed under current law.
- Issuance of an Executive Order 12759, directing all Federal agencies to undertake cost-effective actions which reduce energy consumption by 20 percent. Not only does this Order provide Federal leadership in energy conservation but it also will save

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taxpayers up to $800 million annually, and 100,000 barrels of oil equivalent per day.

- Removing market and regulatory barriers to alternate and renewable fuels.

Securing Future Energy Supplies

Regulatory reform and increased R&D for oil, natural gas, coal, nuclear and renewable will expand the fuel and technology choices available to the Nation to stimulate economic growth, improve our energy security and enhance our environment.

Oil

For the foreseeable future, oil will remain a critical fuel for the United States and the world. The Administration is pursuing a balanced approach to improve our energy security by reducing our economy's dependence on oil and increasing the environmentally responsible production of oil. On the demand side, increased efficiency, expanded use of natural gas and the introduction of alternative fuels and technology are projected to reduce our need for oil by 3.4 million barrels per day by the year 2010. On the supply side, R&D investments of $47 million in 1993 for advanced oil recovery (27 percent over the 1992 enacted level) and actions to remove unwarranted barriers to domestic production are projected to increase domestic supplies of oil by 3.8 million barrels per day by 2010.

As part of this effort, the Administration supports opening access to a discrete portion of the coastal plain of the Arctic National Wildlife Refuge with environmental safeguards. The environmentally responsible development of this area potentially could save $250 billion in payments to foreign oil producers and governments, while providing $125 billion in revenues for Federal and State governments and as many as 200,000 U.S. jobs. The budget proposes that revenues from oil and gas lease sales in the ANWR be divided evenly between Federal government and the State of Alaska.

Whenever possible, the Administration also is taking administrative actions to increase domestic oil production and create new jobs in the energy industry. To prevent the continued loss of domestic oil production capacity on Federal lands, the Administration is proposing royalty relief for stripper wells on Federal lands so that the cost of the royalty payments do not force the premature abandonment of these low volume wells. The Administration has issued an export license for California heavy crude and it will issue a Presidential finding permitting the export of an initial 25,000 barrels per day of California heavy oil, subject to adjustment by the Secretary of Commerce. The Administration also supports deregulation of oil pipelines, except for those not subject to competition, in order to reduce consumer costs and encourage the most efficient use of the oil pipeline system.

Taken together these demand and supply measures along with the other oil-related NES initiatives are projected to reduce oil imports by more than 7 million barrels per day by the year 2010. Reducing our oil dependence will substantially reduce the vulnerability of our economy to costly future oil supply disruptions and price shocks while improving our trade deficit. In 2010, these initiatives are projected to save billions of dollars a year in payments to foreign oil producers and governments, keeping that money at work in the United States.

Natural Gas

Natural gas is a relatively abundant, economical, and clean domestic fuel. The natural gas industry, however, remains hampered by inefficient and outmoded regulation that often discourages greater use of natural gas. The Administration supports a sweeping program of regulatory reforms to replace unnecessary regulation with competition and to create market opportunities for the expanded use of natural gas. These reforms include expedited permitting and construction of pipelines to provide service to new customers, deregulation of pipeline sales of natural gas where the pipeline is providing nondiscriminatory transportation services, and provisions for greater flexibility in setting pipeline charges for gas transportation.

These reforms could increase natural gas consumption by about 1 trillion cubic feet per year after 1995, displacing 300,000 to 400,000 barrels per day of oil. Not only

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are such regulatory reforms projected to provide substantial cost savings for natural gas customers, but also increased use of natural gas will create new jobs in the natural gas industry. In addition to the economic and energy security benefits, natural gas regulatory reform actions also will benefit the environment. In the year 2000, the resulting increased use of natural gas would produce an annual decrease of 670,000 tons of sulfur dioxide emissions, 200,000 tons of nitrogen oxide emissions, and 11 million metric tons of carbon dioxide emissions compared with the estimated projections without the proposed regulatory reform initiatives.

The budget also provides for a 233 percent increase in natural gas related research and development compared with 1992. Over $40 million is proposed in the budget to implement a restructured natural gas R&D program that would address production issues as well as cleaner and more efficient use of natural gas.

Coal

New technologies to use coal more cleanly and efficiently are required in order to enable the U.S. to take full advantage of its enormous, low-cost coal resources. New clean coal technologies can substantially improve efficiency and reduce emissions from the powerplants that generate currently more than one-half of our electricity. The budget proposes $500 million to fully fund Rounds 4 and 5 of the Clean Coal Technology Program, a $5 billion Government-industry cost-shared demonstration program aimed at introducing innovative methods of using coal more cleanly, efficiently and economically. In addition, the Administration actively is promoting the export of coal and clean coal technologies, producing jobs at home while ¶helping other nations (especially in Eastern Europe and the developing world) to achieve common goals: a cleaner environment and less dependence on oil.

Nuclear Power

Nuclear power, which today provides about 20 percent of our electricity, can cleanly, economically and safely meet a substantial portion of future electricity needs if three barriers are addressed. The Administration supports (1) reform of the nuclear powerplant licensing process; (2) the responsible management and disposal of high-level nuclear waste; and (3) development of new, standardized reactor designs that incorporate passive safety features.

The budget provides $392 million, an increase of $117 million, or 45 percent, for nuclear waste management programs, including $248 million for studies of the suitability of the Yucca Mountain site as a permanent repository, and $41 million for planning for a Monitored Retrievable Storage Facility (MRS). The Office of the Nuclear Waste Negotiator will be pursuing arrangements for sitting an MRS with interested States, Counties and Indian tribes. The authorization for this Office may need to be extended if final negotiations continue past January 1993. In addition, the budget includes $59 million for R&D on Advanced Light Water Reactor Technology and $145 million for Advanced Reactor Concepts, including both the High Temperature Gas Reactor and the Liquid Metal Reactor. These budget initiatives, coupled with licensing reforms and license renewal for existing plants where safety can be assured, will ensure that nuclear power will contribute significantly to our future economic growth.

Renewable Energy

The Administration also recognizes the considerable potential contribution of renewable energy resources to achieving national economic, environmental and energy security goals. The most effective way to improve the competitiveness of renewable energy is through increased investments in research and development and regulatory reforms.

The Administration supports major regulatory reforms, including licensing reform and removing projects smaller than five megawatts from federal jurisdiction to take full advantage of domestic hydroelectric power resources, especially those at existing dams, while protecting environmental quality. The Administration also seeks to reduce the costs of, and to increase investor confidence in, solar, wind, biomass, and geothermal technologies to generate electricity; expand the conversion of municipal solid waste to energy; develop

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economical liquid fuels from biomass as alternatives to petroleum-based fuels; and use larger amounts of renewable energy for direct heating, cooling and lighting in buildings. The budget proposes $250 million for renewable R&D, a slight increase over the 1992 enacted level and 68 percent greater than 1989 level. The initiatives in this area will maintain America's competitiveness in developing renewable technologies and create new jobs associated with the manufacture of those technologies.

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Investing in the Future:

11. Preserving National Security and Advancing America's Interests Abroad

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11. PRESERVING NATIONAL SECURITY AND ADVANCING AMERICA'S INTERESTS ABROAD

INTRODUCTION

The budget requests $281.0 billion in budget authority and $285.8 billion in outlays for National Defense (050), and $20.6 billion in budget authority and $18.0 billion in outlays for International Affairs in 1993. The purpose of this request is to provide for programs that preserve the Nation's security—through diplomatic, political, and military means; through advancing the U.S. agenda on economic and trade issues; and through advancing the cause of democracy, human rights, international cooperation and the rule of law.

CONTEXT

During the past year there were remarkable changes. The Warsaw Pact was dissolved. The Soviet Union collapsed and was replaced by twelve independent states, eleven of which formed a Commonwealth of Independent States. Eastern European and Latin American nations moved forward in their efforts to establish democratic governments. The United States, joined by a coalition of nations, liberated Kuwait. A number of long standing regional conflicts were resolved or are in international negotiations.

U.S. defense strategy has also changed. The focus of the new strategy is on regional threats and related requirements for forward presence and crisis response. Because the Cold War is over, United States strategy is no longer focused on the threat of a Soviet-led, European-wide conflict leading to global war. Significant reductions, therefore, are being made in U.S. military forces and programs.

Table 11–1. **FUNDING SUMMARY FOR NATIONAL DEFENSE AND INTERNATIONAL AFFAIRS**
(Dollar amounts in billions) [1]

	1989 Actual	1992 Enacted [2]	1992 Proposed	1993 Proposed	Dollar Change: 1992 Enacted to 1993	Percent Change: 1992 Enacted to 1993
National Defense (050): [3]						
Budget Authority	299.6	290.4	283.8	281.0	-9.4	-3%
Outlays	303.6	295.8	295.2	285.8	-9.9	-3%
Department of Defense—Military (051): [3]						
Budget Authority	(290.8)	(277.5)	(270.9)	(267.6)	(-9.8)	(-4%)
Outlays	(294.9)	(283.1)	(282.5)	(272.8)	(-10.4)	(-4%)
International Affairs (150):						
Budget Authority	17.3	[4] 21.0	21.0	20.6	-0.4	-2%
Outlays	9.6	17.8	17.8	18.0	+0.2	+1%
Total:						
Budget Authority	316.8	311.4	304.8	301.5	-9.8	-3%
Outlays	313.1	313.6	313.0	303.8	-9.8	-3%

[1] Includes both discretionary and mandatory programs.
[2] A portion of the funds for International Affairs programs is covered by a continuing resolution. See footnotes to Table 11–5.
[3] Funding for Operation Desert Shield/Desert Storm is excluded.
[4] Excludes International Monetary Fund quota increase.

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The emphasis of international affairs programs has changed as well. Security assistance will focus more on supporting the resolution of regional disputes. The United States will provide strong support for United Nations forces that are helping to implement regional peace settlements. Assistance will be provided to emerging democracies, including those of Eastern Europe and the former republics of the Soviet Union. Assistance will also be provided to countries that make serious efforts to reform their economies under free market principles.

PRESERVING NATIONAL SECURITY

U.S. military forces must be capable of deterring aggression and protecting American citizens around the globe. They must be able to repel or defeat military attacks that threaten vital U.S. interests.

Because of the reduced threat of a major war, substantial savings are possible. Active duty, selected reserve, and civilian personnel levels are being reduced, and several major weapons programs are being terminated. Reductions have also been made in nuclear weapons production. Active forces will be maintained at current high readiness levels and equipped with modern equipment to be able to respond appropriately to continuing threats. Special efforts will be made to maintain U.S. technological capabilities.

National Defense Budget

Tables 11–2 and 11–3 show the budget authority and outlays for the three national defense subfunctions: military activities of the Department of Defense, atomic energy defense activities, and defense-related activities of other agencies.

Table 11–2. **NATIONAL DEFENSE BUDGET AUTHORITY BY FUNCTION AND PROGRAM**

(In billions of dollars)

	1989 Actual	1992 Enacted	Proposed					
			1992	1993	1994	1995	1996	1997
050 National Defense Discretionary excluding Operation Desert Shield/Desert Storm:								
051 Department of Defense—Military	291.5	278.2	271.6	268.4	268.6	270.7	271.3	275.5
053 Atomic energy defense activities	8.1	12.0	12.0	12.1	12.7	13.4	14.1	14.8
054 Defense-related activities	0.5	0.8	0.8	1.0	1.0	0.9	0.9	0.9
Subtotal, Discretionary	300.1	291.0	284.4	281.6	282.3	285.0	286.3	291.2
050 National Defense Mandatory:								
051 Department of Defense—Military	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8
054 Defense-related activities	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Subtotal, Mandatory	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
050 National Defense Totals:								
051 Department of Defense—Military	290.8	277.5	270.9	267.6	267.8	269.9	270.4	274.6
053 Atomic energy Defense activities	8.1	12.0	12.0	12.1	12.7	13.4	14.1	14.8
054 Defense-related activities	0.6	1.0	1.0	1.2	1.1	1.1	1.1	1.1
Total	299.6	290.4	283.8	281.0	281.6	284.3	285.7	290.6
050 National Defense Operation Desert Shield/Desert Storm	—	10.4	10.4	—	—	—	—	—
Offsetting foreign cash contributions	—	[1] -5.0	-5.0	—	—	—	—	—
Net Budget Authority	—	5.4	5.4	—	—	—	—	—

[1] Estimate.

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Table 11–3. NATIONAL DEFENSE OUTLAYS BY FUNCTION AND PROGRAM

(In billions of dollars)

	1989 Actual	1992 Enacted	Proposed					
			1992	1993	1994	1995	1996	1997
050 National Defense Discretionary excluding Operation Desert Shield/Desert Storm:								
051 Department of Defense—Military	295.6	283.9	283.3	273.5	268.2	268.7	271.7	274.5
053 Atomic energy defense activities	8.1	11.7	11.7	11.9	12.5	13.0	13.7	14.4
054 Defense-related activities	0.4	0.8	0.8	1.0	0.9	0.9	0.9	0.9
Subtotal, Discretionary	304.1	296.4	295.8	286.4	281.6	282.7	286.4	289.8
050 National Defense Mandatory:								
051 Department of Defense—Military	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
054 Defense-related activities	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Subtotal, Mandatory	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
050 National Defense Totals:								
051 Department of Defense—Military	294.9	283.1	282.5	272.8	267.4	267.9	270.9	273.6
053 Atomic energy Defense activities	8.1	11.7	11.7	11.9	12.5	13.0	13.7	14.4
054 Defense-related activities	0.6	1.0	1.0	1.2	1.1	1.1	1.1	1.1
Total	303.6	295.8	295.2	285.8	281.0	282.1	285.8	289.2
050 National Defense Operation Desert Shield/ Desert Storm	—	17.1	17.1	5.5	2.4	1.1	0.5	0.1
Offsetting foreign cash contributions	—	[1] -5.0	-5.0	—	—	—	—	—
Net Outlays	—	12.1	12.1	5.5	2.4	1.1	0.5	0.1

[1] Estimate.

Department of Defense—Military.—The budget includes $267.6 billion for budget authority and $272.8 billion for outlays in 1993 for the Department of Defense, excluding Operation Desert Shield/Desert Storm. A description of the main programmatic features of this request will be provided in the 1992 Annual Report by the Secretary of Defense to the President and Congress. Table 11–4 compares the proposed Department of Defense budget to summit baseline levels.

Intelligence.—Most of the funding for the National Foreign Intelligence Program is included in the defense budget. The exact level is classified. The budget provides for obtaining information on potential threats, improving capabilities to counter foreign intelligence services, monitoring arms reduction treaties, detecting changes in foreign military capabilities and technologies, developing advanced technologies for intelligence, and conducting covert action operations in support of national security objectives in accordance with law. The budget emphasizes intelligence concerned with the potential proliferation of nuclear, chemical, biological, and missile technologies and support for the war on drugs.

Atomic Energy Defense Activities.—These activities, conducted by the Department of Energy (DOE), include research, development, testing, and production of nuclear weapons; production of nuclear materials including the construction of a new production reactor; environmental restoration and waste management within DOE's defense complex; technical support for verification of arms control agreements; and design of reactors for nuclear-powered Navy vessels.

The budget for these purposes is $12.1 billion in 1993 compared to $12.0 billion in 1992. Within this total, there is a major shift to environmental restoration and waste management from weapons production related activities. The budget for defense environmental restoration and waste management increases from $3.7 billion in 1992 to $4.6 billion in 1993—a 25 percent increase. The increase is required to comply with agreements with the Environmental Protection Agency and several States for cleaning up the DOE

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Table 11–4. DEPARTMENT OF DEFENSE (051) DISCRETIONARY LEVELS COMPARED TO SUMMIT BASELINE

(In billions of dollars)

	1992	1993	1994	1995	1996	1997	Cumulative 1992–97
Summit Baseline: [1]							
Budget Authority	278.2	278.6	279.0	281.5	283.4	288.2	1,688.9
Outlays	283.9	279.7	274.0	275.3	279.4	284.8	1,677.1
Inflation Adjustment:							
Budget Authority	—	-2.3	-2.4	-2.4	-2.7	-2.8	-12.5
Outlays	—	-1.0	-1.7	-2.0	-2.4	-2.6	-9.7
Adjusted Baseline:							
Budget Authority	278.2	276.3	276.6	279.1	280.7	285.4	1,676.4
Outlays	283.9	278.7	272.3	273.3	276.9	282.2	1,667.4
Proposed Defense Savings:							
Budget Authority	-6.6	-7.9	-8.0	-8.4	-9.4	-10.0	-50.4
Outlays	-0.6	-5.2	-4.1	-4.6	-5.2	-7.7	-27.4
Proposed Levels (excluding Operation Desert Shield/Desert Storm):							
Budget Authority	271.6	268.4	268.6	270.7	271.3	275.5	1,626.0
Outlays	283.3	273.5	268.2	268.7	271.7	274.5	1,639.9

[1] Defined as January 1991 budget levels extended to 1997 and adjusted for 1992 Congressional action and technical corrections.

defense complex and to safely manage radioactive and hazardous wastes.

The budget for nuclear weapons related activities, conducted by the Office of Defense Programs and the Office of New Production Reactors, decreases from $7.2 billion in 1992 to $6.5 billion in 1993—a 10 percent decrease. The Department of Energy will begin to consolidate its existing facilities and continue planning for a reconfigured weapons production complex that will be smaller and more efficient than the existing complex.

Defense-Related Activities.—Defense-related activities include civil defense and emergency preparedness activities of the Federal Emergency Management Agency, the Selective Service System, the Intelligence Community Staff, CIA retirement funding. It also includes the Maritime Administration's Ready Reserve Force, which provides for a standby fleet that can be activated when needed. Also included are certain elements of the foreign counterintelligence program of the Department of Justice and compensation for certain people who were exposed to radiation. The budget requests $1.2 billion in budget authority and outlays for these purposes in 1993, compared to $1.0 billion for budget authority and outlays in 1992.

ADVANCING AMERICA'S INTERESTS ABROAD

International Affairs

The basic objective of international affairs programs is to support U.S. interests abroad. The President has identified five broad challenges facing America in international affairs: promoting and consolidating democratic values; promoting market economies and strengthening U.S. competitiveness; promoting peace; protecting against transnational threats (e.g., environmental degradation, narcotics, terrorism); and meeting urgent humanitarian needs.

Changing world circumstances are reflected in several important shifts in emphasis and priorities among international affairs programs. The budget reflects:

- a reorientation and selective phasing down of security assistance programs—budget authority for these programs declines by 8 percent from the 1992 level;
- significant increases for UN Peacekeeping operations to ensure peace settlements in

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Africa, Asia and Central America—a $350 million 1992 budget amendment and an additional $350 million in 1993 is requested for new peacekeeping requirements;

- increases in assistance to Eastern Europe and to the new states of the former Soviet Union to encourage the formation of stable democracies with market based economies—a two-year $500 million program is requested for humanitarian assistance to the former republics of the Soviet Union;
- continuation of development and financial assistance programs that encourage economic reforms and that open markets to U.S. trade; and
- expansion of diplomatic, information and exchange activities into the countries of the former communist bloc and the Middle East.

International Security Assistance

Security assistance serves U.S. national security and foreign policy goals by promoting the physical security and economic stability of friendly and allied countries. Developing country purchases of military goods and services are funded through foreign military financing (FMF), primarily a grant program managed by the Departments of State and Defense. Economic stabilization and growth are promoted through the economic support fund (ESF). The ESF program, which is directed by the State Department and implemented by the Agency for International Development, provides grant support for the economies of countries that face security threats. The FMF and ESF programs account for most of security assistance. The remaining programs are for training of members of friendly armed forces, for anti-terrorism assistance grants, and for voluntary peacekeeping contributions. Budget authority for international security assistance in 1993 is requested to be $7.4 billion and outlays are estimated to be $7.4 billion.

The requested budget authority level of $4.2 billion for FMF in 1993 is 11 percent less than the 1992 request. Programs in Central America are being phased down and programs in the Philippines and Pakistan significantly reduced.

FMF assistance for Portugal, Greece and Turkey will continue to be an important priority for the Administration. These key allies were especially important during the Persian Gulf deployments. A significant portion of FMF assistance to these countries in 1993 will be in the form of loans.

Both FMF and ESF resources provided to countries involved in the Middle East peace negotiations will remain at about 1992 levels. The United States will also continue to provide FMF and ESF assistance to Andean countries to fight cocaine trafficking.

Up to $100 million of 1992 ESF funds and $100 million of 1993 ESF funds will be provided to the former Soviet republics for technical assistance. The U.S. is considering a range of initiatives including food distribution and marketing, energy and environment, financial and economic institution building, democratic institution building, and defense conversion. Special humanitarian aid to the republics is discussed below.

The ESF program will continue to provide large scale support to Central America to help consolidate the gains from the peace settlement.

The International Military Education and Training program is proposed to be $47 million in 1993. This program is a low-cost and effective means of influencing the military establishments of developing countries. Assistance to foreign governments to combat terrorism is proposed at a level of $16 million.

The Peacekeeping Operations (PKO) program provides voluntary contributions to peacekeeping forces. In 1993, $9 million is proposed for the United Nations force in Cyprus, and $18 million for the Egypt/Israel/United States peacekeeping force in the Sinai peninsula.

International Development and Humanitarian Assistance

The United States continues to play a major role in alleviating suffering and promoting sound economic policies in the developing

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Table 11–5. INTERNATIONAL AFFAIRS DISCRETIONARY PROGRAMS
(In millions of dollars)

Budget Authority	1989 Actual	1992 Enacted/ Proposed	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
International Security Assistance—152:					
Foreign military financing	4,738	4,667	4,163	-504	-11%
Economic support fund	3,302	3,240	3,123	-117	-4%
Military training and other	94	63	63	—	—
Peacekeeping operations	32	28	27	-1	-4%
Total, International Security Assistance—152	8,166	7,999	7,376	-623	-8%
International Development and Humanitarian Assistance—151:					
Agency for International Development (less Eastern Europe assistance)	2,347	2,894	2,916	+22	+1%
Eastern Europe assistance	—	400	450	+50	+13%
Humanitarian and technical assistance to the former republics of the Soviet Union	—	150	350	+200	+133%
Enterprise for the Americas debt forgiveness	—	310	286	-24	-8%
Multilateral development banks	1,315	1,785	1,759	-26	-1%
Public Law 480, food aid	1,098	1,484	1,323	-161	-11%
Title I (market development)	[399]	[440]	[356]		
Title II humanitarian aid	[699]	[710]	[640]		
Title III economic development	—	[334]	[327]		
Refugee assistance	489	511	570	+59	+12%
International organizations and programs (voluntary)	226	250	257	+7	+3%
Peace Corps	154	200	218	+18	+9%
State Department narcotics assistance	101	172	173	+1	—
Overseas Private Investment Corp.	—	17	20	+3	+18%
Trade and development program	25	35	40	+5	+14%
Regional development foundations	25	44	48	+4	+9%
Total, International Developmental and Humanitarian Assistance—151	5,779	8,252	8,409	+157	+2%
Conduct of Foreign Affairs—153:					
United Nations programs (assessed)	486	752	820	+68	+9%
United Nations peacekeeping	141	419	438	+19	+5%
Regular programs	[141]	[69]	[88]		
Special programs [1]	—	[350]	[350]		
UN Progs. & Peacekeeping Arrearages	—	128	115	-13	-10%
State Department salaries and expenses	1,789	2,015	2,131	+116	+6%
Foreign buildings including Moscow embassy	240	545	600	+55	+10%
Other State Dept. programs and activities	43	75	81	+6	+8%
Arms Control and Disarmament Agency	31	45	48	+3	+7%
International Trade Commission	36	42	45	+3	+7%
U.S. Institute of Peace (USIP)	7	11	11	—	—
Total, Conduct of Foreign Affairs—153	2,773	4,033	4,290	+256	+6%
Foreign Information and Exchange Activities—154:					
U.S. Information Agency	882	1,082	1,144	+62	+6%
Board for International Broadcasting	228	207	220	+13	+6%
Asia Foundation	14	16	17	+1	+6%
Japan U.S. Friendship Commission	2	1	1	—	—
Total, Foreign Information and Exchange Activities—154	1,126	1,306	1,382	+75	+6%
International Financial Programs—155:					
Export-Import Bank of the United States	695	567	682	+115	+20%
International Monetary Fund (IMF) quota increase	—	12,314	—		
Other	—	—	—		
Total, International Financial Programs—155	695	12,881	682		
Total Discretionary Programs	18,538	34,470	22,139		
Total Discretionary Programs less IMF	18,538	22,157	22,139	-18	—

Note: Programs under the headings International Security Assistance, International Development and Humanitarian Assistance (except Public Law 480 food aid) and International Financial Programs have not yet received an annual appropriation for 1992 and are currently operating under continuing resolution Public Law 102–145. Except for special budget amendments for peacekeeping and humanitarian and technical assistance to the former republics of the Soviet Union, as well as the technical changes for credit programs, the budget authority amounts shown in the 1992 column of the budget tables for these accounts are the original Administration budget request for that year.

[1] For 1992, $350 million requested in peacekeeping operations but displayed here.

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Table 11–6. INTERNATIONAL AFFAIRS DISCRETIONARY PROGRAMS
(In millions of dollars)

Outlays	1989 Actual	1992 Enacted/ Proposed	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
International Security Assistance—152:					
Foreign military financing	3,425	4,109	3,968	-141	-3%
Economic support fund	3,488	3,282	3,241	-41	-1%
Military training and other	92	199	130	-69	-35%
Peacekeeping operations	42	38	27	-11	-29%
Total, International Security Assistance—152	7,047	7,628	7,366	-262	-3%
International Development and Humanitarian Assistance—151:					
Agency for International Development (less Eastern Europe assistance)	2,102	2,389	2,635	+246	+10%
Eastern Europe assistance	—	185	259	+74	+40%
Humanitarian and technical assistance to the former republics of the Soviet Union	—	68	180	+112	+165%
Enterprise for the Americas debt forgiveness	—	310	286	-24	-8%
Multilateral development banks	1,245	1,586	1,527	-59	-4%
Public Law 480, food aid	1,098	1,474	1,378	-96	-6%
Title I (market development)	[399]	[347]	[377]		
Title II humanitarian aid	[699]	[672]	[672]		
Title III economic development	—	[455]	[330]		
Refugee assistance	481	561	565	+4	+1%
International organizations and programs (voluntary)	247	257	271	+14	+5%
Peace Corps	153	190	207	+17	+9%
State Department narcotics assistance	100	148	164	+16	+11%
Overseas Private Investment Corp.	-133	-139	-129	+10	+7%
Trade and development program	26	34	36	+2	+6%
Regional development foundations	27	40	47	+7	+18%
Total, International Developmental and Humanitarian Assistance—151	5,346	7,102	7,425	+323	+4%
Conduct of Foreign Affairs—153:					
United Nations programs (assessed)	515	751	819	+68	+9%
United Nations peacekeeping	100	429	435	+6	+1%
Regular programs	[100]	[79]	[85]		
Special programs [1]	—	[350]	[350]		
UN Programs and Peacekeeping Arrearages	—	128	115	-13	-10%
State Department salaries and expenses	1,816	2,022	2,104	+82	+4%
Foreign buildings including Moscow embassy	332	396	447	+51	+13%
Other State Dept. programs and activities	42	80	80	—	—
Arms Control and Disarmament Agency	28	46	48	+2	+4%
International Trade Commission	36	43	45	+2	+5%
U.S. Institute of Peace (USIP)	7	12	11	-1	-8%
Total, Conduct of Foreign Affairs—153	2,877	3,908	4,106	+198	+5%
Foreign Information and Exchange Activities—154:					
U.S. Information Agency	888	1,084	1,128	+44	+4%
Board for International Broadcasting	199	240	236	-4	-2%
Asia Foundation	15	16	17	+1	+6%
Japan U.S. Friendship Commission	3	1	1	—	—
Total, Foreign Information and Exchange Activities—154	1,105	1,341	1,382	+40	+3%
International Financial Programs—155:					
Export-Import Bank of the United States	47	109	307	+198	+181%
International Monetary Fund (IMF) quota: Increase	50	—	—		
Other	115	-18	5	+23	
Total, International Financial Programs—155	212	90	312	+222	+246%
Total Discretionary Programs	16,587	20,069	20,591		
Total Discretionary Programs less IMF	16,587	20,069	20,591	+522	+3%
Adjustment for enacted appropriations scoring in 1992 (CJS, Agric, HHS, DOD)	—	-236	—		

[1] For 1992, $350 million requested in Peacekeeping operations but displayed here.

world. In 1993, the budget proposes $8.4 billion in budget authority and $7.4 billion in outlays for this program category. These programs are intended to promote the growth of market-oriented economies through budgetary support, the financing of development projects and the provision of expert advice to foreign governments and private entities.

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They also provide relief supplies and funds to meet major natural and manmade disasters and to aid refugees abroad and resettle them in the United States.

Agency for International Development (AID).—AID is the primary source of U.S. bilateral development and humanitarian assistance. For 1993 $2.9 billion in budget authority is proposed for regular AID programs, about the same as requested in 1992. AID provides grants, primarily for individual projects, to more than 90 developing countries. The grants range in size from several hundred thousand to tens of millions of dollars for purposes such as agricultural development, population control, primary education, health, and the environment.

There are about 1,700 on-going projects, with about 200 new multi-year projects started every year. About 80 percent of each year's budget request for development assistance is committed to projects begun in earlier years. Countries undertaking significant economic reforms will be given priority in the allocation of AID funds for new projects.

As in previous years, the Administration is seeking one basic AID program account for all development assistance to allow greater flexibility to program managers in carrying out their mission. Moreover, the Administration also proposes a $100 million capital projects fund to help recipient countries invest in the infrastructure necessary to development.

The 1993 AID request also continues humanitarian aid programs at or above requested 1992 amounts. In line with the U.S. position at the 1990 World Summit for Children, special emphasis is placed on child survival, health and nutrition, and education.

In addition to development grants, AID makes disaster relief grants and guarantees loans for housing and for support of private sector entities.

Eastern Europe Assistance.—Beyond its regular program, AID also manages U.S. assistance to Eastern Europe under State Department direction. Budget authority for this program is requested to grow by 13 percent to $450 million in 1993.

The Eastern European countries, particularly Czechoslovakia, Hungary, and Poland continue to make progress toward establishing market-oriented economies. In 1993, U.S. assistance will be heavily oriented toward encouraging a viable private sector in the recipient countries. It will support enterprise funds that make grants and loans to private businesses. It will also support technical assistance to governments for privatization of government industries and for strengthening democratic processes.

The 1993 increase will provide funds for Lithuania, Latvia and Estonia. In addition, $70 million is being proposed as part of the request for multilateral development banks for the third of five equal annual payments to capitalize the European Bank for Reconstruction and Development. The Bank was established in 1991 to make loans in support of market-oriented economic reforms in Eastern Europe.

Humanitarian and Technical Assistance to the Former Republics of the Soviet Union.—The budget proposes a two-year $500 million program of humanitarian aid and technical assistance to the former Soviet republics. This recognizes that instability or resurgent totalitarianism in the region could threaten U.S. national security. It also recognizes the substantial savings in U.S. defense spending made possible by the changes in the former Soviet Union and the need to secure these changes in order to achieve continued savings.

Enterprise for the Americas Initiative (EAI).—The EAI seeks to promote strong economic growth in Latin America through trade liberalization, investment reform, and debt reduction. These efforts will benefit the United States by stimulating greater demand for U.S. exports to Latin America, creating more jobs for American workers, expanding U.S. direct investment in the region, and strengthening America's competitiveness in global markets.

The democratic revolution that swept through Latin America in the 1980s is being followed in the 1990s by an equally profound economic shift from statism and import substitution to free markets and more openess to trade. The EAI aims to encourage and strengthen this trend through three interrelated and mutually reinforcing efforts:

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- *Trade Liberalization.*—The EAI seeks to establish a hemispheric free trade area from the "Northern tip of Alaska to the southernmost point of Tierra del Fuego." The negotiation of a North American Free Trade Agreement with Mexico and Canada is the first step in this process. This process would be extended to other countries or groups of countries associated for the purposes of trade liberalization. In the meantime, the U.S. has entered into framework agreements with 30 countries, apart from Mexico, as stepping stones to eventual free trade agreements.

- *Investment Reform.*—The EAI aims to support Latin efforts to make their investment regimes more attractive to domestic and foreign capital by establishing two new programs at the Inter-American Development Bank (IDB). These programs provide technical advice and financial support to assist Latin investment reforms. The Investment Sector Lending Program is already underway having extended loans to Chile, Bolivia, Jamaica and Columbia; preparations are being made for additional loans. The Multilateral Investment Fund (MIF) is anticipated to get underway in 1992. The budget proposes $100 million per year during 1992–96 for the MIF. Other developed and larger Latin American countries are expected to contribute $200 million per year.

- *Debt Reduction.*—The EAI offers to reduce debt to the U.S. Government by Latin American and Caribbean countries undertaking growth-oriented economic and investment reforms. Debt reduction will help restore confidence in Latin economies, reversing capital flight and promoting domestic as well as foreign investment. Action on debt to the U.S. is especially significant for smaller Latin countries which owe a large share of their debt to official creditors. In 1991, the U.S. negotiated agreements reducing Chile's, Bolivia's, and Jamaica's Public Law 480 debt. The budget proposes $310 million in 1992 and $286 million in 1993 to pay the subsidy costs for other Latin American and Caribbean countries that may qualify for debt reduction.

Multilateral Development Banks.—These institutions, the World Bank Group and the African, Asian, European and Inter-American development banks, are the primary source of development loans to third world countries. Their lending for 1991 was more than $29 billion. Financing for the banks' new loans is provided from funds directly contributed by developed country members, from funds borrowed on world capital markets with developed country repayment guarantees, and from loan repayments. Each bank offers loans at its cost of funds to advanced developing country members and at low interest with long repayment terms to the poorest member nations.

In providing direct contributions to the banks, member governments, including the United States, agree on total contribution levels covering multi-year periods—usually three or four years. Member shares of the total are paid in annual installments during these periods. As Table 11–7 shows, nearly $1.6 billion, 90 percent of the total funds requested for 1993, represent installment payments to be made under previous multi-year agreements. A new four-year capital replenishment is proposed for the Asian Development Bank's low interest loan fund with an initial U.S. installment of $170 million in 1993.

Public Law 480 Food Aid.—This foreign assistance program provides financing for exports of U.S. agricultural commodities to increase foreign markets for such commodities, to provide humanitarian relief, to promote economic development, and to serve other foreign policy objectives. The total Public Law 480 program level in 1993 is $1.5 billion. This will provide an estimated 6.6 million tons of commodities, the same as estimated for 1992.

As revised in the 1990 farm legislation, the program has three components.

- Under Title I of the legislation, the Department of Agriculture provides concessional loans to foreign governments primarily to promote market development for U.S. commodities. The proposed 1993 Title I budget authority is $356 million, representing the subsidies needed to export $474 million of commodities.

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Table 11–7. U.S. CONTRIBUTIONS TO MULTILATERAL DEVELOPMENT BANKS

(Budget authority; dollar amounts in millions)

Institution	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
Previous Multi-Year Commitments:					
World Bank Group	1,050	1,180	1,180	—	—
Inter-American Development Bank [1]	—	190	178	-12	-6.3%
European Bank for Reconstruction and Development [2]	—	70	70	—	—
Asian Development Bank	152	201	26	-175	-87.1%
African Development Fund	112	144	135	-9	-6.3%
Subtotal	1,314	1,785	1,589	-196	-11.0%
New Multi-Year Commitments:					
Asian Development Bank—low interest loans	—	—	170	+170	
Total	1,314	1,785	1,759	+26	-1.5%

[1] Includes the Multilateral Investment Fund for the Enterprise of the Americas Initiative, $100 million in 1992 and 1993.
[2] Created in 1991.

- Under Title II, AID provides food grants to governments in response to emergencies and humanitarian relief to individuals through private voluntary organizations and the United Nations World Food Program. The 1993 proposed budget authority is $640 million.
- Title III, also managed by AID, is a government-to-government grant program that targets the poorest, food deficit countries. Budget authority of $327 million is requested for 1993.

Refugee Assistance.—For 1993, the budget proposes $570 million for refugee programs, which is $59 million above the pending request for 1992. This amount will finance the admission of up to 122,000 refugees into this country, nearly the same as 1992 admissions. The refugee program pays the costs of overseas processing of these people and of their transportation to the United States. It also provides grants to private and voluntary organizations to cover a portion of the expense of initial settlement here. Total 1993 admissions costs of $208 million are requested.

Most of the funding increase in 1993 will support the care and maintenance of refugees in UN managed camps abroad ($330 million in total). Of this, $50 million would be for the resettlement of refugees in Israel. Although some refugee situations are being resolved, for example through the Cambodia peace settlement, it is estimated that over 16 million other refugees will require assistance in 1993.

International Organizations and Programs (Voluntary).—In addition to the larger mandatory payments to the United Nations and related institutions discussed below, the State Department makes voluntary contributions to 24 United Nations and other international organizations that carry out development, humanitarian and scientific activities. Budget authority of $257 million is requested for these contributions.

The largest of the recipient organizations is the UN Development Program (UNDP), which finances and coordinates technical assistance to developing countries through the various UN agencies. In 1991, the UNDP committed over $1 billion in technical aid. The 1993 U.S. contribution to UNDP is proposed to be $124 million. The UN Children's Fund (UNICEF) is proposed to receive

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Table 11–8. **INTERNATIONAL ORGANIZATIONS AND PROGRAMS (VOLUNTARY)**

(Budget authority; dollar amounts in millions)

	1989 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993	Percent Change: 1992 to 1993
UN Development Program	110	115	124	+9	+8%
UN Children's Fund	60	55	60	+5	+9%
International Atomic Energy Agency (IAEA)	22	25	28	+3	+12%
Environmental Programs	14	20	22	+2	+10%
Other	20	35	23	-12	-34%
Total	226	250	257	+7	+3%

a $60 million voluntary contribution in 1993. Other programs receiving voluntary funding directly serve U.S. interests in controlling nuclear non-proliferation and improving the environment.

Peace Corps.—This agency supports volunteers who help foster economic development and promote mutual understanding between the peoples of the United States and the host foreign countries. In 1993, the $218 million in budget authority sought will support volunteers in 95 developing countries. It will also finance activities in 6 Eastern European countries and up to 500 volunteers in the former Soviet republics (Russia, Ukraine and Armenia).

State Department Narcotics Assistance.—Most of the funds supporting the counter-cocaine effort in the Andean countries are provided through the Foreign Military Financing and Economic Support Fund programs discussed above. The State Department also provides law enforcement assistance under this program, for which $173 million in budget authority is proposed in 1993. The Andean countries will receive $58 million in law enforcement assistance. A $27 million program will be carried out in Mexico aimed at both cocaine and marijuana. The remaining funds will be provided to other Latin American countries and for heroin control programs in Asia and elsewhere.

Overseas Private Investment Corporation (OPIC).—This government corporation insures U.S. investors in developing countries against the risks of war, expropriation and currency inconvertibility. It also provides limited amounts of loan guarantees, direct loans and experimental equity investments for overseas private ventures. The intent is to promote investments that are mutually beneficial to the United States and recipient countries and that might not otherwise take place. For 1993, the $20 million in budget authority requested represents the subsidy costs of $1.5 billion of new insurance, $500 million in guaranteed loans, $30 million in direct loans, and $5 million in equity investments. A major initiative in 1993 will be the issuance of insurance and up to $125 million in loan guarantees to the former republics of the Soviet Union.

Trade and Development Program.—This independent agency provides grants to middle income and developing countries which in turn contract with U.S. firms to conduct feasibility studies and training and related services for large scale capital projects. These projects generally take place in the more advanced developing countries. The budget proposes $40 million in budget authority, a $5 million increase over 1992.

Regional Development Foundations.—The African Development Foundation (ADF) and the Inter-American Foundation (IAF) provide small scale grants to indigenous private organizations in their respective regions. Their objective is to create self-sustaining private sector entities that will improve economic and social welfare. The budget proposes to increase

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each program by $2 million in 1993 with the ADF receiving $17 million in budget authority and the IAF receiving $31 million.

Conduct of Foreign Affairs

This category includes annual payments that the United States makes to the United Nations, its affiliated agencies, and to other international organizations. It also includes the cost of State Department operations and diplomatic activities abroad. Budget authority of $4.3 billion is proposed with outlays estimated at $4.1 billion.

United Nations Programs and Other International Organizations

Ongoing Programs.—The United States makes contributions to the United Nations, to UN affiliated agencies such as the World Health Organization and the International Atomic Energy Agency (IAEA) and to other organizations such as NATO and the Organization of American States. These organizations provide a range of political, economic, and humanitarian benefits to their members including the United States. For example, the World Meteorological Organization (WMO) supplies important information to the U.S. Weather Service for use in developing weather forecasts, and the IAEA furthers the U.S. objective of preventing the proliferation of nuclear weapons. The U.S. contribution to each UN or other organization is mandated by a treaty which provides for payment of a specified share, usually 25 percent, of the organization's budget. Budget authority in 1993 to meet these treaty commitments, called assessed contributions, is $820 million.

Peacekeeping Programs.—The United States also makes assessed contributions, normally 30.4 percent of total assessments, to temporary peacekeeping operations under UN auspices. These operations have been critical to the implementation of peacekeeping agreements supported by the United States such as the settlement making Namibia an independent country.

Over the past several years as longstanding regional conflicts have been resolved, the United States has looked to the UN for peacekeeping forces in Angola, the Western Sahara, Central America and elsewhere. For 1992, $69 million was requested and enacted for ongoing UN peacekeeping forces, and $88 million is needed for their continuation in 1993. In addition, a number of unanticipated new peacekeeping requirements have led to further calls by the United Nations for assessed U.S. contributions. A $350 million budget amendment is proposed for 1992 and an additional $350 million is requested for 1993 to meet these needs.

For 1992 the amendment would provide $93 million in U.S. contributions for UN peacekeeping forces that have recently been deployed in Central America, Africa and the Middle East. The amendment would also fund U.S. contributions to initiate new UN peacekeeping activities in El Salvador and Cambodia. For 1993, the additional funds are needed to continue the special new programs.

Arrearages.—The budget reaffirms the U.S. commitment to eliminate arrearages owed to the UN and other international organizations. By 1991 total arrearages owed by the U.S. were over $590 million. For 1991, in response to budget reform in the UN system, the Administration requested that the Congress provide the full amount of assessments for that year. The U.S. also paid the first of five annual installments to eliminate the arrearages. Similar action was taken in 1992. In addition to the assessed contributions proposed for 1993, the budget also requests the third, $115 million, installment on the arrearage elimination plan. It also requests advance appropriations for the 1994 and 1995 installments. Arrearage payments will be used for special activities mutually agreed upon by the United States and the respective international organizations, and their payment will be conditional upon such agreements.

State Department Salaries and Expenses.—$2.1 billion is requested in 1993 for the salaries and expenses account to carry out normal functions and important new foreign policy initiatives. Developments during the past year require the establishment of a United States presence in the Baltic nations, the former Soviet republics and Cambodia. The budget also includes funds to meet increased passport processing requirements, as well as

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improvements to the State Department's financial management systems.

Foreign Buildings.—For 1993, the budget includes $600 million in budget authority for the foreign buildings program to continue a plan for constructing physically secure embassies in locations abroad that are subject to terrorist threats or espionage. Initial facility requirements in the Baltic nations and former Soviet republics will be accommodated within the foreign buildings program. Within the total, $140 million is requested to complete construction of embassy facilities in Moscow.

Other State Programs.—This includes funding for emergency evacuations overseas, the Inspector General's office, bilateral science and technology activities and other administrative programs. The budget includes $81 million in 1993 budget authority for these activities.

Arms Control and Disarmament Agency (ACDA).—ACDA advises the President and the Secretary of State on arms control and disarmament activities and participates in negotiations with other countries seeking international agreements to control, reduce, or eliminate arms. In 1993, this includes support of arms control delegations, research on arms control, verification and compliance, nonproliferation and arms transfers. The budget requests $48 million in 1993, an increase of $3 million over the 1992 level.

International Trade Commission (ITC).—The ITC compiles and analyses data on foreign trade and its impact on the U.S. economy. Periodically, in response to questions raised under the trade statutes, it formally determines whether specific U.S. industries are injured by imports. By law, the budget request is transmitted without review by the Office of Management and Budget.

U.S. Institute of Peace (USIP).—This independent institution was established by Congress to conduct and support research and scholarship in international peace and conflict resolution. Activities include grants and fellowships, publication and dissemination of education and research materials, preparation of public workshops, development of a library network and a national student essay contest. Proposed budget authority for USIP is $11 million in 1993.

Foreign Information and Exchange Activities

U.S. government programs that provide information about the United States and its policies, termed "public diplomacy", are carried out principally by the United States Information Agency (USIA). This category of programs also includes support through the Board for International Broadcasting for Radio Free Europe/Radio Liberty, Inc. (RFE/RL), which provides radio broadcasts to the peoples of Eastern Europe and the former Soviet Union. Budget authority and outlays of $1.4 billion are proposed for this category.

United States Information Agency (USIA).—The mission of this agency is to provide to peoples of other countries accurate information about the United States and its policies and a good understanding of American society and its values. The budget includes $734 million for the USIA salaries and expenses account to fund operations at overseas posts, publications, television and radio broadcasting, libraries, and exhibits. Funds are included for increased broadcasting activities for China. In addition, $200 million is requested for educational and cultural exchanges including Fulbright scholarships and the international visitors program.

Radio broadcasting was a key element of public diplomacy throughout the Cold War. USIA's Voice of America (VOA) and the RFE/RL were principal ways to reach mass audiences in communist countries. Their broadcasts made valuable contributions to the political revolutions in the countries of Eastern Europe and the former Soviet Union. Broadcasting will continue to play an important role as these countries build and develop democratic institutions and market economies. In recent years, U.S. broadcasting has been augmented by Radio Marti and TV Marti, which provide surrogate local broadcast media for Cuba.

In the late 1980's, VOA initiated a major modernization of its transmitter network to assure that all key target audiences receive a clear signal. The budget includes $106 million in 1993 to continue that radio modernization program.

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Board for International Broadcasting (BIB).—The budget request of $220 million maintains this program at about the 1992 level. As democratic governments are established in the countries of Eastern Europe and the former Soviet Union and as these countries develop reliable, free media, the need for RFE/RL broadcasts will gradually diminish. Over time, certain RFE/RL surrogate broadcast services will be phased down.

Asia Foundation.—The United States provides most of the funding for this private, nonprofit organization. The foundation finances exchange of persons programs, book distributions, conferences and other activities intended to acquaint promising Asian leaders and others with the United States and its people. Budget authority of $17 million is requested for 1993.

Japan-United States Friendship Commission.—This inter-governmental entity uses the interest on funds previously invested by the two governments to promote mutual understanding between the United States and Japan. Activities include academic programs, policy-oriented research, professional exchanges and public affairs programs. The program is proposed to remain at 1992 levels in 1993.

International Financial Programs

This category of international affairs spending includes funding for two major financial institutions.

The Export-Import Bank of the United States.—The Eximbank finances U.S. exports through a variety of direct loan, loan guarantee and insurance programs. Eximbank programs assist U.S. exporters who require subsidized financing to compete with foreign exporters who receive subsidies from their governments. The requested 1993 budget authority of $682 million will support about $11.4 billion in face value of financing. The large percentage increase in 1993 outlays over 1992 is due mainly to the new credit reform accounting. In 1993, Eximbank will expand its assistance to small businesses, particularly through a working capital guarantee program.

Through the efforts of Eximbank and other Federal agencies, the developed countries have agreed to reduce subsidies for tied aid credits, in which export credits are offered in combination with direct foreign aid grants. This will support the Administration's free trade objectives.

International Monetary Fund.—The Administration has proposed an appropriation for an increase in the IMF quota for fiscal year 1992 with budget authority estimated at $12.3 billion. The purpose of the Fund is to promote a stable world monetary order, creating conditions for sustained economic growth. It does so in part by drawing on funds deposited by member governments to make medium term loans to governments with balance of payments problems. Loans are provided on conditions that promote economic reforms in borrowing countries.

Roughly every five years, the Fund's members assess whether their deposits, called quotas, are adequate to meet the Fund's objectives. As a result of such an assessment in 1990, it was decided to increase quotas by 50 percent which the 1992 request represents for the United States.

The exact appropriation amount for the U.S. quota will depend on the exchange rates of the U.S. dollar and other currencies at the time the quota increase is provided to the IMF. The quota increase does not lead to budget outlays because the United States receives an increase in its usable international monetary resources equivalent to any resources transferred to the IMF.

Other International Financial Programs.—The only active program under this heading is the Special Defense Acquisition Fund. This revolving fund is intended to reduce procurement costs and delivery time by purchasing defense articles in anticipation of their sale to foreign governments. Because the fund can use the proceeds of sales, no budget authority is required in 1993.

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Addressing Inherited Claims and Hidden Liabilities

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Addressing Inherited Claims and Hidden Liabilities:

12. Modernizing the Financial Services Sector

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12. MODERNIZING THE FINANCIAL SERVICES SECTOR

HIGHLIGHTS

- The competitive disadvantages of banks—partly arising from Government regulation and deposit insurance—threaten continued large deposit insurance losses unless and until the reform process begun in 1991 is completed.
- To improve incentives for reform, this budget proposes to change the way deposit insurance outlays are measured so that costs are estimated as they arise, rather than when institutions are closed—sometimes years later.
- Congress's failure to adopt the entire set of Administration banking reforms will contribute to larger Bank Insurance Fund losses than expected a year ago. Early adoption of these reforms would yield substantial savings through 1997.
- The 1989 Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) reforms have reduced the rate at which new savings and loan costs accrue. But, to finish the Resolution Trust Corporation's clean-up of failed thrifts and further stabilize the savings and loan industry, Congress must provide additional funds early in 1992.

RESTORING THE HEALTH OF BANKS WILL REQUIRE FURTHER REFORMS

A healthy financial services sector promotes the flow of resources to their most productive use. In recent years, very rapid financial product innovation, driven by new computer and communications technology, has made markets more efficient and altered the relative competitiveness of the different providers of financial services. Government regulation has both fostered and hampered this evolution. Piecemeal and ill-timed legislation exacerbated the thrift problem. Where Government's response has failed to keep pace, the results have been costly to regulated firms, taxpayers, and the economy.

The most highly regulated financial sectors—banks and other depository institutions—have been most disadvantaged during this period of rapid change. These firms play a central role in the economy by providing a reliable payment system, a safe haven for small savings, and funding for business, particularly small business. They are also

Table 12–1. **TOTAL DEPOSIT INSURANCE CASH OUTLAYS ASSUMING NO FURTHER REFORMS, 1992–1997**

(Cash outlays; in millions of dollars)

	1992	1993	1994	1995	1996	1997
Resolution Trust Corporation ...	40,437	32,503	-30,055	-26,008	-11,651	-18,996
Bank Insurance Fund	32,960	38,047	13,690	7,545	-4,508	-19,284
FSLIC Resolution Fund	7,020	6,383	253	240	432	297
Savings Associations:						
Insurance Fund	—	-1,012	-864	3,040	846	-1,652
National Credit Union Share Insurance Fund	-312	-227	-242	-257	-273	-288
All Other	11	-2	-1	-1	-1	-1
Total	80,116	75,692	-17,219	-15,441	-15,155	-39,924

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a major focus of concern because more failures result in larger deposit insurance losses.

Deposit insurance cash outlays anticipated under current law, shown in Table 12–1, reflect the problems that have afflicted many banks and thrifts.

- The costs that have accrued are recognized as the Government steps in to close failed institutions.
- At that point, to protect depositors, the deposit insurance funds must pay to cover losses that, in recent years, have averaged 18 percent of the assets of failed banks and 36 percent of the assets of failed thrifts.

The Task of Reform Must be Completed

Last year, the Administration proposed comprehensive reforms to strengthen banks and attract new bank capital. The proposed Financial Institutions Safety and Consumer Choice Act of 1991 (FISCCA) was intended to remove archaic legal barriers, correct weaknesses in the deposit insurance system that encouraged excessive risk, and bolster the Federal Deposit Insurance Corporation (FDIC) Bank Insurance Fund (BIF). The proposals carefully balanced reforms to tighten control of failing or mismanaged banks with reforms that would allow banks to remain competitive.

The legislation that emerged, the Federal Deposit Insurance Corporation Improvement Act of 1991, recapitalized the BIF and improved the tools available to regulators, in particular permitting them to shift a fairer share of costs to firms that take greater risks. However, the parts of the Administration's package that would have broadened banks' role in the financial system, and eliminated costly barriers to diversification and consolidation through interstate branching, were rejected. This produced a one-sided measure that will hamper banks' ability to raise new capital. Because the Congress did not enact these Administration proposals, and because of general weakness in the economy, deposit insurance losses will be deeper and bank earnings will recover more slowly than expected a year ago. Until additional reforms are enacted, banks will remain in a regulatory straightjacket, while less regulated competitors grow at their expense.

Banks Have Lost Ground To Competitors

The banking system has lost ground competitively in the United States and in global markets. In 1990, 1,712 banks, holding 20 percent of the industry's assets, lost money. There are large banks in weak condition.

Banks have lost competitive position on both sides of their balance sheets, and the links between their deposit-taking and lending have weakened. These intermediation services once were performed mainly by banks. Now, they are more often handled by different, more specialized firms. Companies and individuals that once would have gone to the bank for financing now go elsewhere. Alternative instruments—for instance, company-issued commercial paper—tap capital markets directly. Securitization of mortgages, auto and consumer credit, and now other lending also shifts the ultimate source of funding from bank deposits to whoever holds those securities. Larger companies have been reducing their reliance on external funds, including bank lending, for some time now. Net funds raised in financial markets by nonfinancial corporations fell from about 3 percent of GNP in the 1960s and early 1970s to less than one percent in 1990 and 1991.

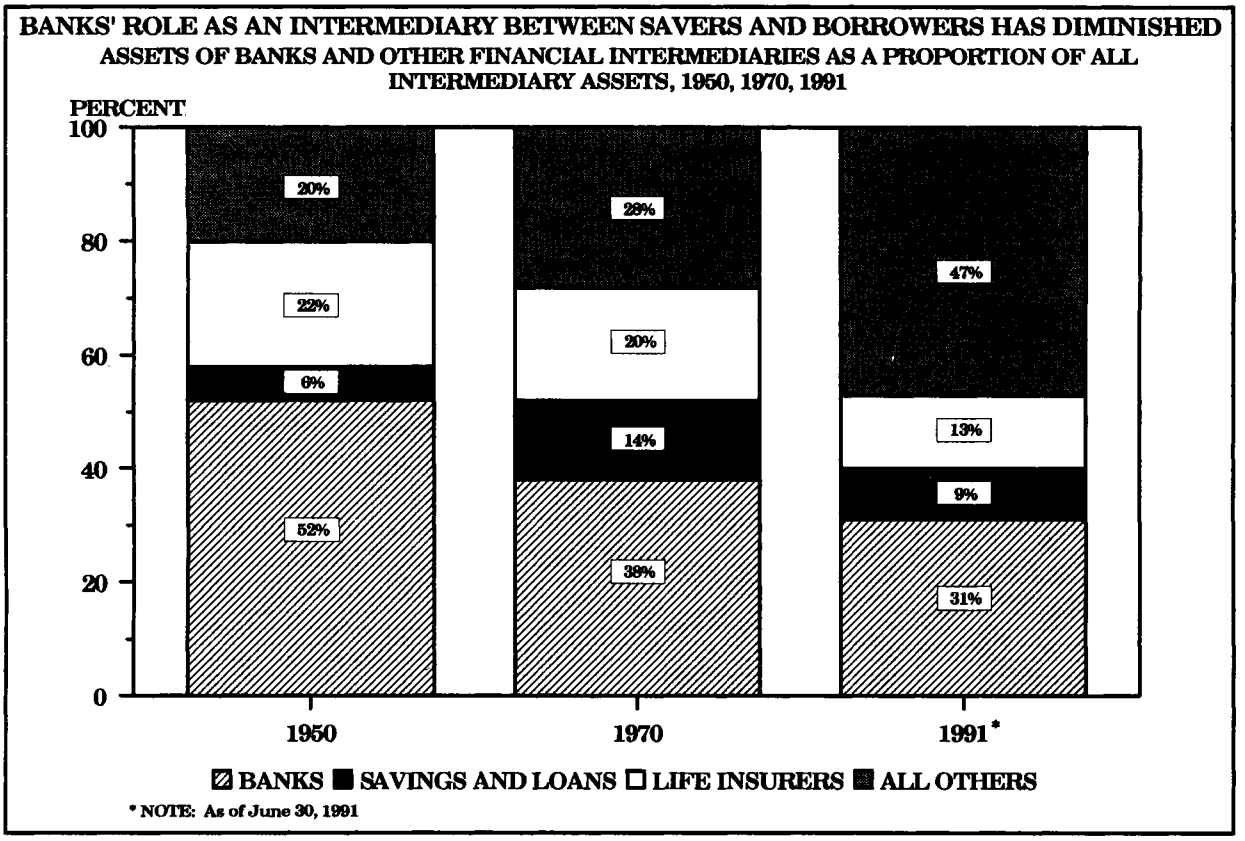
Similarly, from a saver's perspective, banks and other depositories are far from the only option. Money market and other mutual funds provide financial management and payment services. Insurance companies and pension fund managers channel savings directly to investment. Banks' share of the assets of all financial intermediaries has dropped from 52 percent in 1950 to 31 percent today.

While the multiplication of financial services options is healthy for the economy, it works to the disadvantage of a banking sector hemmed in by regulations and burdened by an increasingly costly deposit insurance system.

Small Businesses Must Rely on Banks for Credit

Small, new, and expanding businesses still rely heavily on banks. Because of small business' important role in job creation, the

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availability of bank credit to this sector must be assured. To the extent that banks are burdened with higher costs than competitors or find their lending capacity constrained, these borrowers must pay more for funds. Moreover, a huge secondary mortgage market has developed with Government support, giving that sector a cost advantage relative to commerce and industry. Partly because of active secondary markets, banks' mortgage and consumer lending have been growing while their business lending has recently declined. Small businesses are disadvantaged in equity markets as well. These patterns may have the unintended effect of shifting investment away from more productive uses, thereby reducing the economy's potential to create new employment.

A Flawed Deposit Insurance System Has Added to Losses

Competitive pressures have been compounded by a system in which healthy, cautious banks actually subsidized risk-avid and unprofitable banks. Each group has paid the same deposit insurance premium and, until recently, was required to meet the same capital standards. The combination of these factors has encouraged excessive risk-taking and delayed the elimination of unprofitable lines of business. These trends, in turn, increased the volatility of bank earnings and the probability that more banks would fail. More failures led to higher premium rates and other regulatory burdens. To the extent that these costs were reflected in higher charges for services, good customers were driven away. Unless reforms soon reverse this pattern, higher insurance fund losses will require even higher insurance premiums, further weakening the competitive position of healthy and marginal banks.

The mismeasurement of capital and delay in closing institutions that fail have added to deposit insurance losses. Insolvency often was not recognized until it became a sunk cost; therefore, regulators could not act in a timely fashion. Insolvent banks were given time to gamble for resurrection, often increasing the loss borne by healthy banks and taxpayers. The 1991 bank reform act partially

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addressed this problem by mandating early supervisory intervention at banks whose capital begins to fall and by requiring regulators to take into account new types of risk in establishing capital standards. This process must be carefully monitored to ensure that adequate capital measures are being developed.

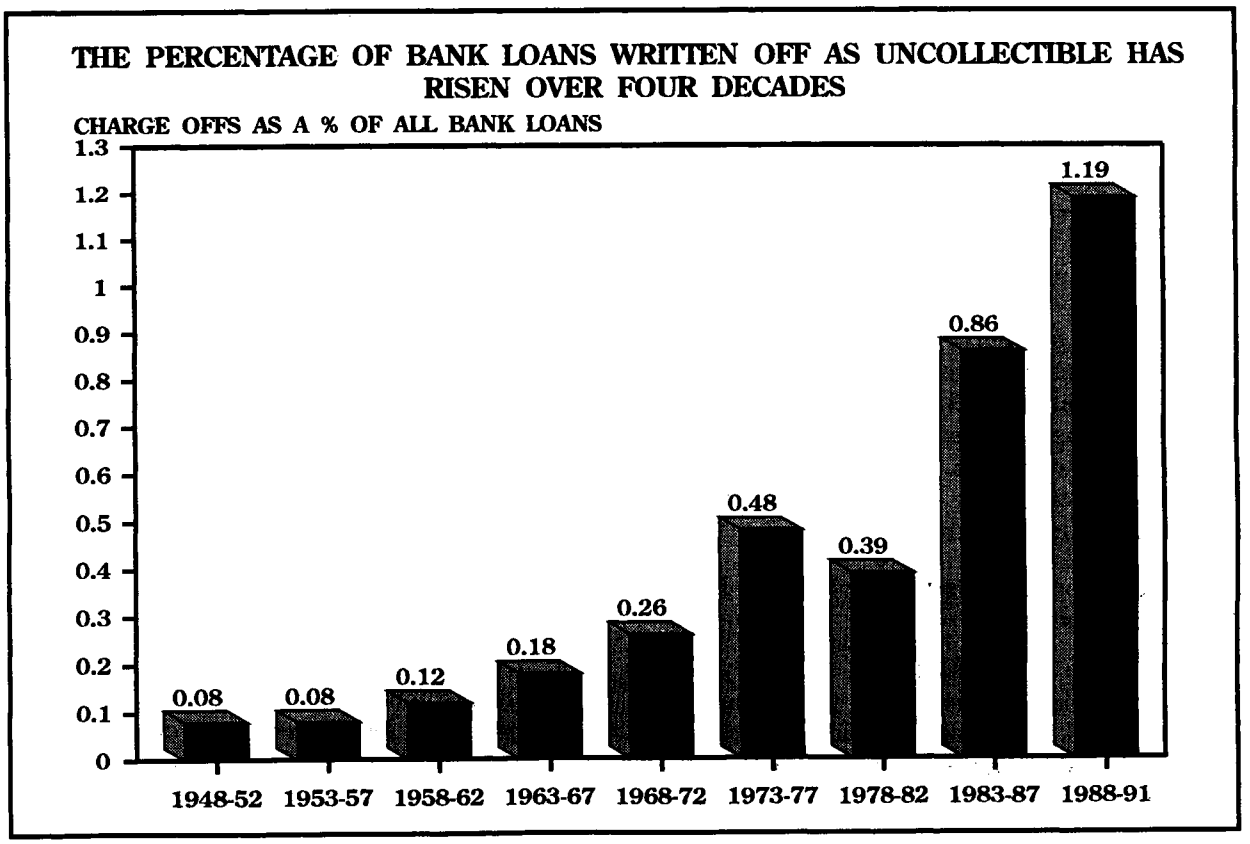
Past Deposit Insurance Losses Must Be Recognized

The numbers of failing banks and thrifts will moderate gradually as the economic recovery gathers momentum and as the weakest banks are liquidated or merged with healthy institutions. Nevertheless, the absence of opportunities for diversification and consolidation and the recent volatility of returns to bank capital suggest that failure costs will not return soon to levels observed prior to the mid-1980s. Moreover, a large backlog of costs has accrued that must be recognized over the next few years, as illustrated by the increasing proportion of bank loans written off as uncollectible.

Unless further reforms are undertaken soon, gross cash loss payments from the Bank Insurance Fund are projected to total $89 billion from 1992 through 1997. Premiums totaling $53 billion will offset part of this cost; the rest must be borrowed and repaid from future premiums.

In last year's budget, the net worth of the BIF was estimated to reach a negative $22 billion in 1996. The 1991 banking legislation authorized the FDIC to borrow up to $30 billion from the Treasury Department to fund this deficit, with the banking industry repaying the loan over time through higher deposit insurance premiums. The July 1991 Midsession review increased the negative net worth estimate to $25 billion, with a pessimistic scenario at $32 billion. Now, however, it appears that, without further reforms, the BIF net worth is likely to fall to a negative $39 billion in 1996 before starting to recover.

The changed estimates reflect not only Congress's failure to adopt the entire Administration reform package but also general weak-



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ness in the economy and problems specific to the real estate sector that have reduced bank profits. However, early adoption of the reforms discussed in the latter part of this Chapter would reduce BIF losses over the 1992–1997 period. In that case, the net worth would fall to a negative $28 billion, and the borrowing authority provided in the 1991 banking legislation would be roughly adequate. Otherwise, additional funding would be necessary by 1995.

Many uncertainties, apart from changes in policy, make it difficult to forecast deposit insurance spending accurately. Economic conditions affect the numbers of institutions that fail. In a given year, the unexpected closing of a single large bank could result in spending in excess of the forecast level. The timing and method of handling failed or failing institutions can change the time pattern of spending and, in some cases, affect losses. The ability of regulators to control undercapitalized institutions also can work to limit losses.

Improving the Budgetary Treatment of Deposit Insurance

The way past budgets have treated deposit insurance encourages the view that deposit insurance outlays are a sunk cost. This has provided an incentive to delay recognition of growing problems and little incentive to enact reforms. In the mid-1980s, cash accounting for deposit insurance delayed recognition of the numbers and depth of savings and loan failures. An earlier effective response to that growing debacle could have saved many billions of dollars of Federal spending.

To address this problem, Congress instructed OMB and the Congressional Budget Office (CBO) to study the feasibility of changing the method of accounting for deposit insurance and other insurance programs and make reform recommendations. In reports to Congress last year, the OMB and CBO agreed that costs should be measured as they arise, rather than later when they must be paid.

Consistent with Congress' interest in reform and the recommendations made in last year's OMB report, the Administration proposes a new method of budgeting for deposit insurance. With this change, budget outlays would be calculated in terms of a new measure of accrued cost, instead of cash disbursements, for all costs in 1992 and thereafter. This budgetary treatment is similar to that currently applied to Government credit programs. The proposed change is part of a broader initiative, which is described in Chapter 13.

Measuring Costs as They Accrue.—For banks and thrifts, accrued costs can be measured from financial information provided quarterly to regulators by each institution. The current value of a depository's assets is estimated by capitalizing its reported income, adjusted for anticipated loan losses, at each institution's cost of capital. This estimate of asset value, less the face value of the institution's deposits or other liabilities, provides a measure of the economic value of its capital. When aggregated, the estimates approximate what it would cost the insurance fund to recognize all current insolvencies.

The new measure is highly correlated with economic values as reflected in stock prices and debt markets. It has reliably predicted continued unprofitability and closure for groups of insolvent institutions. Moreover, loss estimates for failed thrifts based on the new measure are highly correlated with cost estimates made by the Resolution Trust Corporation (RTC) at the time the same institutions were closed.

For budgeting, the rate at which costs will accrue in future years must be estimated. This has been done, for banks and thrifts, using simulations that begin with the currently observed distribution of institutions' financial conditions. Estimates of how this distribution will change in the future require assumptions regarding the trend in industry earnings, earnings volatility, and the regulators' policies on the timing and method of closure. These assumptions extrapolate recent trends, modified by expected changes in the market, regulation, and proposed legislation.

Changing Budgetary Treatment: A New Outlay Measure.—Beginning with 1992, it is proposed that this measure of accrued cost be used in a new budgetary treatment of deposit insurance. Outlays would incorporate an estimate of the expected one-year change in ac-

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crued costs for the whole set of insured institutions. Additions to accrued costs would be based on the number and size of firms projected to become insolvent during the year or those whose insolvency is expected to worsen. Reductions in accrued costs would be based on the number and size of insolvent firms expected to improve during the year.

In future years, newly accrued costs would be recorded in a program account and paid each year to a financing account outside the budget totals. The budget authority to make this payment would take into account premium receipts. Payments from the program account would be required to cover all resolution costs, but the financing account could borrow working capital from the Treasury and repay it with interest. Because of the transition to a new outlay concept, losses that have accrued prior to the change in accounting would continue to be paid to the financing account from the current budget, or liquidating, account.

Total budget outlays would be the sum of new losses as they accrued, payments from the liquidating account for old losses, and administrative costs, less premiums collected. On this basis, BIF outlays are expected to total $32 billion from 1992 through 1997, unless additional reforms are adopted. Expressed on the old cash basis, BIF outlays for the same period are expected to be $68 billion. The difference is largely a result of the exclusion of cash flows associated with the financing and subsequent liquidation of assets taken from failed institutions. Under the new concept, these repayments already have been taken into account when estimating the accrued costs for 1992.

Savings from Further Reforms.—Prompt enactment of further reforms of the type described below, including all elements of the Administration's proposals for modernizing the financial system that were not adopted last year, would reduce BIF cash payments to cover losses over the 1992–1997 period by an estimated $10 billion. As noted, the insurance fund's negative net worth would fall to -$28 billion before starting to recover. Expressed on the new accrual basis, BIF outlays would be $16 billion lower over the 1992–1997 period if a comprehensive set of additional reforms were adopted early in 1992. These effects are shown in Table 12–2.

The savings would result partly from an improvement in bank earnings, increased cost efficiencies, diversified risk and an ability to raise new capital, producing a reduction in the rate at which new costs accrue. Savings also would result from reduced risk-taking with insured deposits.

MODERNIZING THE REGULATION OF FINANCIAL SERVICES

The reforms needed to reduce future Bank Insurance Fund losses include critical elements of last year's comprehensive Administration proposals that were omitted from the 1991 legislation.

Table 12–2. **REFORMS CAN SUBSTANTIALLY REDUCE BANK INSURANCE FUND COSTS**

(In billions of dollars)

	1992	1993	1994	1995	1996	1997	1992–1997
Outlays on Accrual Basis:							
Current Law	13.2	23.9	3.7	0.6	-3.4	-6.4	31.6
With Further Reforms	12.5	22.2	3.2	-3.8	-8.8	-9.8	16.2
Potential Savings	0.7	1.8	0.5	4.5	5.4	3.3	15.5
Fund Net Worth:							
Current Law	-2	-18	-28	-35	-39	-38	NA
With Further Reforms	-2	-18	-25	-28	-27	-25	NA

NA = Not applicable.

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Restoring the Banking System to Good Health

The Administration urges adoption of reforms that were included in FISCCA, as introduced on March 20, 1991. They include:

- **Interstate Branching.**—Enactment of the Administration's proposal to authorize interstate banking and branching would remove archaic and costly restraints. Doing so would make banks safer because they could diversify their risks geographically and increase their profitability by avoiding costly legal barriers to efficient operation. Most importantly, additional capital may be attracted that would be available to absorb unexpected loan losses and thus serve as a buffer for the deposit insurance fund.
- **New Financial Activities.**—The Administration's proposal to authorize diversified financial services holding companies balances the need for banks to adapt to changes in the market and technology with the need for safety. This would allow banks to seek economies of scope by offering related services, thereby maintaining their competitiveness and attracting new capital.
- **Commercial Ownership.**—The opportunity for indirect commercial ownership of banks through a financial services holding company would bring new capital, management expertise, and strategic potential to a troubled sector. The present restrictions leave banks at a competitive disadvantage relative to savings and loans and non-bank financial companies.
- **Limiting the Scope of Deposit Insurance.**—The 1991 Act limited insurance for brokered deposits and bank insurance contracts. Enactment of the Administration's proposal to limit individuals to two $100,000 insured accounts per institution would be a modest step to further reduce taxpayer exposure and draw in an overextended safety net.

Ideas for Further Reform

As called for in the 1991 legislation, prompt efforts should be made to improve the measurement of bank capital.

- **Improved Measuremcnt of Capital.**—The newly enacted early corrective action program can reduce losses and operate fairly only if capital measures accurately distinguish weak from strong banks. Therefore, risk-based capital rules will be reviewed as called for in the 1991 Act to incorporate weights for interest rate and credit concentration risk. In addition, greater distinction should be made between higher- and lower-risk business loans.

Some ideas have more far-reaching implications and will require further study and discussion before taking the form of specific proposals. These include:

- **Risk-based Premiums Set by the Market.**—Either the newly authorized private reinsurance demonstration or yield spreads on banks' uninsured debt could be used to establish benchmark premium rates. Based on experience, the deposit insurance premium structure could be revised so that each bank pays a premium that is proportionate to the risk it poses to the deposit insurance fund. Because private insurers would participate in monitoring the condition of banks they reinsure, their judgments could be used to reinforce Government supervision.
- **Encouraging a Secondary Market for Small Business Loans.**—Following on the enormous growth of a secondary market for mortgages and other consumer credits, some banks have begun to explore securitization of business loans. The growth of a more efficient market for business loans is of interest not only because it would help banks manage their risks but also because it might lower the cost of that credit and thereby promote economic growth. Without creating a new Government-sponsored enterprise and thus a potential taxpayer liability, the Government can encourage such financial innovation, including the development of a deep, liquid secondary market for bank loans to smaller businesses. It can do this by identifying barriers to this innovation and trying to overcome them. In addition, the Securities and Exchange Commission is currently exploring ways to improve

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small business access to debt and equity markets. Government might foster the development of a secondary market for business loans by setting standards, providing incentives for safety, and policing new markets as they develop.

SAVINGS AND LOANS: FINISHING THE CLEAN-UP

The savings and loan industry has experienced an even sharper decline than have banks. In the 1980s, a combination of turbulent markets and ill-conceived or inadequate legislative remedies contributed to hundreds of thrift failures. Fraud, delays in funding, and weak supervision compounded costs.

There are now 900 fewer thrifts, with $400 billion less in assets, than in 1988. However, the FIRREA reforms enacted in 1989 have been effective in limiting the growth of thrift problem costs. Stronger supervision, rapid progress in closing failed institutions, and other reforms have sharply reduced the rate at which new costs accrue. Continued rapid reduction of the overhang of insolvent institutions through the activity of the RTC, combined with recent changes in asset and interstate branching regulations, promise to stabilize the savings industry soon at a sustainable size.

Table 12–3 highlights the need for additional RTC funding. The total cost of the thrift debacle remains uncertain. Thrift industry earnings continue to be sensitive to interest rate movements. Relative to banks, many are thinly capitalized and operate on narrow margins. Final costs also will depend on the strength of real estate markets and on how efficiently the RTC manages and disposes of real estate and other assets acquired from failed institutions. So that the cleanup can be finished and to avoid cost increases that result from delays, it is essential that the Congress provide the necessary additional funds early in 1992.

Table 12–3. **THE RTC NEEDS SUFFICIENT FUNDS TO FINISH THE CLEAN-UP**

(In billions of dollars)

	1989–1991	1992	1993
Net Cash Outlays	106.4	40.4	32.5
Loss Funds Used/Needed	74.5	30.0	24.6
Failed Assets Resolved	187.6	112.0	136.0

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Addressing Inherited Claims and Hidden Liabilities:

13. Identifying Long-Term Obligations and Reducing Underwriting Risks

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13. IDENTIFYING LONG-TERM OBLIGATIONS AND REDUCING UNDERWRITING RISKS

The Federal Government becomes obligated to make large future outlays by extending credit, underwriting insurance, promising social security and medicare benefits, and contracting to pay annuities and health benefits to Federal retirees as part of their compensation. This Chapter estimates these future costs and discusses the measures that have been taken or are proposed in this budget to constrain them. The first section of the Chapter analyzes credit and insurance risks. The second section highlights public and Federal employee retirement and health care obligations.

REDUCING UNDERWRITING RISKS

The Federal Government continues to be the Nation's largest source of credit and underwriter of risk. At the end of 1991, the face amount of Federal and federally assisted credit and insurance was $6.3 trillion, up 3 percent from the previous year and 117 percent from 1980.

Three-fifths of all non-Federal credit outstanding has been assisted by Federal credit programs, Government-sponsored enterprises, or deposit insurance. The proportion of credit for housing that is federally assisted was 82 percent last year. Most credit for agriculture and education is also federally aided. The proportion of business credit that receives Federal support is much smaller. Indeed, the substantial Federal intervention on behalf of other borrowers draws credit away from business, allocating credit inefficiently and slowing the growth of productive investment.

Estimating Costs

Federal assistance can produce a substantial budgetary cost to the Government when failures and defaults occur, as they have with increasing frequency. This budget takes another step in an on-going effort to foresee such costs sooner and estimate their size more accurately. For each Federal credit and insurance program, Table 13–1 shows the face value outstanding at the end of 1991, the present value of all expected future costs, and the sum of budget outlays for new subsidies or accrual costs over 1992–97. These are compared with last year's face value and the costs shown in last year's budget.

- **Face Value.**—Deposit insurance is the largest program, with 45 percent of the face value of the total of all Federal credit and insurance outstanding. However, the most rapidly growing share of the total continues to be the implicitly guaranteed Government-sponsored enterprises, led by the Federal National Mortgage Corporation (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), and the Farm Credit System.
- **Deposit Insurance Cost.**—Measured in terms of both outlays and the present value of future costs, deposit insurance tops the cost list. Deposit insurance costs for thrifts continue to be larger than those for banks, reflecting the Resolution Trust Corporation's vigorous efforts to close insolvent thrifts. But the gross budgetary cost for new liabilities (see Table 13-4) is two to three times larger for commercial and savings banks than for thrifts.
- **Pension Guarantee Cost.**—The present value of future costs for pension guarantees is much higher than last year's figure due to an improved method of estimation. The old estimates focused on plans of firms that had a significant probability of

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Table 13–1. FACE VALUE AND ESTIMATED COST OF FEDERAL CREDIT AND INSURANCE PROGRAMS

(In billions of dollars)

Program	1992 Budget		1993 Budget		
	Face Value[1] 1990	Present Value of Future Costs[1]	Face Value 1991	Present Value of Future Costs[2]	Subsidy or Accrual Outlays 1992–97
Direct Loans:[3]					
Farmers Home[4]	53	19–33	52	11–15	3–4
REA and RTB[4]	37	11–15	39	4–5	0–1
Export-Import	9	3–6	9	4–6	0–1
AID	18	—	21	6–7	—
P.L. 480	13	—	12	7–9	2–3
Foreign Military Financing	17	—	9	1–2	0–1
Small Business	7	—	7	1–2	0–1
Other Direct	4	17–23	5	1–3	0–1
Inactive	19	—	20	1–2	—
Total Direct Loans	177	50–77	174	36–51	5–12
Guaranteed Loans:					
FHA Single-Family	285	(6)–0	301	(5)–0	—
VA Mortgage	161	3–6	158	3–6	1–3
FHA Multi-Family[4]	71	14–16	77	2–3	0–1
Guaranteed Student	53	30–37	57	38–42	16–18
Small Business	12	1–3	14	1–3	0–2
Farmers Home	6	1–3	6	1–3	0–1
Export-Import	5	4–6	6	4–6	1–2
CCC Export Credits	3	1–4	4	2–3	0–1
Other Guaranteed	8	3–9	7	0–1	0–1
Inactive	19	1–2	19	0–1	—
Total Guaranteed Loans	623	52–86	649	46–68	18–29
Federal Insurance:					
Deposit Insurance:					
Commercial and Savings Banks	1,911	[5]	1,942	34–51	4–20
Thrifts	726	[5]	654	55–60	10–12
Credit Unions	178	—	197	—	—
Total Deposit Insurance	2,815	[5]	2,793	89–111	14–32
PBGC	873	6–20	900	30–60	(3)–16
Other Insurance	738	3–6	750	2–3	1–2
Total Federal Insurance	4,426	[5]	4,443	121–174	12–50
GSEs:[6]					
Freddie Mac	317	—	369	—	—
Fannie Mae	372	—	456	—	—
FHLBanks	117	—	107	—	—
Sallie Mae[7]	—	—	—	—	—
FCS	50	1–2	74	0–1	—
Total GSEs	856	1–2	1,006	0–1	—
Total	6,082	[5]	6,272	203–294	35–91

[1] Costs are as they were displayed in the 1992 budget, uncorrected for errors. Outstandings for 1990 have been updated.

[2] For guarantees, these are liquidating plus program account outlays projected into the future. Direct loan future costs are the program account plus the embedded loss from outstanding loans. Future insurance costs are program plus liquidating costs through 1997, plus the accrued liability remaining at the end of 1997.

[3] Excludes loans and guarantees by deposit insurance agencies and programs not included under credit reform, such as CCC farm price supports. Defaulted guarantees which become direct loans are acounted for in guarantee volume and costs. 1990 cost estimates for AID, P.L. 480, Foreign Miliary Financing, Small Business, and "Inactive" direct loans were included in "Other Direct" in the 1992 budget.

[4] Estimated costs change primarily from improved data and estimation procedures, and lower interest rates.

[5] Outlays on the incompatible cash basis were: $42–78 billion for banks, $70–83 billion for thrifts.

[6] Net of borrowing from Federal sources and federally guaranteed loans.

[7] The face value and Federal costs of guaranteed student loans in Sallie Mae's portfolio are included in the guaranteed student loan account above.

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failure in the near future. The new estimates cover a wider range of plans and look much farther into the future at a growing pension system. (The new estimates are discussed below.) This large contingent liability contrasts sharply with the short-term view provided by net cash outlays, where premiums and other income are expected to exceed payments and expenses for several years.

- **Credit Costs.**—Among credit programs, the largest Federal costs, whether on a total present value or a 1992–97 outlay basis, are for guaranteed student loans and the programs of the Farmers Home Administration.

Managing Risk

Historically, the Federal Government has given inadequate attention to managing the risk of these credit and insurance programs. Many of them were viewed as self-financing; credit was expected to be repaid, and the cost of insurance was assumed to be covered by premiums. To the extent that costs occurred, they were mostly "unexpected" and "uncontrollable."

There has been a growing awareness in recent years that both the intended beneficiaries of these programs and the Nation are badly served when the principles of risk-management are not followed. The principle that the beneficiary should have a substantial stake has focused greater attention on the size of the borrower's downpayment and on banks' and businesses' capital. The principle that borrowers or insureds who take more risk should pay more has highlighted the need to relate premiums, fees, and interest rates to risk. Following these principles reduces the incentive that now exists for borrowers and insureds to take greater risks that may yield them larger gains, whereas the Federal program would bear or share any losses without additional compensation for these additional risks. Putting programs on a sounder financial footing can expand, rather than reduce, their social benefits while cutting Federal costs.

Controlling Costs

In addition to the indirect costs associated with excessive risk-taking, Federal credit and insurance programs also result in direct costs to the Government. Much of this cost is paid by healthy firms—for example, through higher deposit insurance or pension guarantee premiums. The remaining costs must be paid by taxpayers.

Prior to 1992, these costs were not controlled before the liability was incurred, in contrast to other budgetary outlays. For credit programs, this changed with the Federal Credit Reform Act of 1990. Starting in 1992, the cost of new direct loans or loan guarantees must be estimated in advance and appropriations enacted or budget authority otherwise provided before credit can be extended. This law is discussed further below.

Consistent with Congressional interest in accounting reforms, this budget proposes that the principles underlying credit reform be extended to budgeting for Federal insurance programs. The Office of Management and Budget and the Congressional Budget Office both reported to Congress last spring on ways in which these principles could be extended to deposit insurance.[1] Since then, OMB staff has done further analysis to make feasible their extension to other insurance programs. This budget includes a legislative proposal to apply these principles to deposit insurance and pension guarantees effective in 1992; this change would be proposed for the other insurance programs in 1993. Implementation of the change would force recognition of costs much earlier than is now the case, and, by providing an incentive to enact much-needed reforms, would increase budgetary control of insurance costs.

CREDIT PROGRAMS

Credit Reform

Implementation of the Federal Credit Reform Act of 1990 was a major development of the past year for credit programs. The

[1] *Budgeting for Federal Deposit Insurance,* published by the Office of Management and Budget, June 1991, and *Budgetary Treatment of Deposit Insurance: A Framework for Reform,* published by the Congressional Budget Office, May 1991.

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law requires agencies to assess the risks of their direct loans and loan guarantees and to estimate their cost. Cost is defined as the present value, discounted at Treasury rates of comparable maturity, of the expected cash outflows from the Government minus the expected cash inflows to the Government. If borrower repayments and interest are not sufficient to cover the principal of a direct loan and the Treasury's cost of borrowing, the shortfall is a cost to the Government; if guaranteed loan defaults (and interest subsidies, where paid) are larger than the fees that borrowers pay to the Government, that too is a cost.[2]

Default costs are not estimated for particular loans as they become delinquent. Nor is an attempt made to predict exactly which loans will become delinquent or default. Instead, the probability of default for a large group of loans is based on an analysis of the historical relationship between default and the specific characteristics on which defaults depend. For example, borrowers who have built up equity in their homes are unlikely to default on their mortgages; at worst, they would sell the house, repay the mortgage, and recoup their equity. Similarly, students who receive a valuable education and begin paying off their loans may become delinquent if they become unemployed and have exhausted their deferments, but they are likely to find a new job and resume payments. The size of these probabilities under different economic conditions can be estimated based on econometric analysis of experience with the program's previous loans.

For international credit programs, a common set of risk-based categories was developed to assess the subsidies of direct loans and loan guarantees. They take into account such factors as a country's payment history, its export potential to service foreign debt, and its ability to implement macroeconomic and financial policies, including the International Monetary Fund's conditionality criteria for advancing loans. The subsidy amounts for specific risk categories were derived using financial market default estimates on sovereign debt.

Budget Justification.—In the 1992 budget, appropriations were requested or budget authority required for Federal credit programs to cover the full subsidy costs—the default, interest, and other costs—of loans and guarantees. In the Congressional budget process, allocations of budget authority to Committees included the costs of credit programs. For the first time, these costs had to compete for resources on the same basis as other Federal spending in the same spending category. For discretionary programs, larger subsidy amounts—for example due to more loan volume, greater risk, or lower interest rates or fees—had to be traded off against other outlays for grants, benefit payments, or purchases. Even where subsidies were small, the need to request appropriations required consideration of the potential costs.

Budget Execution.—Credit reform is also making a substantial difference in budget execution. In effect, funding to cover future costs is charged against the appropriation for each loan and guarantee as it is made. When a direct loan is made, the subsidy lowers the amount borrowed from Treasury to disburse the loan by enough to allow for expected defaults; for loan guarantees, it provided a reserve for future claims. Credit reform requires much more careful record keeping, which identifies loans or classes of loans by the appropriation that provided authority, their maturity and date of origination, and their subsequent cash outflows and inflows. Some programs in 1992 and many programs in 1993 also identify loans by "risk category"—those characteristics that determine the likelihood of defaults and other costs. These records will be used in reestimating the subsidies for each program-year in each succeeding budget, and they will influence the subsidy calculations for new loans and guarantees. These records would also assist programs to underwrite and service loans better.

Program Reforms

In addition to credit reform, the Omnibus Budget Reconciliation Act of 1990 (OBRA) and other recent legislation enacted specific reforms for the Federal Housing Administra-

[2] Subsidies are shown in Tables 13–2 and 13–3. Additional information may be found in Appendix One, Chapter 3, "Federal Credit Programs."

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Table 13–2. ESTIMATED SUBSIDY RATES, BUDGET AUTHORITY, AND OUTLAYS FOR DIRECT LOANS

Agency and Program	1993 Weighted-average subsidy as a percent of disbursements	In millions of dollars					
		Subsidy Budget Authority			Subsidy Outlays		
		1993	1994	1995	1993	1994	1995
Funds Appropriated to the President:							
Foreign military financing	17.5	63	63	63	10	33	52
Overseas Private Investment Corporation	13.9	4	4	4	2	4	4
AID Private Sector Investment Program	6.4	*	*	*	*	*	*
Agriculture:							
Agricultural credit insurance fund	19.7	111	100	98	106	96	93
Rural development insurance fund	13.7	96	83	73	6	5	4
Rural development loan fund	52.3	20	20	19	2	2	2
Rural housing insurance fund	38.5	392	380	370	342	362	364
Public Law 480 export credits	67.1	318	318	318	335	318	318
Rural Electrification Administration:							
Rural electric and telephone	11.3	181	128	124	118	93	107
Rural telephone bank	2.1	10	9	8	1	3	5
Housing and Urban Development: Restore loans	50	50	50	50	17	33	50
Interior: Bureau of Reclamation loan program	48.5	1	1	1	1	1	1
State Department: Repatriation Loans	80	1	1	1	1	1	1
Veterans Affairs:							
Direct loan revolving fund	5.4	*	*	*	*	*	*
Loan guaranty revolving fund	8.4	67	52	41	67	52	41
Guaranty and indemnity fund	7.7	16	25	35	16	25	35
Vocational rehabilitation	2.9	*	*	*	*	*	*
Education loan fund	12.4	*	*	*	*	*	*
Transitional housing loans	10.0	*	*	*	*	*	*
Small Business Administration:							
Disaster loans	8.2	24	24	24	61	34	24
Business Loans: Handicapped Assistance	18.7	1	1	1	7	2	1
Export-Import Bank	6.1	128	128	128	34	71	105
Total, direct loan subsidies [1]	9.4	1,489	1,394	1,359	1,126	1,135	1,207

*$500 thousand or less.
[1] Weighted average.

tion (FHA) and Guaranteed Student Loan (GSL) programs.

Furthermore, many programs undertook administrative reforms to reduce costs and improve management. The Department of Veterans Affairs (VA) is more carefully comparing the return from cash sales of acquired properties with returns from sales financed by new Federal direct loans to the buyers (vendee loans). The FHA multi-family program

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Table 13–3. ESTIMATED SUBSIDY RATES, BUDGET AUTHORITY, AND OUTLAYS FOR LOAN GUARANTEES

(In millions of dollars)

Agency and Program	1993 Weighted-average subsidy as a percent of disbursements	In millions of dollars					
		Subsidy Budget Authority			Subsidy Outlays		
		1993	1994	1995	1993	1994	1995
Funds Appropriated to the President:							
AID private sector loans	4.7	5	5	5	1	3	5
AID housing and other credit	17.3	16	16	16	1	5	9
Overseas Private Investment Corporation	1.5	7	6	6	2	6	6
Agriculture:							
Agricultural credit insurance fund	3.6	83	131	138	66	102	107
Rural development insurance fund	2.7	5	5	6	4	5	5
Rural housing insurance fund	14.7	103	104	105	90	102	104
Agricultural Resource Conservation Demonstration	36.4	4	4	4	4	4	4
Rural Electrification Administration:							
Rural electric and telephone	0.04	(*)	(*)	(*)	(*)	(*)	(*)
Commodity Credit Corporation: Export credits	2.8	158	158	157	158	158	157
Education:							
Guaranteed student loans, Stafford	17.6	2,387	2,793	2,986	2,073	2,444	2,699
Guaranteed student loans, PLUS	8.5	116	128	140	103	117	128
Guaranteed student loans, SLS	12.2	360	407	443	293	358	394
Health and Human Services:							
Health professions graduate student	9.1	21	15	6	21	15	6
Housing and Urban Development:							
Federal Housing Administration mutual mortgage	-2.7	-1,386	-1,363	-1,356	-1,386	-1,363	-1,356
Federal Housing Administration general and special risk	2.0	184	184	184	128	167	167
GNMA secondary mortgage guarantees	—	—	—	—	—	—	—
Interior: Indian loan guaranty and insurance fund	12.9	9	9	9	9	9	9
Veterans Affairs:							
Loan guaranty revolving fund	4.0	(*)	(*)	(*)	(*)	(*)	(*)
Guaranty and indemnity fund	1.3	192	246	246	192	246	246
Small Business Administration: Business loans	1.8	87	87	87	131	83	83
Export-Import Bank	5.3	495	495	495	213	315	412
Total, loan guarantee subsidies [1]	2.8	2,849	3,438	3,677	2,103	2,776	3,185

* $500 thousand or less.
[1] Weighted average.

has begun to delegate underwriting and processing of insurance applications for insuring rental housing properties to HUD-approved processors. HUD field staff review the decisions. This procedure replaces the poorly designed and implemented coinsurance program. The Department of Education is reviewing the default experience of schools and monitoring the performance of lenders and guarantee agencies more closely. The Farmers Home Administration has promulgated new rules to reduce error and fraud in the rural housing program. The minimum private capital needed to operate a Small Business Investment Company has been raised, and staff monitoring increased.

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Budget Proposals

Additional credit program reforms are being proposed in this budget.

- For the VA mortgage guaranty program, the "no-bid" formula used to determine when it is cost-effective to acquire foreclosed property rather than pay the guaranty would be changed to include any expected losses on the resale of property. This change is estimated to reduce acquisitions from 85 percent of foreclosures to 70 percent. The VA also proposes to increase the loan origination fee by 0.75 percent (from 1.25 percent to 2.00 percent for a no-downpayment loan) and to require a 2.50 percent fee and a 10 percent downpayment for second and subsequent uses of the program.
- The Administration seeks to build on last year's changes to strengthen the Guaranteed Student Loan program through its Higher Education Act reauthorization proposals. Federal cost would be reduced by lowering origination and servicing payments to lenders with high default rates. States would be required to strengthen their licensing so that only qualified schools become eligible for the GSL program; they would also be responsible for a portion of default costs when State-approved schools have high default rates. Guarantee agencies would be stabilized by requiring management plans from weak agencies, setting minimum reserve requirements, and giving the Secretary of Education the necessary authority to deal with a troubled guarantor. Students who borrow or receive other Federal student aid, such as Pell grants, would be subject to minimum performance standards, as determined by the Secretary. This is an important step to ensure that recipients of Federal student aid are making satisfactory progress toward the completion of a certificate or degree.
- The Administration favors many of the specific reforms to reduce defaults in the Health Education Assistance Loan (HEAL) program contained in the Senate-passed HEAL reauthorization bill. These include: limiting participation of schools with high default rates, assessing penalty fees and other risk-sharing to encourage policies to reduce defaults, and enhancing the collection authority of the Government.
- Farm lending would be targeted to meet the needs of new and beginning farmers and those who are disadvantaged. Borrower eligibility would be limited to 7 years for direct loans and 10 years for loan guarantees. Shifts to guarantees from direct loans will again be proposed for both farm loans and rural housing.
- The Small Business Administration also will be shifting toward guaranteed loans, and will seek legislation to increase private risk-sharing from 15 percent to 25 percent. Higher fees will be sought to cover a larger share of the cost of these programs. These reforms would reduce the current 19 percent default rate, lowering the subsidy cost to the Federal Government.
- The Rural Telephone Bank (RTB) is scheduled by law to be privatized in 1996. A reserve account would be established from the proceeds of borrower RTB stock purchases to help achieve privatization through the redemption of federally held RTB stock.

An evaluation of the FHA multi-family housing program, which is scheduled to be completed soon, is expected to result in additional proposals for reform.

INSURANCE PROGRAMS

As used to be the case for credit programs, the cash outlays of insurance programs do not provide a clear and timely measure of their cost to the Government. Insurance programs commit the Government to costs that are not delimited or estimated when Congress authorizes the insurance to be provided. The costs are not recorded when they accrue. Instead, the budget records them months, years, or, in the case of pension guarantees, even decades later. They are recorded only when cash payments are made to protect the depositors in failed banks or the pensioners in underfunded plans of failed firms, or in response to the occurrence of other federally insured events.

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Cash budgeting for insurance programs thus delays the recognition of emerging problems. It does not help decision-makers to see what is occurring or what is ahead. As a result, they cannot act in time to ensure adequate resources or to reform the insurance system in ways that might limit costs. Under the current system, these are "sunk costs" by the time they appear in the budget. By that time, they are the Government's legal and moral responsibility, and little can be done to control them.

Toward Insurance Reform

Even before credit reform was enacted, the Administration had begun to explore how its principles could be extended to Federal insurance programs. In enacting credit reform, the Congress also indicated its interest in improving the budgeting and accounting for Federal insurance programs. As the Act required, the Office of Management and Budget and the Congressional Budget Office each reported to Congress on the appropriate way to budget for Federal deposit insurance. Both reports agreed that cash accounting for deposit insurance had served the Nation poorly; it delayed recognition of growing liabilities, and thus added to costs. Both reports agreed that costs should be measured as they arise, rather than later when they are paid.

The OMB report defined the accrual cost of deposit insurance and developed an innovative way to estimate this cost in an options pricing framework by estimating economic value using publicly available financial statements that all insured banks and thrifts file every quarter with regulators. Subsequently, the estimates were refined and validated by comparison with other measures of economic value. Starting from the observed distribution of financial condition, future deposit insurance costs were projected using Monte Carlo simulations, which permit the earnings of firms to vary randomly in a recently-experienced pattern. Further details of this method are described in Chapter 12, "Modernizing the Financial Services Sector."

A similar options pricing approach was developed to estimate the accrual cost of the Pension Benefit Guaranty Corporation (PBGC). The pension guarantee model is complicated by the fact that not one but two events must occur before Federal payments are made, and they are interrelated. Federal payments are made only if a firm with a defined benefit pension plan fails and if its pension fund is inadequate to cover guaranteed payments. This work is discussed further below.

The Administration's Proposal

The Administration is proposing to shift the budgetary treatment of insurance programs to an accrual basis. By recognizing costs as they are incurred, this approach provides policymakers with the information and incentives necessary to control such costs. Rapid progress has been made in developing the appropriate concepts and measures. Legislation will be proposed to shift deposit insurance and pension guarantee programs to the new basis starting in 1992; a similar shift will be proposed for all other Federal insurance programs in 1993.

Measuring Accrual Cost.—For deposit insurance, the gross accrual cost in any year is the amount by which the resolution costs for insolvent firms increase between the beginning of the year and the date of their closure or, for those that remain open, the end of the year. New costs are recorded both for firms whose insolvency worsens, and those that become insolvent during the year. Offsetting cost reductions are recorded to the extent that insolvent firms improve during the year. The resolution cost is the present value of all expected costs of dealing with these insolvencies, taking account of collections from the sale of acquired institutions' assets. As described in Chapter 12, these costs have been estimated as of 1991 and projected for future years, based on data for 400 bank holding companies, other large banks, and all thrifts.

Similarly for pension guarantees, the gross accrual cost is the difference between the accrued cost at the beginning of the year and that at the end of the year (or at termination, if that occurs during the year). The accrued cost is the present value as of a given date of all active plans' estimated future insurance claims over the expected life of the firm. These costs have been

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estimated, as described below, based on publicly available data for about 1,800 firms and their pension plans.

Accrual costs for some other Federal insurance programs can be estimated using methods similar to those used in the private sector. The measure for veterans' life insurance is the same as for any private life insurance. The measure for flood or crop insurance is the same as for any private casualty insurance. Such costs are commonly measured and projected by actuaries. Where the Federal Government insures against unusual or catastrophic risks, such as war or expropriation, a further assessment of costs is needed.

Budgeting for Accrual Cost.—For deposit insurance and pension guarantees, the Administration proposes that the new measure of accrual cost, instead of cash disbursements, be included in budget outlays in 1992 and thereafter. (See Appendix One, Chapters 23 and 33.)

Three accounts would work in tandem to show the full accrued and accruing costs of these programs in the budget on a more timely basis, but also to continue to track all cash flows.

- The program account would focus attention on the new cost of these programs, recorded as it accrues. As conditions change, any change in cost would be shown here. The new accrual costs would be paid each year on a mandatory basis to a financing account. Administrative expenses would be separately accounted for and paid from the program account.
- Consistent with credit reform, all of the costs accrued prior to 1992 would be paid from the current budget account, which would become a liquidating account. At the time the Government takes over failed depository institutions or pension plans are terminated, any cost for that firm or plan which had accrued as of October 1, 1991, would be paid by the liquidating account to the financing account.

The liquidating and program accounts together show the full use of general fund resources for the insurance programs; they are included in total budget outlays. Because the payments by both of these accounts are made to a financing account outside the budget, the total budget outlays and budget deficit reflect these costs and reflect them on a timely basis. The financing account itself will include all cash flows associated with the insurance program. Thus, the countability of cash will not be lost, and the total amount of financing required by the Government will be known.[3]

Total budget outlays for each program would be the sum of accrual cost, liquidating account costs that had accrued before the change in budgeting, and administrative costs, less premiums and interest received. Thus, outlays would be shown only if, and to the extent that, they become a charge on the general taxpayer, rather than premium payers.

Budget authority would be required to make payments from the program and the liquidating accounts for any amounts exceeding the income of the financing account, including premiums. An annual appropriation would be needed, which the present proposal would classify as direct (mandatory) spending. However, the Administration is willing to consider other approaches that would assure sufficient funding flexibility and adequate control over annual expenditures. Payments would be required to cover all resolution or termination costs. But the financing account could borrow working capital, as needed, from the Treasury and repay it with interest.

In the case of deposit insurance and pension guarantees, the expectation is that a cost increase would be offset to the extent possible either by reducing future costs through program reforms or by increasing premiums. By providing a more timely assessment of resource needs, accrual budgeting would help to avoid unpleasant surprises.

Results.—Table 13–4 depicts deposit and pension insurance on this new basis. The first column shows the portion of the liabilities outstanding at the start of 1992 which is expected to be paid as terminations and failures occur through 1997. The projection depends partly on future economic conditions, and partly on closure policies. Column two shows the additional liabilities that are expected to accrue

[3] Financing accounts are discussed further in Chapter 14, "Accounting for Federal Borrowing and Debt," and in Appendix One, Chapter 7, "Off-Budget Federal Entities."

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from 1992 through 1997. The lower end of the range assumes that Administration policy will be enacted; costs would be higher under current law. The last column shows outlays excluding administrative expenses.[4]

Pension Benefit Guarantees

The conversion to accrual budgeting is particularly meaningful for the Pension Benefit Guaranty Corporation (PBGC) because its commitments extend far into the future; and the farther ahead one looks, the more urgent is the case for reform. PBGC's true financial condition is inadequately portrayed by comparing annual cash receipts to current cash outlays. Over the next several years, premiums and investment income are projected to exceed benefit payouts and program administration. However, other data show the PBGC's financial condition deteriorating. The agency is increasingly vulnerable to large losses.

This worsening in PBGC's financial condition occurred despite a period of strong economic growth and stock market gains in the 1980s. Insurance claims on the PBGC increased substantially. Further, despite a decline through most of the decade in pension underfunding, PBGC's exposure to imminent losses has grown because the financial condition of some companies with the largest pension underfunding weakened. For example:

- The Eastern and Pan Am plans that terminated in fiscal year 1991 alone represent roughly 25 percent of the losses that the PBGC has incurred since it was set up in 1974.
- Between 1989 and 1991, the PBGC's deficit for the single-employer plans that it has already taken over—the present value of benefits it must pay in excess of the value of assets—grew 127 percent to $2.5 billion.
- The agency's exposure to "reasonably possible" losses has grown approximately $10 billion since 1989, as sponsoring companies' financial condition has worsened and underfunding has increased.

The reforms enacted to reduce pension underfunding in 1987 are not working fast enough to increase benefit security or to reduce PBGC's expected costs. Nor are PBGC's recoveries from sponsors of terminated underfunded plans under current law enough to offset its growing deficit. In addition, the PBGC's condition in bankruptcy has been put in doubt by recent court decisions.

Because the PBGC guarantees pensions under plans that extend far into the future, policymakers need to have available a more comprehensive method of estimating PBGC's long-run financial condition. Without such

[4] Appendix Two, Chapter 37, "Current Services Estimates," shows deposit and pension insurance on both a cash and an accrual basis, and separately shows the effects of proposed reforms for these programs.

Table 13–4. **FEDERAL INSURANCE PROGRAM COSTS: ACCRUED BASIS**

(In billions of dollars)

	1992–1997			
	Gross Budgetary Cost			
	For pre-1992 Liabilities	For post-1992 Liabilities[1]	Premiums	Net Budgetary Costs[2]
Bank Insurance Fund	42	33–50	53	22–39
Resolution Trust Corporation/SAIF	50	16	6	60
National Credit Union Share Insurance Fund	—	21	1	—
Pension Benefit Guaranty Corporation	6	(1)–23	9	(4)–20
Total	98	52–92	69	83–124

[1] This is the increment to the outstanding cost during the 1992–97 period. The range reflects lower costs if Administration proposals are enacted, to higher costs under current law.
[2] Excluding administrative expenses.

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tools, policymakers would not be able to fully assess the potential costs of the pension insurance program and to adequately monitor and plan for the program's future. New estimates of potential costs, based on more relevant factors and shifting the focus from the near- to the long-term, have been developed. These estimates show that the accrued cost of the PBGC's contingent liability was $43 billion at the beginning of fiscal year 1992 and will grow under current law.

Measuring Pension Guarantee Costs.— The Administration is using a simplified options pricing model to assess the cost of publicly traded firms holding 70 percent ($567 billion) of the single-employer pension liabilities insured by the PBGC. Omitted from this sample are the remaining single-employer plans and the $88 billion in multi-employer pension liabilities insured by the PBGC.

The model starts from actual data on these firms and their pension plans, including the firm's equity and the plan's assets and liabilities. The model also uses information on funding requirements from current pension law, recent PBGC recovery rates from bankrupt firms, historical growth rates of pension fund assets and liabilities, and estimates of the variability and covariance in firm equity and plan assets and liabilities. Based on experience, the assumptions differ between overfunded and underfunded plans.

Estimates of the accrued cost to PBGC of potential insurance claims over the expected life of covered firms are made for each plan. Indeed, the larger plans are subdivided into smaller units with the same characteristics so as to provide a smooth estimate of their probability of failure and the probable size of underfunding at closure. The model is then used to estimate the aggregate cost to PBGC. At the beginning of 1991, this accrued liability was $47 billion. Low stock market values at the start of that year triggered a requirement for increased funding by many firms during 1991; at the same time, stock prices rose. These factors helped to reduce the accrued liability to an estimated $43 billion at the beginning of 1992.

Predicting the future is an uncertain business, but one thing is certain: change will occur. These changes will cause some firms to fail. Future costs can be projected better by starting from current financial conditions and assuming random probabilities of change with a recently observed pattern, rather than either assuming no change or attempting to identify the future failure of specific firms. Currently underfunded pension plans, with 20 percent of outstanding pension liabilities, account for two-thirds of PBGC's accrued cost. Some cost is due to currently overfunded plans and currently solvent firms that may some day become underfunded and insolvent. Under current law and baseline assumptions, the PBGC's costs are estimated to grow at an average rate of $3.4 billion a year over the next six years.

A more comprehensive options pricing model incorporating more variables and relationships is under development. PBGC is also collecting data on the remaining funds covered by its guarantees. This work will further improve understanding of the current and future exposure of PBGC under various economic and financial conditions, and across different industrial sectors and pension fund types.

Reforming the Pension Guarantee System

In view of the PBGC's large and growing exposure, the Administration is proposing a three-part legislative program.

Minimum Funding Requirements.—The Administration will propose that annual pension contributions required of sponsors of underfunded single-employer pension plans with 100 or more participants be the largest of contributions calculated under:

- a new solvency maintenance rule that would require sponsors to contribute as much as a plan paid out during a year and interest on the plan's underfunded liability at the beginning of the year;
- a revision of the underfunding reduction rule enacted in 1987 that would accelerate the effects of the 1987 reform; and
- the ERISA funding standard account rules enacted in 1974.

The new requirements would result in faster amortization of pension plan underfunding than current law rules. To ensure that no firm is unduly burdened

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by the proposed solvency maintenance rule, a cap would be placed on the new requirement for a transition period. In addition, other transition provisions that recognize pre-enactment expectations are part of the package.

Guarantee Growth in Chronically Underfunded Plans.—To further improve funding incentives and limit PBGC's exposure from structurally underfunded pension plans, the Administration will propose to freeze the guarantee with respect to plan amendments that increase promised benefit payments in plans that remain underfunded. This proposal would apply prospectively to new plan amendments.

Bankruptcy Reform.—To improve the PBGC's recoveries, the Administration will repropose bankruptcy law amendments to clarify and improve the status of PBGC claims in bankruptcy, revise the legal treatment of contingent early retirement benefits provided in some pension plans, and give the PBGC the option of becoming a member of creditors' committees in bankruptcy proceedings.

The cumulative effect of these reforms would be to lower the PBGC's accrued cost by $8.7 billion in the year the savings are first counted and reduce substantially the growth of costs thereafter.

GOVERNMENT-SPONSORED ENTERPRISES

The large and rapidly growing Government-sponsored enterprises have continued to be profitable. They have a low borrowing cost due to their perceived Federal guarantee, the geographic diversity and economies of scale that come from their nationwide operations, and the flexibility to respond to market changes due to their private ownership. Stress tests on the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) show that they continue to be resistant to credit and interest rate risks. The Student Loan Marketing Association (Sallie Mae) is similarly resistant to interest rate risk, and its credit risk is almost entirely borne by the Federal Guaranteed Student Loan program.

The Administration, however, continues to support legislation that would for the first time put in place a comprehensive approach to ensure the safety and soundness of Fannie Mae and Freddie Mac and reduce the exposure of the Federal Government to losses. This legislation would establish: (1) a separate, arms-length Office of Secondary Market and Examination within the Department of Housing and Urban Development; (2) a three-part capital standard (including risk-based capital); and (3) authority for the Director of the new Office to take enforcement actions when capital is at unacceptable levels.

The Farm Credit System (FCS) is continuing its slow recovery from the mid-1980s agricultural recession, which precipitated the 1987 Federal bailout of the System. FCS earnings are rising, and all but three FCS banks have already reached the target of seven percent at-risk capital that all banks must reach by 1994. However, two FCS banks remain at some risk of failure. The FCS is getting stronger, but it remains vulnerable to any future downturn in the agricultural economy, and it risks the flight of high quality borrowers whenever its loan rates are not competitive. Insurance companies have re-entered the farm real estate market, and new legislation which permits the Federal Agricultural Mortgage Corporation (Farmer Mac) to hold, as well as guarantee, securitized farm loans could stimulate increased competition for FCS from commercial banks. Legislation will be proposed to require the FCS to set funds aside for the repayment of federally guaranteed bailout debt, and to reimburse the Government for the interest it has paid on this debt.

Management Risks.—The risks from management and operations decisions, while difficult to measure, can be quite substantial for large and growing enterprises. Several GSEs have experienced management and operations risk in the past year. Fannie Mae, Freddie Mac, Sallie Mae, the FHLBanks, and FCS were affected by the overstatement of customer interest by investment bankers in the Government and agency debt markets. As a result, Fannie Mae and Freddie Mac have taken remedial steps, including disciplining the members of their selling groups and changing their debt sales procedures. The Administration continues to support a requirement that the proposed risk-based capital levels be increased by

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30 percent to cover management and operations risk.

Policy and Market Risks.—Two GSEs in particular are exposed to changes in future policy and market circumstances. Sallie Mae could be affected by changes in legislation reauthorizing the GSL program. Although strongly opposed by the Administration, proposals are under discussion in Congress that might shift all or part of this program from guaranteed to direct loans. Other proposals could reduce the payments to lenders and portfolio holders, like Sallie Mae, for operating the loan program.

The Federal Home Loan Bank System is affected by continued shrinkage in the size of the thrift industry. The resulting decline in System membership has led to reduced Federal Home Loan Bank advances, earnings, and dividends. The Federal Housing Finance Board has taken steps to manage this shrinkage while permitting the Banks to respond to earnings pressure by investing in mortgage-backed securities and bank "Federal funds." While this has allowed the System to remain profitable, it has also diminished its primary mission as a source of financing for mortgage origination and may have led to the assumption of increased interest rate risk. Although capital is still strong and there does not appear to be any immediate risk to the Federal Government, if the thrift industry's demand for FHLBank loans continues to decline, contingency plans should be developed to address issues that arise.

Conclusion

The Administration has for the first time systematically assessed the risk and cost of most Federal credit and insurance programs. The estimates for mortgage guarantees (VA, FHA, Fannie, and Freddie), student loans, deposit insurance, and PBGC are based on an options pricing approach and substantial historical data. International loans and the Farm Credit System have also been analyzed. Further work is in progress on small business and farm lending and the Government National Mortgage Association.

Drawing on improved understanding of the nature and size of the inherent risks, legislation has been proposed and administrative changes made to reduce these costs. Further legislative changes are proposed in this budget. The enactment of credit reform and the changes in the budgetary treatment of insurance programs proposed in this budget would further control and reduce Federal underwriting risk.

IDENTIFYING LONG-TERM RETIREMENT OBLIGATIONS

The Government plans to spend $516 billion in 1993 for social security, medicare, railroad retirement, and Federal employee retirement and health care benefits. This is 34 percent of total budget outlays, up sharply from 31 percent in 1980 and 22 percent in 1970. Federal outlays in these areas have been on the rise, reflecting increased real benefits, rapidly rising medical costs, and the aging of the population. Americans have been living longer after age 65, and more of the elderly have been retiring early.

The proportion of the elderly will increase in the early part of the 21st century as the baby-boom generation reaches retirement age. This would seriously stress the social security trust funds and would bankrupt the medicare hospital insurance (HI) trust fund by 2005 under intermediate assumptions. If health care costs continue to grow faster than the overall economy, liabilities for medicare and Federal retiree health programs would continue to expand as a share of the budget.

PUBLIC ANNUITY AND HEALTH INSURANCE PROGRAMS

Medicare

The escalating costs of medical care services and alternative measures to constrain them were highlighted in Chapter 2. According to the actuaries' most recent estimates, the unfunded liability of medicare hospital insurance was $402 billion as of September 1990. Table 13–5 shows actuarial deficiencies for

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major public and Federal employee retirement programs.

Social Security

Social security consists of Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI). Total spending on these two programs is estimated to be $302 billion in 1993. This is more than triple the amount in constant dollars spent in 1970.

Growing Retirement Burden.—Table 13–6, prepared by the social security actuaries under three alternative economic and demographic projections, shows the system's latest long-term financial condition. Although the health of the program is assured over the next 25 years, long-term stresses are likely to occur as the nearly 80 million people born during 1946–64 begin to retire in about 20 years.

- The number of social security beneficiaries per 100 covered workers—an indicator of burden—will rise sharply in the future. The ratio increases 70 percent (from 30 to 51) between 1990 and 2040 under social security's intermediate economic and demographic assumptions, and more than doubles under the pessimistic scenario.
- On a combined basis, the OASDI trust funds are solvent over the next 25 years in all three sets of assumptions, measured as a percent of taxable income or in terms of present value dollars. Over a 75-year horizon, however, a substantial actuarial deficiency exists. Under the intermediate assumptions, the present value of future social security benefits exceeds by $1.1 trillion the present value of total future receipts from (a) payroll taxes; (b) income tax receipts on social security benefits; and (c) interest on the Treasury securities held by the system.
- Without further statutory changes, the combined OASDI trust funds would be depleted by 2041 in the intermediate case, and by 2022 in the pessimistic case.
- Considered separately, the DI trust fund would become depleted by 2015 under intermediate assumptions, and could be depleted during the next ten years using more pessimistic assumptions.

Eroding Surpluses.—The Social Security Amendments of 1983 restored the long-run solvency of the OASDI program. The Trustees' report for that year projected surpluses suffi-

Table 13–5. **ACTUARIAL DEFICIENCIES OF RETIREMENT ANNUITY AND HEALTH PROGRAMS** [1]

(In billions of dollars)

	Amount
Annuity Programs:	
Social Security-OASDI	1,111
Civil Service Retirement System	660
Military Retirement System	533
Federal Employees Retirement System	6
Railroad Retirement Board	33
Other Retirement Systems [2]	21
Health Programs:	
Medicare—HI	402
Federal Employees Health Benefits Program	115
Military Treatment Facilities and CHAMPUS	295

[1] The actuarial deficiencies are not fully comparable. First, they differ in their underlying economic assumptions. Second, for social security and medicare, the deficiencies are calculated on an "open system" basis, which accounts for new entrants into these programs, as well as the active work force and current retirees. Deficiencies for CSRS, FERS, and MRS are calculated on a "closed system" basis. The estimates for Federal employee health programs are based on service accrued to date.

[2] These retirement programs include Coast Guard Military, Public Health Service Commissioned Corps, State Department Foreign Service, Tennessee Valley Authority, National Oceanic and Atmospheric Administration, and the Central Intelligence Agency Retirement and Disability System.

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Table 13–6. **ALTERNATIVE INDICATORS OF SOLVENCY FOR OASDI**

	Trustees' Assumptions		
	I	II	III
Beneficiaries per 100 covered workers in:			
1990	30	30	30
2015	34	37	41
2040	42	51	62
2065	41	55	78
Income rate minus cost rate as a percent of taxable payroll in:			
2015	2.18	0.47	-1.27
2040	0.19	-3.43	-7.76
2065	0.68	-4.52	-12.50
Actuarial deficiency (-) as a percent of taxable payroll:			
25 years	2.63	1.47	0.11
50 years	1.59	-0.21	-2.27
75 years	1.35	-1.08	-4.12
Present value of actuarial deficiency (-) in billions of dollars:			
25 years	1,591	980	314
50 years	1,717	46	-1,669
75 years	1,911	-1,111	-4,442

cient to finance the program over a 75-year horizon in all but the most pessimistic economic and demographic assumptions. Recent experience and revised assumptions, however, have significantly reduced the trust fund surpluses, as shown in the chart. This has advanced by 22 years the time when the trust fund balance would be exhausted.

A major cause of the reduced surpluses is the downward revision in the projection of covered workers' real wage growth, from 1.5 percent a year in the 1983 report to 1.1 percent in the 1991 report. Real wage growth is closely related to productivity growth. This change alone accounted for a reduction in the 75-year income balance of 0.4 percent of taxable payroll, or $479 billion in present value dollars. The Trustees also revised upward the long-term ratio of beneficiaries to covered workers, again reducing the solvency of the trust funds.

As discussed in Chapter 2, the Administration has proposed a growth package designed to promote higher rates of saving and investment, and to enhance long-run productivity growth. Enactment of this program would improve the solvency of the OASDI programs without reducing benefits or increasing contributions.

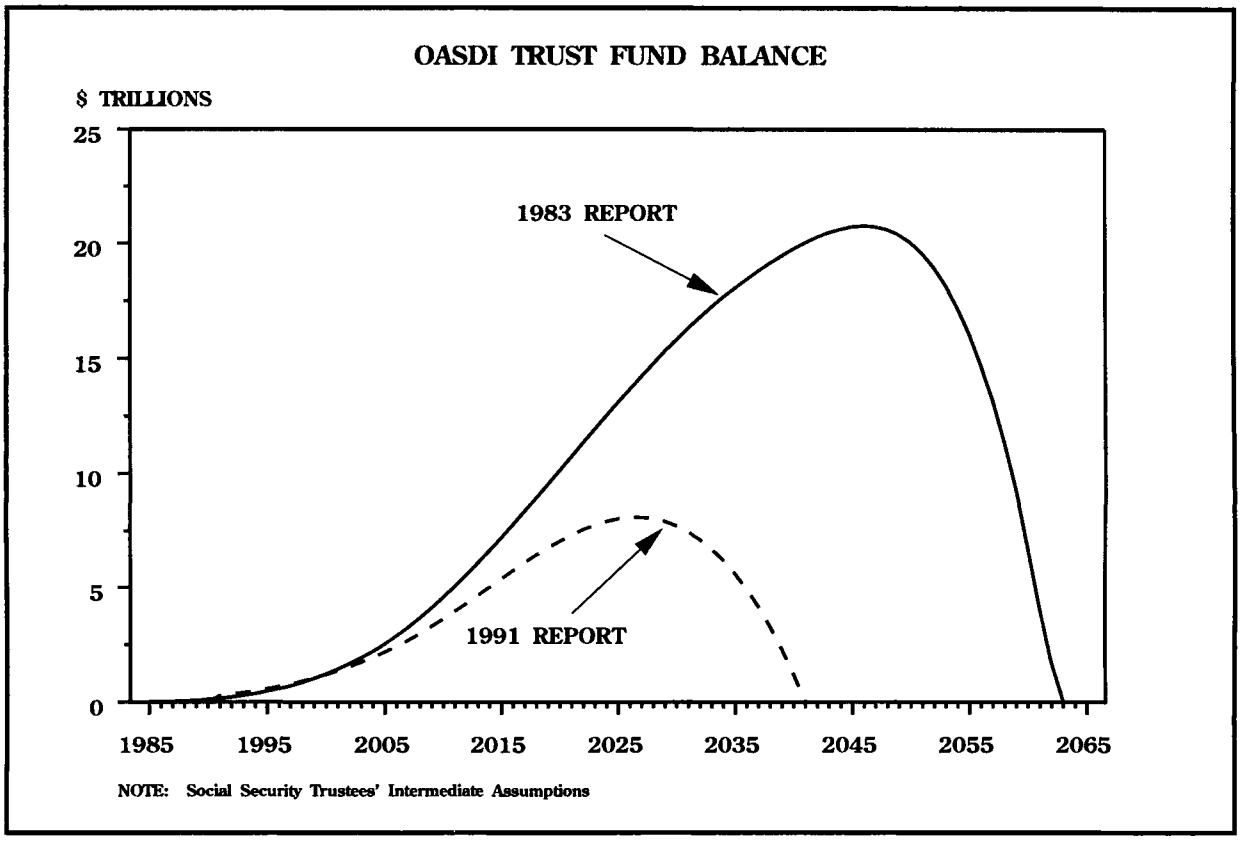
Railroad Retirement Board

With 300 retirees for every 100 rail employees—the exact opposite of social security's ratio—the rail pension system has required Federal subsidies to continue benefit payments. Declining employment, past underfunding by the rail sector, and inadequate financing plans have taken their toll on the rail pension system. The Railroad Retirement Board has been rescued from insolvency by the Congress five times in the past 16 years, and its current unfunded liability is estimated at $33 billion. The Administration has continually opposed increases in subsidies to the rail sector fund, and believes that self-sufficiency is desirable for the rail pension system.

FEDERAL EMPLOYEE RETIREMENT AND HEALTH INSURANCE

The Federal Government is by far the largest employer in the country, and operates several systems of retirement, disability, and medical care for its employees. The largest

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are the civilian and military retirement and disability funds. Next largest are the payment of health benefits for civilian annuitants and the Defense Department medical care program for retired military personnel and their dependents. Outlays on these programs, excluding military retirees' health benefits, are projected to total $64 billion in 1993.

Retirement Pensions

Actuarial Deficiencies and Accruing Costs.—The actuaries for the Federal civilian and military annuity programs provide estimates of unfunded accrued liabilities in their annual reports required by Public Law 95–595. These deficiency estimates are shown in Table 13–5. A distinction can be drawn between programs that are fully funded on an accrual basis and those that are partially funded or unfunded. The purpose is to assess how much of the actuarial deficiency arises from current and future service, and how much results from past service obligations.

For programs on an accrual basis, an actuarial deficiency exists only for obligations related to past service. Contributions for current service equal the estimated future Government liabilities. This results in more accurate trade-offs between personnel costs and other types of expenditures.

Actuarial estimates of accruing costs for defined benefits, as a percentage of basic pay, are shown in Table 13–7. The table also shows current agency and employer contributions to the trust funds set up to finance these plans.

Fully Funded Retirement Programs.—The Military Retirement System (MRS) and the Federal Employees Retirement System (FERS) are already on an accrual basis. Under these programs, the sum of employee and employer contributions to retirement trust funds in a given year is required to equal the actuarially determined cost of retirement annuities.

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Table 13–7. **ACCRUAL COSTS AND FUNDING FOR MAJOR RETIREMENT SYSTEMS**

(1991 estimates)

	Number of Active Personnel (thousands)	Actuaries Estimated Accrual Cost	Current Payments	
			Agency Payroll Charges	Employee Contributions Percent of Basic Pay
Plans on Full or Partial Accrual				
Military Retirement: [1].				
FINAL PAY	575	49.6	49.6	—
HI–3	523	43.6	43.6	—
REDUX	967	36.8	36.8	—
Civil Service Retirement: [2]				
CSRS	1,691	28.3	7.0	7.0
FERS	1,194	13.7	12.9	0.8
Foreign Service Retirement:				
FSRS	7	36.2	7.0	7.0
FSPS	5	23.2	21.7	1.4
Pay-As-You-Go Plans				
Coast Guard	37	29.2	—	—
Public Health Service	6	37.1	—	—

[1] FINAL PAY is the plan for military personnel entering the armed forces prior to September 1980. REDUX applies to all entrants since August 1986. HI–3 is the plan for entrants in the intervening time period. Military pay is only about 70 percent of total salary, and the percentages would be lower if computed on the basis of total compensation.

[2] Costs given for the typical employee. Costs for certain employees (law enforcement officers, firefighters, congressional staff and members, etc.) are higher than shown. For FERS, costs do not include Government contributions for social security or matching Thrift Savings Plan contributions.

MRS carries an actuarial deficiency valued at $533 billion, while FERS has a small actuarial deficiency of only $6 billion. The FERS deficiency largely reflects the prior service of transferees into the new system. The MRS deficiency is being amortized over 60 years, ending in 2043. An annual amortization payment is made by the general fund to the Military Retirement Fund.

Partially Funded Retirement Programs.—The Civil Service Retirement System (CSRS) is the major annuity program that is only partially funded. The combined employee/employer contributions of 14 percent of basic pay cover only about one-half of accruing costs. For this program, the actuarial deficiency is about $660 billion.

Converting CSRS to full accrual funding would eliminate $97 billion of liability related to future service. This would still, however, leave $563 billion of liability for benefits earned by employees and retirees for previous service. Treasury now pays about $19 billion a year to the Civil Service Retirement and Disability Trust Fund, which limits the growth of CSRS unfunded liability.

A few small retirement programs continue to operate strictly on a pay-as-you-go basis. These include the Coast Guard, the National Oceanic and Atmospheric Administration, and the Public Health Service (PHS) Commissioned Officers. This budget recommends converting PHS to an accrual basis, as in the previous two budgets.

Program Reform.—The budget proposes to increase the employee contribution for CSRS by 1 percentage point of base pay in January 1993 and by an additional percentage point in January 1994. This would increase total contributions by about $400 million in 1993

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and by $5.1 billion over 1993–1997. It would moderately reduce the actuarial deficiency for this program.

Retiree Health Care Benefits

Unfunded Liabilities.—The Federal Government operates a pay-as-you-go system for retiree health benefits for both civilian and military retirees. These programs have an actuarial deficiency equal to the present value of future retiree benefits. Preliminary estimates, shown in Table 13–5, have been made for the future health costs for current retirees and for the service-to-date of active employees.

The estimate for the Federal Employees Health Benefits Program (FEHBP) deficiency, $115 billion as of October 1, 1989, is based on calculations analogous to those required by private sector employers under Financial Accounting Standards Board guidelines. The estimate for military health programs, $295 billion, uses a somewhat different method and is calculated as of the beginning of 1993. Both estimates are highly sensitive to assumptions about health care costs and usage.

Civilian Employee Retiree Health Benefits.—Civilian retirees pay the same insurance premium as active employees under FEHBP if they continue to participate in the plan. These premiums cover only a portion of the costs. Although the Government contribution for the premiums of active employees in FEHBP is paid by the employing agency, the Government contribution for civilian retirees who continue to participate in the FEHBP is paid directly by the general fund to OPM. With the exception of the Postal Service, the agencies that employed them pay nothing. Outlays for FEHBP annuitant coverage totaled $1.6 billion in 1987, and are estimated at $3.9 billion in 1993.

Federal employees retiring after December 31, 1983, also qualify for medicare coverage at age 65. For employees who elect to participate in FEHBP and medicare, all covered hospital and physician visits are reimbursed with no deductibles and no coinsurance, and most FEHBP plans also provide 100 percent payment for prescription drugs. In contrast, most business retiree health plans provide for some cost-sharing to be paid by the retirees after medicare eligibility. Many firms are planning to increase employee cost-sharing and limit coverage in the future.

As currently structured, FEHBP provides poor incentives for appropriate health care usage by retirees with medicare coverage. Active employees have to pay significantly higher levels of deductibles and coinsurance than do retirees with medicare. FEHBP also offers more generous protection than most retirees receive in the private sector.

To encourage greater cost consciousness by FEHBP enrollees with medicare coverage, this budget proposes cost-sharing arrangements for this group. This would provide incentives for medicare enrollees to economize in such areas as purchasing prescription drugs and in selecting providers who accept medicare assignment (or charge equivalent fees).

Military Retiree Health Plans.—Military retirees are entitled to essentially free health care in military medical facilities if the facility can provide the needed care. Until they reach age 65, military retirees are also entitled to health care financed by the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). No premium is charged for CHAMPUS financed care, but there are deductible and copayment requirements. After they reach 65 years of age, military retirees are entitled to medicare.

The Department of Defense costs for retiree health care consist of the costs of building, equipping, staffing, operating and maintaining the military medical treatment facilities. They also include expenses of the claims paid by CHAMPUS and the administration of this program. Costs are funded annually by direct appropriations in the year the services are rendered (or, in the case of CHAMPUS, billed). The accruing costs for future health care of current employees when they retire is not now being recorded in the budget, but a proposal to convert to accrual is being studied.

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Addressing Inherited Claims and Hidden Liabilities:

14. Accounting for Federal Borrowing and Debt

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14. ACCOUNTING FOR FEDERAL BORROWING AND DEBT

Debt is the most explicit and legally binding obligation of the Federal Government. At the end of 1991 the Government owed $2,687 billion of principal to the people who had loaned it the money to pay for past deficits. The gross Federal debt, including the amount held by trust funds and other Government accounts, was $3,599 billion. This year the Government is estimated to pay about $217 billion of interest to the public on its debt. The total interest on gross Federal debt is about $294 billion, including $77 billion paid to trust funds.

The present deficit is continuing to increase the amount of debt substantially. However, the reduction in the deficit and borrowing will resume as soon as the economic recovery gathers momentum and the Government ceases to incur large outlays for deposit insurance due to the closing of insolvent thrift institutions and banks.

DEBT HELD BY THE PUBLIC AND GROSS FEDERAL DEBT

The Federal Government issues debt for two principal purposes. First, it borrows from the public in order to finance the Federal deficit. Second, it issues debt to Government accounts, primarily trust funds, that accumulate surpluses. By law, most trust fund surpluses must be invested in Federal securities. The gross Federal debt is thus defined to consist of both the debt held by the public and the debt held by Government accounts. Nearly all the Federal debt has been issued by the Treasury and is formally called "public debt," but a small portion has been issued by other Government agencies and is called "agency debt." [1]

Borrowing from the public, whether by the Treasury or some other Federal agency, has a significant impact on the economy. Borrowing from the public is normally a good approximation to the Federal demand on credit markets (although this is generally offset by an additional supply of funds to the credit market when the borrowing is used to fund the cost of resolving insolvent thrifts and banks). The Federal demand on credit markets, even if used productively for additional tangible or intangible investment, has to be financed by the saving of households and businesses, the State and local sector, or the rest of the world.[2] Borrowing from the public moreover affects the volume of securities sold in the credit market, the size and composition of assets held by the private sector, and the perceived wealth of the public. It also affects the amount of taxes required to pay interest to the public. Borrowing from the public is therefore an important concern of Federal fiscal policy.

Issuing debt securities to Government accounts is an essential element in accounting for the operation of these funds. The balances of debt represent the cumulative surpluses of these funds due to the excess of their tax receipts and other collections compared to their spending. These balances can be used in later years to finance future payments to the public. The interest on this debt compensates these funds—and the members of the public who pay earmarked taxes or user fees into these funds—for spending some of their income at a later time than when they receive it. Public policy may deliberately run surpluses and accumulate debt in trust funds and other Government accounts in order to finance future spending or to measure the accrual cost of employee retirement plans,

[1] The term "agency debt" is defined more narrowly in the budget than in the securities market, where it includes not only the debt of the Federal agencies listed in table 14–3 but also the debt of the Government-sponsored enterprises listed in table 3–8 of Appendix One, Chapter 3, and certain Government-guaranteed securities.

[2] The Federal sector of the national income and product accounts provides a better measure of the deficit for analyzing Federal dissaving than does the budget deficit or Federal borrowing from the public. The Federal sector and its differences from the budget are discussed in Chapter 27. Federal expenditures for tangible and intangible capital are not, however, counted as saving in the national income and product accounts.

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Table 14–1. TRENDS IN FEDERAL DEBT HELD BY THE PUBLIC

(Dollar amounts in billions)

	Debt held by the public		Debt held by the public as a percent of:		Interest on debt held by the public as a percent of total outlays[3]
	Current dollars	Constant 1987 dollars[1]	GDP	Credit market debt[2]	
1950	219.0	1,100.6	82.5	55.3	11.4
1955	226.6	1,002.3	59.0	43.3	7.6
1960	236.8	908.1	46.8	33.7	8.5
1965	260.8	922.5	38.8	26.9	8.1
1970	283.2	819.2	28.7	20.7	7.9
1975	394.7	829.6	26.1	18.4	7.5
1980	709.3	1,004.9	26.8	18.6	10.6
1981	784.8	1,009.2	26.5	18.7	12.1
1982	919.2	1,100.2	29.4	20.1	13.6
1983	1,131.0	1,229.8	34.1	22.3	13.8
1984	1,300.0	1,430.8	35.2	22.5	15.7
1985	1,499.4	1,589.7	37.8	23.0	16.2
1986	1,736.2	1,787.6	41.1	23.2	16.1
1987	1,888.1	1,888.1	42.4	22.9	16.0
1988	2,050.3	1,978.4	42.6	22.7	16.2
1989	2,190.3	2,023.8	42.4	22.4	16.5
1990	2,410.4	2,139.4	44.2	22.8	16.1
1991	2,687.2	2,295.0	47.8	24.3	16.2
1992 estimate	3,079.8	2,551.2	52.5	.....	15.1
1993 estimate	3,433.2	2,752.3	55.1	.....	15.6
1994 estimate	3,646.1	2,830.4	55.0	.....	16.6
1995 estimate	3,841.3	2,886.7	54.4	.....	16.5
1996 estimate	4,026.1	2,931.9	53.6	.....	16.4
1997 estimate	4,213.7	2,973.3	53.0	.....	16.0

[1] Debt in current dollars deflated by the GDP deflator with FY 1987 = 100.
[2] Source: Unpublished and preliminary estimates from the Federal Reserve Board flow of funds accounts. Total credit market debt owed by domestic nonfinancial sectors, modified to be consistent with budget concepts for the measurement of Federal debt. Projections not available.
[3] Interest on debt held by the public is estimated as the interest on the public debt less the "interest received by trust funds" (subfunction 901 less subfunctions 902 and 903). It does not include the comparatively small amount of interest on agency debt or the offsets for other interest received by Government accounts.

as it is doing now with social security, military retirement, and certain other funds.

However, the issuance of debt to Government accounts does not have any of the economic effects of borrowing from the public. It is an internal transaction between two accounts, both within the Government itself. It does not represent either current transactions of the Government with the public or an estimated amount of future transactions with the public. If the account conducts a retirement program, the debt that it holds does not represent the actuarial present value of future benefits. (However, if the costs to a retirement program for past and present services are fully accrued, the debt does approximately represent the actuarial present value of future benefits net of future contributions. The future transactions of the major Federal retirement programs, which own about four-fifths of the debt held by Government accounts, are important in their own right and are discussed in Chapter 13, "Identifying Long-Term Obligations and Reducing Underwriting Risks.") Debt held by the public is therefore a better concept than gross Federal debt for analyzing the effect of the budget on the economy.

Table 14–2 summarizes Federal borrowing and debt from 1991 through 1997. This table is supplemented for earlier years by the data in "Historical Tables," tables 7.1–7.3,

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Table 14–2. FEDERAL GOVERNMENT FINANCING AND DEBT[1]
(In billions of dollars)

	1991 actual	Estimate					
		1992	1993	1994	1995	1996	1997
FINANCING							
Surplus or deficit (-)	-268.7	-366.7	-333.5	-243.6	-218.6	-194.6	-204.1
(On-budget)	(-320.9)	(-416.1)	(-395.3)	(-318.2)	(-304.4)	(-296.4)	(-320.1)
(Off-budget)	(52.2)	(49.4)	(61.8)	(74.5)	(85.8)	(101.8)	(116.0)
Means of financing other than borrowing from the public:							
Decrease or increase (-) in Treasury operating cash balance	-1.3	10.2	.....	.....	.....	.....	.....
Increase or decrease (-) in:							
Checks outstanding, etc.[2]	-6.9	-0.3	-0.9	.....	.....	.....	.....
Deposit fund balances	-0.3	-0.2	-1.4	.....	.....	.....	.....
Seigniorage on coins	0.4	0.3	0.4	0.4	0.4	0.3	0.3
Deduct (-): Net financing disbursements:							
Direct loan financing accounts	.....	-3.1	-3.5	-4.8	-5.5	-6.2	-6.5
Government loan financing accounts	.....	1.5	6.1	3.8	2.8	2.0	1.1
Insurance financing accounts	.....	-34.2	-19.2	31.4	25.7	13.7	21.5
Total, means of financing other than borrowing from the public	-8.1	-25.8	-18.5	30.7	23.3	9.8	16.4
Total, requirement for borrowing from the public	-276.8	-392.5	-352.1	-212.9	-195.2	-184.8	-187.7
Reclassification of debt[3]	.....	.....	-1.4	.....	.....	.....	.....
Change in debt held by the public	**276.8**	**392.5**	**353.4**	**212.9**	**195.2**	**184.8**	**187.7**
DEBT, END OF YEAR							
Gross Federal debt:							
Debt issued by Treasury	3,581.2	4,065.0	4,528.9	4,872.5	5,216.4	5,564.4	5,927.1
Debt issued by other agencies	17.8	15.3	17.7	19.0	20.1	21.0	21.7
Total, gross Federal debt	3,599.0	4,080.3	4,546.6	4,891.5	5,236.5	5,585.4	5,948.8
Held by:.							
Government accounts	911.8	1,000.5	1,113.4	1,245.5	1,395.2	1,559.3	1,735.0
The public	2,687.2	3,079.8	3,433.2	3,646.1	3,841.3	4,026.1	4,213.7
(Federal Reserve Banks)	(258.6)	.....	.....	.....	.....	.....	.....
(Other)	(2,428.7)	.....	.....	.....	.....	.....	.....
DEBT SUBJECT TO STATUTORY LIMITATION, END OF YEAR							
Debt issued by Treasury	3,581.2	4,065.0	4,528.9	4,872.5	5,216.4	5,564.4	5,927.1
Deduct (-): Treasury debt not subject to limitation[4]	-15.6	-15.6	-15.6	-15.6	-15.6	-15.6	-15.6
Agency debt subject to limitation	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Unamortized discount (less premium) on Treasury notes and bonds other than zero-coupon bonds	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Total, debt subject to statutory limitation[5]	**3,569.3**	**4,053.1**	**4,516.9**	**4,860.5**	**5,204.4**	**5,552.4**	**5,915.1**

[1] Treasury securities held by the public are almost entirely measured at accrual value (i.e., sales price plus amortized discount or less amortized premium). Agency debt and Treasury securities held by Government accounts are almost entirely measured at face value.
[2] Besides checks outstanding, includes accrued interest payable on Treasury debt, miscellaneous liability accounts, allocations of special drawing rights, and, as an offset, cash and monetary assets other than the Treasury operating cash balance, miscellaneous asset accounts, and profit on sale of gold.
[3] The Farm Credit System Financial Assistance Corporation is estimated to be reclassified from a Government-sponsored enterprise to a Federal agency as of October 1, 1992, and its debt is accordingly reclassified as Federal agency debt.
[4] Consists primarily of Federal Financing Bank debt.
[5] The statutory debt limit is $4,145 billion.

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which will be published subsequently. In 1991 the borrowing from the public was $276.8 billion, and Federal debt held by the public increased to $2,687.2 billion. The issuance of debt to Government accounts was $115.8 billion, and gross Federal debt increased to $3,599.0 billion. Borrowing from the public is estimated to increase to $392.5 billion in 1992, decline moderately to $352.1 billion in 1993, and then decline sharply to $212.9 billion in 1994.

Borrowing from the public depends both on economic conditions and on the Federal Government's expenditure programs and tax laws. The sensitivity of the budget to economic conditions is analyzed in Chapter 3.

MEASUREMENT OF BORROWING AND DEBT

Debt held by the public was measured until recent years as the par value (or face value) of the security, which is the principal amount due at maturity. The only exception was savings bonds. However, most Treasury securities are sold at a discount from par, and some are sold at a premium. If Treasury sells a bill with a $10,000 par value at a price of $9,300, it raises $9,300 of cash and finances $9,300 of the deficit. For both economic and budgetary analysis, it is more meaningful to say that the Government has borrowed $9,300 than to say it has borrowed $10,000.

The budget has adopted the accrual method of measuring almost all Treasury debt held by the public.[3] At the time of sale, the accrual value equals the sales price. Subsequently, the accrual value equals the sales price plus the amount of the discount that has been amortized up to that time. In equivalent terms, the accrual value equals the par value less the unamortized discount. (For a security sold at a premium, the definition of accrual value is symmetrical.) Agency debt, with one minor exception, is recorded at par.

Debt held by Government accounts consists almost entirely of "special issues" of Treasury debt, which are reported at par with only one exception. As a result, only a small part of debt held by Government accounts is recorded in the budget at accrual value. Gross Federal debt—the sum of debt held by the public and debt held by Government accounts—is therefore reported in the budget largely on an accrual basis but partly at par. For the same reason, total Treasury debt, which includes almost all Federal debt, is also reported in the budget largely on an accrual basis but partly at par.

BORROWING AND GOVERNMENT DEFICITS

Debt Held by the Public.—Table 14–2 shows the relationship between borrowing from the public and the Federal deficit. The total deficit of the Federal Government includes not only the budget deficit but also the surplus or deficit of the off-budget Federal entities, which have been excluded from the budget by law. Under present law the off-budget Federal entities are the old-age and survivors insurance trust fund, the disability insurance trust fund, and the Postal Service fund. Since they had a large combined surplus in 1991 and are estimated to have a growing surplus during most of the years 1992–97, they reduce the requirement for Treasury to borrow from the public by a substantial amount.

The total Federal deficit is financed either by borrowing from the public or by several other means, shown in table 14–2, such as a decrease in Treasury's cash balance. Many of these other means of financing are normally small relative to borrowing from the public. This is because they are limited by their own nature. Decreases in cash balances, for example, are inherently limited by past accumulations, which themselves required financing when they were built up. In 1991 these other accounts added up to a negative amount, -$8.1 billion, and themselves had to be financed by borrowing from the public.

A new type of means of financing was created for credit programs by the Federal Credit Reform Act of 1990 and is proposed in the budget this year for deposit insurance and pension guarantees. As explained in Chapter 13, "Identifying Long-Term Obliga-

[3] See Special Analysis E, "Borrowing and Debt," in *Special Analyses, Budget of the United States Government, Fiscal Year 1990,* pp. E–5 to E–8.

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tions and Reducing Underwriting Risks," this is part of a proposal to record the cost of these programs as an outlay in the budget as the cost accrues, instead of recording the cash flows that result from the closure of failed depository institutions or the bankruptcy of corporations with guaranteed and underfunded pension plans. These cash flows may occur well after the time when the costs begin to accrue. The portion of the net cash flow that does not represent a cost to the Government is non-budgetary, recorded as a transaction of a financing account for each program.[4]

The "net financing disbursements" of a non-budgetary financing account are defined in the same way as the "outlays" of a budgetary account and may be either positive or negative. They are positive if the gross disbursements by the account—whether to the public or to a budgetary account—exceed the collections from both of these sources; they are negative if the collections exceed the gross disbursements. If the net financing disbursements are positive, they must be paid in cash and they increase the requirement for Treasury borrowing; if the net financing disbursements are negative, they provide cash to the Treasury that can be used to pay the Government's bills just like tax receipts, borrowing, or any other cash collections. The financing accounts are therefore a means of financing the Government, positive or negative, just like the other means listed in table 14–2.

The nature of the financing transactions was explained in last year's budget for direct loans and loan guarantees. The transactions are analogous for deposit insurance and pension guarantees. The program account in the budget is proposed to pay the accrual cost of insurance liabilities to a non-budgetary insurance financing account, which handles all transactions with the public. This account holds these collections, collects premiums from the public, and pays default claims. It accumulates balances to the extent that its collections of cost payments, premiums, and interest exceed its gross disbursements. These balances are deposited with Treasury in interest-earning, uninvested funds, which are not part of the Federal debt. If, in the case of deposit insurance, its balances are inadequate for working capital—i.e., for the financing that it needs to acquire assets from failed depository institutions and hold them prior to resale—it may borrow the difference from Treasury, paying interest on its debt. As in other instances where an account borrows from Treasury to finance cash disbursements, this debt is not included in gross Federal debt in order to avoid double counting.

When the insurance financing account collects payments that represent the accrual cost from the insurance program account in the budget, the decrease in its net financing disbursements exactly offsets the increase in budget outlays and the budget deficit. No borrowing from the public is needed to finance the additional deficit; the decrease in net financing disbursements is itself the means of financing the increase in the deficit. When the insurance financing account collects payments from the insurance liquidating account that represent costs that accrued prior to the new method of budgeting for insurance, the effects are the same. When the insurance financing account collects premiums from the public, the collection decreases its net financing disbursements. Since the collection is from the public, it provides cash to the Treasury.

Similarly, when the insurance financing account pays claims to the public, its disbursements require cash financing just like any other cash payments by the Government. And when the insurance financing account temporarily acquires assets prior to resale, its disbursements for these acquisitions also require cash financing just like any other cash disbursements by the Government.

A decrease in net financing disbursements by the insurance financing accounts is therefore a means of financing the Federal deficit, just like a decrease in outlays by a budgetary account; and an increase in net financing disbursements adds to the Government's total financing requirements. Table 14–2 thus shows a positive amount of net financing disbursements by a financing account as having a negative sign.

[4] As explained in Appendix One, Chapter 7, "Off-Budget Federal Entities," the financing accounts are non-budgetary in concept because they do not measure costs and do not represent a reallocation of resources caused by Federal policy.

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As shown by the net financing disbursements in table 14–2, the proposed conversion of the deposit insurance and pension guarantee programs to accrual accounting has a significant effect on the relationship between the Federal deficit and Federal borrowing from the public. In 1992 and 1993, the cash transactions recorded in the financing accounts are estimated to add substantially to Federal borrowing requirements above and beyond the amount of the Federal deficit. To a major extent this is because large cash payments are made in these years to acquire the assets of failed banks and thrifts, which have to be financed by borrowing, and these payments are recorded in the financing accounts instead of the budget. In 1994–97, on the other hand, the cash transactions recorded in the financing accounts reduce Federal borrowing requirements below the amount indicated by the Federal deficit. Assets acquired in earlier years from failed banks and thrifts are sold, which reduces Federal borrowing needs, and these collections are recorded in the financing accounts instead of the budget.

Debt Held by Government Accounts.—The amount of Federal debt issued to Government accounts depends largely on the surpluses of the trust funds, both on-budget and off-budget, which owned 95 percent of the total Federal debt held by Government accounts at the end of 1991. In 1991, for example, the total trust fund surplus was $112.3 billion and Government accounts invested $115.8 billion in Federal securities. The small difference is because some other accounts hold Federal debt and because the trust funds may change the amount of their cash assets not currently invested.

AGENCY DEBT

Several Federal agencies, shown in table 14–3, sell debt securities to the public and in one case to other Government accounts. The reason for issuing agency debt differs considerably from one agency to another. During 1991, agencies repaid $15.0 billion or almost half of their debt to the public. At the end of 1991, agency debt was only one percent of Federal debt held by the public.

The predominant agency borrowers from the mid-1980s to 1989 were the Federal Savings and Loan Insurance Corporation (FSLIC) and the Federal Deposit Insurance Corporation (FDIC) permanent insurance fund. (The latter was subsequently renamed the Bank Insurance Fund, or BIF.) They issued notes to help resolve the financial problems of certain failing thrifts and banks, primarily by providing notes to prospective purchasers as parts of agreements for them to buy the failing institutions. Issuing notes to pay the Government's bills is equivalent to borrowing from the public and then paying the bills by disbursing the cash borrowed, so it was recorded as being simultaneously an outlay and a borrowing. The notes were therefore classified as agency debt. The borrowing by these agencies was thus inherent in the operation of their programs.[5]

During 1991, the FSLIC resolution fund repaid $13.2 billion of its notes, reducing the amount outstanding by two-thirds; and BIF repaid $2.9 billion of its notes, almost the entire amount. FSLIC is estimated to repay about half of its remaining debt in 1992 and to repay further amounts in the following years.

Some types of lease-purchase contracts are equivalent to direct Federal construction financed by Federal borrowing. The Federal Government guaranteed the debt used to finance the construction of buildings for the National Archives and Architect of the Capitol and is exercising full control over the design, construction, and operation of the buildings. The construction and interest expenditures are therefore classified as Federal outlays, and the borrowing is classified as Federal agency borrowing from the public. The securities used to finance the construction of the building for the Architect of the Capitol were zero-coupon certificates, for which the sales price was about one-fourth of par value. As an exception to the normal treatment of agency debt, they are recorded in the

[5] The FHA and Interior debt securities are also issued as a means of paying specified bills. The budgetary treatment of these securities is further discussed in Special Analysis E of the 1989 budget, pp. E–25 to E–26; and Special Analysis E of the 1988 budget, pp. E–27 to E–28.

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Table 14–3. AGENCY DEBT

(In millions of dollars)

Description	Borrowing or repayment (-) of debt			Debt end of 1993 estimate
	1991 actual	1992 estimate	1993 estimate	
Borrowing from the public:				
Defense	-1	-8	3	4
Housing and Urban Development:				
Federal Housing Administration	-16	-100	-69	28
Interior	.....	.....	.....	13
Small Business Administration:				
Participation certificates: SBIC and section 505 development company	.....	.....	.....	74
Architect of the Capitol	12	13	14	176
Farm Credit System Financial Assistance Corporation [1]	.....	.....	.....	1,361
Federal Deposit Insurance Corporation:				
Bank Insurance Fund	-2,886	-95	.....	.....
FSLIC Resolution Fund	-13,215	-3,698	-389	2,037
National Archives	.....	.....	.....	302
Postal Service	-30	.....	.....	220
Tennessee Valley Authority	1,123	1,320	1,534	13,357
Total, borrowing from the public	**-15,012**	**-2,567**	**1,094**	**17,573**
Borrowing from other funds:				
Housing and Urban Development:				
Federal Housing Administration	-6	7	-*	146
Total, borrowing from other funds	**-6**	**7**	**-***	**146**
Total, agency borrowing	**-15,018**	**-2,561**	**1,094**	**17,719**

*$500 thousand or less.

[1] The Farm Credit System Financial Assistance Corporation is estimated to be reclassified from a Government-sponsored enterprise to a Federal agency as of October 1, 1992, and its debt is accordingly reclassified as Federal agency debt. This reclassification does not constitute borrowing.

budget at accrual value and the interest is accrued as an outlay.[6]

The proper budgetary treatment of lease-purchases was further examined in connection with the Budget Enforcement Act of 1990. Several changes were made. Among other decisions, it was determined that outlays for a lease-purchase in which the Government assumes substantial risk will be recorded in an amount equal to the asset cost over the period during which the contractor constructs, manufactures, or purchases the asset; if the asset already exists, the outlays will be recorded when the contract is signed. Agency borrowing will be recorded each year to the extent of these outlays. The agency debt will subsequently be redeemed over the lease payment period by a portion of the annual lease payments. This rule was effective starting in 1991. However, no lease-purchase agreements in which the Government assumes substantial risk have yet been authorized or are estimated for 1992 or 1993.

Besides the lease-purchases financed in these ways by agency borrowing from the public, the budget also reflects the cost of lease-purchases financed by the Federal Financing Bank (FFB). The FFB, established within the Treasury Department, can lend to agencies by purchasing agency debt or in other specified ways. It finances these transactions by borrowing from the Treasury,

[6] Table 14–3 reflects corrections to the calculation of accrual value.

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which in turn borrows from the public. This reduces the cost of financing below what the agency or guaranteed private borrower would have had to pay in the credit market. In 1988, 1989, and 1990 Congress authorized the General Services Administration to enter into lease-purchase contracts for a number of buildings to be constructed over five years at a total cost of $1.9 billion. The FFB is financing these contracts. The outlays will be recorded in the budget as payments are made for construction and other costs, and the financing will consist of Treasury borrowing from the public. Borrowings from the FFB are not included in table 14–3 or other tabulations of Federal debt in order to avoid double counting.

DEBT HELD BY GOVERNMENT ACCOUNTS

Trust funds, and some public enterprise revolving funds and special funds, accumulate cash in excess of current requirements in order to meet future obligations. These cash surpluses are invested mostly in Treasury debt and, to a very small extent, in agency debt.

Investment by trust funds and other Government accounts was around $10 billion per year a decade ago. Primarily due to the Social Security Amendments of 1983, an expanding economy, and the creation of the military retirement trust fund, investment has risen greatly since then. It was $115.8 billion in 1991 and, as shown in table 14–4, it is estimated to be nearly the same in 1993. The holdings of Federal securities by Government accounts are estimated to rise to $1,113.4 billion by the end of 1993. This will be 24 percent of the gross Federal debt.

The great rise of investment by Government accounts is concentrated among a few trust funds. The two social security trust funds—old-age and survivors insurance (OASI) and disability insurance (DI)—have large surpluses and invest increasing amounts almost each year: a total of $166.8 billion during 1991–93, which constitutes 53 percent of the total estimated investment by Government accounts. The hospital insurance trust fund (HI), also financed by the social security payroll tax, has large surpluses at present and accounts for 15 percent of the total investment over this period.

In addition to these three funds, the largest investors are the two major Federal employee retirement funds: the civil service retirement and disability trust fund and the military retirement trust fund. They account for 36 percent of the total investment by Government accounts during 1991–93. Altogether, the investment of these two retirement funds and the three funds financed by the social security tax equals 104 percent of the investment by all Government accounts during this period. At the end of 1993, they will account for 85 percent of the total holdings by Government accounts.

The debt held by Government accounts is ordinarily measured at face value, as explained in a preceding section, but with one exception. During 1991 Treasury issued zero-coupon bonds to the Pension Benefit Guaranty Corporation at a total purchase price of $1.2 billion and a face value of $9.2 billion. These securities are recorded in table 14–4 at an accrual value (the estimated market or redemption price).

LIMITATIONS ON FEDERAL DEBT

Definition of Debt Subject to Limit.—Statutory limitations have normally been placed on Federal debt. Until World War I, the Congress ordinarily authorized a specific amount of debt for each separate issue. Beginning with the Second Liberty Bond Act of 1917, however, the nature of the limitation was modified in several steps until it developed into a ceiling on the total amount of most Federal debt outstanding. The latter type of limitation has been in effect since 1941. The limit currently applies to most debt issued by the Treasury since September 1917, whether held by the public or by Government accounts; and other debt issued by Federal agencies that, according to explicit statute, is guaranteed as to principal and interest by the United States Government.

The lower part of Table 14–2 compares total Treasury debt with the amount not subject to limit. Most of the Treasury debt not subject to limit was issued by the FFB.

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Table 14–4. DEBT HELD BY GOVERNMENT ACCOUNTS [1]

(In millions of dollars)

Description	Investment or disinvestment (-)			Holdings end of 1993 estimate
	1991 actual	1992 estimate	1993 estimate	
Investment in Treasury debt:				
Overseas Private Investment Corporation	143	118	63	1,828
Defense-Military: Defense Cooperation	7,607	-5,316	-2,291	.....
Defense-Civil: Military retirement trust fund	11,304	16,480	12,151	104,687
Energy: Nuclear waste fund	531	482	287	3,793
Health and Human Services:				
Federal old-age and survivors insurance trust fund [3]	51,841	49,435	62,281	367,272
Federal disability insurance trust fund [3]	1,600	533	1,159	14,798
Federal hospital insurance trust fund	13,078	15,659	18,998	143,984
Federal supplementary medical insurance trust fund	1,955	-1,109	-4,549	10,583
Housing and Urban Development:				
Federal Housing Administration	13	249	120	7,017
Other	348	514	-2,073	989
Interior: Outer Continental Shelf deposit funds	74	53	-1,225	11
Labor:				
Unemployment trust fund	-2,958	-11,568	-2,320	33,681
Pension Benefit Guaranty Corporation [1]	789	380	458	3,215
State: Foreign Service retirement and disability trust fund	540	570	589	6,580
Transportation:				
Highway trust fund	2,711	1,702	-701	20,390
Airport and airway trust fund	882	782	-451	15,524
Treasury: Exchange stabilization fund	515	-470	-570	1,338
Veterans Affairs:				
National service life insurance trust fund	233	176	117	11,443
Other trust funds	44	39	21	1,598
Federal funds	297	-54	-61	1,014
Environmental Protection Agency: Hazardous substance trust fund	1,080	441	193	3,945
Office of Personnel Management:				
Civil Service retirement and disability trust fund	22,863	25,051	27,127	310,727
Employees life insurance fund	857	1,176	1,184	13,823
Employees health benefits fund	958	312	242	6,123
Federal Deposit Insurance Corporation:				
Bank Insurance fund	-2,330	-5,608	.....	500
FSLIC Resolution fund	37	-939	.....	.....
Savings Association Insurance fund	35	*	1,011	1,059
National Credit Union Administration: Share insurance fund	261	345	210	2,699
Postal Service fund [3]	276	1,161	550	5,050
Railroad Retirement Board trust funds	1,163	677	464	11,575
Tennessee Valley Authority	-1,877	-3,070	-250	250
Other Federal funds	452	465	-257	3,136
Other trust funds [2]	532	100	221	4,647
Total, investment in Treasury debt [1]	**115,850**	**88,766**	**112,699**	**1,113,277**
Investment in agency debt:				
Housing and Urban Development:				
Government National Mortgage Association	-6	7	-*	146
Total, investment in agency debt	**-6**	**7**	**-***	**146**
Total, investment in Federal debt [1]	**115,844**	**88,773**	**112,699**	**1,113,422**
MEMORANDUM				
Investment by Federal funds (on-budget) [1]	6,814	-12,896	-3,353	26,983
Investment by Federal funds (off-budget)	276	1,161	550	5,050
Investment by trust funds (on-budget)	55,240	50,487	53,285	699,309
Investment by trust funds (off-budget)	53,440	49,968	63,440	382,070
Investment by deposit funds [4]	74	53	-1,225	11

* $500 thousand or less.

[1] Debt held by Government accounts is measured at face value except for the Treasury zero-coupon bonds held by the Pension Benefit Guaranty Corporation, which were issued in 1991 and recorded by an accrual method (the estimated market value). If recorded at face value, PBGC's holdngs at the end of 1991 would be $10,338 million, an increase of $8,751 million compared to 1990; and total holdings by Government accounts would be $929,713 million, an increase of $123,806 million.

[2] Includes the Farm Credit System Financial Assistance Corporation, which is estimated to be reclassified from a Government-sponsored enterprise to a Federal agency as of October 1, 1992. Its holdings of Federal securities ($199 million at the beginning of 1993) are accordingly reclassified as debt held by Government accounts. This reclassification does not constitute investment, but the change in holdings from the beginning to the end of 1993 is so classified.

[3] Off-budget Federal entity.

[4] Only those deposit funds classified as Government accounts.

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It is authorized to have outstanding up to $15 billion of publicly issued debt, and this amount has been issued to the civil service retirement and disability trust fund. The remaining Treasury debt not subject to limit consists almost entirely of silver certificates and other currencies no longer being issued.

The sole type of agency debt currently subject to the general limit is the debentures issued by the Federal Housing Administration, which were only $336 million at the end of 1991. Some of the other agency debt, however, is subject to its own statutory limit. For example, the Postal Service is limited to $15 billion of securities outstanding and $3 billion of annual borrowing (including its debt to the FFB). Besides Treasury debt and agency debt, the debt subject to limit also includes a few very small adjustments.

The amount of debt subject to limit was formerly defined by law as the par value of the securities (except for savings bonds, which were measured at redemption value). This was modified by law in August 1989 in a way that currently applies to Treasury bills and zero-coupon bonds. These securities do not pay any cash interest. They are sold at a discount and pay their entire interest through the periodic amortization of the discount over the term of the security. For Treasury bills, with a maturity of one year or less, the difference between par value and sales price is large enough to be significant. For zero-coupon bonds with a 30-year maturity, the par value could be around ten times the sales price. Measuring zero-coupon bonds at par reduced Treasury's flexibility in debt management, because these securities increased the debt subject to limit by a large multiple of the cash raised to finance the deficit. Furthermore, measuring these securities at par produced a significant difference between the recorded debt and the accrual value, which, as previously explained, is more meaningful for economic and budgetary analysis such as relating changes in debt to the deficit.

The law now provides that Treasury securities issued on a discount basis are to be measured at accrual value for calculating the debt subject to limit. The new method is not applied to regular notes and bonds; except for zero-coupon bonds, accrual methods are also not applied to "special issues," which are issued almost exclusively to Government accounts and comprise most of the debt that is held by Government accounts. These securities are still recorded at par for calculating the debt subject to limit. However, regular notes and bonds account for only a small part of the unamortized discount (less premium) on Treasury securities: $3.4 billion out of $84.1 billion at the end of 1991.

An adjustment for measurement differences is thus needed in order to derive debt subject to limit from Treasury debt and agency debt. The unamortized discount (less premium) on regular notes and bonds is excluded from the amount of Treasury debt as recorded in the budget but is not excluded from the measured amount of debt subject to limit. Therefore, as shown in Table 14–2, the unamortized discount (less premium) on regular notes and bonds must be added to Treasury debt in order to derive debt subject to limit.

Methods of Changing the Debt Limit.— The statutory debt limit has frequently been changed. Since 1960, Congress has passed 62 separate acts to raise the limit or to extend the duration of a temporary increase.

The statutory limit can be changed by normal legislative procedures. It can also be changed as a consequence of the annual Congressional budget resolution, which is not itself a law. The budget resolution includes a provision specifying the appropriate level of the debt subject to limit at the end of each fiscal year. The rules of the House of Representatives provide that, when the budget resolution is adopted by both Houses of the Congress, the vote in the House of Representatives is deemed to have been a vote in favor of a joint resolution setting the statutory limit at the level specified in the budget resolution. The joint resolution is transmitted to the Senate for further action. It may be amended in the Senate to change the debt limit provision or in any other way. If it passes both Houses of the Congress, it is sent to the President for his signature. This method directly relates

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the decision on the debt limit to the decisions on the Federal deficit and other factors that determine the change in the debt subject to limit. Both methods have been used numerous times.

Recent Changes in the Debt Limit.—The debt limit was part of the budget negotiations between the President and the Congress in the summer and fall of 1990, and the limit was temporarily raised or extended six times. The budget negotiations were concluded with the Omnibus Budget Reconciliation Act of 1990, which the President signed on November 5, 1990. This increased the debt limit to $4,145 billion, which was large enough that no increase was needed in 1991.

Unlike some previous years when the debt limit was under consideration, the debt limit in 1990 never temporarily dropped below the actual level of debt on a business day. Treasury was always able to fully invest the trust funds and never had to suspend the sales of savings bonds, State and local government series issues, or other securities. However, the debt was virtually at the limit for a number of days, and Treasury postponed several auctions because of uncertainty about congressional action.

Federal Funds Financing and the Change in Debt Subject to Limit.—The change in debt held by the public, as shown in table 14–2, is determined principally by the total Government deficit. The debt subject to limit, however, includes not only debt held by the public but also debt held by Government accounts. The change in debt subject to limit is therefore determined both by the factors that determine the total Government deficit and by the factors that determine the change in debt held by Government accounts.

The budget is composed of two groups of funds, Federal funds and trust funds. The Federal funds, in the main, are derived from tax receipts and borrowing and are used for the general purposes of the Government. The trust funds, on the other hand, are financed by taxes or other collections earmarked by law for specified purposes, such as paying social security or unemployment benefits.

A Federal funds deficit must generally be financed by borrowing, either by selling securities to the public or by issuing securities to Government accounts. Federal funds borrowing consists almost entirely of the Treasury issuing securities that are subject to the statutory debt limit. Trust fund surpluses are almost entirely invested in these securities, and trust fund holdings include most of the debt held by Government accounts. The change in debt subject to limit is therefore determined principally by the Federal funds deficit, which is equal to the arithmetic sum of the total Government deficit and the trust fund surplus.

Table 14–5 derives the change in debt subject to limit. In 1991 the Federal funds deficit was $381.0 billion, and other factors increased the change in debt subject to limit by $27.0 billion. The largest other factor was the repayment of $15.0 billion of agency debt not subject to limit. As a result, the debt subject to limit increased by $408.1 billion, which was $131.3 billion more than the increase in debt held by the public.

As long as the trust fund surplus is large, the Federal funds deficit will be much more than the total Government deficit; and the increase in debt subject to limit will be much more than the increase in debt held by the public. The trust fund surplus is estimated to increase substantially above its present level in the future, so the debt limit will have to be increased by much more than the total Government deficit.

DEBT HELD BY FOREIGN RESIDENTS

During most of American history the Federal debt was held almost entirely by individuals and institutions within the United States. In the late 1960s, as shown in table 14–6, foreign holdings were just over $10.0 billion, less than 5 percent of the total Federal debt held by the public.

Foreign holdings began to grow much faster starting in 1970. This increase has been primarily due to foreign decisions, both official and private, rather than the direct marketing of these securities to foreign residents. At the end of fiscal year 1991 foreign holdings of Treasury debt were $443.4 billion, which

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Table 14–5. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT

(In billions of dollars)

Description	1991 actual	Estimate					
		1992	1993	1994	1995	1996	1997
Federal funds surplus or deficit (–)	**–381.0**	**–463.1**	**–450.6**	**–376.7**	**–368.3**	**–358.7**	**–379.8**
(On-budget)	(–379.7)	(–462.2)	(–449.0)	(–375.4)	(–367.3)	(–359.4)	(–380.8)
(Off-budget)	(–1.3)	(–0.8)	(–1.6)	(–1.3)	(–1.1)	(0.7)	(1.0)
Means of financing other than borrowing:							
Decrease or increase (–) in Treasury operating cash balance	–1.3	10.2	.....	.....	.....	.....	.....
Increase or decrease (–) in:							
Checks outstanding, etc.[1]	–3.3	–4.4	–2.1	.....	.....	.....	.....
Deposit fund balances[2]	–0.3	–0.2	–1.4	.....	.....	.....	.....
Seigniorage on coins	0.4	0.3	0.4	0.4	0.4	0.3	0.3
Deduct (–): Net financing disbursements:							
Direct loan financing accounts	.....	–3.1	–3.5	–4.8	–5.5	–6.2	–6.5
Guaranteed loan financing accounts	.....	1.5	6.1	3.8	2.8	2.0	1.1
Insurance financing accounts	.....	–34.2	–19.2	31.4	25.7	13.7	21.5
Total, means of financing other than borrowing	**–4.4**	**–29.9**	**–19.7**	**30.7**	**23.3**	**9.8**	**16.4**
Decrease or increase (–) in Federal debt held by Federal funds and deposit funds[3]	–7.2	11.7	4.0	1.1	.....	.....	.....
Increase or decrease (–) in Federal debt not subject to limit	–15.0	–2.5	2.5	1.3	1.1	0.9	0.6
Total, requirement for Federal funds borrowing subject to debt limit	**–407.6**	**–483.8**	**–463.8**	**–343.6**	**–343.9**	**–348.0**	**–362.7**
Increase or decrease (–) in unamortized discounts (less premiums) on Treasury notes and bonds other than zero-coupon bonds	0.4	.....	.....	.....	.....	.....	.....
Adjustments including increase in debt subject to limit but not part of Federal debt	*	.....	.....	.....	.....	.....	.....
Increase in debt subject to limit	**408.1**	**483.8**	**463.8**	**343.6**	**343.9**	**348.0**	**362.7**
ADDENDUM							
Debt subject to statutory limit[4]	3,569.3	4,053.1	4,516.9	4,860.5	5,204.4	5,552.4	5,915.1

* $50 million or less.
[1] Besides checks outstanding, includes accrued interest payable on Treasury debt, miscellaneous liability accounts, allocations of special drawing rights, and, as an offset, cash and monetary assets other than the Treasury operating cash balance, miscellaneous asset accounts, and profit on sale of gold.
[2] Does not include investment in Federal debt securities by deposit funds classified as part of the public.
[3] Only those deposit funds classified as Government accounts.
[4] The statutory debt limit is $4,145 billion.

was 16.5 percent of the total debt held by the public.

Although the amount of debt held by foreigners has grown greatly in the past ten years, the proportion is now slightly lower than during the late 1970s. In 1991, the proportion remained stable. At the end of 1991, foreign central banks and other official institutions owned 66 percent of the Federal debt held by foreign residents; private investors owned nearly all the rest. All of the Federal debt held by foreign residents is currently denominated in dollars.

Foreign holdings of Federal debt are about one-fifth of the foreign-owned assets in the U.S., and foreign purchases of Federal debt securities are normally only a moderate part of the total capital inflow from abroad. The foreign purchases of Federal debt securities do not measure the full impact of the capital inflow from abroad on the market for Federal debt securities. The capital inflow supplies additional funds to the credit market generally, which affect the market for Federal debt. For example, the capital inflow includes deposits in U.S. financial intermediaries that themselves buy Federal debt.

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Table 14–6. FOREIGN HOLDINGS OF FEDERAL DEBT

(Dollar amounts in billions)

Fiscal year	Debt held by the public			Borrowing from the public			Interest on debt held by the public		
	Total	Foreign[1]	Percentage foreign	Total[2]	Foreign[1]	Percentage foreign	Total[3]	Foreign[4]	Percentage foreign
1965	260.8	12.3	4.7	3.9	0.3	6.4	9.6	0.5	4.9
1966	263.7	11.6	4.4	2.9	-0.7	n.a.	10.1	0.5	5.1
1967	266.6	11.4	4.3	2.9	-0.2	n.a.	11.1	0.6	5.1
1968	289.5	10.7	3.7	22.9	-0.7	n.a.	11.9	0.7	5.6
1969	278.1	10.3	3.7	-1.3	-0.4	n.a.	13.5	0.7	5.3
1970	283.2	14.0	5.0	3.5	3.8	107.2	15.4	0.8	5.5
1971	303.0	31.8	10.5	19.8	17.8	89.8	16.2	1.3	7.9
1972	322.4	49.2	15.2	19.3	17.3	89.5	16.8	2.4	14.2
1973	340.9	59.4	17.4	18.5	10.3	55.3	18.7	3.2	17.2
1974	343.7	56.8	16.5	2.8	-2.6	n.a.	22.7	4.1	17.9
1975	394.7	66.0	16.7	51.0	9.2	18.0	25.0	4.5	18.2
1976	477.4	69.8	14.6	82.2	3.8	4.6	29.3	4.4	15.1
TQ	495.5	74.6	15.1	18.1	4.9	26.9	7.8	1.2	14.9
1977	549.1	95.5	17.4	53.6	20.9	39.0	33.8	5.1	15.0
1978	607.1	121.0	19.9	58.0	25.4	43.5	40.2	7.9	19.5
1979[5]	639.8	120.3	18.8	32.6	-0.7	n.a.	49.9	10.7	21.5
1980	709.3	121.7	17.2	69.5	1.4	2.0	62.8	11.0	17.5
1981	784.8	130.7	16.7	75.5	9.0	12.0	81.7	16.4	20.1
1982	919.2	140.6	15.3	134.4	9.9	7.4	101.2	18.7	18.5
1983	1,131.0	160.1	14.2	211.8	19.5	9.2	111.6	19.2	17.2
1984	1,300.0	175.5	13.5	168.9	15.4	9.1	133.5	20.3	15.2
1985[5]	1,499.4	222.9	14.9	199.4	47.4	n.a.	152.9	22.9	15.0
1986	1,736.2	265.5	15.3	236.8	42.7	18.0	159.3	23.8	14.9
1987	1,888.1	279.5	14.8	152.0	14.0	9.2	160.4	24.9	15.5
1988	2,050.3	345.9	16.9	162.1	66.4	40.9	172.3	28.6	16.6
1989	2,190.3	394.9	18.0	140.1	49.0	35.0	189.0	34.8	18.4
1990	2,410.4	403.5	16.7	220.1	8.6	3.9	202.4	37.2	18.4
1991	2,687.2	443.4	16.5	276.8	39.9	14.4	214.8	39.0	18.2

n.a. = Not applicable due to negative numbers or benchmark revision.

[1] Estimated by Treasury Department. These estimates exclude agency debt, the holdings of which are believed to be small. The data on foreign holdings are not recorded by methods that are strictly comparable with the data on debt held by the public.

[2] Borrowing from the public is defined as equal to the change in debt held by the public from the beginning of the year to the end, except to the extent that the amount of debt is changed by reclassification.

[3] Estimated as interest on the public debt less "interest received by trust funds" (subfunction 901 less subfunctions 902 and 903). Does not include the comparatively small amount of interest on agency debt or the offsets for other interest received by Government accounts.

[4] Estimated by Bureau of Economic Analysis, Department of Commerce. These estimates include small amounts of interest from other sources, including the debt of Government-sponsored enterprises, which are not part of the Federal Government.

[5] Benchmark revisions reduced the estimated foreign holdings of Federal debt as of December 1978 and increased the estimated foreign holdings as of December 1984. As a result, the data on foreign holdings in different time periods are not strictly comparable, and the borrowing from foreign residents in 1979 and 1985 reflects the benchmark revision as well as the net purchases of Federal debt securities.

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FEDERALLY ASSISTED BORROWING

The effect of the Government on borrowing in the credit market arises not only from its own borrowing to finance Federal operations but also from its assistance to certain borrowing by the public. Federally assisted borrowing is of two principal types: Government-guaranteed borrowing, which is another term for guaranteed lending, and borrowing by Government-sponsored enterprises (GSEs). The Federal Government also exempts the interest on most State and local government debt from income tax.

Federal guarantees and GSEs are discussed in Chapter 13, "Identifying Long-Term Obligations and Reducing Underwriting Risks." Detailed data are presented in Appendix One, Chapter 3, Tables 3–7 and 3–8. Table 14–7 brings together the totals of Federal and federally assisted borrowing and lending and shows the trends since 1965 in terms of both dollar amounts and, more significantly, as percentages of total credit market borrowing or lending. The Federal and federally assisted lending is recorded at face value. It does not take into account the degree of subsidy and does not indicate the extent to which the credit assistance changed the allocation of financial and real resources.

The Federal borrowing participation rate increased from an average of 17 percent in the 1960s to 27 percent in the 1970s and 41 percent in the 1980s. After peaking at a little over 50 percent in 1982 and 1983, it was around 40 percent until 1990 despite the decline in Federal borrowing. The major factor keeping up the participation rate was the marked rise in GSE borrowing.

Table 14–7. FEDERAL PARTICIPATION IN THE CREDIT MARKET

(Dollar amounts in billions)

	Actual										Estimates	
	1965	1970	1975	1980	1985	1987	1988	1989	1990	1991	1992	1993
Total net borrowing in credit market[1]	67.0	89.0	163.0	327.0	767.0	780.0	795.0	711.0	656.0	496.0	.....	.....
Federal borrowing from the public	3.9	3.5	51.0	69.5	199.4	152.0	162.1	140.1	220.1	276.8	392.5	353.4
Guaranteed borrowing	5.0	7.8	8.6	31.6	21.6	60.4	40.3	41.7	40.7	22.1	36.8	43.6
Government-sponsored enterprise borrowing[2]	1.2	4.9	5.3	21.4	57.9	111.7	87.1	123.2	115.4	124.6	111.5	119.0
Total, Federal and federally assisted borrowing	10.1	16.2	65.0	122.5	278.9	324.0	289.4	305.0	376.2	423.5	540.8	516.0
Federal borrowing participation rate (percent)	**15.0**	**18.2**	**39.8**	**37.5**	**36.4**	**41.5**	**36.4**	**42.9**	**57.4**	**85.4**	.....	.....
Total net lending in credit market[1]	67.0	89.0	163.0	327.0	767.0	780.0	795.0	711.0	656.0	496.0	.....	.....
Direct loans	2.0	3.0	12.7	24.2	28.0	-19.0	-13.4	-14.6	2.8	-7.5	4.6	3.4
Guaranteed loans	5.0	7.8	8.6	31.6	21.6	60.4	40.3	41.7	40.7	22.1	36.8	43.6
Government-sponsored enterprise loans[2]	1.4	5.2	5.5	24.1	60.7	107.8	82.5	101.5	90.0	90.7	103.4	120.1
Total, Federal and federally assisted lending	8.3	15.9	26.9	79.9	110.3	149.2	109.4	128.6	133.5	105.3	144.8	167.1
Federal lending participation rate (percent)	**12.4**	**17.9**	**16.5**	**24.4**	**14.4**	**19.1**	**13.8**	**18.1**	**20.4**	**21.2**	.....	.....

[1] Total net borrowing (or lending) in credit market by domestic nonfinancial sectors excluding equities. Financial sectors are omitted to avoid double counting, since financial intermediaries both borrow and lend in the credit market.

[2] Most Government-sponsored enterprises (GSEs) are financial intermediaries. GSE borrowing (lending) is nevertheless compared with total credit market borrowing (lending) because GSE borrowing (lending) is a proxy for tthe borrowing (lending) by nonfinancial sectors that is intermediated by GSEs. It assists the utlimate nonfinancial borrower (lender) whose loans are purchased or otherwise financed by the GSEs. In order to avoid double counting, GSE borrowing and lending are calcualated net of transaction with Federal agencies, transactions between GSEs, and transaction in guaranteed loans.

n.a. = Not available.

Source: Total net borrowing and lending are unpublished and preliminary estimates from the Federal Reserve Board flow of funds accounts. Projections are not available.

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In 1990, however, the participation rate rose to 57 percent because of the increase in Federal borrowing; and in 1991 it reached 85 percent, as Federal borrowing increased further and total net credit market borrowing dropped by one-quarter. The Federal lending participation rate has been much more stable over time than the borrowing participation rate, because Federal direct loans are much smaller than Federal borrowing.

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Managing for Integrity and Efficiency

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Managing for Integrity and Efficiency:

15. Strengthening Management and Accountability

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15. STRENGTHENING MANAGEMENT AND ACCOUNTABILITY

The Administration remains committed to providing integrity and efficiency in managing Federal programs. Waste must be rooted out; fraud and abuse stopped. The quality of Government services must become second to none. The management of programs that consume nearly a quarter of the Nation's GNP must be both efficient and effective.

To this end, this chapter describes investments and progress in:

- Building Management Capacity
- Improving Federal Service
- Improving Federal Statistics
- Strengthening Financial Management
- Strengthening Information Resources Management
- Reforming the Procurement Process
- Reforming the Civil Justice Process
- Managing Areas of High Risk

The budget requests $7.6 billion in budget authority and $7.3 billion in outlays for these activities—$770 million and $672 million, respectively, more than in 1992.

BUILDING MANAGEMENT CAPACITY

The Federal Government funds thousands of programs affecting each and every American. These programs involve roughly 5 million collection and disbursement transactions averaging $10 billion each work day. They are operated and managed by 4.3 million public servants (2.3 million civilians and 2.0 million personnel in the uniformed services). Federal

Table 15–1. **INVESTMENTS IN MANAGEMENT IMPROVEMENT**
(In millions of dollars)

Improvement	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993
Net Total: [1]			
Budget Authority	6,814	7,584	+770
Outlays	6,662	7,334	+672
Improved Service Delivery:			
Budget Authority	1,294	1,682	+388
Outlays	1,197	1,581	+384
Major Statistical Programs:			
Budget Authority	975	1,170	+195
Outlays	1,057	1,098	+41
Investments in Financial Management:			
Budget Authority	2,122	2,205	+83
Outlays	2,063	2,205	+142
Program for Priority Systems:			
Budget Authority	2,274	2,802	+528
Outlays	2,177	2,701	+524
Investments to Reduce Risks in High Risk Areas:			
Budget Authority	1,936	2,053	+117
Outlays	1,855	1,971	+116

[1]Budget authority and outlay totals for 1992 and 1993 are adjusted for duplication of items included in more than one category.

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employees are assisted in this by expenditures of $24 billion (1993) for systems—providing information on the operations and results of the programs and aiding the provision of services.

Often, Federal programs are well executed. Eighty-three percent of Social Security recipients surveyed rated the Agency's services "good" to "very good". The Internal Revenue Service significantly improved its taxpayer service, increasing accuracy by 27 percent in two years. Airline delays are less than 5 years ago, despite an average of 124,000 takeoffs and landings a day, an increase of 11 percent in 5 years at FAA controlled airports.

Nonetheless, individual scandals occur and contribute to the public's generalized perception of Government. Regardless of frequency, poor management, inefficiency and ineffectiveness are unacceptable. Further, the Government's capacity to know what is working well and what is not, and to act on that knowledge, remains inadequate. There is a need for improved tools, including reliable cost projections. And, most important, Federal managers must be held accountable for their performance.

The Administration's strategy is to concentrate concrete efforts in selected areas—moving from specific "fix" to specific "fix." The Administration has done this, in part, through joint agency-OMB SWAT and review teams. SWAT teams are short term action teams designed to investigate and propose remedies to specific problems. They normally complete action within 2 to 3 months. Review teams work on a longer term basis. The teams generally include 10 to 20 people from the affected agency and OMB's management and budget divisions. The teams also often include experts from other Federal agencies. The Director of OMB and the agency head initiate the efforts and review the results.

1991 ACCOMPLISHMENTS

To date, the Administration has initiated 20 joint agency-OMB reviews involving 14 agencies. Among the 14 reviews active during 1991, several themes and common problems emerged:

- Most reviews sought to control waste and excessive costs or prevent imminent harm to programs. Examples include the Railroad Retirement Board's efforts to eliminate an 80,000 claim backlog and the Department of Education's effort to restore management integrity to its Guaranteed Student Loan Program.

- A common problem involved systems and procedures that could not provide timely and accurate information to policy and program decision-makers.

  —Credit program losses were not known until claims were paid.
  —Thousands of deposit tickets and expenditure vouchers were never recorded in accounting systems.
  —"Supplemental" funds were requested even though agency needs did not exceed typical requirements.
  —Critical mandatory budget estimates were off by billions.

- Another common problem was inadequate management capacity and controls with respect to decentralized operations.

  —There are no standard lender agreements for private lenders participating in Federal credit programs.
  —Too many people have access to agency accounting systems.
  —Reconciliation of payments between agencies (the depositors) and the Department of the Treasury (the bank) is erratic.
  —Audit coverage of contractors is insufficient.
  —Agency management expertise is not adequately matched to program needs.

A summary of the 1991 accomplishments of the SWAT and review teams follows.

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SWAT TEAM RESULTS

Agency and Topic	Problem	Team Results
Department of Education: Student Financial Aid Program Management ($57 billion in loans outstanding).	Escalating student loan defaults ($3.4 billion expected in 1992) involving students attending proprietary schools of dubious quality. Inadequate expertise in Office of Post-secondary Education in running credit programs.	A 14 point management improvement plan was announced by Director Darman and Secretary Alexander in April 1991. Improved oversight over guarantee agencies and lenders, consolidation of student aid operations under a single official, and improved information management were agreed. The June 1991 Administration proposal for reauthorizing the Higher Education Act included needed legislative proposals.
Federal Emergency Management Agency (FEMA): Management of $650 million/year disaster assistance program.	$800 million budget shortfall due to FEMA's inability to estimate and control costs. The FEMA program was operating without sufficient attention to growing liabilities at the same time that Congress was shortfunding disaster relief. This practice assumed that there would be an emergency supplemental.	FEMA's budget and accounting methodology and procedures for determining disaster assistance eligibility and managing declared disasters are being improved. Legislation ensuring non-emergency appropriations for an average level of disasters was signed by the President in December 1991.
Department of Health and Human Services, Health Care Financing Administration (HCFA): Management of $85 billion Federal-State Medicaid Program.	Medicaid estimates (for 1992) escalated, on average, $1 billion each month from January 1990 to January 1992. HCFA's budget forecasting system lacked a formal structure for tracking State-level factors affecting Medicaid growth. This resulted in substantial unforeseen growth in Federal Medicaid spending.	Joint HHS-OMB management initiative was announced in July 1991 to strengthen the Federal system that collects, analyzes and uses State-based Medicaid program spending estimates and forecasts Federal program spending. Specific improvements included providing Medicaid Bureau with full accountability and responsibility for managing the Medicaid program, improved Federal and State Medicaid information and estimates, a new Medicaid management partnership with the States, and an enhanced Medicaid budget forecasting system.
Department of Housing and Urban Development (HUD): Section-8 Housing Subsidy Budget Estimates.	$1.25 billion in unanticipated additional requirements was identified during appropriations markups. HUD lacked a central system for identifying and estimating in a timely fashion Section-8 contract renewals.	Revised estimate of 1992 requirements was provided to Congress in October 1991. New automated system will begin operation in March 1993.

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SWAT TEAM RESULTS—Continued

Agency and Topic	Problem	Team Results
Department of the Interior, Bureau of Indian Affairs (BIA): Accounting Systems.	BIA subjected to two Inspector General audits of possible Anti-Deficiency Act violations in three years ($95 million in accounting discrepancies in 1990). BIA accounting system accessible to over 12,000 individuals allowing an average 10 adjustments for each transaction (500,000 adjustments in 1990).	Access to system limited and adjustments reduced to 6,000 per year. New accounting system (with stringent accounting controls over obligations and disbursements) installed in October 1991. $425 million in cash disbursements were assigned and entered into the system for the first time. Thousands of previously undiscovered deposit tickets were brought under accounting control.
Railroad Retirement Board (RRB): Management Weaknesses.	Major claims backlogs (80,000 cases), significant error rates, widespread beneficiary fraud, underpayment by railroads of employment taxes, and inadequate systems.	Agreement on a five-year plan to correct 104 deficiencies identified by the SWAT team. $13.9 million 5-year investment proposed to assist RRB in achieving its improvement plan.

REVIEW TEAM RESULTS

Agency and Topic	Problem	Team Results
Department of Agriculture: Food Stamp Program.	Excessive illegal food stamp coupon trafficking—benefits worth over $100 million per year being exchanged for cash and drugs.	Final recommendations for reducing food stamp fraud agreed in July 1991. Federal regulations to enable States to use electronic benefit transfers were approved and issued for comment.
Department of Defense (DoD): Use of Contracted Advisory and Assistance Services (CAAS).	Inadequate management controls over the use of Contracted Advisory and Assistance Services (CAAS), including tracking and reporting deficiencies. DoD Inspector General report indicates that under some definitions, CAAS may be underreported by several billion dollars.	Draft OMB policy letter, mandating greater management control over service contracts, was published in the *Federal Register* for comment in December 1991.
Department of Energy (DOE): Environmental Cleanup.	DOE's $5.5 billion annual cleanup activities are not prioritized based on risk to public health, safety and the environment, and cost-effectiveness. DOE cannot measure cleanup progress versus expenditures through time.	Pilot test of risk based prioritization methodology for evaluating 24 cleanup projects is being conducted. Progress Tracking System is being developed to report on the progress of DOE installations in meeting scheduled milestones.

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REVIEW TEAM RESULTS—Continued

Agency and Topic	Problem	Team Results
Department of Health and Human Services, Health Care Financing Administration: Medicare Durable Medical Equipment (DME) Costs ($2 billion estimated in 1992).	Medicare paying suppliers excessive amounts for the purchase of DME.	Action Plan's proposals expected to save $1 billion over the next five years. Plan includes issuance of regulations to consolidate oversight and claims' payments and to close reimbursement loopholes exploited by Medicare providers. Plan also establishes stricter eligibility requirements for suppliers and contains proposals to update some pricing schedules, initiate competitive bidding, and increase pricing discretion to reflect market prices.
Department of Labor: Job Training Partnership Act (JTPA) Controls	Inadequate controls over some contractors participating in this block grant program ($1.4 billion in procurements) led to administrative cost overruns, unallowable costs, and inappropriate program activities (over $100 million at risk).	Legislation enhancing the States' responsibility to establish and monitor improved accounting and procurement practices was submitted to the Congress in May 1991.
National Aeronautics and Space Administration (NASA): Contractor Oversight	Some NASA contractors overstaffed and overpaid (total contract expenditures are projected to be $12 billion annually).	NASA reassigned 100 FTEs for contractor oversight functions. Training program developed to alert key procurement personnel and program managers to contract management issues. NASA's acquisition regulations and directives revised to include priorities for contractor oversight. OFPP guidance on contract management issued.
Department of the Treasury, Internal Revenue Service (IRS): Accounts Receivable and Tax Systems Modernization	Inadequate strategy and systems for collecting accounts receivable and setting allowance for doubtful debt. Outmoded computer and telecommunications systems undermine the effectiveness of tax administration.	Performance targets were set to limit the growth in accounts receivables and boost collections. Allowance for doubtful accounts was developed to determine the collectibility of accounts receivable. Design Master Plan (DMP) for IRS's systems modernization activities was reviewed.
Department of Veterans Affairs (VA): Home Loan Guaranty Program.	Inadequate risk exposure and default trend data for $158 billion in guaranteed loans.	New methodology for predicting defaults and calculating the implicit credit subsidy in new housing loan guarantees was implemented in May 1991.

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IMPROVING FEDERAL SERVICE

The budget requests $1.7 billion in budget authority, $388 million more than in 1992, to improve service delivery by the Internal Revenue Service (IRS), Social Security Administration (SSA), Federal Aviation Administration (FAA), and Railroad Retirement Board (RRB).

SELECTED SYSTEMS IMPROVEMENTS

IRS Tax System Modernization (TSM).—TSM will accelerate tax processing by decentralizing many of the processing functions currently performed at IRS central computing centers. It will reduce the burden associated with tax filing, and allow the IRS to respond to taxpayer inquiries faster and with more accurate information. For example, the electronic filing program for tax returns speeds up taxpayer receipt of refunds by as much as four weeks. Without TSM, IRS will lack the ability to provide "one-stop service" that the public has come to expect from the private sector. This kind of service will allow taxpayers to resolve all questions relating to their tax returns, refunds or correspondence, by speaking to one IRS employee instead of being bounced around the bureaucracy.

SSA Strategic Plan.—In 1991, SSA released plans to address ways to serve the public better and satisfy future workloads. Some of the improvements include pre-retirement notification of benefit status and eligibility and increased public service access over the phone. By the year 2000, it is estimated that 80 percent of SSA transactions will use teleservices, thus saving time and money for the public. These plans also call for improvements with respect to the settlement of disability claims (reducing processing time by more than half).

FAA Advanced Automation System (AAS).—The nation's air traffic control system is approaching obsolescence and becoming increasingly difficult and expensive to operate, increasing delays and the risk of aircraft accidents. AAS will use recent advances in technology to improve the safety and efficiency of air transportation, supporting 185 million aircraft flights annually by the year 2000; this is a 27 percent increase over 1990 levels. The traveling public will face fewer flight delays and also benefit from cost savings obtained by the airlines through reduced fuel consumption and maintenance expenses.

RRB Special Management Improvement Fund.—Over 800,000 retired railroad workers and their families receive Social Security equivalent, Medicare and railroad pension benefits from the RRB. This year a new Special Management Improvement Fund was approved and the first of five years of funding provided to finance reforms that evolved out of a joint RRB/OMB Management Review. The RRB is ahead of schedule in reducing backlogs. The claim case backlog has been cut from over 80,000 to under 60,000 cases. The backlog is expected to decline to under 40,000 in 1992, and to almost zero by the end of the five-year Management Improvement Plan period. This will provide more timely and accurate benefit checks to retired railroad workers and their survivors.

SELECTED IMPROVEMENTS IN FEDERAL SERVICE

The Administration continues to strive to improve the quality, performance, and service delivery of the Federal workforce.

Table 15–2. **INVESTMENTS IN IMPROVED SERVICE DELIVERY**
(In millions of dollars)

	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993
Budget Authority	1,294	1,682	+388
Outlays	1,197	1,581	+384

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In 1991, all necessary pay reform regulations under the Federal Employees Pay Comparability Act of 1990 (FEPCA) were implemented on time, enabling agencies to begin using the pay incentives and exercising the flexibility needed to recruit and retain the highest possible quality workforce. The Bureau of Labor Statistics has begun to gather the salary survey data required under FEPCA to set pay scales by locality beginning in 1994. In addition, to address the Federal Government's most pressing recruitment and retention problems, the President approved an 8 percent interim geographic adjustment in pay for employees in the New York, Los Angeles, and San Francisco metropolitan areas.

In 1992 and 1993, continued attention will be directed toward making long term investments and changes that improve the effectiveness of the Government's pay and personnel systems. Expanded use of computers and telecommunications systems will provide timely vacancy information to prospective hires and speed up and simplify the hiring process. Reviews will be made of a number of pay and personnel management systems, including: pay-for-performance, blue collar pay, classification, and pay and classification of law enforcement officers and health professionals. The objective of these reviews is to identify ways to improve the productivity and performance of Federal employees and encourage more cost-effective delivery of services to the public.

QUALITY IMPROVEMENT AND PERFORMANCE MEASUREMENT

Quality

The 45 million Americans who receive monthly Social Security checks or the 600 million passengers who annually fly on commercial aircraft that rely on the Federal air traffic control system know the importance of quality in Government. A commitment to quality must exist in every agency. To build this commitment, a significant Federal effort to provide higher quality services and products has been underway since 1988. This effort corresponds to major initiatives in the private sector to improve quality.

Federal awards are given annually in recognition of excellence in achieving quality improvement. Winning agencies serve as models for the rest of government.

The President's Award for quality was given in 1991 to the Air Force Logistics Command (AFLC). The AFLC credits its quality improvement effort for much of its success in supporting Desert Shield and Desert Storm. One example was Desert Express, modeled after Federal Express (the 1990 Baldrige Quality Award winner in the private sector). Through Desert Express, the Military Airlift Command and AFLC provided overnight shipment of a total of more than 300,000 pounds of critical spare parts to military forces in the Middle East, with shipments arriving on average 50 minutes ahead of schedule.

Winners of awards from the President's Council on Management Improvement in the domestic area include the IRS's Ogden, Utah, Service Center and the Regional Office and Insurance Center in Philadelphia of the Department of Veterans Affairs (VA). The IRS Ogden Service Center reduced misapplied payments by over 150,000 and undelivered mail by over 14 percent. The VA Regional Office and Insurance Center now handles 98.3 percent of veteran assistance telephone inquiries on the first call.

An important part of the Federal quality effort is the work of the Office of Personnel Management's Federal Quality Institute (FQI). FQI helps train agency officials in quality concepts on a regular basis and organizes an annual conference and workshop on quality improvement. The Institute also serves as a clearinghouse and forum for sharing quality improvement information.

The awards and FQI data show progress. But even award-winning agencies need to improve areas where performance is substandard. As the Social Security Administration acknowledges, the average of 87 days to process an initial disability claim far exceeds the time specified in its stated service objective. A common complaint received by the Internal Revenue Service (IRS) concerns its timely and accurate response to 10 million pieces of annual correspondence from taxpayers. As a result of cost effective quality

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improvement initiatives, the level of satisfactory IRS response to correspondence rose from 60 percent in 1988 to 85 percent in 1991.

The Administration is committed to Federal agencies providing quality services and products to American taxpayers. Building on progress to date, the Administration is launching quality demonstrations in the Internal Revenue Service, the Social Security Administration, and the Department of Veterans Affairs. The purpose of this effort is to demonstrate and evaluate what works in order to improve Federal quality in programs that touch tens of millions of Americans.

Performance Measures

Taxpayers should not be asked to pay for programs unless they can see results. The public deserves an accounting of how programs are working. Too many Government managers know too little about what their programs are actually doing. Federal agencies have not adequately identified measurable goals against which to track and compare performance.

Several fact finding and analytical efforts are underway.

- In the Fall of 1991, the General Accounting Office (GAO) surveyed Federal agencies' current and planned performance measurement systems. The survey showed that, while virtually all agencies selectively measure some performance, most agency officials are less than fully satisfied with the data derived from such measurement, particularly as it relates to making budget decisions, managing programs, or assessing accountability.
- OMB, GAO, and the Congressional Budget Office are completing a set of visits to State and local governments to review performance measurement systems at these levels. These visits have been useful in determining those elements (e.g., using strategic plans to define goals and objectives and holding managers accountable for results) that are necessary for successful performance measurement.
- OMB is participating in an Organization for Economic Cooperation and Development (OECD) experts group engaged in a special study of performance measurement in OECD member countries. This will produce, by the summer of 1992, comparative case studies of performance measurement systems in other countries.
- The Department of the Treasury's Financial Management Service is undertaking an effort to prepare periodic reports on private sector performance measurement systems (where analogies might be drawn with governmental operations).
- OMB is beginning work on typologies of illustrative performance indicators and standards. The initial indicator typology will be ready in March 1992 and show examples of common measures for common functions. The examples will be developed with the agencies, so as to begin a process of consensus building.

Performance indices include output measures (e.g., workload, production, transactions); quality of service measures (e.g., complaints, customer satisfaction levels, responsiveness rates); efficiency and productivity measures (e.g., unit costs); outcome measures (e.g., reduction in measles as a result of inoculation programs); and status of conditions measures (e.g., dam safety, highway pavement conditions).

The Chief Financial Officers Act of 1990 (CFOs Act) requires performance measures as part of financial statements. OMB's guidance on implementing the CFOs Act includes guidance on providing these measures. OMB is also working with selected agencies, including the Internal Revenue Service and the Social Security Administration, to help them develop appropriate performance indicators, which can serve as models for others. The OMB approach is to identify a select number of representative measures that can reflect overall performance and be useful to managers, the Congress, and the public.

OMB is also continuing to work with the Congress on several legislative proposals that have been introduced to establish performance standards and performance measurement systems throughout the Federal Government.

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IMPROVING FEDERAL STATISTICS

The Federal Government collects and disseminates statistics because the unhindered flow of unbiased, timely information about the state of the economy, society, health and the environment is critical. Federal statistical activities affect the lives of virtually every citizen: they determine how much Social Security benefits and labor contracts change, monitor the quality of air and the safety of food, chart the competitiveness of American industry and the status of health, and measure crime in the streets.

The Administration's efforts are designed to improve the efficiency, quality, and relevance of statistical programs while protecting the integrity of statistical information products, respecting pledges of confidentiality, and minimizing the reporting burden on the public.

The Administration's statistical program is aimed at modernizing Federal statistics so that they recognize:

- The shift from manufacturing to services and the greater role of international markets.
- The increase in two-earner and single parent families, lengthened life-expectancies, and postponed marriage and child-bearing.
- The increased demand for environmental monitoring.

The budget for major statistical agencies[1] is $1.2 billion, an increase of 20.1 percent over the 1992 enacted level and 14.2 percent over the 1992 President's budget. This continues a trend of Administration support for improving statistical programs as shown in the accompanying table.

This budget includes an increase of $12 million over 1992 enacted levels for the Economic Statistics Initiative announced in the 1992 budget. Congress funded 60 percent of the 1992 request. The 1993 request for the Initiative provides for the first installment of more than $150 million over the five-year period 1993-97. The budget also contains a $52 million increase for education statistics—to assess progress in implementing the America 2000 strategy and in reaching the National Education Goals, as well as meet legislative requirements for improved data.

In addition, the budget requests funds for continued production of current data used to monitor health trends and use of health services and to explore the relationships between risk factors and diseases. The budget also funds the collection of new criminal justice information necessary for allocation of State and local anti-drug abuse formula grants. Continued planning for the year 2000 Decennial Census is supported, including preparation of field experiments for data collection among groups that are difficult to enumerate.

[1] Major statistical agencies include the Department of Agriculture's Economic Research Service and National Agricultural Statistics Service, the Department of Commerce's Bureau of Economic Analysis and Bureau of the Census, the Department of Education's National Center for Education Statistics, the Department of Energy's Energy Information Administration, the Department of Health and Human Services' National Center for Health Statistics, the Department of Justice's Bureau of Justice Statistics, the Department of Labor's Bureau of Labor Statistics (BLS), and the Department of the Treasury's Statistics of Income Division. To provide a more consistent comparison, the budget totals do not include funding for the 1990 Decennial Census; they do, however, include funds for planning and research for the 2000 Decennial Census. The 1993 total includes $16.8 million in the BLS budget transferred from the Occupational Safety and Health Administration for BLS' occupational safety and health programs.

Table 15–3. **INVESTMENTS IN MAJOR STATISTICAL PROGRAMS**
(In millions of dollars)

	1991 Actual	1992 Enacted	1993 Proposed	Dollar change: 1992 to 1993
Budget Authority	863	975	1,170	+195

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1991 ACCOMPLISHMENTS

Economic Statistics

- Reinstatement of estimates of GNP by industry that were discontinued in 1989.
- Availability of more reliable and consistent data on manufacturer's new orders, shipments, and inventories, and progress in automating import data.
- Improvements in the coverage and accuracy of both current and constant dollar estimates of construction activity in the National Accounts.
- Expansion of information on changes in employers' cost of employee compensation to include the nursing and personal care facilities industry.
- Production, for the first time, of annual information on the $200 billion communications industry.
- The National Energy Information System's success in meeting the increased demand for energy information during the Persian Gulf War (dispelling rumors and speculation about reductions in energy supplies and resulting price increases).
- U.S. statistical agency technical assistance to statistical units in the emerging market economies of Eastern Europe and the former Soviet Union.

Education Statistics

- Issuance of the Congressionally mandated report on education indicators (including indicators for learner outcomes, quality of educational institutions, readiness for school, societal support for learning, education and economic productivity, and educational equity).
- Release, for the first time, of State level reports containing National Assessment of Educational Progress data on mathematics achievement in grade 8.

Health Statistics

- A special supplement to the National Health Interview Survey to collect data for measuring progress in meeting the Nation's Health Objectives for the Year 2000.
- Development of health status indicators at National, State, and local levels. A special minority health chartbook published as part of Health, United States, 1990.

Social and Demographic Statistics

- Early availability of 1990 Decennial Census data (including detailed population and housing data at the block level) to local and regional planners.

1992 AND 1993 OBJECTIVES

The 1992 and 1993 budgets for statistical agencies build on their base programs as well as their 1991 accomplishments to improve the quality and relevance of Federal statistical programs. Specific objectives include:

Economic Statistics Initiative

- Enhanced accuracy, breadth, and international comparability of the National Income and Product Accounts.
- Improved coverage and detail in reports on international payments and investment flows.
- Refined price-change data (adjusting for changes in the quality of goods).
- Increased coverage and detail on the composition of the service sector.
- Legislation to establish a standardized mechanism for limited sharing of confidential statistical information between statistical agencies (solely for statistical purposes).
- An upgraded Government statistical work force (through establishment of a specialized graduate-level program to develop the skills needed in the conduct of Federal statistical surveys).

Agricultural Statistics

- 1992 and 1993 measurements of the growing specialty commodity output of the agricultural sector.
- Collection of comprehensive information on the use of agricultural chemicals, including pesticides, on a wide range of crops.

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Labor Force Statistics

- Publication of detail for 36 new service industries (18 each in 1992 and 1993).
- Introduction of modern data collection technology to reduce the frequency and extent of revisions in preliminary estimates of employment and earnings.

Other Economic Statistics Program Improvements

- Linkage in 1992 of enterprise and establishment data for foreign-owned enterprises (to provide an improved basis for assessing the impact of foreign direct investment on the U.S. economy).
- Design of a new quarterly survey to measure nonresidential reconstruction.
- Basic improvements in 1993 in measures of portfolio investment in the international economic accounts (resulting from the first benchmark survey of U.S. portfolio investment abroad in over 50 years).
- A new capital investment survey in 1993 of business expenditures for equipment and buildings, quarterly financial surveys of the business services industry, and expansion of the Quarterly Financial Report to small companies.
- The largest expansion since the 1930's in the 1992 Economic Censuses, to be conducted in 1993, adding 95 new service sector industries (increasing coverage of the Economic Censuses from 75 to 98 percent of the Gross Domestic Product).

Education Statistics

- Continued improvement of the quality and comparability of education data (including information on family formation, work history, and postsecondary completion rates). Enhanced data in 1993 on elementary and secondary education (including finance, staffing, teachers, and school discipline).
- Availability in 1993 of the results of the 1992 National Assessment of Educational Progress (NAEP).
- Expansion of the 1994 NAEP, field tests of the international comparability of math and science assessments, and assessments of postsecondary students.

Health Statistics

- Additional efforts in 1993 to improve statistics on the health status of minority populations (including the association between socioeconomic status and health, and the interactions among race, ethnicity, poverty, and other social and economic factors).

Social and Demographic Statistics

- Improved questionnaires for the Current Population Survey (CPS) and the Survey of Income and Program Participation—to make them more understandable to respondents, reduce data entry and editing errors, reduce individual respondent burden, and allow for greater flexibility in the questions asked.
- Completion of research in 1993 to determine whether a fundamentally new design will be used for the year 2000 Decennial Census.

STRENGTHENING FINANCIAL MANAGEMENT

The budget requests $2.2 billion for financial management improvements, $83 million more than enacted in 1992 (see Table 15–4).

In 1992 and 1993, the Administration will build on its efforts in 1991 to strengthen financial management. Implementation of the Chief Financial Officers (CFOs) Act will be a comprehensive effort, aimed at correcting long-standing shortcomings in financial systems, internal controls, and the use of assets, and at producing more reliable and useful financial information. Principal activities will include establishing:

- CFO organizations;

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- improved accounting, reporting, and auditing practices;
- improved financial systems; and
- improved asset management policies.

These activities will, in time, bring Federal financial practices in line with what is routinely expected from privately held businesses and State and local governments. For example: (1) accounts will be reconciled on a timely basis; (2) loans and accounts receivable will be controlled so that more of them will be converted into available resources, rather than written off; (3) liabilities will be better understood and the Government better prepared to meet those obligations; (4) electronic transfers for both disbursements and collections will be used to a greater degree; and (5) accounting for assets and liabilities will be improved.

ESTABLISHING CFO ORGANIZATIONS

To lead financial management improvements, the President nominated and the Senate confirmed in 1991, a Deputy Director for Management of OMB (designated by the CFOs Act "as the chief official responsible for financial management in the United States Government") and a Controller (as the head of the newly established Office of Federal Financial Management (OFFM)). The President also designated or appointed (with Senate confirmation) 14 agency CFOs.

Twenty-two of 23 major agencies have now submitted, and received OMB approval of, CFO reorganization plans pursuant to the CFOs Act. The approved plans provide for authority and control by the CFO over agency financial management functions. In 19 of the plans, both budget and finance have been located under the CFO, a move designed to integrate and strengthen agency financial management. In 1992, the CFO Council will be reorganized to provide for improved policy consultation and address practical implementation needs associated with the CFOs Act.

IMPROVED ACCOUNTING, REPORTING, AND AUDITING PRACTICES

Agencies will prepare more reliable and useful financial information to help prevent waste and support better decisions. The Administration is requesting $1 million for establishing accounting and reporting standards; $34 million for preparing financial statements; and $66 million for auditing the statements.

Accounting and Reporting Standards

Accounting and reporting standards define the qualitative basis for financial information. Without them, decision-makers and the public will have no assurance of timely, comparable and useful financial information.

1991 Accomplishments.—The Federal Accounting Standards Advisory Board (FASAB) was established in 1990 to recommend standards for accounting in the Federal Government. It published in November 1991 proposed standards for financial resources, funded liabilities, and net financial resources of Federal entities.

To establish a financial reporting framework for agencies, OMB published in September 1991 guidance directing agencies to produce

Table 15–4. **INVESTMENTS IN FINANCIAL MANAGEMENT**
(In millions of dollars)

	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993
Improved Financial Reporting	57	101	+44
Improved Financial Systems	628	659	+31
Improved Asset Management	1,437	1,445	+8
Total Budget Authority	2,122	2,205	+83

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financial statements containing both traditional financial information and measures of program performance.

1992 and 1993 Plans.—To improve financial control in key areas, FASAB plans to propose standards in 1992 for direct loans and loan guarantees, inventories, and unfunded liabilities. It also intends to issue a paper that identifies user needs and reporting objectives for Federal agencies.

OMB will update the guidance for financial reports. It will also provide guidance for the selection and presentation of information on program and financial performance. The focus will be on developing common performance measures for programs with similar activities.

Preparation and Audit of Financial Statements

Audited financial statements will improve the reliability of financial information.

1991 Accomplishments.—In accordance with the requirements of the CFOs Act, the Department of Labor, the General Services Administration, and the Social Security Administration issued audited financial statements, covering 1990 activity. Twenty-seven Government corporations covered by the Act also issued 1990 financial statements. OMB identified 133 entities (revolving funds, trust funds, and commercial functions) for which 1991 financial statements should be prepared. Seventy of these entities will issue their first audited financial statements in 1992.

OMB published in September 1991 audit requirements for Federal financial statements that go beyond the requirements of generally accepted government auditing standards. They require the auditor to (1) review the processes by which weaknesses are reported under the Federal Managers' Financial Integrity Act (FMFIA); (2) ascertain whether there are conflicts between the entity's FMFIA report and material weaknesses identified during the audit; (3) ascertain whether the agency is in compliance with relevant laws; and (4) ensure that the agency can document and support reported performance information.

1992 and 1993 Plans.—To strengthen auditor effectiveness, the President's Council on Integrity and Efficiency (PCIE) will (1) develop a policy and procedures manual for the audits of Federal entities' financial statements; and (2) define the appropriate level of auditor assistance to management for the preparation of financial statements. The Inspectors General Audit Training Institute will provide the IG community with training on conducting financial audits.

IMPROVED FINANCIAL SYSTEMS

The CFOs Act calls for a strategy to develop and integrate agency accounting systems, and bring existing systems into compliance with new standards and requirements.

The budget requests $659 million for financial systems improvements, $31 million more than enacted in 1992. Efforts will be made in three areas: (1) establishing or improving financial information and functional standards; (2) improving individual agency financial systems; and (3) upgrading the central systems.

Financial Information and Functional Standards

1991 Accomplishments.—In last year's budget, OMB proposed that financial systems development be enhanced by codifying financial data standards and issuing additional functional standards. Both were accomplished. The Joint Financial Management Improvement Program (JFMIP) issued a report defining all financial data elements required by Treasury and OMB.

In addition, a joint OMB/Treasury team issued a document defining the explicit data base requirements for direct and guaranteed loan accounting systems.

1992 and 1993 Plans.—Further tightening of informational and functional requirements is planned in 1992.

- Treasury will integrate the financial data standards into the U.S. Standard General Ledger.
- OMB will define technical linkages between financial information at the Government's various organization levels.
- Functional requirements for consumable inventories and fixed assets systems will be developed.

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During 1993, OMB will expand information requirements to cover Government-wide performance information, and explore ways to maximize information transfers through the use of electronic technology.

Agency Systems

1991 Accomplishments.—A project was started to test the conformance of commercially available "off-the-shelf" administrative accounting system software with the core financial systems requirements, and certify their acceptability. This project will be completed in early 1992.

The major agencies' five-year systems improvement plans were reviewed and determinations made of the needed levels of investment. Direct intervention was used in selected cases, such as the Bureau of Indian Affairs' accounting system, where a joint OMB/Interior team led the successful conversion to a new system in October 1991.

Cross-servicing agreements were made that transferred accounting and payroll operations for several small agencies to Treasury or the Department of Agriculture. The Department of Health and Human Services extended electronic grant payment services to thirty-one external bureaus and small agencies.

1992 and 1993 Plans.—During 1992, OMB will perform reviews of five agencies to ensure that plans are strategically and technically appropriate and can provide a basis for informed investment decisions. Cross-servicing of agency payroll systems will also be expanded; the Departments of Justice and Treasury are scheduled to receive payroll servicing from the Department of Agriculture commencing in late 1992.

During 1993, new initiatives will (1) expand the coverage and improve the quality of packaged financial system software solutions available to Federal agencies; (2) reduce the time required to purchase and implement software packages and (3) develop techniques to reduce the maintenance costs of financial management software solutions.

Central Systems

1991 Accomplishments.—Treasury and OMB have embarked on a major project to achieve basic integration of their financial data bases by 1994.

OMB has automated its budget execution data base. Previously, budget execution data was reported on paper to OMB and did not reside in any central system. Now, monthly execution data is electronically reported (by agencies) to a Treasury data base and then electronically transmitted to OMB.

1992 and 1993 Plans.—In 1992, the content of the integrated Treasury/OMB database will be expanded to provide a special electronic database for credit programs and reporting of budget execution information below the appropriation level.

During 1993, OMB and Treasury will study the technology, and related costs, necessary to transfer data electronically between central and individual agency databases. This study will include assessing the information needs of senior government officials.

ASSET MANAGEMENT

Significant efforts are underway to manage more effectively the Federal Government's assets, valued at $1.4 trillion at the end of 1990. The CFOs Act requires agency CFOs to oversee systems to manage these assets (which range from gold and cash to inventories of consumable materials and public lands). To be effective, the systems must:

- hold, utilize, and dispose of assets in the most cost-effective manner, consistent with public policy;
- prevent and minimize losses from theft, fraud, damage, and deterioration; and
- properly value the assets for financial statements and other management purposes.

Most government-wide efforts have focused on credit management/debt collection ($230 billion in loans and accounts receivable and $70 billion in taxes due, and $653 billion in guaranteed loans) and cash management (over $2 trillion annually; $40 billion on hand at the end of the year).

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Credit Management and Non-Tax Debt Collection

For 1993, $1.4 billion is requested for credit management and non-tax debt collection, approximately the same amount as enacted in 1992. Increases for agency initiatives include:

- $11.5 million for the Department of Veterans Affairs, providing for guaranteed loan workload requirements and debt collection;
- $6.4 million for Treasury's Financial Management Service to improve government-wide credit management activities, including $1.8 million for a Credit Management Training Institute; and
- $4.6 million for the Department of Justice to improve litigation and debt collection information systems, and to provide training in debt collection litigation for U.S. Attorneys.

1991 Trends and Accomplishments.—At the end of 1991, the Government's loan and non-tax debt portfolio totaled about $883 billion, up slightly from $879 billion in 1990. Of this amount, $230 billion was in loans and other non-tax debts owed Government agencies (down from $249 billion in 1990) and $653 billion was in loans guaranteed by the Government (up from $630 billion in 1990). Delinquencies on non-tax receivables decreased in 1991 by $192 million, to $45.5 billion. Over $18 billion in uncollectible debt was written off in 1991, and agencies reported a year-end loss allowance of $59 billion.

The Administration moved forward in 1991 in strengthening guaranteed loan management. It began implementation of the recommendations in Treasury's "Assessment of Guaranteed Loan Management" report. OMB and Treasury Financial Management Service initiatives included standard lender agreements, lender monitoring, and improved disposition of foreclosed property. In 1991, the major credit agencies developed performance standards and began quarterly reporting on early warning indicators. High risk reviews were conducted in four of the five major credit agencies and the Department of Justice to address serious deficiencies in credit management and debt collection.

1992 and 1993 Plans.—The Administration will:

- *Increase collections.* In 1992 and 1993, the major credit agencies are expected to increase collections by over $1 billion.
- *Propose credit management and debt collection legislation.* The legislative package includes:
  - —Mandating the use of income tax refund offsets for delinquent debt.
  - —Allowing Federal agencies to obtain current debtor address information from the IRS for debt collection purposes.
  - —Barring delinquent debtors from obtaining new Federal loans or guarantees.
  - —Requiring collection of taxpayer identification numbers for loan applicants, grant recipients, and contractors, for future offset purposes.
  - —Requiring guaranteed loan program agencies to establish standard lender agreements, collect information on the status of guaranteed loans, and collect fees to cover the costs of lender reviews.
  - —Simplifying the late charge fee structure.
  - —Expanding reporting to credit bureaus.
  - —Removing the exemption of the Social Security Administration (SSA) from the Debt Collection Act of 1982.
  - —Providing the Justice Department with permanent authority to contract with private sector attorneys for litigation and collection of delinquent debt referred to Justice by other agencies.

  Enactment of this legislative package will lead to an estimated increase in collections of over $170 million in 1993. In addition, an estimated $140 million in losses would be avoided annually by barring delinquent debtors from receiving Federal loans or loan guarantees.
- *Improve credit information.* The Federal Credit Reform Act of 1990 reforms budgeting for credit by requiring annual appropriations for the subsidies inherent in direct and guaranteed loan programs. OMB is working with agencies to improve their financial systems in order to produce accurate and timely data for credit reform. The Act also requires that OMB submit to Con-

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gress a report on administrative costs for credit and grant programs. This report will provide the Congress with information on the appropriate treatment of administrative costs under credit reform accounting.

- *Improve credit screening.* In 1992 the major credit agencies will begin using a credit screening system operated by the Department of Housing and Urban Development to ensure that new credit is not given to individuals already delinquent on Federal loans.
- *Increase collections of Civil Monetary Penalties (CMP).* For 1991, agencies reported CMP assessments of $548.9 million, collections of $320.2 million, and delinquent CMPs of $235.5 million. OMB will work with agency CFOs during 1992 to set meaningful performance objectives for decreasing delinquencies and increasing collections.
- *Stop erroneous payments to deceased beneficiaries.* In February 1991, GAO estimated that 20 Federal benefit programs erroneously paid over $4.3 million in a single month to beneficiaries listed in SSA records as deceased. In 1992, OMB will require Federal agencies to acquire death information from SSA, match the data with their benefit rolls, promptly terminate benefits to deceased beneficiaries, initiate efforts to recover overpayments, and share death information from their records with SSA. OMB will also work with Treasury to improve Treasury's methods of stopping checks and canceling electronic funds transfers to deceased beneficiaries. SSA will work with the States to conduct pilot studies to assess the feasibility and cost-effectiveness of automated transmission to SSA of deceased beneficiary information.
- *Recover SSA overpayments.* SSA has accounts receivable of over $3 billion, due mainly to overpayments of benefits. SSA routinely recoups overpayments to current beneficiaries by offsetting future benefit payments. In 1992, SSA will begin participating in the income tax refund offset program by referring debts of former beneficiaries no longer entitled to benefits.

Tax-Related Debt

Congress denied additional resources requested in the President's 1992 budget for tax-related accounts receivable collections initiatives. For 1993, the Administration proposes providing additional resources of $16.2 million and 397 full-time equivalent positions, annualized in 1994 to 800 actual positions, to collect delinquent tax debt.

1991 Trends and Accomplishments.—Due in part to a weak economy, IRS accounts receivable increased during 1991 from $64 billion to $70 billion, an increase of 9 percent. Collections dropped from $25.5 billion to $24.3 billion, a decrease of 5 percent. Collections as a percent of accounts receivable dropped from 40 percent to 35 percent, although collections as a percent of new receivables rose from 73 to 77 percent during the same period. At the end of the year, delinquent tax debt had risen from $61 billion in 1990 to $67 billion, an increase of 10 percent.

In May 1991, the IRS appointed an Accounts Receivable Executive Officer (AREO) to oversee agency-wide actions and limit growth of accounts receivable. The AREO developed an agency-wide action plan that brings direction, focus and coordination to accounts receivable. In addition, a set of key performance indicators for tracking IRS management of accounts receivable is in place and quarterly performance assessments will begin in 1992.

The IRS also developed in 1991 an Allowance for Doubtful Accounts to present a clearer picture of the value and collectibility of accounts receivable. At the end of 1991, the IRS reported an allowance of $41 billion (indicating that up to 59 percent of the $70 billion in accounts receivable may be uncollectible).

1992 and 1993 Plans.—To stem the further growth of accounts receivable and boost collections, the IRS will:

- *Implement an accounts receivable strategy.* IRS is committed to halting the growth of accounts receivable during 1992 and boosting collections of delinquent taxes by 8 percent ($1.9 billion) over 1991.
- *Use private sector tools.* During 1992, the IRS will continue to expand electronic fil-

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ing, which enables private sector tax preparers to submit tax returns electronically to the IRS. Electronic filing also speeds refunds to the taxpayers. The Administration will support legislation that will permit the use of credit card payments on tax accounts. OMB will also work with the IRS to determine the feasibility of using private collection agencies to assist in the collection of certain delinquent tax debt.

- *Simplify and redesign the tax deposit system.* The payroll tax deposit reporting system processes more than $800 billion each year from more than 5 million businesses. The present system makes compliance expensive and frustrating for businesses. The Administration's reform proposal includes:

  —A single wage reporting system that would eliminate the multiple filings currently required to comply with Federal and State tax systems.
  —Simplified payroll tax deposit rules that would include revenue neutral changes to current Treasury regulations.
  —Emphasis on up-front compliance that would shift much of IRS enforcement emphasis to initiatives to improve voluntary compliance.

  The Administration's proposal also includes continued funding for the Federal Tax Deposit Redesign project to test in 1993 electronic receipt, processing, and deposit of annual employer tax deposits. Full implementation will begin in 1994, if testing is successful.

Cash Management

1991 Trends and Accomplishments.—The Administration's goal is to convert, to the maximum extent possible, the Government's $2.6 trillion annual cash flow to a fully electronic collection and payment system. Currently, over 900 million Federal disbursements are made annually, amounting to $1.4 trillion. Approximately 43 percent of the number of payments (and 56 percent of the dollar amounts) are issued electronically. This is an improvement over 1988, when 38 percent of the number of payments (and 42 percent of the dollars) were issued electronically.

Electronic payment of recurring benefits for social security, supplemental security income, civil service annuity, railroad retirement, and veterans benefits has increased from 19 percent in 1982 to 47 percent in 1991.

Federal and State governments are developing and testing Electronic Benefit Transfer (EBT) payment mechanisms. EBT delivers Federal and State benefits electronically through plastic cards, automatic teller machines, and card scanning devices in grocery stores. EBT demonstrations are underway in Maryland, Pennsylvania, Minnesota, New Mexico, Iowa, and Wyoming. Planning has begun in fifteen States, and statewide implementation of EBT was approved in 1991 for Maryland by the Department of Health and Human Services and the Department of Agriculture's Food and Nutrition Service.

Although agencies report that 90 percent of payments to vendors were made on time in 1990, OMB has concerns about the accuracy of agency reporting. OMB will continue to sponsor improved payment techniques that streamline the payment process (e.g., use of Small Purchase Bank Cards and third party drafts). At the same time, agencies need to improve their data on the timeliness of payments through the use of quality assurance programs as demonstrated by GSA in 1991.

1992 and 1993 Plans.—The Administration will:

- *Continue to refine disbursement mechanisms.* The costs of disbursements will be lessened through electronic funds transfer and other disbursement alternatives. Treasury will work with OMB and the agency CFOs to examine Federal disbursement strategies and costs, including non-electronic payments to employees.
- *Improve flows of payments to States.* The Administration plans to publish, in early 1992, proposed regulations for implementing the Cash Management Improvement Act of 1990 (CMIA). Implementation of the CMIA will significantly increase the equity and efficiency of the processes used by Federal agencies to make over $150 billion in payments to States each year.

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- *Modernize payments to individuals.* The Administration will continue to increase use of electronic funds transfer by direct deposit (EFT/DD) into recipients' bank accounts to reduce paper costs further and to improve security for individuals.
- *Complete testing and, if positive, expand use of Electronic Benefit Transfers.* If evaluation of the Maryland pilot (noted above) proves positive, a large-scale single card multi-program EBT demonstration in 1994 will be designed to test whether EBT will work across State lines for Federally-operated programs combined with State-operated programs.

STRENGTHENING INFORMATION RESOURCES MANAGEMENT

The Paperwork Reduction Act requires agencies to manage their information and information technology in an efficient, effective, and economical manner. Information resources management (IRM) is a critical area, both because of the importance of Government information and because of the heavy reliance Federal agencies place on information technology to deliver programs to the public. The Administration's goal is to maximize the usefulness of information collected, maintained, and disseminated by the Federal Government, and to improve the Government's use of information technology in the execution of its responsibilities.

THE PROGRAM FOR PRIORITY SYSTEMS (PPS)

The PPS was established to focus top-level management attention on important agency information technology initiatives with government-wide significance. Agency information technology initiatives are selected for the PPS based on system size, complexity or sensitivity, or proposed use of precedent-setting technology or implementation strategy. PPS initiatives are typically removed from the Program after the design and development stage. Lessons learned during the PPS review process are shared with agencies planning similar or new initiatives.

The PPS currently includes:

Table 15–5. **PROGRAM FOR PRIORITY SYSTEMS**
(In millions of dollars)

System	1991 Actual	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993
SSA Strategic Plan	225	260	260	—
IRS TSM	278	427	612	+185
FAA's AAS	585	604	806	+202
SEC's EDGAR	12	9	11	+2
FDA Drug Approval	—	—	3	+3
FBI IAFIS	—	48	100	+52
IBIS	10	10	10	—
Government-wide FMS's	442	628	659	+31
FTS 2000	20	10	10	—
DoD CIM	100	278	331	+53
Total Budget Authority	1,672	2,274	2,802	+528

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- ***The Social Security Administration's (SSA) Strategic Plan.*** The SSA's Strategic Plan, released in 1991, is designed to meet the challenges of substantially increasing future workloads. The Agency Information System Plan (ISP) aims to help SSA better serve the public. In next steps, SSA will develop tactical plans, review existing and proposed business processes, and test the effectiveness of the proposed information technology architectures to determine which will best satisfy SSA's goals.
- ***Internal Revenue Service (IRS) Tax System Modernization (TSM).*** IRS currently relies on computer systems designed over twenty years ago that are expensive to maintain, increasingly unreliable, and not flexible enough to respond to taxpayer inquiries. TSM will modernize these antiquated systems, make tax administration less expensive, and improve IRS' ability to provide high quality service to taxpayers. During 1991, the IRS published a Design Master Plan (outlining the new system's architecture and laying out plans for transition from the current to target architecture). TSM is projected to be largely completed in 1998.
- ***The Federal Aviation Administration's (FAA's) Advanced Automation System (AAS).*** The FAA is engaged in a comprehensive program for modernizing the national air traffic control and airway management system. AAS forms the backbone of the revamped air traffic control system, providing new controller work stations, tower control facilities, rationalized operating facilities, and improved communications (including satellite technology for safer, more efficient aircraft navigation). The first AAS subcomponents are now being introduced to area control facilities throughout the nation. Installation of the system is projected to be completed in 2003.
- ***The Securities and Exchange Commission's (SEC's) Electronic Data Gathering, Analysis, and Retrieval (EDGAR) System.*** The purpose of EDGAR is to increase the efficiency and fairness of the securities market for the benefit of investors, corporations, and the economy. EDGAR is designed to accelerate the processing, dissemination, and analysis of time-sensitive information filed with the SEC (over 9 million pages per year). Filing this information electronically will make it accessible in minutes instead of days. The SEC began the EDGAR program as a pilot in 1984, awarded the full contract in 1989, and expects to have the entire system implemented in 1997.
- ***The Food and Drug Administration's (FDA's) Drug Approval Process.*** FDA is reviewing its existing paper-intensive drug approval process for pharmaceutical products. FDA will develop a master plan that will identify, review, and streamline the existing drug approval process, and then identify ways in which information technology can be utilized to accelerate the process. Under current procedures, the bound materials germane to an FDA approval of a proposed drug average 20 packing boxes and require an average of 28 months for review. The objectives of an improved process are to minimize the volume of hard-copy documents submitted, allow for better tracking, and reduce the time required for FDA approval to less than 14 months.
- ***The Federal Bureau of Investigation's (FBI's) Integrated Automated Fingerprint Identification System (IAFIS).*** The FBI's IAFIS will allow law enforcement officers to process and transmit fingerprint information, criminal histories, and other data electronically. IAFIS will serve as a component of the FBI's information sharing program currently offered to over 63,000 State and local law enforcement authorities. Currently, the FBI receives 30,000 fingerprint submissions per day (most of which take between 15 and 20 days to process). By 2000, IAFIS will receive 60,000 submissions per day, and will process these submissions within 2 hours. This faster response will greatly reduce the possibility of an individual wanted on other criminal charges from being inadvertently released by local magistrates. The FBI is in the process of preparing the requirements and concept studies for IAFIS.

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- ***Interagency Border Inspection System (IBIS).*** Three agencies (the Department of State, the Customs Service, and the Immigration and Naturalization Service) created IBIS, a shared system, to assist law enforcement officials at U.S. borders. All incoming international passengers will have their names checked twice. In selected airports where IBIS is installed, IBIS has freed Customs Service inspectors to move among travelers and expedite the processing of travellers who warrant no more than a cursory inspection. IBIS will also improve border law enforcement through ensuring cooperation in the development of border information systems.
- ***Government-wide Financial Management Systems (FMS).*** Improved financial management systems are necessary to enable CFOs and OMB to implement the requirements of the CFOs Act. Investments in financial management systems will establish or improve informational and functional standards and improve the individual agency and central financial systems necessary to achieve the goals of the CFOs Act.
- ***General Services Administration Federal Telecommunications System (FTS) 2000 Program.*** The FTS 2000 is a nationwide, interagency telecommunications system that uses digital switching and transmission to provide voice, data, and video communications services. The Federal Government is the largest single user of telecommunications services in the world, and Federal agencies depend heavily on these services for program delivery. Two 10-year contracts (aggregating up to $15 billion) were awarded in December 1988 to replace the 1960s-vintage FTS voice communications network. The transition for 1.2 million Federal users from the former FTS was completed ahead of schedule in June 1990. FTS 2000 contracts are structured so that Federal telecommunications benefit from constantly upgraded technology.
- ***Department of Defense (DoD) Corporate Information Management (CIM).*** In October 1989, DoD initiated CIM to increase management efficiencies and eliminate unnecessary redundancy in automated systems that support DoD business processes. DoD estimates that consolidating information systems and eliminating unnecessary software development will result in savings exceeding $2 billion by 1996. DoD also attributes about $35 billion in potential operational and defense management savings to the application of CIM processes. Through an examination of existing automated systems during 1991, the CIM program seeks to establish uniform system requirements and data formats across common functional areas. In 1992 and 1993, the Department will focus on establishing standards and implementing these standards to improve business processes throughout DoD.

OTHER IRM INITIATIVES

A central challenge of IRM is achievement of efficient and concurrent management of both information and the technology used to collect, process, and disseminate that information. Other initiatives to improve Federal IRM include:

- ***Consolidation in 1991 of two IRM reporting documents*** (one on information collection and the other on ADP) into one report titled *Information Resources Management Plan of the Federal Government.* This consolidation will promote an integrated agency approach to these matters.
- ***Revision of OMB Circular No. A-130 "Management of Federal Information Resources."*** In the past few years, new technologies have fundamentally changed the way the Government collects, maintains, and disseminates information. In 1991, OMB published notice of proposed Circular A-130 revisions and evaluated comments on potential changes to address emerging technological and policy issues. OMB will propose further revisions in early 1992. These will include revised policies to ensure that (i) information created at taxpayer expense (including electronic records) is available to citizens on an equal and equitable basis; (ii) the Computer Matching and Privacy Protection Act of 1988, as amended, is implemented; and (iii) benefit-cost analysis is used to assist

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agencies in the development of their required five-year plans for information technology acquisition.

- ***Improvements to Federal Computer Security.*** It is important to improve the security of Federal computer systems, given the degree to which agencies rely on their systems and the potential for service disruptions due to internal error or external attack. In 1991, agencies increased their awareness of computer security; prepared and implemented security plans for sensitive systems; tested back-up systems; and identified security of individual systems as material weaknesses under the Federal Managers Financial Integrity Act (FMFIA). In addition, NIST released for comment a new data encryption standard that will improve security of data transmitted and stored by Federal systems. In 1992 and 1993, agencies will continue to assess the vulnerabilities of their computer systems and work to mitigate these vulnerabilities. Agencies will also expand use of the FMFIA in reporting material weaknesses relating to agency computer security.
- ***Expanding the Use of Electronic Data Interchange (EDI).*** EDI is saving the Government time and money by eliminating paper transfers for routine transactions. For example, the U.S. Treasury can issue an electronic payment for 4.5 cents, while issuing and mailing a traditional paper check costs 30.2 cents. The Customs Service's Automated Commercial System used EDI to improve system productivity by 10 percent annually and reduce error rates from one error in six filings to one error in 64 filings. Ten Federal agencies are currently engaged in workshops to develop standards and share information in order to facilitate Federal use of EDI.
- ***Participation in the Development of the Federal High Performance Computing and Communications Program (HPCC).*** A description of the HPCC may be found in Chapter 6.
- ***Improvement of Federal Electromagnetic Spectrum Management.*** Cellular telephones, satellite systems, and microwave transmission have revolutionized global communications. They have also substantially increased demand for electromagnetic spectrum allocations, and challenged the ability of national and international spectrum management organizations to allocate the spectrum in an efficient and effective manner. In the United States, separate portions of the spectrum are managed independently by the Federal Communications Commission, the Departments of Commerce and Defense, and other Federal agencies. In 1992, these agencies will work together, and with international organizations, to improve the Federal information systems which support spectrum management.
- ***Development of Guidance on Computer Matching.*** Computer matching is used by agencies to detect fraud, waste, and abuse in Federal benefit programs, and to collect debts owed the Federal Government. As required by the Privacy Act as amended, agencies will begin to utilize cost-benefit analysis as a decision tool for deciding whether to implement computer matching. OMB will issue by March 1992 guidance on analytic methodologies and program changes due to passage of the Computer Matching and Privacy Protection Amendments of 1990.

REFORMING THE PROCUREMENT PROCESS

The Federal Government buys almost $200 billion in goods and services each year—ranging from tanks to paper clips, and from building maintenance to advanced research. The Department of Defense spends 75 percent of the procurement budget—more than the combined annual purchases of IBM, General Motors and Exxon. Procuring agencies take about 20 million contracting actions each year, an average of 70,000 actions every working day. Approximately 250,000 firms—both large and small businesses—provide com-

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modities and services to the Federal Government as prime contractors. The number of subcontractors is far greater.

While, after substantial effort, nearly two-thirds of current procurement dollars are now awarded competitively, problems with integrity, faulty products, and uncontrolled costs still plague the process.

The Administration is engaged in five areas of reform: enhancing integrity, correcting problems, removing impediments, improving quality, and improving efficiency and effectiveness.

Enhancing Integrity

Procurement Integrity and Ethics Laws.—Congress has over time enacted a confusing mix of laws in this area. Each incident of fraud or abuse has given rise to new requirements. Some Government employees are, as a result, subject to up to five different post-employment statutes, three of which contain multiple prohibitions. In an effort to simplify the law, the Administration submitted to Congress in June 1990 a proposed Procurement Ethics Reform Act; it did so again in February 1991. Although there have been Congressional hearings, reform legislation has not been enacted. The Administration will continue in 1992 to work toward enactment of a uniform, clear and enforceable statute.

Lobbying.—There is a similar welter of lobbying laws—many of them conflicting and many of them unused and unenforced, or unusable and unenforceable. In 1990, Congress enacted legislation (sponsored by Senator Byrd) that imposed controls on the expenditure of funds to influence the award of a contract, grant or cooperative agreement. The legislation endeavored to increase the visibility of lobbying activities through reporting requirements. The Administration developed guidelines to implement the contracting aspects of the statute in 1990. The guidelines require firms to submit disclosure statements when Federal funds are spent for lobbying activities. The guidelines, however, need refinement because they continue to permit certain kinds of "program lobbying" to escape the new controls. These loopholes will be closed in 1992.

Correcting Problems

Service Contracting.—This is the fastest growing area of Government contracting. Current expenditures exceed $87 billion annually. Tighter controls are needed to prevent cost overruns, performance delays and quality deficiencies. For example, it took one agency eight months and $1.9 million before discovering that a study it had commissioned was not feasible. OMB's Office of Federal Procurement Policy (OFPP) tightened controls in 1989; these controls were implemented in final form on a Government-wide basis in October 1991. OFPP's April 1991 policy letter also required that the acquisition of services be based upon performance standards and best value. In December 1991, OFPP published for comment two supplementary directives: (i) defining functions that should not be performed by contractors (i.e., "inherently governmental functions"), and (ii) providing guidance for determining whether the Government is getting its money's worth. Taken together, these four policy initiatives, when fully implemented, should help improve service contracting.

Acquisition of Environmentally Sound and Energy Conserving Products.—The Administration has increased emphasis on the purchase of environmentally safe, energy conserving products and services. President Bush issued Executive Order 12759 (Federal Energy Management) in April 1991 and Executive Order 12780 (Federal Agency Recycling and the Council on Federal Recycling and Procurement Policy) in October 1991. The Executive Orders provide for departments and agencies to work with the General Services Administration to make greater use of energy conserving, environmentally-sound products and services. These products and services will be highlighted in Federal supply catalogs; energy-efficient light bulbs will be made available to Federal agencies; and greater use will be made of recycled paper.

International Markets.—U.S. firms want assurances that they can compete in emerging international markets—particularly those in Central and Eastern Europe. Assistance is being provided to those countries to help them develop fair and open procurement systems. The first in a series of seminars was held in November 1991 for representatives of Poland.

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It will serve as a prototype for subsequent programs for Hungary, Bulgaria and Czechoslovakia in 1992.

Contract Administration Programs.—General Accounting Office reports indicate that too little management attention is being paid to contract administration functions, particularly within the civilian agencies. For example, statements of work are poorly drafted, contract clauses are ambiguous, actions of program officials exceed their authority under the contracts, and improper use is being made of contract modifications. To address these problems, OFPP issued detailed guidance in March 1991 prescribing practices to be employed from acquisition planning through contract enforcement. The guidance requires contracting officials to plan and implement competitive acquisition strategies and ensure effective oversight and enforcement, in particular, of contractor performance.

Cost Accounting Principles for Educational Institutions.—Responding to widely publicized abuses, the Administration published in October 1991 revisions to OMB Circular A-21 (Cost Principles for Educational Institutions). These clarified cost principles for reimbursements to colleges and universities under Federal research grants, and capped administrative costs at 26 percent. Proposed standards now under development by the Cost Accounting Standards Board (CASB) will, in part, require educational institutions to (1) disclose their accounting practices, (2) consistently follow established accounting practices and allocate costs, and (3) agree to a contract price adjustment, with interest, for any increased costs due to an accounting change or failure to comply with applicable standards. Upon issuance of the final CASB decision in 1992, OMB Circular A-21 will be revised further.

Removing Impediments

Letters of Credit in Lieu of Bonds.—Small construction firms have found it increasingly difficult under the 1935 Miller Act to obtain performance or payment bonds from corporate sureties. To help eliminate this impediment for small business, OFPP issued a new policy directive, effective in December 1991, allowing firms to use letters of credit in lieu of surety bonds to satisfy the Act's bonding requirements. In addition, the Administration is developing a proposed amendment to the Miller Act that would raise the statutory threshold for bonding from $25,000 to at least $100,000. Raising the threshold should increase access, stimulate more competition, and result in lower prices to the Government.

Access to High Technology.—High technology firms complain that Government procurement practices cause them to segregate the work they do for Government from their normal commercial work. This results in higher prices to the Government and fewer spinoff benefits to the economy from Government procurement. The major impediments to integrating commercial and Government work are unique Government specifications and standards, cost accounting requirements, and technical data demands imposed by Government. The Administration is working to reduce these impediments through requiring fewer detailed specifications and relying more on competition and financial incentives (as opposed to requiring cost, technical and other data, inspections and audits). The Administration is also reviewing current rules and policies to ensure that the Government is not inhibiting unnecessarily the transfer of technologies from the Department of Defense to the commercial market.

Improving Quality

Past Performance.—Critics of the Federal procurement process argue that the Government fails adequately to take into account past contractor performance in awarding contracts. Such a result significantly reduces a contractor's incentive to perform well. OFPP proposed policies in December 1991 requiring agencies to make past performance a significant factor in making contract awards. In a related effort, NASA is establishing a past performance data base on contractor performance to be used by the agency's source evaluation boards.

Nonconforming Products.—The Federal Government purchases millions of individual parts and products each year through its 2500 procurement offices. Parts and products which do not meet contract specifications are called nonconforming. Until 1991, there was no Government-wide system to communicate informa-

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tion about nonconforming parts among Federal agencies. The Executive Branch established such a system in June 1991 and all departments and major procurement agencies now participate in it. The system will help eliminate instances where individual agencies or their contractors acquire products previously identified as nonconforming by other agencies and assist in reducing parts fraud.

Improving Efficiency and Effectiveness

Commercial Products.—Nearly every procurement reform study since 1972 has recommended that the Government rely more on commercial products, in place of ones designed specifically for Government use. For the most part, there is no need for Government-unique foods, drugs, medical devices, office equipment, or even computers. Standard commercial products are often better and less expensive than products produced to Government specifications. In order to provide for routine access to commercial products—taking advantage of the short lead-times, economies of scale, and innovations available commercially—contracting officers need more flexible competitive procedures. While the Administration first proposed legislation in this area in 1990, very few provisions have been enacted. The Administration will in 1992 continue to work for legislative reform and adopt further administrative measures, where practicable, in an effort to allow agencies to rely more on commercial products.

Electronic Commerce.—Most Government and industry officials continue to criticize the Government's acquisition process as archaic, cumbersome and unnecessarily paper intensive. For example, most agency automated acquisition systems generate paper forms and other hard copy outputs to accommodate traditional manual processes. Many of these paper outputs are unnecessarily re-keyed into other government and industry computers. According to some private sector sources, 70 percent of all computer outputs are inputs to other computers. Unfortunately, this situation and the adherence to entrenched manual processes and practices perpetuates ineffective and inefficient operations throughout the Federal acquisition community. Small businesses are particularly concerned about these shortcomings.

The Defense Department initiated in November 1991 a pilot program at Wright Patterson Air Force Base in Ohio to demonstrate the use of automated, electronic issuance of requests for quotations and purchase orders and the making of payments. OFPP, the Defense Department and the Small Business Administration are now modeling a Government-wide program along the lines of the Wright Patterson pilot. The goal is to convert most small purchase transactions to electronic means by the end of 1996.

The system is expected to allow electronic dissemination of information about all Government open market small purchases—approximately 50,000 daily—to millions of small businesses. It should also permit small businesses to submit nearly 500,000 quotations daily by electronic means to Federal contracting officers and to Government prime contractors (with ensuing large cost reductions over present practices).

Streamlining Procedures.—The Government currently uses streamlined "small purchase" procedures only for purchases of $25,000 or less. The Administration is working with the Congress to increase this statutory threshold to $50,000. When enacted, this change will capture an additional 30,000 procurement actions each year—reducing procurement lead-times in these cases from 90 days to less than two weeks and accelerating the procurement of $1 billion worth of purchases. In addition, NASA is developing a new simplified procurement procedure aimed at medium sized contracts (i.e., up to $500,000).

Improving the Procurement Workforce.—A recent Merit Systems Protection Board survey of the acquisition workforce revealed major dissatisfaction among both Government and private sector individuals involved in the procurement process. Complaints focused on the educational background, training and negotiating skills of the workforce, as well as the time necessary to effect procurements. An OFPP interagency working group will continue its work in 1992 to address needed improvements in the training, educational qualifications and recruitment of acquisition personnel.

Wage Rates in Construction Contracts.—The 1931 Davis-Bacon Act requires the Secretary of Labor to determine the minimum

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wages to be paid to workers on Federal or federally assisted construction, alteration or repair projects. The threshold of coverage has not been revised since it was originally set at $2,000. A legislative proposal will be submitted to raise the threshold for contracts subject to the Act's provisions from $2,000 to $250,000 and to reduce paperwork requirements. Savings of $128 million in budget authority and $68 million in outlays are expected from the proposed threshold increase. In addition, the Department of Labor will implement a regulation permitting the use of "helpers" on federally funded construction projects. Savings of $567 million in budget authority and $479 million in outlays are included in the budget from implementation of these regulations.

REFORMING THE CIVIL JUSTICE PROCESS

In the past 30 years, our legal system has become burdened with excessive costs and long delays. Overuse and abuse of the legal system impose tremendous costs upon American society. This puts America at a competitive disadvantage internationally, retards growth, and results in higher prices for American consumers. To address these probems, the Administration will propose legislation developed through the Council on Competitiveness to reduce costs and delays in the civil justice system. One of the major reforms will be to deter meritless litigation by requiring, for many private civil cases in Federal court, that the losing party reimburse the winning party for its attorney fees. The legislation also proposes to authorize Federal agencies, in certain cases, to enter into agreements (subject to appropriations) for the losing party to reimburse the winning party for its attorney fees. For 1993, the budget includes an account for each of the largest affected agencies (the Departments of Agriculture, Defense and Transportation) which will receive payment for its own attorney fees when it wins and disburse attorney fee payments when it loses.

MANAGING HIGH RISK AREAS

The High Risk List focuses attention and resources on eliminating major risks confronting the Federal Government.

The budget requests over $2 billion for management investments to reduce the risk in high risk areas, $117 million more than enacted in 1992. The requested funding includes:

—$732.9 million to correct computer system deficiencies at nineteen agencies;

—$440.7 million to correct health and safety problems at four agencies;

—$255.2 million to correct asset management weaknesses at five agencies;

—$69.1 million to correct credit management problems at seven agencies; and

Table 15–6. **INVESTMENTS TO REDUCE RISKS IN HIGH RISK AREAS**
(In millions of dollars)

	1992 Enacted	1993 Proposed	Dollar Change: 1992 to 1993
Budget Authority	1,936	2,053	+117

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—$20.7 million to correct contractor oversight deficiencies at five agencies.

The budget defines management investments as the critical, marginal amounts of funding needed to ensure that the corresponding program funding is spent efficiently and effectively. (Funding identified in the 1992 budget for correction of high risk areas generally represented the sum of these two items.) Management investments being requested in the 1993 budget range from computer system upgrades to funding for SWAT and review teams, training, acquisition of specialized personnel, and organizational restructuring.

Progress is being made as a result of the High Risk Program. Since establishment of the High Risk List in the fall of 1989, a total of 28 areas have been removed from the List based on agency correction of problems. During the same period, 19 areas have been added. Agencies and the Administration remain committed to identifying and addressing critical Federal management problems, rather than ignoring them.

At the start of 1991, the High Risk List contained 106 areas. During 1991, 17 of these areas were removed from the List; seven new areas were added; and, due to risk redefinition, two areas were included in a new high risk area, and four areas were split into nine. Thus, at the beginning of 1992, the High Risk List contains 99 items.

In assessing agency progress in the 92 high risk areas that have been on the High Risk List throughout 1991, OMB concluded that:

—In 30 of the areas, agencies have made significant progress in correcting the deficiencies.

—In 48 of the areas, agencies have active efforts underway to improve progress in correcting the deficiencies.

—In 13 of the areas, OMB has reservations about the adequacy of agency plans and/or progress.

—In one area, agency progress is dependent on the results of Governmentwide studies.

OMB's commitment is to ensure that reasonable resources are provided in the budget to assist agencies in taking appropriate and timely corrective actions in their high risk areas. Since establishment of the High Risk List, OMB has also endeavored, through ongoing oversight activities, to heighten agencies' awareness of, and action on, their high risk areas. The benefits of these efforts are reflected in the fact that, at the start of 1991, OMB had reservations about the adequacy of agency plans and progress in 23 high risk areas; by the end of 1991, that number had been reduced to 13.

In 1990 and 1991, the Administration took the further step of identifying selected high risk areas where the pace of corrective action needed to be accelerated. Agency/OMB SWAT and special review teams were established to ensure that result. (See section on Building Management Capacity.)

1992 PRIORITIES

In 1992, the Administration plans intensive efforts in 14 areas.

Continuing Efforts

In the following eight areas, SWAT and review teams initiated in 1991 will continue their work in 1992. Progress has been made in these areas, but additional effort is needed to ensure that corrective actions are firmly institutionalized.

- Department of Agriculture's Farmers Home Administration Loan Program (FmHA): management controls over loan making and servicing.
- Department of Defense: controls over Contracted Advisory and Assistance Services (CAAS).
- Department of Defense: financial accountability over real and personal property.
- Department of Education: management of the Guaranteed Student Loan Program.
- Department of Housing and Urban Development: financial systems.
- Department of the Interior: Indian Trust Funds.
- Department of Justice: debt collection.

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- Department of the Treasury, Internal Revenue Service: accounts receivable collection.

New Initiatives

In 1992, OMB will undertake intensive efforts in the following six areas:

- ***Department of Health and Human Services (HHS): Third Party Liability.***—Each year Federal and State taxpayers pay $1–3 billion for health care that should be paid by employer health, Workers' Compensation, no fault, property and casualty and other insurance coverage. This occurs because there is no systematic method of collecting and using insurance data. In 1992, OMB will work closely with HHS and other affected agencies to develop (i) a Federal third party liability policy and (ii) mechanisms to ensure systematic identification of employer-based and other health coverage.
- ***Department of Housing and Urban Development: Multifamily Property Management and Disposition.***—HUD's inventory of multifamily properties and assigned mortgages has increased significantly in recent years. From 1989 to 1991, the number of HUD-owned multifamily units grew by 200 percent, while the number of multifamily assigned mortgage units increased by 156 percent. Almost half of the inventory results from the high default rate in the Multifamily Coinsurance programs. In 1992, OMB and HUD will work together to secure enactment of proposed legislative reforms to manage more effectively, and reduce the size of, HUD's property inventory.
- ***Department of Interior Office of Territorial and International Affairs: Financial Management.***—In 1992, OMB will work with the Office of Territorial and International Affairs (OTIA) to address concerns about the effectiveness of financial management, grant administration, and technical assistance provided by OTIA to the territories, as well as financial management practices in the territories themselves, and recommend improvements.
- ***Agency for International Development (AID): Project administration, policies and procedures.***—Serious deficiencies in management control systems have been alleged by the AID Inspector General and the General Accounting Office. To address these deficiencies, AID and OMB will work together to develop improved accountability of personnel engaged in contract, grant and project management, improved procurement and contract/grant administrative processes, and improved audit and evaluation efforts.
- ***National Labor Relations Board (NLRB): Accounting System and Inventory.***—Conversion to a new accounting system in 1990 failed due to poor testing procedures and inappropriate controls over data conversion. A new system was implemented in August 1991. However, the quality of the new system needs to be independently reviewed. In 1992, OMB and NLRB's Inspector General will jointly review the operation of the system to determine whether it is operating properly, produces reliable data, and contains internal controls which are adequately administered.
- ***Pension Benefit Guaranty Corporation (PBGC): Financial Systems.***—PBGC's financial systems are in disarray and its financial statements cannot be audited. OMB will review the current condition of all major PBGC systems to determine ongoing problems. The intended result of the study is to ensure appropriate technical resources are directed toward defining systems requirements and formulating systems solutions.

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PROGRESS REPORT
CORRECTION OF HIGH RISK AREAS

There follows a progress report on agency efforts to correct high risk areas. OMB's assessment of agency progress is presented in column 3, "Status." The status codes are: (1) Significant progress; (2) Active efforts underway to improve progress; (3) Reservations about adequacy of progress and/or plans; (A) Added to High Risk List; and (D) Deleted from High Risk List.

Management investments to correct high risk areas, which are displayed in columns 4 and 5, are the critical, marginal amounts of funding needed to ensure that the corresponding program funding is spent efficiently and effectively.

DEPARTMENT OF AGRICULTURE

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Farmers Home (FmHA) Loan Programs: High total delinquencies ($12.3B) and high delinquency rates (21.8%) in 1991. There are $56B in outstanding FmHA loans. At risk: up to $14B in delinquent loans.	Comprehensive training program for loan officers begun in 1991; Phase 1 of three-phase Information Systems Plan (ISP) completed July 1991; State plans being developed to improve underwriting and appraising functions. Centralized servicing function is under consideration. Next steps: credit training for 800 loan officers to be held in 1992; Phase 2 of ISP to be completed in January 1992, Phase 3 to begin in 1992; State plans to be reviewed and implemented.	2	11,385	8,764
Food and Nutrition Service (FNS): Food Stamp coupon and bank deposit data not reconcilable.	FNS redesigned the coupon redemption system to enable (i) reconciliation of "coupons redeemed" with bank statements and (ii) tracing payments for redeemed coupons to vendors. During 1991, an evaluation of the redesigned system validated that FNS actions had corrected the weakness. DELETED FROM HIGH RISK LIST.	D	.....	.....
FNS: Food Stamp Coupon illegal trafficking for cash, drugs and weapons. Budget includes $23B for Food Stamp Program. At risk: est. $100M in benefits diverted annually.	Joint OMB-USDA review team in 1991 made recommendations for corrective actions. Improvements in 1991 include enhancement of investigative techniques to uncover trafficking, and activation of additional EBT projects. Next steps: pilot new investigative approaches; initiate update of all authorized retailer information; and authorize implementation of States' EBT projects.	2	6,250	5,750
Federal Crop Insurance: Overpayment of claims. Federal Crop Insurance has a $1B annual operating level. At risk: $100M in losses paid to reinsurance companies.	In 1991, FCIC established field compliance offices to perform systematic, operational reviews of companies reinsured by FCIC; and expanded computer edits in the data acceptance and reinsurance accounting systems. Next steps: improve computer edits and rigorously monitor reinsured companies' performance to ensure adherence to the terms of the Standard Reinsurance Agreement; open one additional compliance office; and add 19 FTE compliance positions.	1	883	.....

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DEPARTMENT OF COMMERCE

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Departmental computer site security weak. Budget requests $1.2B for ADP. At risk: assurance that this investment and DOC data are protected from loss.	The Department's ADP and telecommunications security program now complies with OMB Circular A–130 and the Computer Security Act of 1987. Next steps: meet requirements of OMB Bulletin 90–08 for Sensitive System Security plans and develop methodology for plan preparation and automated milestone tracking system.	1	1,200	1,500
Departmental financial systems inadequate. Department lacks a core financial system. DOC financial systems process $2.9B. At risk: assurance that these funds are being accounted for in an accurate and timely fashion.	Financial management systems strategic plan completed. Improvement project has been defined, an internal team assembled and an initial support contract awarded. Next steps: during 1992 DOC's contractor will submit final report on risk reduction plan, functional requirements and cost-benefit analysis. DOC will select best implementation alternative and issue RFP for technical support contract. 1993 funding provides for systems development and implementation planning.	2	.....	5,200
National Weather Service (NWS): Major systems acquisition problems. Budget requests $130M for procurement of NWS systems. At risk: $50–60M in potential cost overruns if procurement schedule slips.	Systems, procurement and management problems continue to impair the ability of the Department and NOAA to acquire major systems, particularly for the Weather Service's modernization. A Systems Program Office has been created to strengthen program management by assigning responsibility for the design, procurement and acceptance of new systems to a single NOAA management office. Next step: achieve full operational capacity in newly created Systems Program Office.	3	.....	1,200
Minority Business Development Agency (MBDA): Inadequate grants management.	IG review in 1991 showed positive management action to reduce debt portfolio and achieve better control over the network of minority business development centers. DELETED FROM HIGH RISK LIST.	D	.....	.....
Patent and Trademark Office (PTO): Problems in automating systems.	The development, implementation and full deployment of electronic searching of trademark text and images have effectively eliminated gross file integrity problems for trademark examiners. DELETED FROM HIGH RISK LIST.	D	.....	.....
Geostationary Operational Environmental Satellite (GOES) Technical Development Problems. The budget requests $129M for GOES. At risk: the loss of weather estimating capability.	Single remaining satellite (currently in geosynchronous orbit) will exceed its 5-year design life in February 1992. Replacement satellite has run into cost overruns, schedule slippage and potential reduced satellite capability that jeopardize fourth quarter 1992 launch date. Emergency task force is examining alternatives and the cost implications. ADDED TO HIGH RISK LIST.	A	.....	.....

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DEPARTMENT OF DEFENSE

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Departmental and Service supply operations inadequate, weakening effective management of inventories. DOD supply transactions involve $101B annually. At risk: $100M in potential loss or theft.	Defense Management Report (DMR) actions have produced major improvements: supply depots consolidated; inventory points centralized from Services to Defense Logistics Agency (DLA); inactive inventories reduced $5 billion; policy and procedure revisions completed to address private contractor access weakness. Next steps: inventory reduction plan will identify assets and redundant inventory to be reduced.	2	64,200	39,100
Departmental and Service information technology development and ADP security deficient. Budget requests $9B for general purpose ADP. At risk: assurance that these funds are being spent effectively.	Under the Corporate Information Management (CIM) initiative, DOD is improving information technology (IT) life cycle management policies and procedures (including IT acquisitions and inventory control); eliminating unnecessary redundancy in automated management information systems; developing standardized data dictionaries; and improving the processes that foster management information systems. Next steps: over 100 information resources management reviews are planned for 1992; 1993 funding includes additional costs associated with the consolidation of ADP operations and design centers and the implementation of electronic data interchange.	2	544,000	594,400
Foreign Military Sales (FMS) Program: $613 million in unreconciled balances.	Balances totaling $513 million have been reconciled. No new unreconciled balances following major revisions in accounting procedures. DELETED FROM HIGH RISK LIST.	D	.....	.....
Departmental and Service contract administration controls over DOD property in private contractor possession inadequate. $160B in property and facilities in possession of DOD contractors. At risk: $80M in potential loss or theft.	Progress made to date includes improved oversight by Contract Administration Offices; better documentation for contract awards; improved monitoring of subcontractors by prime contractors; and better controls over entry of material into DOD inventory. DLA and Service component implementation plans are on schedule. DMR initiative will streamline and provide improved ADP systems for management purposes. Next steps: CIM plans in 1992 to develop functional requirements needed to gain auditable control of Government material held by contractors.	2	N/A	N/A

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DEPARTMENT OF DEFENSE—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Departmental and Service controls over contracted advisory and assistance services (CAAS) inadequate or non-existent. CAAS contracts estimated at $1.5B annually. At risk: $15M in potential fraud or waste.	Policy changes made to improve control over CAAS expenditures. In 1991–1992, joint OMB-DOD review team undertook efforts to improve controls over contracts for advisory and assistance services. OMB's Office of Federal Procurement Policy has developed new policy guidelines and issued a proposed Policy Letter, entitled "Management Oversight of Service Contracts," in the Federal Register in December 1991 for comment. This policy letter focuses on specific types of service contracting problems and provides guidance on what constitutes good management practice in the use of such contracts. Next steps: public comments on proposed policy letter are due in February 1992; after issuance of final policy letter, DOD will issue internal directive that incorporates results of joint DOD-OMB review team efforts.	2	N/A	N/A
Departmental and Service financial accountability for real and personal property is inadequate. DOD inventory estimated at $706B. At risk: $800M in potential loss or stolen property.	Real and personal property systems are not integrated with financial accounting systems, resulting in a lack of financial control over line item transactions. DOD conducted a survey of the military services to identify the accounting systems used to track real and personal property, and to determine each Service's method of valuing reported property. Survey was completed in November 1991. Next steps: financial accountability for property will be brought to minimally acceptable standards by February 1992; from the survey results, DOD will determine candidates for an interim DOD-wide system and select the interim system by December 1992. For the longer-term, DOD will implement systems developed by the CIM process to provide General Ledger control over property by 1996. Joint OMB-DOD review team to monitor DOD progress.	2	20,000	28,000

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DEPARTMENT OF EDUCATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Student Financial Aid (SFA) Program Management: Guaranteed Student Loan (GSL) and other SFA program abuses and fraud. Budget includes $13.7B for student aid programs. At risk: up to $3.4B in loan defaults in 1992.	Education-OMB SWAT team completed review. Higher Education Act (HEA) reauthorization proposal transmitted; school certification process improved; closed school task force established; improved communications and coordination with accrediting and State licensing agencies; schools with default rates of 35% or higher notified that they will lose their eligibility to participate. Next steps: ED will reorganize the Office of Postsecondary Education; improve monitoring of guaranty agencies and lenders; implement new legislative authority to garnish wages; issue final regulations implementing 1986 HEA Amendments; improve information systems; and seek legislation to reduce defaults and increase risk-sharing.	3	6,800	38,800
Departmental inability to generate reliable accounting data. Budget requests $100M for financial management personnel and systems support. At risk: assurance that accurate and useful accounting information will be available.	Progress in 1991 included some improvement in data entering the Primary Accounting System, and correction of prior year errors. Next steps: work will continue on cleaning up the data base; reconciliation of the Payment Management System to the Primary Accounting System is scheduled for completion in 1993.	2	7,100	8,100
Departmental contract and grant closeout processes are vulnerable to unauthorized drawdowns.	Backlog of grant and contract closeouts eliminated. ED now processing closeouts as contracts and grants expire. New closeout component developed for automated grants system which supports manual effort. To maintain progress, ED is creating a five person unit to specialize in contract and grant closeouts. DELETED FROM HIGH RISK LIST.	D	.....	.....
Departmental audit follow-up improvements needed; internal control process not identifying material weaknesses. The Department receives audit reports with monetary findings of $500M annually. At risk: up to 20% if audit follow-up is not done aggressively.	Audit Follow-up: Since November 1990, ED reviewed and closed 67 internal audits, management improvement reports, and GAO reports (after determining that corrective action had been taken to address the recommendations). Internal Control: Committee chaired by the Deputy Secretary is involved in all phases of the FMFIA process; comprehensive FMFIA training of senior and mid-level managers completed in June 1991. Next steps: for audit follow-up, ED will take steps to verify that corrective actions are taken to address audit findings; for internal control, ED will develop a Management Control Handbook.	1	3,300	3,600

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DEPARTMENT OF EDUCATION—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Departmental program compliance monitoring and accountability inadequate. Budget requests over $31B for ED programs. At risk: assurance that these funds are being spent effectively.	Cross-Cutting Monitoring Team (CCMT) established in October 1991. Each Principal Office is preparing a Monitoring Improvement Plan which will be reviewed by the CCMT. Next steps: monitoring standards will be developed and issued by the CCMT by March 1992; additional funds are provided in the budget for on-site monitoring and staff resources.	2	10,500	14,200
Departmental security of computer systems inadequately reviewed. Budget requests $89M for ADP systems. At risk: integrity and confidentiality of some data maintained in ED computer systems.	Security review of the Pell Grant disbursement system completed in 1991. Task orders or interagency agreements have been initiated for additional security reviews. Next steps: three more security reviews will be completed by March 1992; background investigation requirements will be established for ADP-sensitive positions; and ADP security policies and guidance will be reviewed and updated in 1992.	2	300	400

DEPARTMENT OF ENERGY

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Reduction in defense nuclear production capabilities; weapons complex reconfiguration needed. Budget requests $6.5B for this program. At risk: national defense capabilities.	Established a Weapons Complex Reconfiguration office and released Nuclear Weapons Complex Reconfiguration study. Restarted Savannah River Plant "K" reactor for testing December 1991. Completed operational readiness review at Rocky Flats. Next steps: accelerate Environmental Impact Statement for the reconfiguration of the nuclear weapons complex; complete DOE-wide study of excess nuclear materials; complete environmental assessment of consolidation of non-nuclear weapons facilities; and authorize resumption of operations at Rocky Flats.	2	223,400	286,000
Environmental compliance problems. The budget requests $5.5B for clean-up. At risk: continued progress on environmental clean-up, concerns for health and safety.	Completed 26 independent tiger team reviews. Modified criteria for determining DOE contract fees to emphasize compliance with environmental regulation. Technical safety appraisals and tiger team reports now being considered in award fee determinations and contractor performance evaluations. Interagency environmental clean-up task force analyzed nationwide program budget commitments for 1993. Implemented a central system for tracking corrective actions. Next steps: complete tiger team reviews; implement a risk-based priority system to support funding decisions; reduce the risk of accidental radioactive release from Hanford facility; continue agencywide environmental training; and continue implementing the Environmental Restoration and Waste Management Five-Year Plan.	2	24,700	28,800

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DEPARTMENT OF ENERGY—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Nuclear plant health and safety problems. Budget requests $1.495B to address this high risk area (including nuclear and non-nuclear health and safety). At risk: the health and safety of DOE workers and the public.	Conducted tiger team reviews of all nuclear production facilities. Modified criteria for determining contractor fees to increase emphasis on safety and health. Office of Nuclear Safety established on-site residence program to evaluate nuclear safety performance and contractor management. Published revised nuclear safety rules and enforcement procedures. Next steps: develop a comprehensive strategic plan to address departmentwide nuclear safety problems; implement a tracking system for corrective actions; improve accounting controls by establishing a budget coding system for nuclear safety activities across all program areas; compile comprehensive epidemiological data to define better the magnitude of health and safety problems, estimate costs of corrective action, and establish a new baseline for nuclear safety; and implement long-term corrective action plans resulting from tiger team reviews, technical safety appraisals, and external oversight recommendations.	2	13,100	15,500
Nuclear waste storage disposal inadequate. Budget requests $577.6M for this area. At risk: the health and safety of DOE workers and the public.	Preliminary requirements for Waste Isolation Pilot Plant (WIPP) completed and facility transitioned to pre-operational phase. Two of three State of Nevada permits to gain sustained access to Yucca Mountain have been obtained. Limited site testing begun. Six counties and Indian tribes have applied for funds to study feasibility of siting the Monitored Retrieval Storage (MRS). Next steps: resolve remaining permits with State of Nevada; test WIPP to demonstrate compliance with disposal requirements for radioactive transuranic waste; and identify a volunteer candidate site for MRS. Contract management aspects of the nuclear waste storage disposal issue are included in a separate high risk area.	2	17,600	18,300
Departmental oversight of commercial functions and reimbursable program financial controls inadequate. Budget provides $3.2B in apportionment authority for this function. At risk: assurance that funds owed are collected.	Issued comprehensive policies for strengthening administrative control over reimbursable work. Initiated departmentwide review of reimbursable work and established a reimbursable work steering committee to address findings of internal and external control reviews. Next steps: joint DOE-OMB definition of additional work to be done in oversight of commercial functions, including Power Marketing Administrations.	2	211	191
Departmental contract/project management inadequate. The budget requests $13.7B for DOE contracting. At risk: assurance that contract funds are being spent efficiently and effectively.	Modified management and operating contract provisions to require that contractors bear increased accountability for avoidable costs and increased risk for unacceptable performance. Contracts provide greater incentive for improved performance. Next steps: better define cost allowability and performance measurement criteria; improve project management control to instill fiscal accountability for implementing programs and projects on time and within budget. This high risk area had been a part of the nuclear waste storage issue; due to increased emphasis in the DOE 1991 FMFIA report, it is now presented as a separate area.	2	3,500	3,500

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Food and Drug Administration (FDA): Application review process for generic drug approval faulty.	All major planned corrective actions have been completed. FDA created the Office of Generic Drugs; increased quality control checks; created a training branch; improved physical security; increased staff; issued 29 policies and procedures designed to standardize generic drug evaluations and processing; conducted special audits at generic drug companies; began to perform regular, good manufacturing practices reviews; and inspected bioequivalence testing laboratories. DELETED FROM HIGH RISK LIST.	D	.....	.....
HCFA: Medicare program data systems inadequate to track Medicare costs and usage. 1993 projected cost of Medicare program is $140B. At risk: ability to estimate Medicare costs accurately; mis-estimate may be as high as 15% of outlays.	HCFA has implemented the Common Working File (CWF), which contains all beneficiary entitlement, utilization, and claims history data. OMB and HHS worked together to identify monthly financial and management data needs; and HCFA proposed a report to meet those needs. HHS is working with the Treasury Department to automate the letter of credit process used to pay Medicare claims; this process could then be a source of more detailed and current outlay data on the Medicare program. CWF investment largely completed in 1992. Next steps: HCFA and OMB to determine the final format for the financial and management report. HCFA then to report monthly.	1	1,084	28
HCFA: Medicaid management system inadequate to predict Medicaid costs. 1993 projected cost of Medicaid program is $85B. At risk: ability to estimate Medicaid costs accurately; mis-estimate may be as high as 10%.	A joint OMB-HHS SWAT Team analyzed the State and Federal Medicaid estimating systems and recommended: State-level information be collected, maintained, and disseminated by the Medicaid Bureau; a Medicaid budget forecasting system be developed that provides State-level estimates for key States; reporting requirements for the Medicaid Bureau be instituted; revision of key State Medicaid reporting forms be revised; and ongoing and systematic feedback on the accuracy of State projections be undertaken. Next steps: HCFA to implement the SWAT Team's recommendations. This high risk area was formerly a part of the Medicare program data high risk area, but was split to identify separately similar problems, but different solutions relating to the Medicare and Medicaid programs.	2	2,800	2,800
HCFA: Medicare contractors have not provided adequate safeguards to prevent inappropriate payments.	Payment safeguards (i.e., medical and utilization reviews, audits and Medicare Secondary Payer activities) are administered by Medicare intermediaries and carriers under HCFA guidelines and oversight. Adequate funding for payment safeguards ensures that the Medicare contractors can hire, train, and retain well-qualified staff. The budget proposes increased payment safeguard funding. DELETED FROM HIGH RISK LIST.	D	.....	.....

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DEPARTMENT OF HEALTH AND HUMAN SERVICES—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
HCFA: Medicare making payments which should be made by others. 1993 projected cost of Medicare program is $140B. At risk: $600M–1B, reflecting costs paid by Medicare that should have been paid by another insurer.	HCFA has completed a data match with IRS and SSA and issued necessary recovery notices for claims with statutory notification limits. HCFA has also obtained information from employers to verify spousal employee health insurance coverage. A revised common claim form that identifies other insurance was implemented in July. The information will be required in January 1992. Claims will be denied for absence of information beginning in April 1992. Next steps: HCFA will annotate the Common Working File to identify spousal insurance coverage, and the common claim form will be further revised to add specific spousal information. OMB and HHS will undertake an intensive effort in 1992 to identify additional methods for ensuring appropriate payments by other insurers.	2	70,000	82,000
Indian Health Service: Insufficient financial controls and attention to management. Budget requests $1.9B for IHS. At particular risk: $380M in funding for contract health services.	Quality assurance activities have been coordinated into a comprehensive oversight system. Work is underway to expand and improve IHS' cost center concept. IHS outlined a management improvement strategy for contract health services. 98% of the scholarship default backlog has been computerized, and appropriate cases have been referred for collection. IHS has begun to implement a Model Business Office plan for billing and managing third party collections. IHS achieved 100% accreditation of its health care facilities by the Joint Commission on the Accreditation of Health Care Organizations. Next steps: establish a business office in each IHS health care facility; develop IHS-wide performance indicators and standards; and produce financial statements for audit in 1992.	2	6,405	9,011

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Section 8: Program fails to verify tenant information in Section 8 subsidy programs. Budget requests over $12B for the Section 8 program. At risk: $100M–$1B in ineligible subsidies per year.	HUD is developing a new financial management system to control tenant certification and payment processing, as well as program budgeting and funds control. HUD-OMB SWAT Team recommended new financial management system, CFS/TRACS. Next step: complete first phase of CFS/TRACS by March 1993.	2	4,448	4,250

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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Department: Financial management systems suffer from inefficiencies, incompatibilities, and internal control problems. HUD financial systems process $24B annually. At risk: whether these funds are being accounted for in an accurate and timely fashion.	In November 1991, HUD adopted a financial management systems integration plan that recommended replacing 77 existing financial systems with 9 integrated financial systems. None of HUD's 77 financial systems is in conformance with OMB Circular A–127. Next steps: joint HUD-OMB effort will define an implementation strategy for financial systems integration. HUD will complete requirements and design of subsidies system (already in process); and finalize core accounting functional requirements, software evaluation, and acquisition.	3	6,656	21,049
Federal Housing Administration (FHA): Multifamily Coinsurance program experiencing high defaults. $8B in insurance outstanding. At risk: $3B reserve fund.	Program terminated. Department established Coinsurance Management Division and developed plan to minimize continuing losses of outstanding coinsurance. This high risk area is being merged with the new high risk area described below, "Multifamily Property Disposition." MERGED WITH NEW HIGH RISK AREA.			
FHA: Mutual Mortgage Insurance (MMI) fund lacks proper controls and has backlog of distributive shares and premium refunds. The suspension of distributive shares will save the MMI fund approximately $1.1B in present value terms	National Affordable Housing Act of 1990 suspended the establishment of new distributive share claims until the Mutual Mortgage Insurance Fund is actuarially sound. In 1991, HUD implemented a new disbursement system which contains automated audit trails and addresses internal control concerns. DELETED FROM HIGH RISK LIST.	D	.....	.....
FHA: Single Family Property Disposition controls and oversight of area management brokers (AMBs) are inadequate. 1991 property disposition sales proceeds were $2.8B. At risk: $5–10M estimated losses incurred in 1990 prior to implementation of SAMS.	Department installed new property management and accounting systems (SAMS) during 1991; implemented standard contract and bonding requirements for area management brokers (AMBs), reorganized and centralized the contracting process; and increased training and monitoring requirements for field staff. Next step: conduct verification review and increase field resources to monitor activities of AMBs.	1	0	0
FHA: Retirement Service Center program experienced excessive default claims. (Insurance in force is $500 million.)	Department terminated program in 1991. Verification review will be conducted in 1992 to determine if sufficient loss reserve has been established to cover anticipated losses. This high risk area is being merged with the new high risk area described below, "Multifamily Property Disposition." MERGED WITH NEW HIGH RISK AREA.			
Section 8: Moderate Rehabilitation program overpays developers, lenders, and Public Housing Authorities. Program terminated. At risk: $413M in overpayments.	Department has terminated program and is collecting overpayments. Due to inadequate controls and oversight, Public Housing Authorities (PHAs), developers, and lenders obtained excessive subsidy payments. Next steps: during 1992, HUD will conduct verification review of collection process.	1	0	0

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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
FHA: Single Family Mutual Mortgage Insurance (MMI) fund equity may not be sufficient to cover losses resulting from adverse economic conditions. $300B in insurance in force. At risk: Required capital ratio of 1.25% (estimate of $3.75B).	National Affordable Housing Act implemented risk-related premium structure and reduced financing of closing costs. FHA's independent auditors are completing annual actuarial study of MMI fund (updated for current economic conditions and actual claim experience). Next steps: analyze and assess actuarial study for application to program and monitor new business to determine if capital reserve ratio of 1.25% can be met by October 1992.	2	100	100
FHA: Title I Manufactured Housing and Home Improvement loans have excessive claims. Manufactured home loan guarantees outstanding $3B and Improvement loan guarantees outstanding $2B. At risk: estimated 1.5% of outstanding guaranteed loans.	In 1990 FHA published a final rule that made major changes to the program (including increasing the insurance premium and accelerating the collection of premiums). In 1991, FHA published final regulations establishing higher qualification standards for dealers and lenders; requiring greater lender oversight of dealers; strengthening the loan collateral position; increasing down payments; requiring site inspections; and encouraging more efficient foreclosures procedures. Next steps: review options for enhanced monitoring and enforcement procedures. Commence verification review of regulation implementation.	2	.....	.....
Public and Indian Housing (PIH): Public Housing Modernization project grants inadequately administered by Public Housing Authorities. $2B in grant funding each year. At risk: $5B backlog of unspent grant funding.	Modernization program has been replaced by Comprehensive Improvement Assistance Program (CIAP). CIAP handbook was revised and training was completed. Next steps: Department is revising monitoring procedures. During 1992 and 1993, HUD will install PHMAP, a new management information system, to improve monitoring of PHAs.	2	350	15
FHA: Multifamily Property Disposition program experiencing mushrooming growth in acquired and assigned properties. $7.5B in inventory as of 1991. At risk: $3.75B reserve for losses.	Since 1987, the number of units in the multifamily property inventory has more than doubled, from 160,000 to 327,000 in 1991. HUD has proposed initiatives to reduce the property inventory growth. HUD and OMB will evaluate proposed initiatives during 1992. ADDED TO HIGH RISK LIST BY OMB.	A	.....	.....

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DEPARTMENT OF THE INTERIOR

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Bureau of Land Management (BLM): Inadequate gas and oil inspection to verify on-shore production and usage. $500M in revenues is received annually. At risk: $50–75M in losses due to improper production verification.	BLM reassessed its nationwide inspection and enforcement (I&E) strategy and implemented changes in inspection procedures, annual inspection objectives, and staffing/ resources to assure production accountability. Next steps: evaluate inspection results quarterly; conduct more detailed production inspections with emphasis on measurement and accountability and Indian leases; and increase I&E staff.	2	3,500	3,500
Office of Territorial and International Affairs: Lack of financial management controls and grant oversight, weak technical assistance, program for insular areas. OTIA budget request $300M. At risk: $30M due to improper use of grant funds.	Interior-OMB SWAT team began exploratory work on necessary improvements in financial and grant administration; OTIA recruited staff for financial management oversight positions at Headquarters and a field office. Next steps: during 1992, SWAT team to review financial management, grant administration and technical assistance provided by OTIA and other Federal agencies, as well as financial management practices in the territories, and recommend improvements.	3	1,800	1,800
Bureau of Indian Affairs (BIA): Seriously deficient financial systems and controls, $95M bookkeeping error in November 1990. Budget requests $1.9B for BIA. At risk: $100–150M in bookkeeping errors.	During 1991, an Interior-OMB SWAT team implemented the Financial Management Improvement Project which resulted in BIA's successful conversion to the Department's accounting system; the conversion of prior year data to the new system; and the reconciliation of 1991 year-end reports. Next steps: on-going software enhancements; finalize transaction audit; and implement improvements in the Irrigation and Power Revenue System and the Loan Accounting System. Reconciliation of prior year cash transactions to be completed by year-end 1992. Note: BIA high risks, previously shown as a single area, have now been defined as three separate high risks (financial systems, trust funds, and school/dam safety).	1	1,500	1,000
BIA: Inability to account for and reconcile Indian Trust Funds. $2B in Indian Trust Funds. At risk: $25–30M in potential losses due to mismanagement.	During 1991, an Interior-OMB SWAT team initiated a review of the Office of Trust Funds Management; established a working relationship with the Inter-tribal Monitoring Association for Trust Funds; began work on the reconciliation project to reconstruct $2B in trust funds accounts; and recommended the reorganization of the Trust Funds office. Next steps: approval of Trust Funds reorganization; continuation of the reconciliation project; and systems analysis and design for new Trust Funds systems.	3	6,500	9,800
BIA: Longstanding deficiencies in the management of BIA School Facilities and BIA Dam Safety. Budget requests $126M for these programs. At risk: the health and safety of the affected Indian communities.	During 1991, the Interior IG issued an audit highlighting health and safety deficiencies in BIA schools. Dam safety also continues to be an unaddressed problem. Next steps: in 1992, BIA will institute a management improvement plan and target more funding to correct health and safety problems in Indian schools. For dam safety, DOI is proposing to transfer technical responsibility to the Bureau of Reclamation in 1993.	3	36,800	24,200

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DEPARTMENT OF JUSTICE

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Departmental debt collection system inadequate to support collection of $6.0B inventory. There are $6.0B in outstanding receivables referred to DOJ by other agencies. At risk: non-collection of up to 5%, representing potential additional collections from improved management information.	Associate Deputy AG for Debt Collection hired in December 1990 to centralize planning and oversight. First Departmentwide Financial Litigation Plan approved by the Deputy Attorney General in July 1991. Joint OMB-DOJ Litigation Information Action Team (also including 9 referring agencies) established to reconcile agency data on debts referred to Justice with data at Justice and to facilitate DOJ report on status of financial litigation cases at Justice. Next steps: Action Team will make recommendations in February 1992 on improving information systems for financial litigation and debt collection at agencies and Justice. Justice and agencies will work to implement steps in Financial Litigation Plan and recommendations of Action Team.	2	3,185	5,307
Departmental asset forfeiture fund controls inadequate. Seized asset forfeiture inventory totals $1.4B. At risk: $3M representing potential loss of deposits to the fund (through inadequate inventory controls).	The Executive Office for Asset Forfeiture and program agencies have undertaken the design of a new, nationwide automated information system, Consolidated Asset Tracking System (CATS) which will be fully operational in 1993; the completion of the first nation-wide physical inventory of all seized assets in the custody of the investigative agencies and the U.S. Marshals Service; identification of policy issues, procedural conflicts and other problems through the Asset Forfeiture Working Group; revision of policy and procedures; and the development of standard forms program-wide. Next steps: in 1992, detailed system design, telecommunications network analysis, and software development will be completed for CATS; system testing and equipment acquisition will also begin.	1	26,903	28,970
Executive Office of the US Trustees: Inadequate oversight of private trustees by US Trustees. Estimated amount in bankruptcy accounts is $26B. No risk to Federal funds, but private funds are subject to potential loss or fraud.	Staff training in financial management is improving oversight. Case trustees are gradually adopting more professional methods of conducting business. Next steps: additional staff in 1992 (60 FTE) and an additional 45 FTE proposed in budget.	1	57,221	70,916
Bureau of Prisons (BOP) overcrowding creates unsafe conditions. Budget requests $ 2.24B for BOP. At risk: the safety and security of prison staff, inmates, and surrounding communities.	Plan developed to increase rated capacity to 81,260 beds and reduce overcrowding to 30% by 1996; funding available through 1991 has reduced overcrowding to 45% by providing 43,035 beds. 1992 construction funds will provide 3,600 beds in 1995–96, and funds for equipment will allow BOP to activate 5,783 beds in 1992. In addition, in 1991, 4,000 additional positions were provided to BOP to address overcrowding; these positions are fully funded in 1992. Next steps: 1993–96 funding to reduce overcrowding to 30% of prison population, a manageable capacity for safety and security.	1	431,075	319,618

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DEPARTMENT OF JUSTICE—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
BOP: Not all prisons comply with fire and/or hazardous waste disposal codes. Budget requests $67.3M for corrective actions needed. At risk: possible environmental damage, personal injury, fines, or court action if compliance is not achieved.	All immediate life and health risks due to hazardous waste have been corrected. Sixty percent of the 120 fire code compliance projects have been completed. Previous GAO audit recommendations have been resolved. Next step: complete fire code compliance projects and tracking system.	2	21,015	19,544
BOP: Inadequate staff to operate and manage prisons. Budget requests $105 million for BOP. At risk: the safety and security of prison staff, inmates, and surrounding communities.	Special salary rates established for physicians, guards, and support staff; recommendations of the National Advisory Commission on Law Enforcement Pay Reform were enacted and will help recruitment and retention efforts; Federal Employees Pay Comparability Act will achieve pay comparability between BOP employees and non-Federal counterparts. Employee turnover rate has been reduced from 33.6% in 1983 to 23.6% in 1989, and new legislation should reduce turnover rate even further. Next steps: continue aggressive recruitment plans.	1	0	15,222
Immigration and Naturalization Service (INS): Poor management controls and inadequate financial management system. Accounting system processes $1.3B annually. At risk: $15M, representing bonds posted by apprehended aliens.	In 1991, INS modified the Department's Distributed Budget Module (DBM) and used it to develop 1992 budget execution plans for INS headquarters. Next steps: in 1992, the DBM will be implemented in regional and district offices; also, INS will implement an integrated debt management system by early 1993. The budget proposes funding to implement detailed corrective action plans to upgrade the financial management system and resolve security, assets forfeiture and other program management deficiencies by 1994.	3	3,653	4,222
Marshal's Service (USMS): Inadequate financial management systems; poor budget monitoring.. Accounting system processes $520M annually. At risk: assurance that funds are used in an effective and efficient manner.	USMS plans to convert to the integrated District Office System have slipped a year to 1994. Conversion to the Department's Financial Management Information System (FMIS) is also scheduled for 1994. New financial management staff formed to coordinate FMIS implementation and operation. Preliminary design of the USMS version of the Distributed Budget Module (DBM) completed. Next steps: implementation of DBM in 1992; continued development of General Ledger, receivables, travel and payment components of FMIS. This high risk area was split into two separate areas: financial management systems, and detention (below).	3	500	3,380

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DEPARTMENT OF JUSTICE—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
USMS: Shortage of detention facilities. Budget requests $268.5M for prison support services. At risk: increased costs of moving prisoners long distances from outlying jails to courts and exposure during moving.	USMS has cooperated with INS and BOP in establishing a five-year plan to increase the number of detention spaces available. In 1991, an additional 1,274 bed spaces were acquired. 1993 resouces for the Cooperative Agreement Program will provide an additional 250 beds, along with 1,542 beds in new Federal facilities. Next steps: USMS will continue to implement the five-year plan. This high risk area was split from the USMS financial management systems area.	2	15,049	7,417
Departmental: Inadequate security over Departmental ADP sites and systems. Total ADP expenditure by General Administration is $6M. At risk: sensitive litigation material subject to unauthorized access.	GAO reports have been critical of DOJ's security over computer systems used to support litigation efforts. In response to OMB Bulletin 90–08, DOJ will prepare a methodology for security plan preparation and verification. Training programs are underway to inform employees of their responsibilities to safeguard systems and applications. ADDED TO HIGH RISK LIST..	A	.....	.....

DEPARTMENT OF LABOR

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Employment and Training Administration (ETA): Federal equity in real property held by State Employment Security Agencies (SESAs) at risk. Fair market value (FMV) is $1B. At risk: up to 10% of FMV.	DOL provided additional grantee guidance which outlines real property requirements; revised the SESA financial management review guide to include compliance with the property provisions of OMB Circular A–102; implemented a grantee real property tracking system; and issued final determinations on outstanding debts to four States. Next steps: issue real property policies and requirements to grantees; develop inventory tracking requirements for and provide appropriate training to ETA staff; reconcile the initial real property database with SESA records; and ensure that all States formally certify DOL's equity in SESA real property.	2	413	413
Departmental financial systems inadequate. DOL systems process $73B annually. At risk: assurance that these funds are being accounted for in an accurate and timely fashion.	Core accounting system installed in 1990; accounts payable installed in 1991. Next steps: complete testing of procurement, accounts receivable, and imprest fund subsystems; complete development of budget and financial management reporting subsystems; finalize grants management prototype testing and functional requirements; and develop inventory modules and interfaces for new property management system.	1	700	1,200

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DEPARTMENT OF LABOR—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Job Training Partnership Act (JTPA): Single Audit Act not effective in safeguarding JTPA Federal funds.	DOL IG review recommends government-wide approach to Single Audit Act issues. Next steps: during 1992, GAO and the President's Council on Integrity and Efficiency (PCIE) will be reviewing governmentwide issues concerning the Single Audit Act. Unilateral action by DOL in this area is not feasible. This item will be re-evaluated on a governmentwide basis after GAO and PCIE findings are available.	N/A	.....	.....
JTPA: Service Delivery Area grantees have inadequate procurement practices. Budget requests $1.4B for JTPA grantee procurement activities. At risk: 10% of grantee procurement awards.	During 1991, joint DOL-OMB review team worked on needed legislative reforms. In 1991, DOL delivered procurement training at five regional locations, conducted special oversight reviews which determined that 90% of the problems previously identified have been resolved, and introduced JTPA amendments that will address needed procurement reforms. Next steps: DOL will conduct further reviews of SDA procurement practices and provide on-site technical assistance for areas with severe problems.	1	1,169	1,169
Pension and Welfare Benefits Administration (PWBA): Oversight of pension plans inadequate. PWBA oversees private pension funds valued at $2 trillion. At risk: billions of dollars in pensions guaranteed by the Federal Government.	DOL has worked with the American Institute of Certified Public Accountants to revise and issue an audit guide covering employee benefit plans. Next steps: DOL will submit legislative proposals to eliminate limited scope audits of pension plans; institute peer review requirements for independent public accountants; and require expanded audit reporting.	1	7,493	10,935

DEPARTMENT OF STATE

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Foreign Buildings Office (FBO): Rehabilitation and maintenance of real property overseas inadequate. Budget requests $600M for FBO. At risk: the health, safety, and security of employees and visitors at overseas posts due to building deterioration.	Both maintenance assistance centers nearly fully staffed; work done at 49 posts in 1991. Foreign Service skill group established to offer career ladder for facilities maintenance experts. Concerns remain over inadequate strategy for managing data collected on post conditions. Next steps: continue to implement program's six initiatives in accordance with Department's 5-year plan for rehabilitation and maintenance.	2	145,546	158,000

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DEPARTMENT OF STATE—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Consular Affairs: Visa processing controls inadequate. Worldwide cost of issuing visas is $86.7M annually. At risk: potential for visa fraud.	Machine Readable Visa (MRV) now installed at 15 posts; conversion to more sophisticated name check system completed and volume capacity improved. Next steps: implement antifraud unit at new immigrant visa central facility; install MRV at up to 40 additional posts in 1992.	1	6,800	6,800
Departmental management of overseas security program, including ADP security, is inadequate. Budget requests $313M for security. At risk: assurance that this investment is adequately protecting U.S. personnel, information, and property overseas.	Program now recognizes four categories of threats to U.S. personnel, information, and property. Thirty-six of 37 interagency security standards approved; progress being made to implement post-specific security plans. However, serious ADP security vulnerabilities at unclassified mainframes (Washington and overseas) have not been resolved. Next steps: fully implement residential security standards at highest threat posts by 9/92; on ADP security, complete study of vulnerabilities and commit to corrective action plan.	3	12,125	12,768
Departmental ADP operational deficiencies. Budget requests $381M for information resources management. At risk: assurance that this investment provides efficient and continuous ADP operations.	Contingency plans completed for main data processing center and overseas Regional Administrative Centers (RAMCs). Environmental deficiencies corrected at main center; continuous power supply installed at RAMC Bangkok. Reservations remain about adequacy of backup capabilities for RAMCs, lack of strategy to test contingency plans. Next steps: issue policy on information systems by 2/92; put backup mainframe computer center into full operation by 6/92.	2	5,371	3,871
Departmental accounting and financial systems do not meet core requirements. In 1992, State Department financial systems processed financial transactions totalling approximately $4B. At risk: assurance that funds are being accounted for in an accurate, useful, and timely fashion.	Current transactions for all domestic bureaus now on-line with new primary accounting system, but conversion of last two bureaus created serious system capacity problems. Next steps: reduce from 6 to 3 accounting systems by December 1992; convert remaining funds and all prior-year data and implement Standard General Ledger (SGL) for all budgetary accounts by December 1992. Concerns remain over implementation of SGL, including overseas financial management system.	2	6,640	10,640
Departmental controls over worldwide disbursing and cashiering are inadequate. Over $7B is disbursed annually by State Department disbursing officers worldwide. At risk: $50M, representing funds unreconciled with Treasury.	1991 State FMFIA report upgrades this material weakness to high risk status. Started centralization of disbursing function at 3 overseas regional administrative centers; substantially reduced domestic imprest funds. Next steps: complete disbursing centralization and monitor disbursing officer accountability in 1992; improve training by September 1992. ADDED TO HIGH RISK LIST	A	.....	.....

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DEPARTMENT OF TRANSPORTATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Departmental financial management and administrative systems non-standard, fragmented. Budget requests $43.6M for operating core financial management systems. At risk: $10M, representing the potential cost of using unreliable information.	Implementation of core accounting system, DAFIS, is on schedule for implementation in all bureaus by 1993. Next steps: 1993 funds will be used to complete a procurement subsidiary system and upgrades of the payroll and personnel system that will become the Integrated Personnel/Payroll System (IPPS).	1	6,323	6,213
Federal Transit Administration (FTA): Inadequate grants management oversight. FTA has $30B in active grants. At risk: $50M–$250M due to improper use of grant funds.	Backlog of inactive grants eliminated; disbursement practices improved. Additional staff approved for 1992 and proposed in budget. Contract awarded to train grantees in third party contracting. Next steps: new staff will be recruited and assigned to grant processing and oversight activities; engineers will be recruited to perform professional engineering services in connection with capital projects.	1	2,000	3,609
Federal Highway Administration (FHWA): Poor practices in grantees' use of consultants.	Problem resulted from unclear FHWA guidance; States were interpreting the requirements differently. Issued final rule April 30, 1991 to ensure consistent and uniform interpretation of the requirements by the States. DELETED FROM HIGH RISK LIST.	D	.....	.....
Departmental major systems acquisition procedures inadequate. Coast Guard Budget for procurement totals $1.5B over 5 years. FAA budget for procurement totals $1.74B annually. At risk: overpricing because of poor contract management.	Coast Guard: Project officers did not have capability to manage the size and complexity of CG procurements. In 1991, CG developed a competency model for assessing requirements for project managers, and instituted training programs. Next steps: in 1992, CG plans to review compliance with major systems acquisition guidance. FAA: Lacked policy and procedures to manage acquisition of major systems. In 1991, acquisition planning guidance issued to all components. Next steps: in 1992, FAA will institute new methodolgy to determine system requirements, to ensure user input to process, to better define contract specifications, and to emphasize use of pre-production testing.	1	1,108	848
Maritime Administration (MarAd): Inadequate controls over disbursement of Federal funds.	Based on recent assessments by DOT, OIG and GAO, no material weakness currently exists in the funds disbursement process. DELETED FROM HIGH RISK LIST.	D	.....	.....

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DEPARTMENT OF THE TREASURY

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Internal Revenue Service (IRS): Accounts Receivable (AR) collection strategy inadequate. IRS accounts receivable is $70B. At risk: $67B is delinquent.	In 1991, joint Treasury-OMB review team studied accounts receivable (AR) collections strategy. IRS appointed an AR Executive Officer and developed an AR action plan to centralize and improve management focus; performance targets were set for collections and receivables; management steps were taken to improve maintenance of accounts and remove erroneous debt; better management information developed on receivables and collections; accelerated notice pilot launched to assess the impact on collections of making earlier personal contact with the delinquent taxpayer. Congress did not approve $34M in funding requested by the President to reduce AR risks. Next steps: fund 397 FTE in 1993, annualized to 800 positions in 1994; track quarterly performance; and conduct private collection agency pilot.	2	.....	16,217
Customs Service: Inadequate collecting/accounting systems for revenues on imports. Collections total $19B annually. At risk: $3B in cash collections.	New procedures for timely reconciliation of deposits and collections have improved controls over collections. The procedures have been strengthened by implementation of a "Cash Link" system, which allows daily reconciliation of deposits and collections. Also, a funds control module has abated previously identified funds control problems. During 1991, all deposit and cash differences were reconciled and resolved. A new general ledger software module was purchased as a core element for development of a new primary accounting system (AIMS), with implementation effective October 1, 1992. Next steps: By April 1992, complete inventory, collection, and destruction of old, unused forms used in the collections process; continue work on AIMS.	2	16,244	19,529
Public Debt: Account reconciliation issues regarding Public Debt need to be resolved.	All account reconciliations for current business are being completed on a timely basis and all previously unreconciled balances have been resolved. DELETED FROM HIGH RISK LIST.	D	.....	.....
Departmental: financial systems coordination inadequate. Treasury has invested $78M in financial systems development. At risk: $15M, representing potential expenditures for unnecessary systems.	Arrangements have been completed with Agriculture to provide payroll/personnel processing for all Treasury bureaus. Also, a number of bureaus are currently installing Federal Financial System software. The need for Departmental review and approval of major financial system replacement or enhancement projects is being re-emphasized, partly through the issuance of Departmental policies pursuant to the CFOs Act. Next steps: a study team is exploring the feasibility of linking common financial systems or designing a single integrated system.	2	166	170

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DEPARTMENT OF VETERANS AFFAIRS

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Veterans Benefits Administration (VBA): Compensation and pension benefit overpayments. Budget requests $16.5B for compensation and pension benefits. At risk: $185M in overpayments to beneficiaries annually.	Legislation enacted that enables matching of income records to identify beneficiaries who have received benefit overpayments. Memorandum of understanding signed with IRS and SSA on exchange of income data; system tested and overpayment cases being validated. Next step: first matches will be completed in 1992. The budget proposes to remove the sunset date in current law that would terminate the match on September 30, 1992.	1	16,386	8,357
Departmental audit followup systems inadequate. The Department receives audit reports with monetary findings of $350M annually. At risk: up to 15% if audit followup is not done aggressively.	Centralized, automated system developed and implemented.. Next steps: conduct on-site peer review to validate corrective actions and complete any peer review recommended actions by June 1992.	1	350	461
Veterans Health Administration (VHA): Drug inventory controls inadequate. Drugs and medical supply inventories in VA hospitals replenished at rate of $450M a year. At risk: $77M in potential loss of drugs in inventory due to waste, theft, or loss.	84% of VA hospitals converted from ward stock to unit dose distribution system. Next steps: complete budgets and plans for conversion of all facilities by 1995; initiate actions to address broader drug accountability issues under this high risk area.	1	6,614	6,962
Office of Facilities: Health care facilities construction planning process lacks design standards. Budget requests $382M for facility construction. At risk: $40M for additional, unnecessary costs, cost overruns, or facilities exceeding actual needs.	VA organizing a task force to develop design standards for constructing medical facilities. Next steps: develop acceptable standards to be incorporated into construction planning process by October 1992.	2	0	0
Departmental internal controls program weak. At risk: assurance that VA funds and operations are adequately protected against fraud, waste, and abuse.	Specifications for automated management control system developed. Next steps: fully implement tracking system; validate corrective actions by June 1992.	1	245	290

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DEPARTMENT OF VETERANS AFFAIRS—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Loan Guaranty Program: Lack of system for assessing credit risk exposure ($158B in guaranteed loans outstanding).	VA has adopted a default model that enables the Department to develop budget requirements under credit reform, and to predict future portfolio performance. A lender review monitoring unit has been established to review underwriting and servicing activities carried out by private sector lenders; 141 reviews of originating lenders have been completed. DELETED FROM HIGH RISK LIST.	D	.....	.....
VHA: Physician employment screening inadequate. Budget requests $14.6B for Veterans Health Services. At risk: inadequate assurance that VA patients are treated by qualified physicians.	Template folder developed to secure and file standard credentialing and privileging information; internal policy and operations manuals updated. Next step: validate implementation of corrective action by September 1992.	1	0	0

ENVIRONMENTAL PROTECTION AGENCY

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Agency enforcement oversight inadequate. At risk: polluters paid $61M in civil penalties in 1990.	Integrated data base on compliance and enforcement activities developed, allowing EPA to target violators better. Staff training completed. System in use. DELETED FROM HIGH RISK LIST.	D	.....	.....
Agency financial system produces unreliable data. Financial system processes $7B annually. At risk: assurance that these funds are being accounted for in an accurate and timely fashion.	Converted to new core financial accounting system; implemented new management accounting reporting system; and continued improvements to accounts receivable and general ledger controls. Next steps: implement upgraded version of accounting software; improving accounts receivable module; and implement general ledger data reconciliation.	1	600	20
Superfund: Program lacks goals and management controls. Budget requests $1.75B for Superfund. At risk: environmental safety and assurance that contract funds are being spent efficiently and effectively.	Continued strengthening of enforcement activities requiring responsible parties to undertake site cleanups; funds for enforcement activities increased from $178M in 1989 to $225M in 1993. Conducted two studies, one on accelerating and improving cleanup of Superfund sites, and the other on contract management. Next steps: implement study findings on accelerating cleanups and assessing and managing risks at sites; and improve management and contain costs of Superfund contracts. Senior EPA management team will review contract management personnel and practices in all EPA headquarters and field offices in 1992, with the goal of emphasizing preventative measures.	2	2,296	0

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Administration financial systems integration needed. NASA systems process $15B annually. At risk: assurance that these funds are being accounted for in an accurate and timely fashion.	Integrated personnel/payroll system (PPS) to replace 13 existing systems installed at all sites. NASA Accounting and Financial Information System (NAFIS), an integrated accounting system, functional requirements phase completed; software/systems specifications under development; funds control function baselined. Next steps: consolidated Agencywide Personnel/Payroll System (CAPPS), which will tie all sites into Headquarters personnel information system, to be completed by September 1992. NAFIS design will be completed by October 1992.	1	9,089	13,679
Administration oversight of contractors and subcontractors inadequate. Budget requests $12B for NASA contracting effort. At risk: $200M–$500M, representing potential overpayments to contractors through erroneous contract charges.	Continued expansion of training program to key procurement personnel and program managers; additional staff assigned to procurement function; all administrative reforms taken; OMB review team continued oversight. Next steps: complete cycle of procurement management surveys to validate corrective actions by September 1992.	1	4,072	8,171

AGENCY FOR INTERNATIONAL DEVELOPMENT

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Agency financial management systems and operations inadequate. AID/HQ financial system processes $4.1B annually. At risk: $56M, representing unresolved cash differences with Treasury, potential duplicative payments, loss if new system fails.	Information engineering methodology being used to develop new primary accounting system. Strategic Information Systems Plan completed. Next step: use cost/benefit analysis to determine whether to use off-the-shelf or custom system and select contractor by May 1992.	2	3,780	3,830
Agency audit coverage of contractors and grantees inadequate. Budget requests $4.3B for assistance programs for which audit coverage is inadequate. At risk: up to $445M, representing potential misuse of funds by contractors and grantees.	IG staffing increased from 193 in 1989 to 251 in 1991. Circular A–133 audit requirements for foreign nongovernmental grantees were incorporated into AID policy manual. Next step: in early 1992, issue guidance on implementing audit management program, which defines mission/central office responsibilities for monitoring audit coverage. Program to include audit requirements for funds to foreign governments.	2	750	500

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AGENCY FOR INTERNATIONAL DEVELOPMENT—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Agency ADP security vulnerabilities. Budget requests $17M for IRM activities. At risk: assurance that this investment and AID data are adequately protected from loss due to disasters.	Interim disaster recovery service tested for three most critical systems; and contracts awarded for interim tape backup storage facility and long-term disaster recovery services. Next steps: issue contract for long-term off-site tape storage; and expand disaster recovery program to include all centralized facilities in 1992.	1	370	889
Agency program monitoring and oversight inadequate. Total AID 1993 operating budget request is $7.5B. At risk: assurance that these funds are being spent efficiently and effectively.	Headquarters reorganized to streamline operations; internal budget process revised to integrate review of program, workforce, and operating expense resources; standard field staffing model developed and tested. Next steps: refine field staffing model based on completed evaluation of overseas staffing approaches; increase focus and concentration of field programs. AID-OMB SWAT Team to review personnel, contracting, audit and evaluation system and make recommendations for improvement.	3	4,900	7,000

FARM CREDIT ADMINISTRATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Inadequate accounting systems Budget requests $40M in budget authority for offsetting collections. At risk: $403,000 in waste if staff must correct accounting system errors related to these collections.	Continued enhancements to new accounting system, including definition of additional accounting functional requirements; and design of internal and external reports. Training and user support services have also been provided. Next steps: develop accounts receivable and cost accumulation components; and install property management system.	2	311	269

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FEDERAL EMERGENCY MANAGEMENT AGENCY

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Internal control program inadequately implemented. Budget requests $1.594B for FEMA, including flood and crime programs. At risk: assurance that these funds are adequately protected against fraud, waste and abuse.	As of August 1991, FEMA had completed only one internal control review in 1991 except for work done by the Inspector General. IG is auditing 1990 FEMA internal control review program, issuing draft report in November 1991. Next steps: management is currently preparing response to draft IG report. OMB will actively engage FEMA CFO and management to respond to IG recommendations.	3	335	350
Financial management systems inadequate. At risk: assurance that $2.18M investment in financial systems results in accurate and useful financial information.	Created a division to focus on systems design and acquired general ledger software from Education; reconciled unexpended cash balances for 1984 and prior. Next steps: during 1992 FEMA plans to finalize its 5 year systems plan and test software which links seven subsystems to primary accounting system.	2	630	900

GENERAL SERVICES ADMINISTRATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Major internal control weaknesses not being reported.	Management Control Oversight Council established; staffing increased for internal controls and for full time desk officers; independent public accountant audit of 1990 financial statements disclosed no material weaknesses. DELETED FROM THE HIGH RISK LIST.	D	.....	.....
Major systems development project failed due to inadequate oversight by Public Building Service (PBS). Total PBS/IS multi-year program cost is $69.6M . At risk: $9.6M in development funds if system fails.	GSA has developed and instituted new procedures to ensure successful implementation of IRM modernization projects. PBS/IS modernization is the current project that reflects how that strategy is applied. For PBS/IS, activity is well underway—new processing site (HHS, Parklawn) selected; interagency agreement signed with HHS. Software conversion contract solicitation issued. Next steps: award contract for information system upgrade in 1992; system to be operational in 1994.	1	1,900	2,100

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NATIONAL CREDIT UNION ADMINISTRATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Centralized asset liquidation center needs effective internal controls (assets valued at $527M in central facility).	Asset disposition and liquidation activities combined into a single unit in Austin, Texas to improve management controls. Annual audit by independent CPA firm; collection activity monitored monthly; recent IG audit indicates that internal controls are adequate to minimize risk to the Center. DELETED FROM HIGH RISK LIST.	D	.....	.....
Deficiencies in internal control process.	Managers must now provide mission statements that encompass quality and cost factors and assess inherent risks. Control techniques are documented and in place. DELETED FROM HIGH RISK LIST.	D	.....	.....

NATIONAL LABOR RELATIONS BOARD

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Poor accounting system. Accounting system processes $162M annually. At risk: assurance that funds are being accounted for in an accurate and timely fashion.	Conversion to a new accounting system in 1990 failed due to poor testing procedures and inappropriate controls over data conversion. Another system (FMIAS) was imported from another agency and implemented in August 1991. Next step: OMB and the OIG will review the adequacy of the system during fiscal year 1992.	3	50	.....
Inventory system not reconcilable. Capitalized property valued at $618,000. At risk: assurance that these assets are adequately protected against loss and theft.	Prepared inventory of capitalized property and reconciled with accounting systems records. Next step: in 1992, NLRB IG will validate corrective actions.	2	0	0

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OFFICE OF PERSONNEL MANAGEMENT

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Federal Employees Health Benefits Program (FEHB): inadequate standards and oversight of insurance carriers. $16B in obligations in 1993. At risk: excess payments to carriers and providers.	In its 1991 FMFIA report, OPM identified a new material weakness: FEHB insurance contract administration. Lack of effective internal control standards and monitoring of FEHB carrier performance creates increased potential for waste, fraud, and abuse. Next steps: OPM studying carrier financial and claims processing controls; plans to issue internal control standards for carriers in 1993, and conduct carrier reviews and audits more frequently. ADDED TO HIGH RISK LIST.	A	.....	.....

PEACE CORPS

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
System for reviewing internal controls at overseas posts not implemented. Budget requests $92M for overseas posts. At risk: assurance that these expenditures are adequately protected against fraud, waste, and abuse.	Good progress made in implementing comprehensive training course for overseas administrative (AO) officers and new management control survey program. Two 3-week training courses were held in calendar 1990 and four courses were held in calendar 1991. Since July 1990, 60 AOs have received training. Property Management Inventory System imported from State Department for use by PC posts. Next steps: administrative improvements will focus on property management in 1992; IG audit of property management system is now underway; findings will be indicator of new inventory control system's effectiveness.	2	100	125
Financial management systems antiquated. Accounting system processes $218M annually. At risk: assurance that funds are being accounted for in an accurate and timely fashion.	Defined requirements; selected vendor to develop new primary accounting system; and completed acceptance testing of software. Next steps: pilot test March 1992; implement core accounting October 1992.	2	350	300

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PENSION BENEFIT GUARANTY CORPORATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Poor coordination of information on pension plans.	Effective coordination and exchange of information on financial integrity of insurance plans now exists among PBGC, Pension and Welfare Benefits Administration and the Internal Revenue Service. Exposure study completed, listing 50 plans with the largest underfunding. DELETED FROM HIGH RISK LIST.	D	.....	.....
Weaknesses in financial management systems. PBGC oversight of $1,004B in retirement funds. At risk: assurance that amount owed is accurate and can be identified for collection.	PBGC cited weaknesses in financial systems following internal assessments and a failed GAO attempt to audit financial statements. Next steps: continue joint PBGC-OMB efforts to make premium accounting system compliant with OMB, GAO and IG requirements, as well as responsive to ERISA by 1993; auditable balance sheets for 1992 will be available for audit in 1993. ADDED TO HIGH RISK LIST.	A	.....	.....

RAILROAD RETIREMENT BOARD

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Inadequate management controls and inability to certify the adequacy of controls for the Board's biggest benefit program. $7.3B in benefits, 950,000 beneficiaries in 1990. At risk: 80,000 backlogged cases of inaccurate benefit payments; 52,000 inaccurate tax statements; unrecovered debt owed RRB.	In April 1990, OMB led a management review of RRB resulting in 42 findings and 104 recommendations for corrective actions. RRB and OMB negotiated a $13.9 million 5-year "contract" to correct past problems. The plan linked specific reductions in backlogs and other problems with specific resource commitments. Significant progress in reducing backlogs and reaching other objectives has been made in 1991. Next steps: continue OMB and RRB implementation of the 5-year contract.	1	3,264	3,758

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SECURITIES AND EXCHANGE COMMISSION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Management of ADP systems development projects needs improvement. Budget requests $34M for SEC computer systems development projects. At risk: assurance that this expenditure will result in systems that produce accurate, timely, and useful information.	Restructured and consolidated management of information resources and created position of Chief Information Officer. Restructuring should improve the overall management of information resources by creating economies of scale in ADP planning. Next steps: recruit Chief Information Officer; and issue internal guidelines on administration of systems development projects.	2	200	200
Agency lacks a long term disaster recovery plan for computer operations. At risk: assurance that SEC data are adequately protected, and agency can perform its mission in the event of a disaster.	A risk assessment of the Commission's automation resources environment was completed; and an SEC contractor issued a report presenting risk reduction contingency planning alternatives. Next steps: based on the results of a capacity study, the SEC will develop a detailed contingency plan.	2	6,700	3,750

SMALL BUSINESS ADMINISTRATION

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Small Business Investment Company (SBIC) management/liquidation activities inadequately supervised. The current outstanding portfolio is $1.5B for SBICs. At risk: $426.5M, representing the size of the current liquidation portfolio.	Management changes and restructuring have taken place: SBIC operations and liquidation functions are now under a single Management Board official who has been recently appointed; 27 additional positions have been allocated to the SBIC Program, of which 18 have been filled; and a broad-based Advisory Council has been established to provide advice and counsel on the Program. License applications are screened and only suitable applications are accepted for processing. SBICs with regulatory or credit problems are being monitored more closely. Next steps: financial advisor to review program. Program management, resources, and overview will continue to be upgraded.	2	400	750

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SMALL BUSINESS ADMINISTRATION—Continued

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Small Business Development Centers (SBDCs) lack control over program income. Budget requests no funds for SBDCs; 1992 appropriation is $60M. At risk: assurance that appropriated monies are protected from fraud, waste and misuse by grantees.	SBA has, within its administrative discretion, corrected 4 out of 5 related material weaknesses in the SBDC program. However, Congressional impediments prohibit regulatory changes . The budget proposes zero funding for this program as a result of the Administration's concern over the legislative impediments which restrict the ability of the agency to manage the program effectively. Next step: seek Congressional action to eliminate funding for the program.	3	.....	.....
Surety Bond has weaknesses in its system of management control. Total surety bond guarantees outstanding in 1991 $896M. At risk: $15M in potential claims.	SBA has identified as "high risk," weaknesses in the Surety Bond Program's operating procedures, management information systems, and audit followup process. SBA plans to address these problems in 1992 and 1993 by redesigning the Claims Tracking System, conducting on-site reviews, reviewing and evaluating SOPs and regulations, reviewing workload, and conducting training. ADDED TO HIGH RISK LIST.	A	.....	.....

U.S. INFORMATION AGENCY

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Financial management systems and operations inadequate. Systems process $1B. At risk: assurance that funds are being accounted for in an accurate and timely fashion.	Five year plan completed; evaluation of alternative systems underway. Next steps: implement priority improvements to existing system; in 1993, establish architecture and planning framework for next generation of integrated financial systems.	2	820	1,500

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UNITED STATES SOLDIERS AND AIRMEN'S HOME

High Risk Area	Progress to Date	Status	Investment to Correct High Risk (In thousands of dollars)	
			1992 Estimate	1993 Proposed
Financial management controls weak (particularly accounting and contract functions). $190M in funds managed. At risk: assurance that financial transactions are accounted for in an accurate and timely fashion.	Memorandum of Understanding signed with Treasury (FMS) for accounting cross-servicing. Phase I for accounting and payroll interface operational. Next steps: Phase II for trust fund, billings and collections installed by October 1992; supply and inventory to follow. CPA firm to audit 1992 financial statements to validate Phase I.	1	500	639

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Managing for Integrity and Efficiency:

16. Increasing Returns on Investment

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16. INCREASING RETURNS ON INVESTMENT

The budget reflects a set of choices on relative program priorities and funding needs. These choices are based, in part, on analytic and evaluative information concerning likely consequences and results of programs and policies. Budget caps under the Budget Enforcement Act of 1990 make it more critical than ever to plan for and conduct rigorous evaluations of programs to help assure the highest possible Federal returns on investment.

This section describes:

- Selected formal evaluations used in formulating the budget and an evaluation agenda for use in future budget formulation,
- Congressionally imposed barriers to sound management, and
- Significant discretionary program terminations, decreases, and increases (based in part on the results of these studies)—and in part on the countless less formal evaluations and analyses used in preparing the budget (but not highlighted here).

EVALUATION

Program evaluation is a formal assessment, through objective measurement and systematic analysis, of the manner and extent to which Federal programs achieve intended objectives. Program evaluation efforts in the Federal Government remain uneven. Few agencies perform results-oriented, outcome evaluations—answering "What does the program accomplish?" "How do program results compare with program goals?" "What works and why?" Process evaluations and related management analyses, such as compliance audits, are more usual. While necessary and often useful, such studies do not usually provide sufficient information by themselves to support major policy and budget allocation decisions.

The Administration continues to support strongly the production of sound, timely and relevant information on program results to make informed major policy decisions and to improve program management.

PROGRAM EVALUATIONS USED IN THE BUDGET

The following examples illustrate how evaluations have supported decisions to continue, increase, or reduce proposed program funding during budget formulation.

Department of Agriculture

Federal Crop Insurance Program.—The Federal Crop Insurance Corporation provides crop insurance to farmers for protection against losses from adverse climate or weather conditions, fire, plant disease, insect and animal damage. (Over $10 billion in protection is currently outstanding.) In recent years, indemnity payments have significantly exceeded premium income by several hundred million dollars annually. A Department of Agriculture evaluation this year reviewed the potential for crop losses to all the farms in an area (as opposed to only a single farm) as a condition of making individual farms eligible for insurance payments. The current program pays claims even if only one farm, in an otherwise undamaged area, is damaged. The findings of the study were taken into account in preparing the budget. The findings were also sufficiently favorable to support further examination of this idea in two 1992 pilot projects covering soybeans and wheat. If successful, this revised approach could add an additional level of insurance that would complement the existing multiple peril insurance policy and provide individual farmers with greater flexibility to tailor insurance to their own needs. It should bring claims payments more in line with premiums.

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Department of Commerce

Minority Business Development Centers.—The Minority Business Development Agency (MBDA) ($40.5 million appropriated in 1992; $44 million proposed for 1993) funds minority business development centers which provide management and technical assistance for minority business owners. A recent report on the MBDA by KPMG Peat Marwick concluded that service delivery would be improved if each center could provide specialized services tailored to the community in which it operates. The budget includes $2 million to allow four centers to upgrade their technical skills in specific, community-appropriate areas (e.g., tourism, capital development, construction, and franchising).

Census.—GAO evaluations of the 1990 Decennial Census stressed the need for the Census Bureau ($290.3 million appropriated for 1992; $338.4 million proposed for 1993) to fundamentally, rather than incrementally, reform conducting the next decennial census. The budget provides a $9.0 million increase to the Bureau to allow new concepts to be tested in time for incorporation in the 2000 Decennial Census. Concepts to be tested include a drastically simplified questionnaire; increased use of sampling, modeling and administrative records; and design of techniques for special areas and subpopulations.

Geostationary Weather Satellite.—The Geostationary Weather Satellite (GOES) Study Panel, a committee of Government and private aerospace experts, reviewed the troubled GOES program ($237 million in 1992, including a one-time $110 million contingency fund appropriation). The GOES program is more than 100 percent over budget and over three years behind schedule. The panel recommended a planned one-year launch delay, coupled with an enhanced test program, to ensure a reliable system. The budget proposes implementation of the panel's recommendations and provides several "insurance" measures, including use of a European GOES-like weather satellite over the U.S., as back-up against loss of geostationary weather satellite coverage. The budget includes $129 million for the program.

Department of Defense

Force Mobility.—DOD reviewed the effectiveness of defense mobility programs during Operations Desert Shield and Desert Storm. The resulting report presented a comprehensive evaluation of airlift and sealift mobilization requirements for the next decade and identified a need for additional sealift capabilities. As a result, the budget includes $1.2 billion, in addition to prior year appropriations, for acquisition of ships to augment the Department's sealift capability.

Department of Energy

Fossil Energy R&D.—A DOE evaluation of the funding sources for fossil energy R&D from 1981 to 1991 revealed highly variable industry cost-sharing in the various fossil research programs. As a product of this study, the Department's oil research programs (e.g., advanced oil recovery) will explicitly require industry cost-sharing.

Department of the Interior

Outer Continental Shelf (OCS) Receipts.—An evaluation of cost recovery alternatives for OCS receipt collection led to the decision in the budget for the Minerals Management Service (MMS) to finance the costs of the new MMS computer system through additional receipts. The new system is expected to increase collections by at least $5 million annually.

Department of Labor

Pension Benefit Guaranty Corporation (PBGC).—The PBGC (a government-owned corporation chaired by the Secretary of Labor) guarantees pension payments under covered private defined benefit pension plans. PBGC is financed primarily by insurance premiums paid by these plans. The budget proposes legislation and increased resources to address a Treasury Department report assessing the causes of PBGC contingent liabilities and PBGC analysis of its potential exposure to additional liability from termination of large pension plans. In addition, increased staff and other resources are provided to address weaknesses identified in a GAO audit of the PBGC's operations and its premium accounting system.

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Intervention for Serious Work-Related Injuries.—Under the Federal Employees' Compensation Act (FECA), a Federal employee's income is replaced if a job injury results in time away from work. In 1991, $1.6 billion in compensation was paid under FECA. Based on the results of an Employment Standards Administration research and demonstration project, the budget includes staff and resources for a multi-year effort to return those on long-term disability to work, using some of the intervention techniques shown to be effective by the evaluation. The effort is expected to save up to $15 million between 1994 and 1997.

Department of Transportation

Preventing and Responding to Pollution of Ports.—The Oil Pollution Act of 1990 required the Coast Guard to undertake an evaluation of all major U.S. ports to determine whether vessel traffic systems are needed to provide proper protection from oil pollution incidents and other marine accidents ($65.7 million appropriated to the Coast Guard in 1992 for oil pollution activities). The results of this study were used to prioritize and justify funding requests for vessel traffic systems in major U.S. ports in this ($26.8 million requested) and future year budgets.

Environmental Protection Agency

Superfund Program.—Superfund was created by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 to provide funding to clean up the nation's most dangerous hazardous waste sites. An EPA Task Force (set up to review criticism of EPA's control and oversight of its Superfund contractors) recommended several reforms to improve Superfund cleanup and contracting procedures. The budget reflects these reforms, including reduced resources for contractor administrative costs, and increased resources ($1.5 million) for oversight of Superfund contracts and improved internal controls by EPA's Inspector General.

FUTURE EVALUATIONS

The Administration supports a systematic and sustained investment in high-quality, policy-relevant evaluations. The purpose is to aid both the Executive Branch and the Congress in planning, monitoring, and assessing program implementation and results, and in determining future program needs. Future evaluations include a variety of short-term and long-term efforts, including comprehensive longitudinal outcome studies and assessments of pilots.

The budget requests over $53 million for priority evaluations discussed below (for which cost estimates are available); total multi-year costs are expected to exceed $165 million.

Department of Agriculture

Electronic Benefit Transfer (EBT).—EBT demonstration projects are testing delivery of a variety of Federal benefits in several States through use of plastic cards, automated teller machines, and point-of-sale terminals. Between January and December 1992, Maryland will expand its EBT demonstration to the entire State for the Food Stamps, Aid to Families with Dependent Children, and Child Support Enforcement programs. The Food and Nutrition Service will evaluate the cost effectiveness and quality of service provided by EBT in Maryland. Baseline data and some preliminary analysis will be available in the Fall of 1992. This $2.5 million effort will be completed in January 1994.

Quality of Grain Exports.—In recent years, there have been increasing concerns over the quality of grains exported from the United States (in comparison to the quality of competitors' grain). In August 1990, USDA began a three-year study to determine the costs and benefits associated with selling cleaner grain, with special reference to the effects on U.S. competitiveness in international trade. The wheat portion of the study will be completed in March 1992, and the corn/soybeans portion should be completed by October 1992. The results of these studies will provide information on the competitiveness of U.S. grain exports. (Total estimated cost: $900,000.)

Soil Conservation.—The Department is conducting the third of a series of appraisals to fulfill the requirements of the Soil and Water Resources Conservation Act of 1977. These periodic appraisals are designed to aid in developing conservation policy for managing soil, water and related resources and to provide a better understanding of the environ-

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mental relationships of alternative agricultural production choices. The appraisal is expected to take five years from the design of the plan of work to completion of the first draft report in December 1996. The final report is scheduled for December 1997. The draft report will be used to formulate the strategic plan for natural resources for the decade beginning in 1998. (Total estimated cost: $12 million.)

Department of Commerce

Impact of Standards Development Surcharge.—A National Institute of Standards and Technology (NIST) study will analyze whether standards development surcharge (SDS) fees or the sluggish economy are discouraging equipment calibration by private industry. Less equipment calibration could result in reduced product quality. This study should be completed by June 1992; it will be used to set the SDS fee schedule for 1993 and beyond. (Cost: $150,000.)

Department of Education

National Evaluation of Adult Education.—The Department of Education (ED) spent $212 million in 1991 to improve basic literacy skills of over 3 million adults. ED began an evaluation of the program in August 1990, relating participation in adult education programs to employment outcomes. The study will be completed in the spring of 1994. No new funds are requested for 1993. (Total cost: $2.8 million.)

Compensatory Education (Chapter 1).—The Chapter 1 program is a formula grant program to local education agencies to assist educationally disadvantaged students. The program spent $5.6 billion in 1991. A longitudinal study of the impact on students and schools is mandated by law. The evaluation was begun in 1989; an interim report is due in 1993 and the final report is due in 1997. The budget requests $6 million for this study in 1993. (Total cost: $35 million.)

School Dropout Prevention Demonstration Program.—ED has commissioned evaluations of the effectiveness of projects funded in 1991 ($20 million) to test ways to prevent dropouts. These evaluations, primarily of demonstration projects, will be completed in 1995. The budget requests $2 million for this effort in 1993. (Total cost: $6 million.)

Special Education.—This program makes grants to States to help them identify, protect, and educate children with disabilities. ED spent $2.4 billion in this area in 1991. A two-stage longitudinal study is underway to examine educational outcomes resulting from the program. The first stage (not an evaluation) is a survey of the characteristics of disabled youth; this stage is complete. The second stage (an evaluation of post-education outcomes and variables affecting outcomes) is to be completed in 1992. (Total cost: $6.4 million.)

Vocational Rehabilitation Basic State Grant Program.—This program provides assistance to States to help persons with a vocational disability prepare for and engage in gainful employment. ED spent $1.6 billion on this program in 1991. In 1992, ED will design and begin implementation of a comprehensive multi-year longitudinal evaluation of the program. Using a nationally representative sample of program applicants, the study will assess the effects of program services on client outcomes, both economic (wage-related) and non-economic (quality of living). The budget requests $2 million for this ongoing effort. (Total cost: $6 million.)

Special Programs for the Disadvantaged.—Eight programs ($334 million in 1991) provide special services to disadvantaged students to encourage them to enroll in and complete postsecondary education. A two-part evaluation is examining available data to describe characteristics of post-secondary students using a variety of supplemental services and to assess the effects of services on high school performance, college enrollment, college performance and graduation. The results of the first part of this study should be available in 1992. The budget requests $2 million for this effort. (Total cost: $7.6 million.)

Department of Energy

Fossil Energy R&D.—The DOE Fossil Energy R&D program supports research in cleaning sulfur from coal and its combustion flue gases, advanced combustion technologies, coal derived gases, and synthetic fuels and fuel cells. The second phase of an evaluation (begun in 1991) will (1) address the program's

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success in identifying and developing technologies ultimately adopted by industry and (2) assess the program's future cost-effectiveness. (Total estimated cost: $250,000.)

Environmental Cleanup.—DOE has taken initial steps toward implementing a progress tracking system. A fully operational tracking system should be in place in the near future. (Total estimated cost: $250,000.)

Department of Health and Human Services

JOBS (Job Opportunity and Basic Skills) Program.—Along with stronger child support enforcement, JOBS was the centerpiece of the Family Support Act of 1988's welfare reform legislation. For 1993, $1 billion is authorized for grants to States for (1) JOBS-related education, training, and employment and (2) support services to adults in families receiving Aid to Families with Dependent Children. The Family Support Act mandates a multi-year evaluation in up to ten sites to measure the impact of JOBS on earning and welfare dependency, especially with respect to potentially long-term recipients. Preliminary data will begin to become available in 1995. Final impact data and cost-effectiveness analysis will follow. Multi-year costs will be about $15 million for the Departments of Health and Human Services and Education for this effort.

Department of Housing and Urban Development

The budget requests $35 million for research within HUD, a 40 percent increase over 1992. The following evaluations will be funded within this amount:

HOPE (Homeownership and Opportunity for People Everywhere) Grants.—HUD's 1990 HOPE initiative (over $1 billion requested for 1993) is designed to enhance homeownership opportunities for very low-income households. Grants are provided to tenant organizations, local public housing authorities, and nonprofit organizations to convert to homeownership public housing, low-income distressed FHA multi-family properties, and governmentally-held, single family properties. HOPE also assists nonprofits with programs to sell Government-held single family properties to low-income families. A HUD study will help address questions concerning the short-term and long-term benefits and costs of homeownership programs for very low-income families. Results should be available by the end of 1995. (Total estimated cost: $1.2 million.)

Homeownership Vouchers.—A new initiative in the budget allows housing vouchers, currently only a rental subsidy, to be used also as a homeownership subsidy. The budget includes $2.7 billion in budget authority for vouchers. A HUD study (to be completed by the end of 1995) will assess how well this initiative is working. The study will examine who is participating, how many participants receive FHA insurance, what the default rate is for participants, and how many families need voucher subsidies beyond five years. (Total estimated cost: $1 million.)

Opportunity Counseling Demonstration.—The budget proposes an initiative to provide low-income families counseling and other assistance in moving to mixed-income neighborhoods. An evaluation of this initiative, called the "Moving to Opportunity Counseling Demonstration," will assess the effectiveness of counseling services for these families. The evaluation will focus on the program's impact on recipients' income and education levels, source neighborhoods, and target neighborhoods. The evaluation should be completed by the end of 1995. (Total estimated cost: $1 million.)

Programs for the Homeless.—HUD will assess how efficiently and effectively its current programs identify and meet the needs of homeless persons. It also will evaluate specific initiatives, including the new Safe Havens initiative (a program for the mentally ill homeless) and Shelter Plus Care (a program that links housing with other supportive services for the mentally/physically disabled). The evaluations will examine how successful HUD is in moving persons from homelessness to permanent housing, the extent to which HUD programs clearly identify and address the predominant/recurring problems of the homeless, and whether the distribution of funding within HUD's homeless programs matches the relative needs among the homeless population. The evaluations should be completed by the

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end of 1993. (Total estimated cost: $1.2 million.)

HOME (Housing Block Grant) Program.—HUD will evaluate HOME, a new housing block grant to States and local governments ($700 million requested for 1993) to assist low-income families and individuals. Eligible activities include tenant-based rental assistance as well as acquisition, rehabilitation, and new construction of affordable housing. HUD will examine what kinds of activities are being funded through HOME, including whether this block grant is primarily a supply (building) subsidy or demand (tenant) subsidy. HUD will also examine how well State and local governments coordinate their spending decisions with local housing needs. The studies will be completed by the end of 1995. (Total estimated cost: $400,000.)

Community Development Block Grant (CDBG).—Evaluations of both the State and entitlement portions of the CDBG program ($2.9 billion requested for 1993) are needed, especially in light of recent Congressional hearings on programmatic abuses by State and local entities. HUD will evaluate the effectiveness of States' CDBG-sponsored economic development projects and the impact of projects funded by the CDBG entitlement program on low and moderate income persons. The studies will be completed by the end of 1993. (Total estimated cost: $750,000.)

Lead-Based Paint Abatement.—HUD will evaluate the effectiveness of Federal grants to States and units of general local government begun in 1992 to abate lead-based paint and/or lead dust. Children residing in selected homes will be tested by local health authorities before and after abatement procedures. HUD will also gather information from State and local authorities to determine the extent to which blood lead levels are reduced as a result of the abatement. The study should be completed by the end of 1995. (Total estimated cost: $1.5 million.)

Department of the Interior

Bureau of Mines (BOM) Research.—The Department of the Interior (DOI) and the Bureau of Mines will conduct two studies to analyze duplication of research activities at the BOM research field offices and the ways in which cost-recovery of research activities can take place. BOM has nine field offices that conduct research in the areas of health, safety, and mining technology; minerals and materials science; and environmental technology. Much of the research performed by BOM directly benefits the private sector. The first study proposed is to determine whether research at the field offices is duplicative and, if so, how consolidation of research centers can occur. In addition, DOI and BOM will develop a plan for greater cost-recovery of BOM research output. The reviews are scheduled for completion by August 1992. (Total estimated cost: $100,000.)

Department of Labor

Job Corps.—The Job Corps is a national network of residential centers designed to assist disadvantaged youth (ages 14–21) in acquiring job and social skills. In 1991, $867.5 million was provided to serve about 68,000 young people. Operating costs per participant ($11,795 in 1991) are high—far exceeding those in other education and training programs. The program has not been evaluated since 1977. The Department of Labor plans to initiate a five-year, incrementally funded, comprehensive process/impact evaluation beginning in 1992. The first phase (evaluation design) is to be completed by mid-1993. The budget requests $500,000 for this effort. (Total cost: Unknown until design is completed.)

Assisted Reemployment of Injured Workers.—The Department will initiate a four-year Assisted Reemployment demonstration project in 1992. Employers who rehire injured Federal workers will receive time-limited, declining wage subsidies for these workers. The evaluation will test whether, and to what extent, this initiative increases the number of injured workers who return to productive employment and reduces the cost of long-term disability compensation and medical bills. Initial results should be available in 1993. No additional funds are requested for this effort.

Department of the Treasury

Internal Revenue Service Accelerated Notice Stage Pilot.—The IRS typically collects delinquent tax accounts in a three stage process that may involve as many as five computer generated notices or letters to the taxpayer; attempted contacts through an auto-

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mated telephone calling system; and, if warranted, visits by IRS officers. About two-thirds of collections are resolved at the notice stage. In 1991, the IRS began testing the effect of eliminating one of the five notices currently sent to taxpayers with delinquent accounts, seeing whether earlier personal contact with the taxpayer would increase collections. Analysis of the six month field test, involving three test districts and three control districts, is scheduled for completion by July 1992. No additional funds are requested for the pilot, since it reduces costs by eliminating one of the notices mailed.

General Services Administration

FTS (Federal Telecommunications System) 2000.—FTS 2000 is a $15–20 billion, ten-year project to provide Federal agencies with voice, data and teleconferencing services commercially. Conversion of voice services from the old FTS to FTS 2000 was completed in June 1990, 18 months ahead of schedule and considerably below estimated costs. Recent Congressional testimony by GAO and agencies, however, have raised questions about whether the program could be managed in a more cost-effective manner and whether the Government is receiving the lowest possible price from its commercial providers. GSA will evaluate the program's efficiency and effectiveness in comparison to that of similar operations in the public and private sectors. The study should be completed by June 1992; it will be used by GSA to make management improvements and by OMB in its 1994 budget review. (Total cost: $750,000.)

Small Business Administration

Section 7(a) General Business Guaranteed Loans.—At the end of 1991, the SBA recorded over 91,000 loans outstanding, with total exposure reaching $11.5 billion. An SBA study will enable the agency to assess the impact of the program, including its costs and benefits, to identify areas for program improvement, and to conduct budgetary and regulatory review of the program. Results of the study will be used in developing the 1994 budget. (Cost: $437,000 in 1992.)

Multi-Agency

Federal Motor Vehicle Fleet Management.—Federal agencies spend almost $1.3 billion annually to support a fleet of over 359,000 vehicles. In the fall of 1991, the President's Council on Management Improvement launched a two-phase project to identify ways to achieve the most cost-effective and efficient Federal motor vehicle fleet possible. Phase 1, which should be completed by early 1992, will identify alternatives that can be implemented in the near-term to reduce fleet costs. Phase 2 will focus on longer-term reforms. Results in early 1993 should assist Federal agencies in determining the "best practices" of motor vehicle fleet acquisition, operation, maintenance, and disposal and provide the foundation for a government-wide Federal motor vehicle fleet policy. (Total cost: To be determined.)

Drug-Abuse Prevention and Treatment.—Federal funds to reduce the demand for drugs ($4.1 billion in 1993) are split between preventing and treating drug abuse. These efforts involve 17 Federal agencies. Examples of some of the most significant upcoming evaluations include:

- The Department of Education's long-term strategy to evaluate the effectiveness of drug abuse prevention programs, including a five year evaluation of school-based programs that began in 1991. Preliminary findings on school-based programs are expected in 1993, and a final report will be available in 1995. The budget requests $5 million for ongoing and new evaluation efforts in these areas.
- The Alcohol, Drug Abuse, Mental Health Administration's (ADAMHA) National Treatment Improvement Evaluation Study (NTIES). NTIES will evaluate ADAMHA's treatment improvement grants, including Treatment Campuses (which house the full range of treatment and ancillary services), the Target Cities Program (which focuses on improving city-wide treatment systems), treatment enhancement for critical populations (e.g., pregnant women), and the criminal justice system. Results of these studies should be available in 1994 and 1995. (Total cost: $17 million.)

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- ADAMHA's Drug Abuse Treatment Outcomes Study (DATOS), the third in a series of national studies to determine "what works" in drug abuse treatment. DATOS will focus on what services are being provided; how those services are delivered; and how the services relate to the drugs abused, level of impairment, and outcome measures. Initial results from DATOS are expected in 1995. (Total cost: $6.4 million.)
- Scientifically designed and controlled evaluation of new and promising treatment methods. This evaluation is sponsored by the Department of Veterans Affairs and will be completed in 1995 or 1996. The budget requests $1 million for these efforts. (Total cost: $5 million.)

LEGISLATIVE IMPEDIMENTS TO SOUND MANAGEMENT

Congressional barriers to sound management affect nearly every department and agency in the Federal Government. These legislative impediments include excessive program earmarking, onerous program restrictions, and mandates to continue wasteful administrative practices. Removal of these impediments is essential if Congress and the Executive Branch are to reach their shared objective of an effective and efficient Government.

PROGRAM EARMARKING

"Bringing something back to the home district" is a long-standing Congressional tradition. Earmarking often provides substantial benefits to a local community. Considered individually, many of these projects are worthwhile; but in the aggregate, they wastefully divert scarce Federal tax dollars. The tight budget caps under the Omnibus Budget and Reconciliation Act of 1990 mean that for every dollar that goes into funding local projects, there is one less dollar to invest in areas of pressing national concern.

Some illustrative examples of Congressional earmarking include:

- $2.5 million to establish a Geriatric Research, Education, and Clinical Center at the Baltimore Veterans Medical Center, after it failed to receive the award competitively.
- $9.8 million in Environmental Protection Agency funds earmarked without the benefit of competitive review, for the renovation and purchase of equipment for a specific neural science laboratory in New York City.
- $993 million for 566 R&D facilities and research projects for particular institutions and researchers in 1992 appropriations acts, according to an analysis by the Office of Science and Technology Policy.
- $6.4 million to Kellogg, Idaho, for Bavarian-style gondola cars over the Coeur d'Alene National Forest.
- $2.0 million of Park Service funds to restore the Chicago Public Library as if authorized by the Historic Sites Act (although it is not a national historic site under the terms of that Act).
- $20 million of Environmental Protection Agency funds are earmarked for site acquisition and design of a dock facility in Bay City, Michigan.
- A $500,000 cut in funds available to help farmers through the planting season in order to rehabilitate the home of Lawrence Welk in Strasburg, North Dakota. (This earmark was so egregious that the USDA refused to make the funds available.)
- $537 million appropriated in 1992 for new fixed guideway rail and bus systems and extensions to existing systems, commonly known as "new starts." These "new starts" included (1) $103 million for projects without full funding grant agreements (FFGAs) and that did not meet Federal Transit Administration criteria of cost-effectiveness and local financial commitment, and (2) $208 million for projects for which sufficient information is not avail-

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able to determine cost-effectiveness and local financial commitment.

ONEROUS PROGRAM RESTRICTIONS

Congress continues to become ever more deeply involved in the day-to-day operations of Federal agencies. There is a tension between legitimate oversight and micro-management. Although the dividing line is not always clear, onerous Congressional program restrictions not only cause practical problems, they can also overstep the Constitutional authority of the Executive Branch to execute the law.

Examples of onerous Congressional restrictions include:

- Directions to the Department of Defense to "give away" properties freed up from base closures (estimated market value of about $500 million) to States, other Federal agencies, and local interests. Such directions seriously undermine the objectives and savings to be derived from closing military bases.
- A prohibition on the Interior Department transferring technical responsibility for its dam safety program from the Bureau of Indian Affairs to the Bureau of Reclamation. The BIA has far less expertise in this area than the Bureau of Reclamation. As a result, lives and property are put needlessly at risk, so that one appropriations committee will not lose jurisdiction to another.
- A prohibition on the Office of Personnel Management reducing non-foreign COLA's. OPM cost surveys show that sharp reductions in cost-of-living allowances for Federal workers in Alaska, Hawaii, Guam, Puerto Rico and the Virgin Islands are warranted. Non-foreign area COLA's were originally established when particularly high living expenses in these locales justified special pay rates. This restriction will cost taxpayers more than $100 million a year.
- Cancellation of the indebtedness of seven cities (New London, CT; Newburyport and Malden, MA; Jefferson, MS; Calhoun Falls, SC; Suddy Daisy, TN; and Davenport, IA) with respect to amounts owed the Federal Government under HUD grants and contractual agreements. A select number of cities benefit, while taxpayers lose $5.2 million.

WASTEFUL ADMINISTRATIVE PRACTICES

Congressionally mandated administrative practices (such as procurement rules, personnel restrictions, and limitations on office consolidations or closings) force expenditures for particular favored activities, regardless of their merit or costliness.

For example, Congress:

- Opposes revamping USDA's 50-year old, bloated field structure. The current 11,000 office, 63,000 employee system costs $2.4 billion a year. Today 1 in 50 Americans live on farms, compared to 1 in 4 in 1935 when the Department's field structure was initiated. In addition, vast improvements in transportation and communication networks have made farmers' access to information and assistance much easier.
- Provides 11 separate appropriations for the Secretary of Agriculture and senior staff offices. This adversely affects the ability of senior officials to manage the Department effectively.
- Unduly restricts the deployment of staff in HUD's headquarters offices. Restrictions include setting staff ceilings by office (some as small as 13 staff years) and prohibiting any HUD organization from detailing persons to Department management.
- Prohibits the U.S. Customs Service closing, relocating, or consolidating any Customs office. This restriction forces managers to deploy resources inefficiently.
- Prohibits the General Services Administration from contracting for certain services provided by GSA employees (e.g., guards, elevator operators, and messengers). This restriction denies GSA flexibility to deliver services in the most cost-effective manner.
- Prohibits the Department of Labor contracting out operations of Job Corps' Civil-

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ian Conservation centers with non-governmental entities. This prohibition builds in cost inefficiencies.

- Sets personnel floors in many agencies, including several USDA bureaus, the U.S. Customs Service, the Office of Foreign Assets Control, and the Bureau of Alcohol, Tobacco, and Firearms. This prevents productivity improvements and automation.
- Continues to apply socioeconomic statutes, such as the Davis-Bacon and Service Contract Acts, at thresholds below $2,000 and $2,500, respectively. These provisions seriously impair the Government's efforts to simplify some 20 million purchase actions each year and reduce costs.
- Places multiple reporting requirements on the Defense Department requiring significant time and resources that could be better utilized managing programs.
- Imposes overlapping and inconsistent statutes dealing with procurement integrity that unnecessarily complicate the procurement process and impair the Government's ability to recruit and retain qualified employees.

SUMMARY OF TERMINATIONS, REDUCTIONS, AND INCREASES

The Budget Enforcement Act of 1990 (BEA) set separate 1993 spending limits for defense, international, and domestic discretionary programs. As one measure to bring the growth of the Federal budget under control, the budget proposes a freeze on 1993 budget authority for domestic discretionary programs at the aggregate 1992 level of $203.1 billion. Outlays resulting from this freeze are estimated to be $224.7 billion for 1993, $0.6 billion below the BEA limits.

The budget proposes that 330 programs be terminated or reduced. These reductions were made on the merits, to terminate or decrease funding for programs no longer necessary or of low priority. The reductions also helped to make possible funding increases, within the discretionary caps, for programs with a much higher priority. This part of this chapter discusses the proposals for terminations and reductions and summarizes the increases, most of which are described in detail in other chapters.

TERMINATION OF SUBSTANDARD PROJECTS

Many projects funded by the Congress do not meet programmatic standards established by Congress in authorizing statutes or by published agency regulations. These substandard projects are commonly referred to as "pork" or "pork-barrel" projects. Standards most commonly violated are:

- Requirements to use competitive procedures in making grants and awarding contracts are waived in order to fund legislatively designated projects.
- Requirements to fund only projects of national or regional importance are disregarded in order to fund projects of purely local interest.
- Requirements that design work for construction projects be significantly underway (35–50 percent completed) to ensure that funded projects can be executed on time and within authorized funding levels are disregarded.

This section identifies examples of such substandard projects, for which $433 million in budget authority was provided in 1992. The budget proposes to eliminate new funding for such projects in 1993. The types of substandard projects that are included in this discussion are summarized in Table 16–1.

Department of Agriculture

Earmarked non-competitive buildings and facilities.—In the 1992 Budget, the Administration proposed a $25 million competitive grant program to finance facility construction at the land-grant universities. This pro-

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Table 16–1. TERMINATIONS OF SUBSTANDARD PROJECTS

(In millions of dollars)

	Number of Programs	Number of Projects	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
			Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Agriculture:								
Earmarked Buildings and Facilities	1	51	74	46	—	42	-74	-4
Extension Service Special Grants	1	25	13	13	—	—	-13	-13
Subtotal, Agriculture	2	76	87	59	—	42	-87	-17
Energy: Earmarked Research Projects	2	10	85	38	—	34	-85	-4
Housing and Urban Development: Special Project Grants	1	133	150	75	—	75	-150	—
Transportation:								
Federal Highway Administration	—	28	73	5	—	12	-73	7
Conrail Commuter Transition Assistance	1	N/A	14	3	—	19	-14	16
Amtrak Corridor Improvement Loans	1	N/A	4	*	—	*	-4	—
Subtotal, Transportation	2	28	91	8	—	31	-91	23
Small Business Administration: Miscellaneous Grants	17	17	20	20	—	—	-20	-20
Total, Terminations of Substandard Projects	24	264	433	200	—	182	-433	-18

* $500,000 or less.

gram was rejected by Congress, which instead earmarked $74 million for special facility grants directly to universities. These grants were not awarded competitively. Because of the lack of support from Congress for a competitively awarded grants program for facilities, the Administration does not request support for buildings and facility construction in the budget.

Department of Energy

Earmarked non-competitive energy projects.—The Department of Energy scientific research programs fund projects through an objective merit review process in which requests for proposals are published and distributed to the scientific community. Proposed projects compete and are selected on the basis of scientific merit and applicability to program goals. However, $85 million of appropriated 1992 funds were earmarked for specific projects and activities that have not been subject to competition and have not been evaluated and selected on the basis of their scientific and technical merit or their relevance to the agency mission.

Department of Housing and Urban Development (HUD)

Special Project Grants.—In 1992, Congress provided $150 million for specifically-directed grants which violate the principles of open and fair distribution of HUD program resources that were adopted by the Congress in the 1989 HUD Reform Act to restore the public's faith in HUD programs. These grants were awarded directly in annual appropriations action without authorization, without any published selection criteria, and without application procedure. The budget requests no funding for such projects.

Department of Transportation

Federal Highway Administration.—Federal highway funding is apportioned to the States. It is the State's responsibility to select which projects will receive funding. To be eligible for Federal funding, the project must be on the Federal-aid highway system. In 1992, Congress appropriated $73 million for 28 projects which were not on the Federal-aid highway system. These "demonstration projects" should be the sole responsibility of

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the States and are not eligible for regular Federal funding.

Conrail commuter transition assistance.—This program was originally designed to help defray the one-time start-up costs of commuter service and other transition expenses connected with the transfer of rail commuter services from Conrail to other operators (Public Law 97–35 and Public Law 97–468). Between 1986 and 1992, $33 million outside of the original statutory mandate have been appropriated through this program to be available to the Southeastern Pennsylvania Transportation Authority (SEPTA) for continuing rail and bridge improvements. These are local projects that should be financed through SEPTA's own funds.

Amtrak corridor improvement loans.—In 1991 and 1992, $7 million was provided to a private rail carrier for infrastructure improvements in Illinois. These loans have been targeted for a local rehabilitation project on a private railroad under the pretext of preserving Amtrak service over an existing route. This project is unnecessary to preserve Amtrak service (alternative routes are available), and the Federal Government should not be financing capital improvements on a private rail carrier. The budget requests no new loans.

Small Business Administration

Miscellaneous Grants.—For 1992, the Congress provided $20 million to SBA to fund a number of projects at various colleges and universities and at local economic development centers. These projects were provided, without authorization, in annual appropriations action. Because these projects are inconsistent with the objectives of the Small Business Act, the budget requests no funding for them for 1993.

OTHER PROGRAM TERMINATIONS

In addition to the terminations of substandard projects, the budget requests termination of 222 other programs. Programs are proposed for termination for a variety of reasons. Some should not be Federal responsibilities since they can be more effectively managed by either State and local governments or the private sector. Others have fulfilled their original missions and are no longer needed. Still others duplicate other more effective Federal programs or cannot be afforded within available Federal resources.

A discussion of the major domestic discretionary terminations proposed in the budget follows. Terminations are listed by agency.

Table 16–2. **TERMINATIONS OF DOMESTIC DISCRETIONARY PROGRAMS**
(In millions of dollars)

	Number of Programs	Number of Projects	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
			Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Commerce:								
Economic Development Administration	6	842	229	197	—	186	-229	-11
National Oceanic and Atmospheric Administration:								
Oceanic and Atmospheric Research	14	107	36	29	—	11	-36	-18
Fisheries Assistance and Research	30	42	21	17	—	7	-21	-10
Weather Service Local Assistance	14	30	11	10	—	4	-11	-6
National Ocean Service Local Assistance	8	12	6	5	—	2	-6	-3
Facilities Construction	3	3	4	3	—	1	-4	-2
Program Support—Facilities	3	3	2	1	—	1	-2	—
Public Telecommunications Facilities Grants	1	140	22	20	—	26	-22	6
International Trade Administration	3	3	14	14	—	—	-14	14
Childrens Television Endowment Fund	1	4	2	—	—	1	-2	1
Tourism Disaster Grants	1	15	2	3	—	1	-2	-2
Subtotal, Commerce	84	1,201	349	299	—	240	-349	-59

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Table 16–2. TERMINATIONS OF DOMESTIC DISCRETIONARY PROGRAMS—Continued

(In millions of dollars)

	Number of Programs	Number of Projects	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
			Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Education:								
Student Financial Assistance	2	N/A	228	221	—	178	-228	-42
Impact Aid	2	N/A	139	142	—	29	-139	-112
Other	30	N/A	196	171	—	145	-196	-26
Subtotal, Education	34	N/A	563	533	—	353	-563	-180
Health and Human Services:								
Community Services Block Grant	9	187	437	453	5	149	-432	-303
Untargeted Health Professions Assistance Grants	27	1,488	188	165	—	46	-188	-119
Mental Health Protection and Advocacy	1	56	20	16	—	14	-20	-2
State Formula Planning Grants for Dependent Care	1	56	13	13	—	10	-13	-3
Mental Health Clinical Training	1	123	11	12	—	2	-11	-10
Community Youth Activity Formula Grants	1	74	10	14	—	18	-10	4
Trauma Care Demonstration Grants	1	10	5	2	—	2	-5	—
Demonstration Emergency Medical Services	1	14	5	5	—	1	-5	-4
Other	3	49	30	22	—	11	-30	-11
Subtotal, Health and Human Services	45	2,057	719	702	5	253	-714	-448
Housing and Urban Development:								
Public Housing New Construction	1	N/A	574	520	—	746	-574	226
Indian Housing New Construction	1	N/A	227	178	—	176	-227	-2
Flexible Subsidy Fund	1	N/A	50	36	-88	-17	-138	-53
Section 8 Moderate Rehabilitation Single Room Occupancy	1	N/A	105	19	—	23	-105	4
Supplemental Assistance for Facilities	1	N/A	11	9	—	11	-11	2
Congregate Services	1	N/A	1	5	—	5	-1	—
Subtotal, Housing and Urban Development	6	—	968	767	-88	944	-1,056	177
Interior:								
Rural Abandoned Mine Program	1	N/A	12	11	—	10	-12	-1
Bureau of Indian Affairs Business Development Grants	1	N/A	7	5	—	—	-7	-5
Bureau of Mines Mineral Institutes	1	N/A	6	10	—	6	-6	-4
National Park Service Urban Park Grants	1	N/A	5	18	—	9	-5	-9
Navajo Rehabilitation Trust Fund	1	N/A	4	4	—	—	-4	-4
Bureau of Indian Affairs Direct Loans	1	N/A	3	3	—	—	-3	-3
Subtotal, Interior	6	N/A	37	51	—	25	-37	-26
Justice:								
Mariel Cuban Grant Program	1	39	5	5	—	—	-5	-5
Labor:								
Job Training Partnership Act (JTPA) Setasides	2	N/A	8	8	—	8	-8	—
Bureau of Labor Statistics Mass Layoff	1	49	6	6	—	—	-6	-6
Mine Safety and Health Administration State Grants	1	47	6	6	—	—	-6	-6
National Occupational Information Coordinating Committee (NOICC)	1	N/A	5	4	—	4	-5	—
Bureau of Labor Management Relations Cooperative Program	1	1	4	3	—	1	-4	-2
National Veterans Training Institute	1	1	2	2	—	—	-2	-2

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Table 16–2. TERMINATIONS OF DOMESTIC DISCRETIONARY PROGRAMS—Continued

(In millions of dollars)

	Number of Programs	Number of Projects	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
			Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Bureau of Labor Statistics Foreign Direct Investment	1	1	1	1	—	—	-1	-1
Subtotal, Labor	8	99	32	30	—	13	-32	-17
Transportation:								
Federal Highway Adminstration	—	103	528	35	—	91	-528	56
Northeast Corridor Improvement	1	N/A	205	132	—	179	-205	47
Local Rail Freight Assistance Grants	1	40	12	10	—	10	-12	—
Subtotal, Transportation	2	143	745	177	—	280	-745	103
Army Corps of Engineers:								
Water Projects and Studies	—	74	168	147	—	—	-168	-147
Environmental Protection Agency:								
Construction Grants Project on the Rouge River	1	1	46	1	—	6	-46	5
Asbestos Abatement Loans and Grants	2	2	37	50	—	28	-37	-22
Miscellaneous Low-Priority Projects	15	31	37	23	—	19	-37	-3
Unnecessary Buildings and Facilities	3	3	32	3	—	9	-32	6
Non-Competitively Selected Water Projects	1	21	16	10	—	7	-16	-3
Low Priority Superfund Projects	1	6	8	2	—	2	-8	—
Subtotal, Environmental Protection Agency	23	64	176	88	—	71	-176	-18
National Aeronautics and Space Administration:								
Advanced Solid Rocket Motor	1	1	315	311	—	100	-315	-211
Comet Rendezvous/Asteroid Flyby	1	1	211	5	—	—	-211	-5
Space Test of Relativity Experiment	1	1	27	21	—	4	-27	-17
Subtotal, National Aeronautics and Space Administration	3	3	553	337	—	104	-553	-233
Small Business Administration:								
Small Business Development Centers	1	56	61	44	—	13	-61	-31
Tree Planting	1	N/A	16	16	—	—	-16	-16
Subtotal, Small Business Administration	2	56	77	60	—	13	-77	-47
Other Independent Agencies:								
Interstate Commerce Commission	1	1	41	41	16	15	-25	-26
District of Columbia Special Projects	5	5	17	17	—	—	-17	-17
State Justice Institute	1	185	14	15	—	14	-14	-1
Commission on Bicentennial of the US Constitution	1	1	2	2	—	—	-2	-2
Subtotal, Other Independent Agencies	8	192	74	75	16	29	-58	-46
Total, Other Domestic Discretionary Terminations	222	3,928	4,466	3,271	-67	2,325	-4,533	-946
Substandard Projects Terminations	24	264	433	200	—	182	-433	-18
Total, Domestic Discretionary Terminations	246	4,192	4,899	3,471	-67	2,507	-4,966	-964

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Department of Commerce

Economic Development Administration (EDA).—The Administration proposes to terminate the EDA ($229 million in 1992 for direct assistance), funding only closeout costs in 1993. Although originally designed to aid distressed areas, EDA assistance is now available to more than 80 percent of the country. In addition, decisions on local economic investment options that yield only local benefits are best made and paid for at the local level. The goals of the EDA programs can best be promoted at the Federal level through the Administration's other economic development and job creation programs.

National Oceanic and Atmospheric Administration (NOAA) projects.—The budget does not request funding for 72 NOAA programs totaling $80 million that are direct industry subsidies, compete with private industry, are low priority State-specific projects, or are made unnecessary due to management improvements.

Department of Education

Obsolete forms of student financial assistance.—The budget proposes no funding for two discretionary student financial assistance programs—State Student Incentive Grants and Federal Capital Contribution for Perkins loans. The former has long since achieved its goal of stimulating States to establish need-based student financial aid programs of their own. The latter provides for costly loan subsidies, which are not needed in light of the general availability of Stafford and other guaranteed student loans.

Impact aid.—No funds are proposed in the impact aid programs for "b" payments for federally connected children or for payments for decreases in Federal activity. No significant burden is placed on most school districts associated with either the presence of "b" children or the closing of military facilities.

Other.—The Administration proposes to terminate 30 small, narrow-purpose categorical education programs that have achieved their purpose, are low priority, or whose objectives can be achieved through broader program authorities.

Department of Health and Human Services

Community Services Block Grant.—Now that community action agencies are mature, they should not need the special administrative funding provided by this program; they should compete with other services providers on an even basis. In addition, the HHS Inspector General has found many problems in the use of discretionary grant funds.

Untargeted Health Professions Curriculum Assistance Grants.—The budget does not request funding for untargeted health professions curriculum assistance grants, but supports targeted health professions assistance for disadvantaged students. After two decades of Federal support, the aggregate shortage of health professionals perceived in the 1960s, when these subsidies were initiated, has abated. Apart from the targeted curriculum assistance grants, funding to help students finance their training in the health professions is available through other sources, including Medicare medical education payments, health professions loans for disadvantaged students, and guaranteed loans and other student assistance through the Department of Education.

Department of Housing and Urban Development

Public housing new construction.—The budget proposes to terminate new public housing construction, but continues to provide funding for vouchers and a limited new construction program for the elderly and disabled. Public housing new construction costs at least twice as much as rental assistance, whether it is in the form of rental certificates or housing vouchers. Housing vouchers expand opportunity for low income households by increasing their ability to choose where to live. In addition to this critical social benefit, vouchers also meet national housing policy objectives at substantially lower cost.

Indian housing new construction.—The Administration proposes to fund Indian housing new construction as a setaside through HOME investment partnership grants, rather than as a separate categorical program. The HOME grants provide Indian tribes greater flexibility in the use of resources (rental assistance, rehabilitation, or new construction) than

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the current new construction program. This set-aside would fund about 1,475 units of new Indian housing should tribes decide to use all of the HOME funds for new construction; a higher number would be served if funds are used for rehabilitation and rental assistance, as opposed to exclusive reliance on new construction.

Flexible subsidy.—No funds are requested for this program. Instead, the budget requests funds for a new initiative, called Restore, which replaces this program.

Section 8 moderate rehabilitation single room occupancy (SRO).—The budget does not request funding for this program. Instead, the Administration requests $266 million for Shelter Plus Care, a program that combines SROs and other housing resources with medical/mental health/drug addiction treatment services. The Administration supports Shelter Plus Care's innovative approach to the multifaceted needs of many of the homeless.

Supplemental assistance for facilities.—The Administration proposes to merge this program into the transitional housing for the homeless program. This consolidated program would make delivery of assistance to homeless families and individuals more efficient by reducing the number of separate, national funding competitions conducted by the Department of Housing and Urban Development.

Congregate services.—The Administration proposes to replace congregate services with a new program. The new program would provide frail elderly with special housing vouchers subsidizing both housing and service costs. This new program emphasizes choice of independent living arrangements and is better targeted to the frail elderly than the current congregate services program. Funding is also provided for service coordinators who help residents in elderly public housing projects find needed support services.

Department of Interior

Rural Abandoned Mine Program (RAMP).—RAMP, which operates small-scale rural mine land reclamation projects, is administered through the Department of Agriculture. This duplicates existing State reclamation activities administered through Interior's Abandoned Mine Land (AML) grant program. The Administration proposes no additional funding for RAMP in order to eliminate duplication and to ensure that such activities are State reclamation priorities.

Bureau of Indian Affairs (BIA) business development grants.—The budget requests no funding for BIA development grants to Indian businesses. These grants have little or no documented record of success and would continue unnecessary reliance on the BIA for assistance to Indian businesses. The Administration places much greater emphasis on promoting commercial lending to tribes and individual entrepreneurs through BIA's 90-percent loan guarantees. This will enable individuals to shift from reliance on the Federal Government to reliance on the private sector, which provides the only viable long-term source of funds and expertise for all of the Nation's new businesses.

Bureau of Mines mineral institutes.—The mineral institutes program was initiated in the 1970s to provide seed money to encourage the development of mineral-related university research and graduate education programs. The States have responded and such programs are now in place. Therefore, the program's goal has been accomplished, and there is no further need for direct Federal financial assistance to these institutes.

National Park Service urban park grants.—The Administration proposes no funding for urban park grants in 1993. No funds were requested or appropriated from the mid-1980s through 1990 for these grants to local governments for city park maintenance and rehabilitation. Local park maintenance and rehabilitation must remain the responsibility of the local governments that established these parks. Making maintenance and rehabilitation of local parks a Federal responsibility could add hundreds of millions of dollars annually to the Federal deficit.

Navajo Rehabilitation Trust Fund.—This program funds infrastructure improvements on Navajo tribal land in Arizona and New Mexico, to be repaid when subsurface coal acquired by the Navajo Tribe (the Paragon Ranch) is mined and sold. The budget suspends infrastructure funding until coal mining plans are definite and a repayment plan is implemented.

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Bureau of Indian Affairs (BIA) direct loan program.—The budget requests no funding for BIA direct loans to Indian businesses. These loans have higher subsidies than BIA guaranteed loans and are not needed in light of the general availability of the guaranteed loans. Direct loans also have a delinquency rate of more than 50 percent. In addition, with BIA's 90-percent loan guarantees, more emphasis can be given to promoting commercial lending to tribes and individual entrepreneurs through direct face-to-face contact with private sector banking expertise. Continued reliance on direct BIA lending would be ineffective and inappropriate.

Department of Transportation

Federal Highway Administration.—The budget proposes to terminate funding for current categories of earmarked State-specific highway project funding. The Administration has consistently opposed Congressional earmarking of funds for specific projects. This reduces the States' ability to determine which projects to fund and generally results in the construction of projects that are a lower priority.

Northeast corridor improvement program.—Since 1982, the Federal government has provided almost $700 million specifically for improvements on the Northeast corridor. In the future, new projects on the corridor to improve Amtrak service should be financed through Amtrak's regular capital program, not as a separate appropriation.

Local rail freight assistance grants.—The conditions prevalent in the rail industry that inspired this program no longer exist—namely, the abandonment of light density rail lines during the industry's financial crisis in the 1970s. Since the partial deregulation achieved by the Staggers Rail Act in 1980, shortline and regional railroads have become a growth industry. Furthermore, 20 States have their own local rail assistance programs. Finally, a report issued by the Department of Transportation, Deferred Maintenance and Delayed Capital Improvements on Class II and Class III Railroads, found that 85 percent of the carloads reported by small railroads were accounted for by carriers with no rehabilitation needs or no needs beyond what they can cover from internally generated funds. There is no longer a need for a Federal role in preserving light density lines.

Corps of Engineers

Water projects and studies.—The budget provides no funding for 74 studies, and construction and maintenance activities for projects that were added to the 1992 Budget by the Congress at a cost of $168 million in 1992, with much larger outyear funding requirements. The majority of these activities do not meet long-standing Administration criteria in that they are not Federal responsibilities, not economic, not cost-shared as prescribed by law, or were legislatively exempted from cost sharing.

Environmental Protection Agency

Rouge River storm water.—The budget terminates a one-time Congressional project for the Rouge River in Michigan. The $46 million project was not authorized, and would not normally be funded by EPA's construction grants program. Municipalities across the country are assuming responsibility for storm water control, paid for by local water utility fees. In that context, this Congressional project sets a bad precedent. In contrast, the budget targets limited resources to high priority wastewater treatment projects that are well within the traditional eligibilities of the construction grants program, address nationally prominent pollution problems, and will have significant environmental benefits.

Asbestos loans and grants.—The budget requests no funding for the asbestos-in-schools loans and grants program. The program has already greatly reduced the asbestos problem. Additional funding would largely go either to State and local agencies that are capable financially of addressing the remaining problem themselves or to low priority projects that do not represent a significant environmental threat. By the end of 1992, over $340 million in Federal funds will have been provided to over 1,000 local educational agencies showing the greatest financial and environmental needs. The financial responsibility for asbestos abatement now rests with States and localities. At least 35 States have enacted more than 60 asbestos-related laws and nearly half

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of the States have financing provisions in the laws.

National Aeronautic and Space Administration

Advanced Solid Rocket Motor (ASRM).—ASRM is a project designed to replace the Space Shuttle's existing solid rocket motors by developing an improved version. Termination of new motor development is proposed because of significant program cost growth and schedule delays, diminution of benefits since time of approval, and viability and cost savings of continuing to use the current solid rocket motor.

CRAF/Cassini.—The CRAF/Cassini project is a roughly $2 billion planetary exploration mission. CRAF is a comet rendezvous and asteroid flyby mission and Cassini is a mission to Saturn. They were being developed together because they utilize many of the same technologies. However, the budget proposes to terminate CRAF because the scientific benefits of this mission no longer justify the investment. The scope of the CRAF project was recently reduced by deleting its comet penetrator and several other science instruments. In addition, the Cassini mission also includes an asteroid flyby.

Other Agencies

Interstate Commerce Commission (ICC).—Consistent with previous Administration proposals, the budget proposes to sunset the ICC following enactment of proposed legislation to eliminate all remaining economic regulation of the trucking industry by the Federal Government. Residual functions would be transferred to the Departments of Transportation and Justice, and the Federal Trade Commission.

OTHER PROGRAM REDUCTIONS

The budget requests that numerous programs be funded below the level enacted for 1992. These programs are either (1) of lower priority and need to be restrained in order to fund higher priority programs, or (2) can be reformed at a significant cost savings to the Federal Government while still fulfilling their purpose.

Table 16–3. **MAJOR REDUCTIONS IN DOMESTIC DISCRETIONARY PROGRAMS**
(In millions of dollars)

	Number of Programs	Number of Projects	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
			Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Agriculture:								
Watershed/River Basin Programs	3	6	228	270	169	184	-59	-86
Cooperative State Research Service Special Research Grants	1	135	75	24	29	61	-46	37
Subtotal, Agriculture	4	141	303	294	198	245	-105	-49
Commerce:								
National Oceanic and Atmospheric Administration	6	77	133	98	66	81	-67	-17
Decennial Census	1	1	73	117	59	61	-14	-56
Subtotal, Commerce	7	78	206	215	125	142	-81	-73
Education:								
Work Study and Opportunity Grants	2	N/A	1,192	975	812	1,152	-380	177
Impact Aid	1	N/A	589	596	506	538	-83	-58
Other	11	N/A	230	215	160	199	-70	-16
Subtotal, Education	14	N/A	2,011	1,786	1,478	1,889	-533	103
Energy:								
Fossil Research and Development	1	1	444	442	311	393	-133	-49
Conservation Grants	1	1	240	208	155	186	-85	-22
Subtotal, Energy	2	2	684	650	466	579	-218	-71
Health and Human Services:								
Low-income Home Energy Assistance	1	1	1,500	1,143	1,065	674	-435	-470
Refugee and Entrant Assistance	1	5	411	371	227	283	-184	-88

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Table 16–3. MAJOR REDUCTIONS IN DOMESTIC DISCRETIONARY PROGRAMS—Continued

(In millions of dollars)

	Number of Programs	Number of Projects	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
			Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Subtotal, Health and Human Services	2	6	1,911	1,514	1,292	957	-619	-558
Housing and Urban Development:								
Housing for the Elderly and Disabled	1	N/A	1,193	1,868	321	2,025	-872	157
Home Grants	1	N/A	1,500	30	700	269	-800	239
Public Housing Modernization	1	N/A	2,801	—	2,292	—	-509	—
Community Development Block Grants	1	N/A	3,400	3,125	2,900	3,339	-500	214
Public Housing Operating Subsidies	1	N/A	2,450	2,271	2,282	2,271	-168	—
Subsidized Housing Amendments	1	N/A	2,300	329	2,179	305	-121	-24
Renewal of Expiring Section 8 Contracts	1	N/A	7,355	1,508	7,262	2,260	-93	752
Subtotal, Housing and Urban Development	7	N/A	20,999	9,131	17,936	10,469	-3,063	1,338
Interior:								
National Park Service and Fish Wildlife Service Construction	2	N/A	386	471	186	316	-200	-155
Bureau of Reclamation Construction	1	N/A	564	729	461	477	-103	-252
Miscellaneous Payments to Indians	1	N/A	123	80	32	73	-91	-7
Bureau of Indian Affairs Construction	1	N/A	203	149	130	161	-73	12
Subtotal, Interior	5	N/A	1,276	1,429	809	1,027	-467	-402
Justice:								
Prison Construction	1	5	452	275	339	456	-113	181
Juvenile Justice Grants	1	56	72	65	8	45	-64	-20
Cooperative Agreement Program	1	12	15	9	7	4	-8	-5
Regional Information Sharing System	1	7	15	14	10	5	-5	-19
Subtotal, Justice	4	80	554	363	364	500	-190	137
Labor:								
Older Americans Employment	1	N/A	395	385	343	385	-52	—
Various Job Training Partnership Act Programs	6	N/A	160	172	132	165	-28	-7
Subtotal, Labor	7	N/A	555	557	475	550	-80	-7
Transportation:								
Federal Transit Administration—Operating Subsidies	1	N/A	802	802	217	451	-585	-351
Amtrak	1	N/A	651	609	343	333	-308	-276
Federal Transit Administration—New Starts [1]	1	N/A	537	395	400	415	-137	20
Federal Transit Administration—Interstate Transfer Grants	1	N/A	160	197	82	143	-78	-54
Subtotal, Transportation	4	N/A	1,613	2,003	642	1,342	-971	-661
Treasury:								
Custom Service: Operations and Maintenance Air and Marine Program	1	2	176	164	139	160	-37	-4
Veterans Affairs: Major Projects Construction	1	13	414	456	382	472	-32	16
Environmental Protection Agency:								
Non-Point Source Grants	1	1	53	52	27	38	-26	-14
Miscellaneous Reductions	6	10	132	115	101	113	-31	2
Subtotal, Environmental Protection Agency	7	11	185	167	128	151	-57	-16
National Aeronautics and Space Administration: Construction of Facilities	1	11	525	448	319	491	-206	43
Small Business Administration:								
Disaster Loan Subsidies	1	N/A	122	61	24	61	-98	—
Guaranteed Business Loan Subsidies	5	N/A	246	159	155	174	-91	-15
Direct Business Loan Subsidies	6	N/A	27	19	1	7	-26	-12
Subtotal, Small Business Administration	12	N/A	395	239	180	242	-215	-3
Other Independent Agencies:								
Federal Emergency Management:								
Disaster Relief	1	N/A	983	660	292	735	-691	75
Emergency Food	1	1	134	134	100	100	-34	-34
Postal Revenue Forgone	1	1	470	470	122	122	-348	-348
Appalachian Regional Commission	1	13	190	117	100	133	-90	16
Tennessee Valley Authority	1	N/A	135	131	79	87	-56	-44
Railroad Windfall Subsidy	1	N/A	319	319	303	303	-16	-16

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Table 16–3. MAJOR REDUCTIONS IN DOMESTIC DISCRETIONARY PROGRAMS—Continued

(In millions of dollars)

	Number of Programs	Number of Projects	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
			Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Subtotal, Other Independent Agencies	6	15	2,231	1,831	996	1,480	-1,235	-351
Total, Major Domestic Discretionary Reductions	84	359	34,038	21,247	25,929	20,696	-8,109	-552

[1] The budget authority shown for this program is not counted under the discretionary cap and is not include in the totals for this table.

Department of Agriculture

Watershed and river basin programs.—In 1992, the Congress added almost $57 million for these programs, an increase of almost one-third above the Administration's request. The 1993 request continues funding for these programs at about the level in the 1992 Budget, and places emphasis on ongoing high priority projects and studies.

Cooperative State Research Service special research grants.—In 1992, Congress added $47 million for 135 special research grants earmarked directly to universities to address local needs and problems. The Administration does not request funds in 1993 to continue these grants. A grant program that focuses on national or regional needs and makes awards competitively is a more appropriate means of spending Federal research and development dollars.

Department of Commerce

National Oceanic and Atmospheric Administration (NOAA).—The 1993 request for the Coastal Zone Mangement and National Sea Grant programs is at a level below 1992. Because the benefits of these programs are largely State or regionally based, it would be appropriate for non-Federal entities to assume a larger portion of program costs. For modernization of the NOAA fleet, Congress provided $33 million in 1992. For 1993, the $2 million requested will allow for critical maintenance of the existing fleet and for continued fleet modernization planning. Funding will continue for development of the advanced weather interactive processing system, but at a reduced level in recognition of adequate carryover funds.

Census Bureau decennial census.—The 1990 Decennial Census is winding down. Activities to be performed in 1993 include completing the release of data products and evaluating Census coverage, content, and procedures used in the 1990 census.

Department of Education

Student financial assistance.—The budget proposes to reduce two discretionary campus-based student aid programs, Work Study and Supplemental Educational Opportunity Grants, by $380 million. Total aid provided to students would not be reduced because schools would be required to provide a higher matching share. The budget appropriately refocuses discretionary student aid funding on the largest and most effective program, Pell grants, which would be increased by $1.2 billion, or 22 percent, over 1992. Pell grants provide the best and most effective delivery mechanism to reach low and middle income students.

Impact aid.—The budget proposes reduced funding for impact aid "a" payments. This general aid is not focused on educational improvements for students in need of assistance.

Department of Energy

Fossil Research and Development (R&D).—The budget requests a reduction in funding for the non-petroleum R&D areas in the fossil R&D budget. Because of the lack of private sector participation and cost sharing in these applied R&D areas and their history of limited success, R&D funds are reallocated to higher priority areas. For example, in coal, emphasis has been placed on more efficient combustion technologies. Additional funding is als[illegible] to activities where significant in-

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dustry interest and cost sharing can be expected.

Conservation grants.—The weatherization assistance program (WAP) provides Federal assistance to State and local organizations to increase the energy efficiency of residences. Currently available data indicate that the WAP program is not cost effective because the average annual energy savings is not sufficient to pay back the Federal investment within the average useful life of the housing stock. The budget recommends a restructured conservation grant program with a reduced low income weatherization program but an increased cooperative, cost-shared demonstration program with States, which should prove more beneficial.

Department of Health and Human Services

Low-income home energy assistance (LIHEAP).—LIHEAP was enacted as a temporary program to deal with short-term energy price increases. The price of natural gas, the heating fuel most households use, is at a long-term low and expected to remain low through 1993. The Administration proposes to reduce funding to $1.1 billion in 1993. As enacted for 1992, a significant portion of this amount would become available on September 30th.

Refugee and entrant assistance.—The budget continues to phase down the special welfare portion of this program, which supplies benefits unavailable to citizens. Refugees would continue to be eligible for regular welfare benefits on the same basis as citizens.

Department of Housing and Urban Development

Housing for the elderly and disabled.—The budget proposes to reduce this program by $0.9 billion in 1993 because other more effective and less costly programs are available to meet the housing needs of low-income elderly and disabled individuals. These include: (1) the HOME grants program, which includes a set-aside for non-profit organizations, and (2) less costly housing vouchers. In addition, HUD evaluations indicate that HUD subsidized housing programs disproportionately meet elderly needs relative to those of younger families with children.

HOME grants.—In appropriations language, Congress shifted the focus of the Federal HOME program to housing construction by waiving the non-Federal match requirement for 1992. The sliding-scale match favored tenant-based assistance by making new construction more expensive from the State and local governments' perspectives. The 1993 request level reflects the Administration's disapproval of the waiver and the resulting distortion of the program's purpose.

Public housing modernization.—Modernization of public housing to assure safe and decent housing remains an Administration priority. The 1993 proposed level of $2.3 billion represents a 7.5 percent increase over the average modernization funding level for 1988 through 1992. The unsustainable 1992 level of $2.8 billion has only increased the already substantial, multi-billion dollar backlog of available but unspent modernization funds.

Community development block grants (CDBG).—The 1993 request level ($2.9 billion) is consistent with the Administration's 1992 request. The HOME program also provides Federal block grants to State/local governments for use in assisting low-income individuals. The CDBG request plus the HOME request totals $3.6 billion in grant funds going to State and local governments.

Public housing operating subsidies.—The 1992 appropriation of $2.45 billion provided by Congress for this program exceeds the expected 1992 subsidy needs (estimated by the Performance Funding System formula) by about $250 million. The Administration opposes funding this account at a level that exceeds expected subsidy needs. The Administration remains committed to full funding of the Performance Funding System requirements in 1993, and proposes a funding level of $2.282 billion that fully covers estimated subsidy needs.

Subsidized housing amendments.—The request for subsidized housing contract amendments in the budget decreases slightly because HUD's estimated amendment needs drop. Over time, the amendment needs are likely to decline as increasing numbers of subsidies are renewed only for five years. Amendment needs arise primarily because it is difficult to estimate up front the total amount of budget re-

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sources needed to cover the term of longer-term contracts.

Renewal of expiring Section 8 subsidy contracts.—The Administration is requesting full funding for all expiring Section 8 housing contracts (e.g., housing vouchers and housing certificates) in 1993. The number of expiring contracts is expected to decline in 1993 and, as a result, the amount of money needed to renew these expiring contracts will also decline.

Department of the Interior

National Park Service (NPS) and Fish and Wildlife Service (FWS) construction.—The budget proposes to increase funding for environmental infrastructure upgrading and facility rehabilitation construction in both bureaus as part of the Administration's America the Beautiful initiative. At the same time, the Administration is not requesting follow-on funding for new or continued projects that were added to the 1992 budget request by individual members of Congress. Such projects generally do not contribute to the basic missions of the National Park Service and Fish and Wildlife Service. As a result, total proposed funding for NPS and FWS construction is $200 million below the 1992 level.

Bureau of Reclamation (BuRec) construction.—The Administration is requesting $461 million for the BuRec construction program in 1993, a reduction of $103 million from 1992. The reduction results from reduced funding requirements for projects nearing completion and from continuation of the Administration's policy of placing greater emphasis on less capital-intensive, non-structural activities and more efficient operation of existing projects. The request maintains significant funding levels for high-priority activities, including safety of dams, for which the Administration is requesting $95 million.

Miscellaneous payments to Indians.—The budget requests funding for all currently enacted Indian settlements that require payments beyond 1992. The reduction from 1992 is a technical adjustment, reflecting lower funding requirements in 1993.

Bureau of Indian Affairs (BIA) construction.—The budget request supports increased funding over 1992 to repair and maintain unsafe and unsanitary schools and other BIA facilities. However, the budget does not request follow-on funding for construction projects that were added to the 1992 budget request. Many, such as BIA irrigation projects serving specific Indian tribes, are not cost-effective to continue building and are generally lower priority than the health and safety projects funded in the budget.

The budget also reflects a technical decrease that has no programmatic effect. Road sealing on Indian lands ($13 million annually and formerly funded from BIA construction) will now be financed from the Highway Trust Fund pursuant to the 1991 Intermodal Surface Transportation Efficiency Act.

Department of Justice

Prison Construction.—From 1990 through 1992, over $2 billion has been appropriated for new construction, providing an estimated increase of 40,000 bed spaces. As a result of this increase, available bedspaces will almost double within the decade of the 1990s. The budget proposes an additional $339 million for new construction and repair of prisons. While a reduction of $113 million from 1992, this level, in combination with prior year appropriations, will allow for growth in the prisoner population with reduced prison overcrowding. For example, the overcrowding of Federal prisons is projected to decrease from 68 percent in 1990 to the mid-30 percent range in 1997.

Juvenile justice grants.—These grants provide funds to State and local units of government, public and private agencies, organizations, and institutions to aid in the prevention, reduction, and treatment of juvenile crime and delinquency. The budget proposes to terminate the formula grant program portion of the program and retain funding for discretionary grants specifically targeted to high-risk youth including $2 million for the "weed and seed" initiative. The goals of the formula grant program have for the most part been achieved and States have appropriate State-funded delinquency prevention programs in place.

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Department of Labor

Older Americans Employment.—This program finances part-time minimum-wage jobs for the low-income elderly. The budget request would result in a reduction in subsidized job slots. Nearly all of this reduction can be achieved through seniors leaving program enrollment.

Department of Transportation

Federal Transit Administration (FTA) operating subsidies.—The Administration proposes to eliminate FTA operating subsidies to cities over 500 thousand in population, thereby reducing operating assistance from $802 million in 1992 to $217 million in 1993. Increased total operating subsidies tend to inflate labor costs by reducing management's incentive to negotiate with labor for lower operating costs. Federal dollars are more appropriately and efficiently targeted to investment in the capital infrastructure of transit. This proposal continues funding to urbanized areas with populations of 500 thousand or less, which are the most dependent on Federal operating assistance.

Amtrak.—The budget proposes the continuation of a multi-year subsidy program. The proposal includes the implementation of reform measures identified by Amtrak management and the Administration and a capital investment program that will reduce operating costs and generate additional revenues, accelerating Amtrak's movement toward operating self-sufficiency.

Federal Transit Administration (FTA) "new start" capital projects.—Since the mid-1970s, a well-documented system for developing and evaluating the merits of new fixed guideway rail and bus systems and extensions to existing systems has been in place. These projects are commonly known as "new starts." Since 1984, the process has included a rating system to help set Federal priorities among those projects that warrant funding consideration. The basic rating criteria are cost-effectiveness and local financial commitment, although others are also considered. Notwithstanding the existing criteria, the Congress earmarked the entire $537 million appropriated for new starts in 1992, including $208 million for projects for which sufficient information is not available to determine cost-effectiveness and local financial commitment and $103 million for projects that do not meet the criteria. The budget proposes to reduce funding for new starts to $400 million in 1993. The proposed level funds those projects with existing full funding grant agreements and those projects that meet FTA criteria.

Federal Transit Administration (FTA) interstate transfer grants.—This program funds those projects for which States and localities withdrew previously approved segments of the Interstate Highway System and substituted them with transit capital projects. The budget proposes to complete funding for these projects in 1993 and 1994 rather than in 1993, thereby achieving a saving of $78 million in 1993.

Department of Treasury

Customs Service operation and maintenance air and marine program.—The 1992 enacted level for Customs' Air program included $46 million in one-time purchases for new air and marine interdiction assets. These non-recurring costs appear as a net reduction of $37 million in the budget. The budget fully supports increased operational costs associated with these new assets and includes an additional $6 million for Marine interdiction that will allow Customs to complete the upgrade of its entire marine fleet.

Department of Veterans Affairs

Major construction projects.—The budget continues the Administration's shift in emphasis toward minor construction to better maintain and renovate VA's physical plant nationwide. A larger share of construction funding will be devoted to minor projects that correct patient environment deficiencies and upgrade clinical areas for advances in medical technology.

National Aeronautic and Space Administration

Construction of facilities.—The budget requests funding only for continuing construction projects and highest priority new starts. Projects to be completed include the Space Station Freedom facility, wind tunnel reconstruc-

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tion, and the last year of a 5-year wind tunnel revitalization program.

Small Business Administration

Disaster loans.—The Administration proposes to target eligibility for disaster loans to those borrowers unable to obtain credit elsewhere. In addition, the budget proposes to increase the interest rate on disaster loans to the Treasury's cost of borrowing. Together, these proposals will substantially reduce credit subsidies in 1993.

Guaranteed business loans.—The Administration proposes to reduce the unacceptably high default rates for SBA guaranteed business loans by increasing the share of the default risk borne by private lenders. This will improve loan underwriting and risk assessment for each loan.

Other Agencies

Federal Emergency Management Agency disaster relief.—The budget request provides enough funds for a normal year of disasters. If this level is exceeded, an additional $143 million is available to the President for emergency needs. The reduction in resources between 1992 and 1993 is due to an unusually high amount of funding for this program in 1992. Most of this 1992 funding was to make up for insufficient funding in previous disasters, which should not occur in the future.

Federal Emergency Management Agency emergency food and shelter.—The budget request, although reduced relative to the 1992 level, is an integral part of the Administration's effort to re-focus and increase resources for comprehensive, longer term solutions to help end the tragedy of homelessness. Funding for most programs for the homeless increases in 1993 but, a few, such as this one, are decreased. Overall, the Administration proposes over $1 billion for targeted homeless programs in 1993, an increase of $57 million over the 1992 enacted level.

Postal Service revenue foregone.—The budget requests $122 million for reduced rate mail, a $348 million reduction from the 1992 level. The budget proposes to eliminate abuses of these postal subsidies, which were identified in the 1989 update to the Postal Rate Commission's 1986 study. The budget also proposes an across-the-board reduction in the remaining subsidies, comparable to the one enacted by the Congress in 1986.

Appalachian Regional Commission (ARC).—The budget requests $100 million for the ARC, compared to $190 million appropriated by the Congress in 1992. The Commission was established in 1965 to help alleviate economic and social distress in the Appalachian region through a combination of social programs and highway development that would end the region's relative isolation. Since the inception of the ARC, more than 2,000 miles of highways, two-thirds of the entire Appalachian Highway Development System, have been completed and economic disparities between the region and the rest of the country have narrowed considerably.

Tennessee Valley Authority (TVA).—The budget proposes $79 million for the non-power activities of the TVA, a reduction of $56 million from the 1992 level. TVA's economic development program would be terminated along with alcohol fuels research and development activities. Economic development is more appropriately a State and local responsibility with Federal assistance provided through other, existing Federal programs. Large increases for alcohol and alternative fuels research in other Federal agencies allow this TVA research program to be ended. The budget also assumes a higher level of industry cost sharing in TVA's fertilizer program in order to reduce Federal costs.

INCREASES

The terminations and reductions discussed above have provided room under the statutory discretionary funding caps for increases in deserving programs. Table 16–4 shows the major domestic discretionary increases for executive branch agencies. These increases are discussed in greater detail in other chapters of the budget.

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Table 16–4. INCREASES IN DOMESTIC DISCRETIONARY PROGRAMS

(In millions of dollars)

	Number of Programs	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
		Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Agriculture:							
Special Supplemental Food Program for Women, Infants and Children (WIC)	1	2,600	2,616	2,840	2,825	240	209
America the Beautiful	1	231	223	348	335	117	112
Subtotal, Agriculture	2	2,831	2,839	3,188	3,160	357	321
Commerce:							
National Oceanic and Atmospheric Administration:							
Weather Satellites (Without GOES Contingency Fund)	5	338	341	437	439	99	98
Weather Service and Construction	5	469	464	548	503	79	39
National Institute of Standards and Technology	3	247	235	311	269	64	34
Subtotal, Commerce	13	1,054	1,040	1,296	1,211	242	171
Education:							
Pell Grants	1	5,460	5,259	6,638	5,768	1,178	508
Choice Grants for America's Children Act	1	—	—	500	60	500	60
Other Educational Excellence	1	100	12	268	100	168	88
Research, Statistics, Improvement	1	264	166	415	287	152	121
Compensatory Education Grants	1	6,135	5,532	6,235	5,895	100	362
Education for the Disabled	1	2,855	2,553	2,943	2,850	89	297
Salaries and Expenses	1	416	403	484	465	68	62
Postsecondary Institutional Quality	1	—	—	50	10	50	10
Subtotal, Education	8	15,230	13,925	17,533	15,435	2,303	1,510
Energy:							
Superconducting Supercollider	1	484	252	650	453	166	201
Energy Supply Research and Development-Office of Energy Research	10	1,536	1,386	1,696	1,592	160	206
Nuclear Waste Disposal Fund	1	275	264	392	330	117	66
Energy Supply Research and Development-Cleanup	1	602	490	707	625	105	135
Clean Coal Technology	1	415	162	500	184	85	22
Conservation Research and Development	5	296	255	366	310	70	55
Power Marketing Administrations	5	468	106	524	521	56	415
Subtotal, Energy	24	4,076	2,915	4,835	4,015	759	1,100
Health and Human Services:							
Head Start	4	2,202	1,970	2,802	2,454	600	484
National Institutes of Health	20	8,936	8,513	9,377	9,065	442	552
Social Security Administration: Limitation on Administrative Expenses	1	4,550	4,571	4,749	4,708	199	137
Drug Abuse Treatment	8	651	504	791	559	140	55
Community/Migrant Health Centers	3	594	516	684	601	90	85
Healthy Start	1	64	45	143	104	79	59
Substance Abuse/Mental Health Research	3	1,059	898	1,121	1,027	62	129
Center for Disease Control:							
Immunization Grants	1	297	233	349	305	52	72
Breast and Cervical Cancer Screening Grants	1	50	35	70	55	20	21
Tuberculosis Grants	1	15	11	35	23	20	12
Lead Screening Grants	1	21	13	40	28	19	15
Smoking Cessation Activities	2	10	7	13	10	3	3
Indian Health Service:							
Prevention	6	103	43	148	62	45	19
Alcholism/Substance Abuse	1	80	34	98	41	18	8

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Table 16–4. INCREASES IN DOMESTIC DISCRETIONARY PROGRAMS—Continued

(In millions of dollars)

	Number of Programs	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
		Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Mental Health	1	27	11	29	12	2	1
Food and Drug Administration	1	760	735	791	790	31	55
Ryan White HIV Treatment Grants	3	280	236	307	284	27	48
Maternal and Child Health Block Grant	1	650	553	674	615	24	62
National Health Service Corps	1	100	95	120	111	20	16
Health Care for the Homeless Grants	2	56	49	68	59	12	10
"Ready to Learn" Grants	1	—	—	6	2	6	2
Family Planning Grants	1	150	135	155	147	5	12
Administration on Aging	11	846	818	851	845	5	27
Minority Male Grants	1	1	1	5	2	3	1
Public Housing Health Service Grants	1	6	5	9	7	3	2
Crisis Nurseries	1	11	11	12	11	1	—
Abandoned Infants	1	13	12	14	13	1	1
Subtotal, Health and Human Services	77	21,532	20,053	23,460	21,941	1,928	1,888
Housing and Urban Development:							
Subsidized Housing: Vouchers/Incrementals	1	1,693	17	2,691	27	998	10
HOPE Grants	1	361	7	1,010	121	649	114
Subsidized Housing: Preservation/Prepayment	1	618	19	1,159	3	541	-16
RESTORE	1	—	—	312	25	312	25
Consolidated Shelter Plus Care	1	111	9	266	43	155	34
FHA-GI Fund Program Accounts	1	—	—	130	78	130	78
Transitional and Supportive Housing	1	150	73	204	75	54	2
Subtotal, Housing and Urban Development	7	2,933	125	5,772	372	2,839	247
Interior:							
America the Beautiful	1	1,349	1,214	1,504	1,354	155	140
Wetlands	1	223	178	291	233	68	55
Automated Land and Mineral Records System	1	23	20	39	34	16	14
Tribal Horizons (BIA)	1	850	650	865	697	15	47
Presidio (CA) Park Transition	1	3	2	18	12	15	10
State Historic Preservation Grants	1	36	34	41	38	5	4
Subtotal, Interior[1]	6	2,261	1,920	2,467	2,135	206	215
Justice:							
Prisons Operations	1	1,599	1,626	1,896	1,795	297	169
Federal Bureau of Investigation	1	1,926	1,819	2,062	1,853	136	34
Immigration and Naturalization Service	1	946	888	1,067	978	121	90
United States Attorneys	1	721	724	814	801	93	77
Drug Enforcement Administration	1	717	697	788	714	71	17
Subtotal, Justice	5	5,909	5,754	6,627	6,141	718	387
Labor:							
Youth Opportunities Unlimited (YOU) Demonstration	1	8	5	25	8	17	3
McKinney Act Homeless Job Training Demonstration	1	9	11	17	11	8	—
Subtotal, Labor	2	17	16	42	19	25	3
Transportation:							
Federal-aid Highways[2]	1	16,986	15,803	19,198	16,909	2,212	1,106
Federal Aviation Administration[3]	5	8,872	7,944	9,436	8,601	564	657
Coast Guard Operating Expenses	1	2,254	2,471	2,394	2,256	140	-215
Washington Metro	1	124	196	182	145	58	-51
Subtotal, Transportation	8	9,350	26,414	10,112	27,911	762	1,497

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Table 16–4. INCREASES IN DOMESTIC DISCRETIONARY PROGRAMS—Continued

(In millions of dollars)

	Number of Programs	1992 Enacted		1993 Proposed		Change: 1992 to 1993	
		Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Veterans Affairs:							
Medical Care	1	13,610	13,234	14,565	14,285	955	1,051
Minor Projects Construction	1	191	102	220	131	29	29
Subtotal, Veterans	2	13,801	13,336	14,785	14,416	984	1,080
Environmental Protection Agency:							
Operating Program	1	2,457	2,220	2,698	2,535	241	315
Construction Grants	1	2,354	2,201	2,500	2,165	146	-36
Superfund	1	1,608	1,483	1,750	1,524	142	41
Subtotal, Enviromental Protection Agency	3	6,419	5,904	6,948	6,224	529	320
National Aeronautics and Space Administration:							
Space Station	1	2,029	1,902	2,250	2,075	221	173
Earth Observing System	1	271	194	391	280	120	86
Aeronautics Research and Technology	1	775	703	890	787	115	84
New Launch System	1	38	28	125	73	87	45
Research and Program Management	1	1,578	1,554	1,660	1,646	82	92
Spacecraft Operations	3	539	400	611	456	72	56
Materials Experiments	1	107	76	167	118	60	42
National Aerospace Plane	1	20	57	80	50	60	-7
Subtotal, National Aeronautics and Space Administration	10	5,357	4,914	6,174	5,485	817	571
Other Independent Agencies:							
National Science Foundation	7	2,574	2,315	3,027	2,716	453	401
Equal Employment Opportunity Commission	1	210	208	243	237	33	29
Subtotal, Other Independent Agencies	8	2,784	2,523	3,270	2,953	486	430
Total, Domestic Discretionary Increases	177	93,554	101,678	106,509	111,418	12,955	9,740

[1] Total adjusted to eliminate double count between Department of Interior America the Beautiful and Department of Interior Wetlands.
[2] Budget authority shown for this program is not counted under the discretionary cap and is not included in the totals for this table.
[3] Part of the budget authority shown for this program, $1,900 million, is not counted under the discretionary cap and is not included in the totals for this table.

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Managing for Integrity and Efficiency:

17. Reforming Regulation and Managing Risk Reduction

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17. REFORMING REGULATION AND MANAGING RISK REDUCTION

This chapter of the budget discusses:

—The Overall Benefits and Costs of Federal Regulation.

—A Concept for Moving Toward a Regulatory Budget.

—The Major Federal Rulemakings Expected in 1992.

THE OVERALL BENEFITS AND COSTS OF FEDERAL REGULATION

The benefits and costs of Federal regulation are large and growing.

Federal regulations are designed to result in public benefits—increased health and safety, reduced pollution, and reduced market imperfections. While an aggregate estimate of regulatory benefits is not available, they can be assumed to be substantial.

The critical analysis in developing new or reforming existing regulations is, however, based on a comparison of the incremental benefits and costs of individual regulatory provisions, not on aggregate benefits and costs of all regulations. However, just as forecasting budget outlays is key to the development of macroeconomic policy, knowledge of the mandated costs of regulation is important for the conduct of micro- and macro-economic policy.

Table 17–1 is based on a new study that aggregates the various individual cost estimates of regulations that have been published.[1] It presents estimates of the aggregate costs of regulation for 1990, as well as projections to the year 2000 based on current trends and recently enacted laws. The costs are broken out into major categories and show that the predicted increase in the costs of social regulation, (mainly regulations reducing risks to health, safety and the environment) is the primary explanation for the expected increase in the overall costs of regulation for the year 2000.

[1] See Thomas D. Hopkins, "Cost of Regulation", Rochester Institute of Technology Public Policy Working Paper, December 1991 (an abridged version is forthcoming in the *Journal of Regulation and Social Costs*). For a discussion of several earlier studies upon which the Hopkins study builds, see *Regulatory Program of the United States Government, April 1, 1991–March 31, 1992* (U.S. G.P.O., 1991), page 5. That discussion also contains an estimate of the total cost of regulation ($434–$508 billion) close to the Hopkins estimate ($430–$562 billion).

Table 17–1. **COSTS OF FEDERAL REGULATIONS**
(In billions of 1990 dollars)

	1990	2000
Environmental Regulation	109	184
Other Social Regulation	32	52
Economic Regulation	155–261	155–261
Process Regulation	134–160	151–191
Total Costs	430–562	542–688

Source: Thomas D. Hopkins, "Cost of Regulation", Rochester Institute of Technology Public Policy Working Paper, December 1991.

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The costs of "economic regulation" (i.e., the regulation of the prices or quantities of goods or services, usually in specific industries) are expected to stay constant in the 1990's after declining in the 1980's. "Process regulation" (or the rules by which the Federal government collects, manages, and allocates its funds and property, including the burden of filling out Federal Government paperwork) is expected to grow, but at the rate of growth of the economy.

Table 17–2 lists by year the annualized private sector compliance costs of the major proposed and final social regulations issued since 1987, the first year for which systematic data were collected. The table is derived mainly from cost estimates found in the Regulatory Impact Analyses (RIA's) required by Executive Order No. 12291 for "major regulations". Major regulations are defined as those that are likely to have an annual effect on the economy of $100 million or more, a major increase in costs or prices, or significant adverse effects on competition.[2]

Table 17–2 also indicates that the private sector can expect over the next several years to bear substantial new regulatory costs. About $13.5 billion per year on average is ascribed to proposed rules submitted over the last two years.

To deal with the increased burden of higher costs for consumers and businesses and slower economic growth for the economy that regulation imposes, the President has requested that Federal agencies renew their efforts to eliminate unnecessary and growth-retarding regulations. He has also asked agencies to refrain from issuing proposed or final rules during a 90-day period, excepting only regulations subject to judicial or statutory deadlines or those that promote economic growth. In addition, the President has requested that agencies, during the review period, specifically identify existing regulations that impose a substantial cost on the economy.

MOVING TOWARD A REGULATORY BUDGET

Improving regulatory accountability and control through a regulatory budgeting approach has been discussed on and off since the late 1970's. The concept of a regulatory budget emerges from the suggestion by economists and others that any measure of government impact on the economy and use of resources should include regulatory cost estimates (as well as tax expenditure and market intervention estimates) along with the budget and deficit calculations. The regulatory budget concept was discussed by the Council of Economic Advisors and at OMB during several previous Administrations, and has enjoyed a degree of bipartisan Congressional support.

In 1981, President Reagan issued Executive Order No. 12291 which formally established Presidential oversight and review of the costs and benefits of individual regulations. The Executive Order also requires OMB to "... Develop procedures for estimating the annual benefits and costs of agency regulations, on an aggregate and economic or industrial sector basis, for purposes of compiling a regulatory budget." Development of a regulatory budget is a logical extension and supplement to the case-by-case cost-benefit approach currently implemented through Executive Order No. 12291.

A regulatory budget is conceptually and functionally analogous to a fiscal budget. Both its micro- and macro-economic effects are similar, as is its purpose: limiting the use of private resources for governmental purposes to levels agreed to by the President and Congress. The need for such a mechanism is as important for regulatory expenditures as it is for fiscal expenditures, because the effects of the two sets of policy tools are very similar.

The microeconomic effects of regulatory expenditures on the allocation of economic resources are similar to the effects of budget

[2] Although regulatory impact analyses should include costs borne by the Federal Government as well as private sector costs, the estimates in Table 17–2 do not include the costs that regulations impose on the Federal Government itself, because those cost estimates are included in the fiscal budget. For that reason, these sorts of costs should not be included in a regulatory budget.

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Table 17–2. **INCREMENTAL REGULATORY COST OF MAJOR RULES,[1] 1987–1991**

(In millions of dollars)

	1987	1988	1989	1990	1991	Total
Environmental Protection Agency:						
Final	2,000	8,400	970	1,748	4,340	17,458
Proposed	7,200	2,100	1,500	6,918	9,267	26,985
Department of Transportation:						
Final	—	50	550	920	1,042	2,562
Proposed	—	85	400	849	878	2,212
Department of Labor:						
Final	270	30	1,270	80	821	2,471
Proposed	280	1,200	1,080	1,320	131	4,011
Other Agencies:[2]						
Final	104	78	147	41	1,300	1,670
Proposed	—	—	—	6,092	1,695	7,787
Total:						
Final	2,374	8,558	2,937	2,789	7,503	24,161
Proposed	7,480	3,385	2,980	15,179	11,971	40,995

[1] Cost estimates are based upon Regulatory Impact Analyses prepared by the agencies. The total costs of regulation are understated because not all major rules have quantified cost estimates and the costs of non-major rules are not included

[2] Other agencies with major rules include HHS, HUD, DOJ, and Agriculture.

outlays. Both regulation and budget outlays divert private resources to public purposes. Furthermore, in many cases, expenditures required by regulation may be an alternative means of achieving the same public policy objectives as budget outlays. For example, firms can be required by regulation to treat their effluent before dumping. Alternatively, public waste water treatment facilities can be constructed by direct expenditures of government. The basic allocative effects are similar, although the efficiency of the methods and the implications for the distribution of income may differ.

The macroeconomic effects of expenditures required by regulation are also similar to those of budget outlays: i.e., both affect output, employment, prices, and growth. The Federal Government finances outlays by diverting resources from the private sector through taxation and borrowing. Similarly, business firms finance expenditures required by regulation (e.g., for worker safety) by borrowing, increasing prices, reducing other expenditures, and reducing dividends. These are the same ways firms finance taxes and thus have the same broad effects on the economy as do many taxes. Regulatory costs have an economic impact closer to that of excise taxes or user fees than to income taxes, but a major effect nonetheless.

Problems in Estimating Costs

There are practical accounting problems with implementing a regulatory budget. But these problems are not insurmountable and differ in degree, not in kind, from problems encountered in estimating the fiscal budget.

One problem involves the incentive for regulatory agencies to underestimate the costs of their regulations. Unlike underestimates of Federal spending, which lead to constraints in discretionary programs or show up later in mandatory programs as reestimates in the Federal deficit, underestimates of regulatory costs are less visible and less easily verified. This problem can be mitigated through a representative sample of ex post regulatory evaluations. The fact that actual fiscal deficits may differ significantly from projected deficits is not a reason to abandon the budget process. It is a reason to improve

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forecasting and estimation techniques. Likewise the fact that one will never know ex post the true private sector cost of regulation does not mean that ex ante best estimates of regulatory costs should not be used for planning purposes.

A second problem involves differentiating expenditures made because of a regulatory requirement from those that would have been made in the absence of regulation. For example, some level of worker safety would be provided to employees even if there were no safety regulations. But, since the amount is unknown, the additional cost of regulation is difficult to estimate. On the other hand, this measurement problem diminishes if an incremental budget approach is used. For example, in the absence of new regulations, the amount of safety that a firm would provide to its workers is not likely to change much from one year to the next.

A third problem involves the difficulty of estimating the indirect costs of regulation (e.g., increased production costs and product prices reducing sales or making products unprofitable to produce). Indirect costs are usually excluded from budget measures of the effects of spending and taxes. Because the indirect costs of regulation are not directly measurable, and can only be estimated by complicated statistical models, some argue they should likewise be excluded. On the other hand, measuring only the direct costs of regulation would create a bias toward banning substances and products (rather than controlling them). Because projected cost estimates do not have to be perfectly accurate to be effective, but only unbiased and defensible, estimating problems should not be the reason to reject the regulatory budgeting approach or to confine a regulatory budget to direct costs.

A fourth problem involves the increased paperwork burden on affected industries to document actual costs. The extent of these costs would depend on the need for audits or evaluations designed to improve the ex ante estimates of regulatory costs used for planning purposes. Auditing is not needed in the same way as it is to determine whether public funds are spent properly. Further, evaluating small representative samples of regulations should be sufficient to learn how to improve cost estimation techniques.

Improving Cost and Benefit Estimates

The first step toward a regulatory budget is the first step in any regulatory oversight program: estimating the costs and benefits of proposed regulations. Executive Order No. 12291 requires agencies generally to provide Regulatory Impact Assessments (RIA's) that include cost and benefit estimates of proposed and final major regulations before promulgation. Table 17–2 is a compilation of the costs of major regulations derived from the required RIA's.

For the Regulatory Program published in 1991, OMB asked agencies to provide cost and benefit data, not just for "major" regulations, but for all significant regulations. This request increased the number of rules covered from about 80 to 500 per year. However the agencies were not able to provide cost and/or benefit estimates for all significant rules. Table 17–3 is a summary of regulations with cost and benefit estimates that are likely to be published in final form in 1992. Although Table 17–3 indicates that agencies have been more successful in providing cost information than benefit estimates, even cost estimates are not available for a number of important rules. While, in general, agencies have improved their cost and benefit estimates over the last several years, they need to continue to improve these capacities before regulatory budgeting can begin.

Regulatory Budget Models

The regulatory budgeting concept has as many variations as the fiscal budget. It can be viewed as a continuum from simply making public the projected costs of new regulations and regulatory statutes to a statutory requirement that the costs of regulations promulgated pursuant to each specific statute cannot exceed a limit set by that statute. The level of coverage could also vary from a given program area to all Federal regulatory activity. The concept could apply to legislation with large regulatory cost impacts, just the implementing regulations, or both. Some mod-

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els would require legislation; others could be put in place administratively.

Legislation.—One variant, explicitly introducing compliance cost considerations into legislative deliberations, was tried with modest success during the Administration's negotiations with Congress over the 1990 Clean Air Act Amendments (CAAA). During those negotiations, the Administration estimated the costs of its proposal and indicated that it would not approve provisions that significantly exceeded that amount. The Administration estimated that the bill ultimately signed by the President would impose costs of over $25 billion per year. It is difficult, however, to estimate what costs would have been if costs had not been an explicit consideration (as the bill was being developed and shaped in Congress). As the regulations under the CAAA are implemented, the costs are being carefully tracked to ensure that implementation of the law carries out the statutory requirements at minimum cost.

If these procedures work, they could be extended to future legislation with significant regulatory cost impacts. The target ceilings could also be given legal standing by the authorizing legislation; eventually, government-wide or program specific cost caps could be established. Such statutory spending limits would offset the reluctance of lawmakers to use language requiring, or even permitting, agencies to write rules that maximize net benefits. Ceilings could also be combined with statutory language stipulating that the ceiling amounts should be spent in the most cost-effective way.

Fiscal and regulatory budgets might also eventually be integrated into one "superbudget" that allocated and controlled both direct government spending and federally mandated private-sector spending on an equal footing. The similarities between the effects of the two types of spending suggest that treating them the same, and thus facilitating tradeoffs between them in one superbudget, should produce both a more efficient and a more equitable public use of private resources. This alternative should, however, follow greater experience with other legislative and administrative models for regulatory budgeting.

The Administration will use regulatory budget techniques in 1992 in negotiating legislation with significant regulatory costs, and seek program specific cost caps in appropriate regulatory areas.

Administrative Action.—For several industrial sectors covered by the CAAA, a pilot regulatory budget is being tested by the Administration. The Environmental Protection Agency (EPA), the Council of Economic Advisors (CEA), and OMB are working cooperatively to establish regulatory budget procedures and a budget cap for a set of technology-based standards for certain industrial categories required by the CAAA. In implementing these regulations, EPA will try to keep the projected costs of the selected options below the budget cap, while implementing the law. OMB, CEA, and EPA will work together to resolve some of the estimating and accounting problems that are likely to arise in carrying out this regulatory budget project.

The Administration will test the regulatory budget technique in selected additional areas in 1992. The purpose will be to examine estimating and accounting procedures in areas other than Clear Air and assure that regulations produce net benefits.

The Executive branch could also give agencies allowances that would set ceilings on increased regulatory compliance costs they would be allowed to impose each year on the private sector for regulatory requirements that go beyond requirements in law; "mandatory" regulatory spending would not be covered. Agencies could also be given "credits," which they could add to their allowances, for cutting regulatory spending by relaxing existing regulations.

Another approach, patterned after the fiscal budget process, would be to pass back agency-wide cost reduction goals (based on analysis) for final regulations. Such an approach would provide a framework within which the agency would decide regulatory tradeoffs. The passback could be expressed in percentage or dollar terms relative to a baseline consisting of the costs of the regulations at the proposal stage. Only cost reductions resulting from regulatory changes, not cost estimation changes, would count toward the cost reduction goal, and the regulatory changes would

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have to be within the discretion allowed by the rulemaking record and in accord with the Administrative Procedures Act. Gaming of the system could be a problem if agencies anticipate the required cut at the final rule stage by building in a cushion at the proposal stage. This, of course, is a problem found in most budgeting systems—to which analysts and decision-makers must be sensitive.

MAJOR FEDERAL RULEMAKINGS EXPECTED IN 1992

Table 17–3 presents a summary of those Federal regulations expected to be promulgated during 1992 that will require major increases in private sector compliance costs. These final rules are estimated to increase the compliance burden on the private sector by at least $15 billion per year. Most (but not all) of these regulatory actions have been published in the *Federal Register* for notice and public comment, as required under the Administrative Procedure Act.

Data on costs and benefits reported in the summary should be viewed as preliminary and are not strictly comparable in that the agencies used different methodological assumptions. For example, costs are always monetized, discounted, and placed in expected value terms, while benefits usually are not monetized or discounted and usually assume the highest estimate of likely benefits. The low quality of some of the estimates, particularly some of the benefit estimates, may be due to the constraints imposed by tight statutory deadlines.

Table 17–3. COSTS AND BENEFITS OF SIGNIFICANT REGULATIONS EXPECTED TO BECOME FINAL IN 1992
(With deadline types and dates)

Regulation	Description	Proposal Date	Statutory or Judicial Deadline	Annual Costs (millions of dollars)	Benefits
USDA					
Extension of Nutrition Labeling to Meat and Poultry Products.	Harmonizes USDA rules with FDA's.	11/27/91 (56 FR 60302)	None	65	Improved knowledge of nutrition and health.
HHS					
Nutrition Labeling.	Implements the Nutrition Labeling and Education Act of 1990 with 20 regulations to regulate implicit and explicit health messages on food labels.	11/27/91 (56 FR 60556)	Statutory 11/8/92	197	81,000 life-years gained over twenty years.
Medical Devices.	Requires reporting and tracking by medical device users and distributors.	11/26/91 (56 FR 60024)	Statutory 11/28/91	68	May improve ability to recall products.
Clinical Laboratory Improvement Amendments.	Revises and extends regulations to all labs that examine human specimens for diagnosis, treatment, or prevention of human disease.	5/21/90 (55 FR 20896)	Statutory 1/1/90	1,600	More accurate test results.
HUD					
Manufactured Home Construction and Safety Standard.	Upgrades existing energy conservation and ventilation requirements in connection with manufactured housing that benefits from Federal loans, guarantees, and mortgage insurance.	Early 1992	None	200	Energy savings.

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Table 17–3. COSTS AND BENEFITS OF SIGNIFICANT REGULATIONS EXPECTED TO BECOME FINAL IN 1992—Continued

(With deadline types and dates)

Regulation	Description	Proposal Date	Statutory or Judicial Deadline	Annual Costs (millions of dollars)	Benefits
DOI					
Critical Habitat for the Northern Spotted Owl.	Responds to a court order that requires designation of a critical habitat for the spotted owl in areas that are currently harvested for timber.	N.A.	Judicial 1/8/92	Unknown	Protection of the spotted owl
Valid Existing Rights (VER).	Defines VER in areas where mining is otherwise prohibited.	7/91	None	97	Unknown.
DOL					
Underground Coal Mine Ventilation.	Clarifies and updates ventilation requirements.	1/27/88 (53 FR 2382)	None	19	Reduction of 6 Fatalities/Yr. 2 Injuries/Yr.
Diesel-Powered Coal Mine Equipment.	Establishes approval and use rules for diesel-powered equipment.	10/4/89 (54 FR 40950)	None	20	Reduction of 1 Fatality/Yr. 20 Injuries/Yr.
Air Quality and Chemicals.	Sets permissible exposure limits (PELs) and compliance rules for mines.	8/29/89 (54 FR 35760)	None	38	Reduction of 3 Fatalities/Yr. 200 Illnesses/Yr.
Asbestos Remand.	Lowers PEL by half; requires OSHA notification prior to construction or renovation.	2/05/90 (55 FR 3724)	Judicial 2/27/90	246	Possible reduction of fatalities.
1,3-Butadiene.	Lowers PEL for 1,3-butadiene to 2 ppm from 1000 ppm.	8/10/90 (55 FR 32736)	None	3	Reduction of .5 Fatalities/Yr. 100 Illnesses/Yr.
Confined Spaces.	Regulates entry into confined spaces (e.g. tanks).	6/05/89 (54 FR 24080)	None	105	Reduction of 52 Fatalities/Yr. 3522 Lost Workday Injuries (LWDI).
Personal Protective Equipment (Part 1910).	Updates and clarifies standards for protective clothing, footwear, etc.	4/10/90 (55 FR 13423)	None	100	Reduction of 27 Fatalities/Yr. 5 Million LWDI.
4,4-Methylene- daniline (MDA).	Lowers PEL for MDA to 10 parts per billion.	5/12/89 (54 FR 20672)	None	2	Reduction of 2.3 Cancer Deaths/Yr.
Vehicle Safety.	Requires employers to ensure seatbelt usage by employees.	7/12/90 (55 FR 28728)	None	221	Reduction of 673 Fatalities/ Yr. 28,661 LWDI.
Hazardous Materials.	Revises standards for handling, storage, and use of chemicals.	7/17/90 (55 FR 29150)	None	711	Reduction of 212 Fatalities/ Yr. 315 LWDI/Yr.
Walking and Working Surfaces.	Revises standards for scaffolding, stairways, etc.	4/10/90 (55 FR 13360)	None	462	Reduction of 86 Fatalities/Yr. 30,000 LWDI/Yr.
Shipyard Employment.	Consolidates and updates standards regarding shipyard safety.	11/29/88 (53 FR 48130)	None	9	Reduction of 2 Fatalities/Yr. 310 LWDI/Yr.
Logging Operations.	Sets industry-specific standards for logging operations.	5/02/89 (54 FR 18798)	None	4	Reduction of 17 Fatalities/Yr. 2028 LWDI/Yr.
Formaldehyde.	Lowers formaldehyde PEL to 0.75 ppm	7/15/91 (56 FR 32302)	None	36	Reduction of 150 Illnesses/ Yr.
Electric Power Generation.	Regulates to prevent accidents occurring with electric power generators and transmission lines.	1/31/89 (54 FR 4974)	None	24	Reduction of 75 Fatalities/Yr. 21,175 LWDI/Yr.
Cadmium.	Lowers cadmium PEL to 1 microgram per cubic meter of air.	2/06/90 (55 FR 4052)	None	182	Reduction of 14 Fatalities/Yr. 100 Illnesses/Yr.
DOT					
Alcohol Testing for Transportation Workers.	Establishes standards regarding alcohol testing of 6 million transportation workers.	11/2/89 (54 FR 46326)	Statutory 11/3/92	Unknown	Fewer accidents.
Standards for Double-Hulled Oil Vessels.	Implements Oil Pollution Control Act of 1990, which requires double-hulls in all oil-carrying vessels.	12/5/90 (55 FR 50192)	None	349	$23 Million/Yr. in avoided cleanup and third party costs.

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Table 17–3. COSTS AND BENEFITS OF SIGNIFICANT REGULATIONS EXPECTED TO BECOME FINAL IN 1992—Continued

(With deadline types and dates)

Regulation	Description	Proposal Date	Statutory or Judicial Deadline	Annual Costs (millions of dollars)	Benefits
EPA					
Water Quality Standards for Toxic Pollutants.	Establishes water quality criteria for toxic pollutants in States that have not adopted Clean Water Act standards.	11/19/91 (56 FR 58420)	Statutory 2/16/92	Unknown	Unknown.
Effluent Guidelines and Standards for Offshore Extraction (Subcategory of the Oil and Gas Extraction Category).	Defines acceptable technologies for offshore oil and gas extraction point sources.	3/13/91 (56 FR 10664)	Judicial 6/92	67 and 1,200 short tons air emission increases.	280 tons non-conventional pollutants removed. 180 ton-equivalents removed.
National Pollution Discharge Effluent Standards (NPDES) Regulations: Stormwater Implementation Rule (Revision).	Changes stormwater discharge permit monitoring and reporting requirements and notices (in States where EPA, not the State, has responsibility for issuing permits).	8/16/91 (56 FR 40948)	Statutory 2/1/92	160	Unknown.
Sewage Sludge Use and Disposal Regulation.	Establishes standards for use and disposal of sewage sludge, including landfilling and incineration.	2/6/89 (54 FR 5746)	Judicial 8/92	140	9 Statistical cancer cases avoided. 5,000 health effects avoided.
National Primary Drinking Water Regulation: Inorganic and Organic Compounds (Phase V/24 Contaminants).	Sets maximum contaminant limit goals, standards, and monitoring requirements for 24 chemicals specified in the Safe Drinking Water Act.	7/25/90 (55 FR 30370)	Judicial 2/29/92	81	$27 Million/Yr.
Oil Pollution Prevention Regulation Phase I (40 CFR Part 112).	Revises containment requirements for certain non-transportation-related onshore oil facilities.	10/23/91 (56 FR 54612)	None	72	$163 Million/Yr.
Used Oil Management Standards.	Sets recordkeeping, storage, and other management standards for all used oil from gasoline-powered engines.	9/23/91 (56 FR 48000)	Judicial 5/1/92	610	Unknown.
Protection of Stratospheric Ozone: Phase-out.	Accelerated phase-out of ozone-depleting compounds by year 2000.	9/30/91 (56 FR 49547)	Statutory 9/15/91	100	0.
Hazardous Organic National Emissions Standards for Hazardous Air Pollutants (NESHAP).	Sets technology standards for synthetic organic chemical manufacturers.	N.A.	Statutory 11/92	210	450,00 Mg. Volatile Organic Compounds (VOCs) removed.
NESHAP: Coke Oven Emissions from Coke Oven Charging, Door Leaks, and Topside Leaks on Coal Charged Batteries.	Implements Clean Air Act (CAA) requirement to regulate coke oven emissions using maximum available control technology.	N.A.	Statutory 11/15/92	Unknown	Unknown.
Tank Vessel Standards.	Implements CAA requirement to set national emissions standards for volatile organic compounds that may be emitted during loading and off-loading of waterborne tank vessels.	N.A.	Statutory 11/92	Unknown	Unknown.
Reformulated Gasoline.	Implements CAA requirement to adopt new gasoline formulas for fuel sold in nine worst ozone nonattainment areas.	7/9/91 (56 FR 31176)	Statutory 11/15/91	1,000	8,000 tons benzene removed. 120,000 tons VOCs removed.

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Table 17–3. COSTS AND BENEFITS OF SIGNIFICANT REGULATIONS EXPECTED TO BECOME FINAL IN 1992—Continued

(With deadline types and dates)

Regulation	Description	Proposal Date	Statutory or Judicial Deadline	Annual Costs (millions of dollars)	Benefits
Oxygenated Fuels.	Implements CAA amendments requiring areas that fail carbon monoxide (CO) standards to require wintertime fuel reformulation to at least 2.7% oxygen.	7/9/91 (56 FR 31148)	Statutory 11/15/91	430	1 million tons CO removed.
On-Board Diagnostics.	Requires on-board pollution monitoring devices for all light-duty trucks and vehicles after 1994.	9/24/91 (56 FR 48272)	Statutory 5/15/92	1,600	$250 Million/Yr. 325,000 tons hydrocarbons removed. 1,875,000 tons CO removed. 176,000 tons Nitrogen Oxides removed.
Standards for Municipal Solid Waste Landfills.	Establishes regulations for airborne emissions from new and modified municipal solid waste landfills.	5/30/91 (56 FR 24468)	None	320	Reduction of 12 million Mg Non-methane Organic Compounds.
Standards for Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF).	Regulates emissions of volatile organic compounds and particulates from hazardous waste tanks and impoundments.	7/22/91 (56 FR 33490)	Statutory 5/87	360	Unknown.
Applicability of Title I New Source Requirements to Electric Utilities (Stationary Source Enhanced Monitoring and Compliance Certification Requirements, (WEPCO).	Requires enhanced monitoring and compliance certification for major stationary sources.	6/14/91 (56 FR 27630)	None	Unknown	Unknown.
Acid Rain Excess Emissions Requirements Regulation 1995/2005.	Reduces emission of sulfur and nitrogen oxides from major electric utilities, including provisions for permitting, monitoring, and emissions trading.	12/3/91 (56 FR 63002)	Statutory 5/15/92	3,000	10 million tons SO2 reduced from 1980 levels.
General Preamble for Title I.	Establishes provisions for attainment and maintenance of National Ambient Air Quality Standards (NAAQS).	N.A.	None	Unknown	Unknown.
General Permits for Title V Permitting Program.	Sets provisions for permitting of sources subject to regulation under the Clean Air Act in order to ensure compliance with substantive requirements of the Act.	5/10/91 (56 FR 21712)	Statutory 11/15/91	650	Unknown.
Basic and Enhanced Inspection and Maintenance.	Establishes new standards for inspection and maintenance of motor vehicles to ensure compliance with applicable mobile source standards.	N.A.	Statutory 11/15/91	Unknown	Unknown.
Worker Protection Standards for Agricultural Pesticides.	Revises required procedures for pesticide applicators and workers who may contact crops sprayed with pesticides.	7/8/88 (53 FR 25970)	None	140	16,000-24,000 health effects avoided.
Cold Temperature Carbon Monoxide (CO) Standards for Light Duty Cars and Trucks.	Establishes new standards for CO during warm-up period in winter months.	9/17/90 (55 FR 38250)	Statutory 11/15/91	280	Unknown.
Endangered Species Protection Program.	Establishes a new pesticide labeling requirement to indicate possible effects on Federally listed endangered species.	7/3/89 (54 FR 27984)	None	Unknown	Unknown.

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Table 17–3. COSTS AND BENEFITS OF SIGNIFICANT REGULATIONS EXPECTED TO BECOME FINAL IN 1992—Continued

(With deadline types and dates)

Regulation	Description	Proposal Date	Statutory or Judicial Deadline	Annual Costs (millions of dollars)	Benefits
Coastal Non-Point Source Water Pollution Program.	Specifies measures States must implement to control non-point source pollution of coastal waters, from farms, forests, and urban areas.	6/14/91 (56 FR 27618)	Statutory 5/92	Unknown	Unknown.
Vehicle Evaporative Emission.	Regulates volatile organic compound emissions from vehicles during their operation.	1/19/90 (55 FR 1914)	Statutory 5/15/91	100	Unknown.
Lender Liability.	Relieves banks and other secured creditors from unreasonable hazardous liabilities.	6/24/91 (56 FR 28798)	None	Unknown	Potential savings of $1 billion.
Contaminated Debris.	Sets mandatory treatment technologies to convert debris to non-hazardous waste.	N.A.	Statutory 5/92	100	Unknown.
Resource Conservation and Recovery Act (RCRA) Definition of "Mixture" and "Derived From".	Responds to court decision. Allows EPA option to redefine "mixture" and "derived from" in RCRA rules to exempt large volume, low risk wastes.	N.A.	Judicial 1/26/92	Unknown	Potential savings of at least $2 billion in disposal costs.
Onboard Control for Refueling Emissions.	Establishes standards for vehicles to control VOC emissions during vehicle refueling.	N.A.	None	100	Unknown.
Municipal Waste Combustors (MWCs).	Establishes acid gas, particulate matter, NOx, and toxics emissions standards for MWCs larger than 35 Mg/day.	N.A.	Judicial 11/15/91	390	Unknown.
Nitrogen Oxide (NOx) Limits for Electric Utilities.	Establishes NOx emissions limits for electric utility boilers in order to reduce NOx by 2 million tons per year from 1980 levels.	N.A.	Statutory 5/15/92 (Group I Boilers)	200–400	1–2 million tons NOx per year reduced from 1980 levels.

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Managing for Integrity and Efficiency:

18. Improving the Budget Process

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18. IMPROVING THE BUDGET PROCESS

The 1992 budget was the first to be proposed by the President and acted upon by Congress within the rules and procedures of the Budget Enforcement Act of 1990 (BEA). The BEA significantly improved the budget process. Discretionary spending appropriations were held within the spending limits imposed by the BEA. The "pay-as-you-go" rules ensured that any legislated increases in mandatory spending or decreases in receipts were offset. In fact, the estimated net effect of such legislation is a reduction in the 1992 deficit. Federal credit reform measures required, for the first time, that direct loan and loan guarantee programs be budgeted and controlled on a basis that permitted meaningful comparisons with the cost of other programs.

Building on the accomplishments of the BEA, the Executive and the Congress can further improve accountability and control. The proposals made below address some aspects of the budget that clearly need improvement. In addition, certain more fundamental changes in the budget process are still needed, including a balanced budget constitutional amendment. These proposed changes are summarized below:

The growth of mandatory spending programs should be subject to regular review as part of the budget process.—The BEA requires that new entitlements and other mandatory spending programs, or legislated changes to existing programs, be paid for by reducing other mandatory spending or increasing receipts. However, there is no mechanism to control the automatic growth in spending for these programs. A mechanism that limits the growth in aggregate mandatory spending needs to be developed to supplement the pay-as-you-go rule of the BEA. (See the discussion of an enforceable mandatory program cap in Chapter 2, Director's Introduction.)

Budgeting for deposit, pension, and other insurance.—The Government operates many insurance programs, the largest being deposit insurance and pension guarantees. Some other major programs insure crops, overseas private investments, and veterans' lives. For most Federal spending, cash-based budget authority and outlays are a good measure of the costs that the Government incurs when it undertakes an activity or makes a commitment. For insurance programs, however, cash-based measures do not provide a clear, timely measure of ultimate costs to the Government. The Administration proposes to shift the accounting for insurance programs from a cash basis to an accrual basis in an accounting framework similar to that used for credit programs. The improved budget accounting would better disclose the costs of continuing existing programs unchanged and the additional cost or savings of policy changes that are proposed. The proposed conversion would be implemented in phases. Deposit insurance and pension guarantees would be converted in 1992 and all other insurance programs in 1993. This proposal is discussed in more detail in Chapter 13, "Identifying Long-Term Obligations and Reducing Underwriting Risks."[1]

Instituting a regulatory budget.—The private expenditures required by regulation have many of the same economic effects as Federal budget outlays. Most fundamentally, both regulation and budget outlays divert private resources to public purposes. In many cases, expenditures required by regulation may be an alternative means of achieving the same public policy objectives as budget outlays. For example, firms can be required by regulation to treat their effluent before dumping or, alternatively, public waste water treatment facilities can be constructed by direct expenditures of the Government. A fully-developed regulatory budget process would involve the President and Congress in setting overall goals, ceilings, and allocations for the costs of regulation to the private sector, just as the present fiscal budget now allocates direct Government spending. OMB has worked closely with agen-

[1] Alternatives for deposit insurance also are discussed in two reports required by the BEA: "Budgetary Treatment of Deposit Insurance: A Framework for Reform" published by the Congressional Budget Office, May 1991; and "Budgeting for Federal Deposit Insurance," published by the Office of Management and Budget, June 1991.

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cies to improve regulatory cost estimates, and some variants of regulatory budgets have had small-scale applications or pilot tests. As more experience is gained, they may be applied more broadly and evolve toward one integrated budget that includes regulatory cost estimates in the expenditure and deficit calculations. This topic is discussed in more detail in Part One, Chapter 17, "Reforming Regulation and Managing Risk Reduction Sensibly."

Technical improvements in the Budget Enforcement Act.—Although the BEA made important improvements in the budget process, many other changes are needed to further strengthen the process and close loopholes. Some examples are:

- Extend the deficit reduction requirements and enforcement procedures until the budget is balanced:

  —continue the existing discretionary spending categories with limits;

  —continue the pay-as-you-go requirements;

  —continue maximum deficit amounts.

- Enact limits on total Federal direct loans, loan guarantees, and on the cumulative total of related subsidies.

- Eliminate or limit most exemptions from sequestrations (while preserving the exemption for Social Security).

- Make the definition of budget authority consistent from program to program.

Balanced budget amendment.—Stemming the steady build-up of the national debt is important for generations to come. It appears that the current budget system is close to incapable of eliminating deficits, much less producing a surplus. That is because there is a fundamental weakness in the existing process: It does not adequately reflect the interests of the voters of the future (most of whom are not yet here).

Line-item veto.—The current system of authorizing spending promotes special interest spending and affords the President little opportunity to control it. The President, as representative of the general interest, should have the power to strike from legislation provisions that reflect only narrow interests. As with any other veto, a veto by the President of an item in a spending or revenue bill would be subject to override by a two-thirds vote in each house of Congress. This essential tool is available to most State Governors, who have used it successfully without unduly shifting the balance of power between the executive and the legislature.

Enhanced rescission authority.—The rescission mechanism in current law is ineffective. If the President determines that all or some of the amount provided in an appropriations item should not be spent, he must ask Congress to "rescind" it, in accordance with the rules of the Impoundment Control Act of 1974. Proposed rescissions do not become effective unless approved by both Houses of Congress within 45 days. If the rescission is not approved, the funds must be spent. This means that the Congress can defeat the President's rescission proposals by simply ignoring them.

In practice, the Congress has used these procedures to virtually eliminate the President's ability to reduce unnecessary spending through rescissions. The great majority of rescissions proposed since the Act was passed have been defeated by congressional inaction. In recent years, Congress has approved very little of the savings proposed by the President. In the last 5 years, for example, 120 rescissions were submitted, totaling $11.4 billion. Of those, just 3 were approved, totaling $38.1 million, or 0.3 percent of the amount the President proposed.

A line-item veto amendment to the Constitution is needed for the reasons discussed above, and it would be the most effective solution to the inadequacy of the current rescission procedures. However, absent such an amendment, the President has supported legislation to enhance the existing rescission procedures by requiring an up-or-down vote in Congress on Presidential rescission proposals.

Joint budget resolution.—Under current law, the annual congressional resolution on the budget is a concurrent resolution, which does not require the President's signature. The budget resolution sets the limits for all subsequent legislation related to the budget—appropriations bills, revenue measures, and re-

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forms of mandatory programs in reconciliation bills. Formal Presidential involvement in negotiations on the budget resolution should reduce the potential for conflict between the Administration and the Congress on the subsequent bills that typically pass in the later stages of each session of Congress.

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Advancing States as Laboratories

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Advancing States as Laboratories:

19. Encouraging Experimentation

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19. ENCOURAGING EXPERIMENTATION

BLOCK GRANT

To achieve general agreement on a single consolidated block grant with representatives of State and local government, the Administration modified its block grant proposal in the 1992 budget. The resulting 24 program candidates ($14.7 billion in 1993) are set out in Table 19–1.

Table 19–1. **BLOCK GRANT PROGRAM CANDIDATES**
(In millions of dollars)

Department/Programs	1992 Enacted		Proposed									
			1993		1994		1995		1996		1997	
	BA	O	BA	O	BA	O	BA	O	BA	O	BA	O
Education:												
Chapter 2	450	517	450	478	450	453	450	450	450	450	450	450
College assistance migrant program	2	2	2	2	2	2	2	2	2	2	2	2
High school equivalency	8	7	8	8	8	8	8	8	8	8	8	8
Drug Free Schools and Community Act	624	654	654	648	654	649	654	653	654	654	654	654
Vocational education	1,135	859	1,138	961	1,138	1,131	1,138	1,145	1,138	1,138	1,138	1,138
Education for homeless youth	25	10	25	22	25	25	25	25	25	25	25	25
Follow-through program	9	7	—	7	—	2	—	—	—	—	—	—
Adult Education Act (State Grants)	236	175	261	202	261	254	261	262	261	261	261	261
Foreign language assistance	10	5	—	8	—	2	—	—	—	—	—	—
Student literacy corps	5	4	—	4	—	1	—	—	—	—	—	—
Workplace literacy partnerships	19	16	19	16	19	19	19	19	19	19	19	19
Literacy training for the homeless	10	8	10	8	10	10	10	10	10	10	10	10
Environment:												
Construction grants	2,011	2,196	2,030	2,110	1,500	2,044	700	1,889	200	1,609	—	1,162
Health and Human Services:												
Maternal and child health block grant	650	553	674	674	674	674	674	674	674	674	674	674
Social services block grant	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800
State welfare administrative expenses:												
Medicaid	2,649	2,649	2,868	2,802	2,868	3,164	3,521	3,521	3,922	3,922	4,374	4,374
AFDC	1,369	1,403	1,483	1,466	1,587	1,567	1,598	1,600	1,650	1,643	1,685	1,681
Food stamps	1,410	1,457	1,470	1,456	1,511	1,507	1,564	1,560	1,620	1,615	1,677	1,672
Justice:												
Drug control	498	341	496	502	496	496	496	496	496	496	496	496
Juvenile justice	72	68	8	58	9	28	8	9	8	8	8	8
Other Programs:												
Job training for the homeless	9	11	17	11	17	15	17	17	17	17	17	17
ASCS cost share	194	204	125	171	125	164	125	139	125	135	125	127
Community service employment for older Americans	87	84	75	85	75	77	75	75	75	75	75	75
National and Community Services Act	73	38	73	57	73	70	73	73	73	73	73	73
Total	14,355	14,068	14,686	14,622	14,598	15,162	14,218	15,427	14,227	15,634	14,571	15,726

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This revised list replaces the illustrative list of programs the President proposed last year. The President's goal is to move power and decision-making authority closer to the people and allow State and local governments greater flexibility to manage programs more efficiently and effectively.

In order to move the proposal forward, the Administration asked the Governors, State legislators and local officials to review the Administration's proposed block grant principles and identify other program candidates that they would consider suitable for turnover to the States. Governors and State legislators endorsed the block grant concept. Representatives of local government were more cautious, even negative; but representatives of the National Association of Counties and the National League of Cities contributed substantially to the discussions.

Additions to, and deletions from, the Administration's illustrative list were made as a result of this process. Specifically, the Governors recommended including additional education programs, while local governments recommended dropping housing programs. In the end, the participants generally agreed to the list of programs for turnover to the States (set out in Table 19–1).

It is recognized that some type of transition period will be necessary to ensure that sufficient fund controls and service delivery mechanisms are in place. The goal of the Administration's block grant proposal is to provide State and local governments with the maximum flexibility possible, phased in over a five-year period. The funding formula proposed would approximate current funding distribution levels to the individual States—seeking to ensure that no State would be harmed as these programs are incorporated into the new block grant.

A legislative package, containing the Administration's proposal, will be proposed to Congress after further consultation with representatives of State and local governments.

CREATIVE USE OF WAIVERS IN WELFARE PROGRAMS

Efforts to improve major assistance programs for low-income families must grapple with the fact that practically any change to one program will have consequences for other programs serving the same population. This interaction of program designs makes it necessary for States to seek permission separately from several Federal agencies when they want to demonstrate innovative ways to move families from welfare dependency to self-sufficiency.

For example, to encourage family-heads receiving Aid to Families with Dependent Children (AFDC) to seek employment, a State may wish to allow a family to earn an extra $100 a month without any reduction in their AFDC benefit. However, without a complementary change in the way the Food Stamp Program operates in the demonstration, the family's food stamps will be reduced by about $30 to reflect the additional $100 in cash income. Thus, the extra income to the family would be only $70 instead of the $100 intended.

To encourage States to design and test potential improvements to current programs, the Administration will institute an interagency review process to coordinate and expedite State requests for waivers of assistance program rules which are necessary to demonstrate the alternatives. The process will allow States seeking waivers involving several programs to have a single Federal contact responsible for managing the Federal process of obtaining the waivers.

A similar process was created in 1987 in response to initiatives by a variety of States to test welfare reform proposals. Over the following year, an interagency board (made up of representatives from agencies administering programs of assistance to low-income people) arranged for Federal approval of demonstration proposals from more than a dozen States. Within the next year or two, results from most of these previous multi-year demonstrations will add significantly to our knowledge of how to address welfare dependency.

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For example, under the waiver process—

- Wisconsin and Ohio are testing alternative approaches to increasing high school attendance by children in families receiving AFDC. Wisconsin's "Learnfare" program reduces a family's AFDC payment if a child fails to meet school attendance requirements. In Ohio, grants are higher for attendance and lower for failure to stay in school.
- New York is experimenting with a child support assurance program recommended in recent reports on the condition of children and proposed in several bills pending before Congress. When a custodial parent has an order for support from an absent parent, the State moves aggressively to enforce the order. However, if the support actually received falls below a minimum level, the State provides the custodial parent with the difference. Unlike current welfare programs, this payment is not reduced to offset any earnings of the custodial parent. Advocates of the program hope it will encourage custodial parents to obtain support orders, increase their employment, and provide assistance without the stigma usually associated with welfare.
- Alabama is testing a program that simplifies and rationalizes welfare programs. Based on the adoption of common rules and policies across several programs, families with children receive aid in the form of a single cash payment. Vigorous education and training and a school attendance requirement for dependent children are part of the demonstration.
- Washington is experimenting with a program that provides a single cash grant including both AFDC and the cash value of food stamps, along with rules that provide higher benefits to families in training programs and more favorable treatment of income from earnings.

These demonstrations embody a wide range of policies to improve the welfare system. Implementation of national program changes, without testing, could make things worse, both in human and budgetary terms. Encouraging States to test their ideas, to be laboratories of change, gives policy-makers at the national level a firmer foundation for their decisions.

To open Federal research and demonstration activities up to such a wide range of proposals, two conditions are needed:

First, the demonstration must be cost-neutral to the Federal Government across programs. If State assumptions of savings from the new approach are correct, States should be able to draw on the Federal share of funds they saved and pay for demonstration activities for which Federal funds are otherwise not available. Conversely, if the innovations turn out to be more expensive than the programs they were intended to replace, Federal funding will be limited to the amount of spending that would have occurred in the absence of the demonstration.

Applying the cost-neutrality requirement across all Federal programs involved in the demonstration provides significant additional flexibility for the States. For example, some States have encouraged AFDC families to leave the rolls by providing Medicaid coverage for a transitional period in excess of that allowed in current law. While the demonstrations involved an increase in Medicaid costs, at least in the short run, the States hope these costs will be offset by lower AFDC costs.

Second, participating States must agree to a rigorous evaluation of their demonstrations (usually based on experimental evaluation design). While well-designed evaluations may require more resources and effort, States should be willing to undertake them, so that the impact of the demonstration will have wide credibility.

These principles of cost-neutrality and rigorous evaluation will be applied by the interagency review process to expedite approval of future State proposals for multi-program low-income assistance demonstrations.

The Administration will also explore with the States ways to expedite the review and approval of other waivers that are not for research and demonstration purposes. With some programs, the law authorizes waivers to provide States with added flexibility, if

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the State's alternative practice can be shown to be cost-effective. The cost-neutrality principles discussed above, that will be applied to multi-program demonstration waivers, may also be applicable to other cost-effectiveness waivers.

EXAMPLES OF FEDERALLY PROMPTED STATE INNOVATIONS AND DEMONSTRATIONS

ALTERNATIVE METHODS OF MEAL COUNTING IN CHILD NUTRITION PROGRAMS

The Food and Nutrition Service's (FNS) school lunch and breakfast programs offer meal subsidies to schools. The level of these subsidies varies with student family income. Under current practice, to claim subsidies, schools must maintain a head count of meals served to students in each subsidy category. In 1990, FNS approved nine pilot projects (including California, Maine, Oregon, Pennsylvania and Ohio) to test samplings (versus head counts) as a means of counting and claiming reimbursements for school lunches. In Philadelphia schools, where more than 70 percent of the students are eligible for free or reduced price lunches, they have introduced universal free lunches. In Atlantic City, some schools now receive subsidies based on statistical sampling techniques; if the sample indicates that 30 percent of the students in the school would be eligible for free lunches, the school receives free lunch reimbursement for 30 percent of the meals served.

DRUG ABUSE TREATMENT

The Department of Health and Human Services is providing Federal matching funds at a rate of 80 percent for two drug abuse campus treatment demonstrations. During 1991, the campuses were awarded three-year cooperative agreements at approximately $9 million each per year. The campuses, located in New Jersey and Texas, will provide 675 beds in a range of treatment programs. The campuses will emphasize treatment of one or more of the following populations: racial and ethnic minorities, pregnant women, female addicts and their children, and adolescents. Knowledge gained through evaluations of these treatment programs will improve the residential community treatment model and increase the efficacy of the national drug abuse treatment system.

SELF-EMPLOYMENT DEMONSTRATION PROJECTS

The Department of Labor (DOL) is carrying out a series of demonstration projects designed to get unemployed workers back into jobs, particularly dislocated workers who are likely to remain unemployed for some time. Two of these projects focus on self-employment. In Massachusetts and Washington, State employment security agencies and economic development agencies are examining the effectiveness of providing self-employment allowances and support services (e.g., business training and counseling) to help interested unemployment insurance (UI) claimants start their own small businesses. Massachusetts provides financial assistance in the form of weekly or biweekly allowances set at the level of the participant's UI benefits; Washington provides a lump-sum grant of business start-up capital (based on the remaining portion of the participant's UI benefits). DOL will evaluate the Massachusetts and Washington demonstrations with respect to various outcomes (e.g., participant earnings and assets, employment stability, business survival) and cost effectiveness.

AIRPORT BLOCK GRANT PROGRAM

Over the past 3 years, under a Federal Aviation Administration experimental program, Illinois, North Carolina and Missouri have taken responsibility for distributing Airport Improvement Program (AIP) grants to small airports. Due to the success of this pilot program, the Administration will propose legislation to expand the State block grant

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program to allow voluntary participation by all States.

PASSENGER FACILITY CHARGES

The Aviation Safety and Capacity Expansion Act of 1990 authorizes airports to impose "Passenger Facility Charges" (PFCs) of $1 to $3 on departing passengers in order to fund increased capacity. PFCs increase local airport authority flexibility to raise revenues to meet their own needs. The Department of Transportation has received 16 applications from airports to collect a total of $1.9 billion over several years in PFCs. These funds will support airport improvement projects—including runway extensions, terminal development and the construction of new gates. At least 40 airports are planning to apply for authorization to collect PFCs next year.

TOLL ROADS

The Intermodal Surface Transportation Efficiency Act of 1991, for the first time in the history of the Federal highway program, permits States wide discretion in the use of Federal funding for the construction and reconstruction of toll highways. States will be able to mix Federal funds and tolls to upgrade existing free, non-Interstate highways.

This could lead to the acceleration of projects since State and local governments would not have to rely exclusively on limited user fee or general revenue resources. The new law permits the continuation of tolls after the debt for the highway is retired, as long as the revenue is used for transportation purposes. The new law also allows joint public and private investment to construct or improve toll roads and authorizes private entities to own Federally funded toll facilities (as long as certain conditions are met).

The Department of Transportation is, in addition, initiating a pilot program of variable tolls to reduce congestion at peak travel times on Federally financed highways. The program will consist of five projects, three of which may be on the Interstate Highway System. In order to prevent traffic delays at toll booths, new state-of-the-art technologies to assess and collect tolls (and eliminate the need for motorists to stop at toll booths) will be introduced.

MATCHING FLEXIBILITY IN MASS TRANSIT

The Federal Transit Administration's "overmatch initiative" is designed to spread Federal mass transit capital dollars further and achieve more construction. The initiative generally requires State and local governments to match at least 50 percent of the cost of a project (instead of the statutory minimum of 20 percent) in return for expeditious review of their planning studies and priority consideration for funding.

An example involves Honolulu's rapid rail system. Honolulu and the State of Hawaii collaborated on innovative financing and procurement methods to build the new system with only 30 percent Federal funds. The city will use higher local excise taxes to help finance its share. Honolulu also avoided the problem of cost overruns by using the turnkey method of contracting, under which a vendor received a contract to design, build and operate the system for a fixed price.

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Advancing States as Laboratories:

20. Reporting on Variation and Innovation

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20. REPORTING ON VARIATION AND INNOVATION

Most experimentation and innovation at State and local government levels come spontaneously with no Federal prompting. Sometimes, as in health care experiments, what is learned from State efforts may ultimately have a profound influence on national policy. In other cases, the lessons learned are primarily valuable for possible imitation in other States and localities. This chapter reports on a sampling of innovations at the State and local levels, many of which—depending on how the experiments work out—could help develop solutions to national problems.

COPING WITH RISING WELFARE CASELOADS

In 1989, the number of families and individuals receiving benefits from the major Federally funded low-income assistance programs began to rise sharply. This trend accelerated in 1990. By October 1991, the number of families receiving cash aid from the Aid to Families with Dependent Children (AFDC) program had reached 4.6 million, 21 percent higher than two years earlier. Over the same period, an additional 4.6 million people had joined the Food Stamp Program rolls, a 24 percent increase.

The surge in the number of participants came just as the States were implementing the Family Support Act of 1988. The Act aimed to change the focus of AFDC from income maintenance to education and employment. The Act provides States with broad flexibility to design programs that meet the needs and circumstances of their recipient families.

The national assessment of the effects of the Act will be built upon rigorous evaluations of a variety of innovative State programs in ten sites. Variations on different service philosophies will be tested, including a model that stresses investment in education and training and one that stresses attachment to the work force.

In addition, States are testing or considering a wide range of policies, beyond those in the Family Support Act, to move recipients from the welfare rolls to the employment rolls and otherwise influence behavior.

The State of Michigan and the University of Michigan are planning to study the effects of State reduction of eligibility for general assistance payments to able-bodied single adults. Among the questions are whether employment of this population will increase, whether spending in the corrections system for the same population will offset welfare savings, whether homelessness will increase, or whether a combination of all of these may occur.

Other State initiatives experiment with conditioning benefits upon a behavioral standard. One of the strongest links in the chain of poverty is low educational achievement. As mentioned in Chapter 19, Wisconsin and Ohio are already testing alternative schemes of monetary rewards and penalties for school attendance by children in AFDC families. Maryland and California are also considering variations of this approach.

States have, in addition, begun to explore ways to influence decisions about bearing and raising children out of wedlock. AFDC increasingly has become a program for mothers who have never been married. Mothers and children end up on welfare because families do not form, rather than because they break up.

To counter this trend, the Governor of Wisconsin has proposed a financial incentive for teenage welfare mothers to marry. To complement the proposal, the State would provide for AFDC eligibility for young couples

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with children even when the father has not established the attachment to the work force required in the regular AFDC Unemployed Parent program.

To encourage AFDC mothers to postpone additional child-bearing, several States (including Maryland, New Jersey, and California) are considering limits on benefits for larger families.

Other behavioral experiments include (1) the Governor of Maryland's proposal to require AFDC recipient parents to immunize their children and keep their rent paid or face a reduction in benefits, and (2) the Governor of California's proposals to reduce benefits after a family has remained on the rolls for six months and require teenage parents to remain in their parents' homes.

STATE INNOVATIONS IN HEALTH CARE

Innovation at the State level can address some of the problems of rising medical expenditures and access to quality health care. The Administration recognizes the value of State experimentation and strongly encourages State and local innovations in health care.

The National Governors' Association, at its 1991 Annual Conference, stated:

> "The Governors believe a way to achieve national consensus is to develop comprehensive, statewide health care reforms... that maximize preventive public health programs and experiment with medical care payment programs to reduce overall medical costs."

The rapid growth in health spending is a significant fiscal threat to the States as well as to the Federal government. In 1970, Medicaid spending accounted for four percent of all State spending; by 1991, Medicaid consumed 14 percent of State spending. Health expenditures, including Medicaid, went from 18 percent of State spending in 1990 to 23 percent in 1991. As a result, States, by necessity, have become innovators, developing different approaches to controlling costs and expanding access.

Various State-level initiatives provide valuable insight to strategies that could be effective on a national level. Described below are several examples of the kinds of innovations States are testing.

CONTAINING THE COSTS OF HEALTH CARE

The escalating cost of health care is of critical concern to States. The magazine *Governing* reports that economists estimate that health care inflation accounts for 60 percent of recent Medicaid cost increases. To counter this trend, States are testing a variety of approaches to reform their health care systems that have potential for broader application.

Selective Contracting and Cost Containment: California's Prudent Purchaser Agreement.—In 1982, California reformed its Medicaid program by implementing selective contracting as a means of introducing market forces to bring down program costs. In exchange for providing discounts to the State, hospitals receive a greater share of Medicaid business. Only those hospitals with such agreements are permitted to provide elective, non-emergency treatment to Medicaid recipients.

A 1986 evaluation funded by the Health Care Financing Administration (HCFA) concluded that this program reduced daily hospital inpatient costs by 16 percent. HCFA now estimates that the program saves California $299 million annually. In turn, California reports that the cost of administering the selective contracting program is only $1–2 million per year and that the program was in place within one year from the time the legislation was passed.

Using Public Resources to Cover Those in Need: Oregon's Priority Care Program.—Oregon lawmakers began wrestling with health care reform on a bipartisan basis in 1987. The reform proposal that has emerged is perhaps the most dramatic and controversial plan currently being considered among the States. Oregon has established a prioritized list of medical services that eventually will be offered to nearly all residents below the poverty level—significantly broadening its current

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Medicaid population. The list of services offered is prioritized to ensure access to more people within existing resources.

Under its proposed plan, Oregon would limit the number and type of services covered by Medicaid and reallocate the savings to expand eligibility. Almost all persons below the Federal poverty level will be eligible for the new program, as will pregnant women and young children with family incomes up to 133 percent of the poverty level.

The Oregon plan is controversial and awaits a decision on a Medicaid waiver by the Health Care Financing Administration. Regardless of the plan's substantive merits, the State's efforts to develop creative reforms on a bipartisan basis are noteworthy.

COORDINATED CARE AND STATE MEDICAID PROGRAMS

Coordinated care programs pay a fixed sum to a group of hospitals and doctors for the care provided to a program's customers. Each patient has his/her own physician. Coordinated care improves health care quality through better supervision of care and communication among caregivers. It also improves the efficiency of health care service delivery by introducing market forces. Not surprisingly, an increasing number of States are turning to coordinated care programs for their Medicaid programs, to control costs while at the same time covering essential services and assuring quality care.

Although only ten percent of the nationwide Medicaid population is currently enrolled in coordinated care, roughly 30 States have at least experimented with coordinated care elements in their Medicaid programs in the last few years.

Coordinated care is becoming an increasingly popular service delivery option for Medicaid programs. According to the most recent statistics, 2.3 million Medicaid beneficiaries nationwide receive care through coordinated care arrangements.

State-Wide Coordinated Care for Medicaid Recipients in Arizona.—Arizona's Health Care Cost Containment System (AHCCS) has been operating since 1982, when Arizona first opted to participate in the Medicaid program. Arizona was the last State to join the Medicaid program—and as a result may be the most progressive. Rather than running a Medicaid program similar to other States, Arizona has run the program since its inception as a coordinated care operation.

All care received by Medicaid-eligible recipients is through coordinated care arrangements, with no fee-for-service option. The State uses six different cost containment features:

- Primary care "first step" physicians who refer patients to specialized care, as appropriate;
- Prepaid capitated contract providers;
- Competitive bidding for contract providers;
- Use of nominal copayments;
- Limited restrictions on plan providers; and
- Capitated Federal payments for Medicaid on a per patient basis.

The Arizona program has resulted in an estimated annual savings of 5.1 percent over other comparable States' costs. Further, the cost of medical service in the State grew by only nine percent between 1987 and 1989—as opposed to an average 17 percent in other States with similar demographic profiles. Through competitive contracting, Arizona has introduced market forces and management efficiencies into the program, yet has maintained access to high quality services.

New York's Phased-In Coordinated Care Initiative.—In 1991, New York State mandated that its Medicaid program undertake a five-year program that requires all of the State's 58 local social service districts to begin enrolling Medicaid recipients in coordinated care programs. By 2000, nearly one million recipients could be enrolled in coordinated care programs. By exempting coordinated care from restrictions on physician and clinic visits, New York is trying to encourage hospitals to provide services to Medicaid recipients. All fourteen hospitals in Buffalo have responded by asking to join the physician case management program.

Indiana's Health Insurance Organization.—In Indiana, roughly 40 percent of the

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1.3 million Medicaid beneficiaries are covered under coordinated care plans through Health Insuring Organizations (HIOs). Since 1986, Blue Cross and Blue Shield of Indiana has provided comprehensive health services to that State's Medicaid recipients. The HIO shares in all actual savings or losses, relative to projected costs. The clear cost containment incentives inherent in such a plan have led several other States to develop HIO arrangements.

INCREASED ACCESS TO HEALTH INSURANCE

Three-quarters of uninsured Americans are workers or their dependents, and two-thirds of uninsured workers are employed by small businesses. For much of this population, insurers are reluctant to provide small businesses with health insurance for two reasons: the high cost of marketing and administering such policies and the very small risk pools that small businesses represent. To overcome these barriers, States are attempting to make such policies more attractive to insurers and more affordable to small businesses. States are also making efforts to extend health insurance to the unemployed. Eligibility for such programs is based on income

Minnesota's Children's Health Plan.—Facing a rising number of uninsured children, Minnesota enacted the Children's Health Plan (CHP) in 1988 in an effort to provide health insurance to children in poor and near-poor families. Targeting families ineligible for Medicaid, and with incomes below 185 percent of the poverty level, the Plan had enrolled over 21,000 children as of October 1991.

Initially funded through a penny-per-pack cigarette tax, the Plan now receives an annual $10 million appropriation and charges a $25 enrollment fee for each child. Local service agencies aid families in meeting the fee if the families cannot afford it. Results have been encouraging: CHP clients have demonstrated a moderate increase in well-child care utilization between 1989 and 1990.

Washington State's Basic Health Plan.—In 1987, Washington State enacted the Basic Health Plan as a five-year demonstration project. A legislative "sunset review" for the Plan is scheduled for July 1992, but it is expected to be reauthorized. The program has proven to be popular. Nearly as many residents are on a waiting list as are enrolled in the program.

The State contracts with coordinated care plans to provide basic services to residents under 65 with incomes below 200 percent of the poverty level. Medicaid eligibles, who have already applied for Medicaid, are also eligible to apply for the Plan. Participants pay a monthly premium based on their incomes. The State funds the remainder. To restrain the growth in costs, non-essential services (e.g., vision care, dental care, and mental health and substance abuse treatment) are not covered. Enrollment has been limited—to 22,000 in 1991—but is expected to expand under reauthorization.

The Robert Wood Johnson Foundation's Project to Aid Small Businesses in Acquiring Health Insurance.—Private sector initiatives have also proven effective. The Robert Wood Johnson Project is demonstrating that insuring small businesses is a viable option for insurance companies, if the risk can be spread and if initial administrative costs can be controlled. Insurance companies shy away from providing small businesses with health insurance, for fear of adverse selection as well as the high marketing and administrative costs required for such customers. The Robert Wood Johnson Foundation (RWJ) funds demonstration projects that subsidize the insurer's marketing costs and assist insurers in dealing with administrative burdens, allowing these companies to get a toehold in the small business market and to spread their risk pools effectively.

By providing start-up funds to insurance companies, the Foundation helps insurers overcome their initial reluctance about entering an untested market and demonstrate that the market is viable. The success of the demonstration projects shows the potential for private firms to gain entry and fill the gap in an underserved market.

RWJ found that 75 percent of the working uninsured are employed by firms with fewer than 10 employees. At a cost of $6.2 million, the ten demonstration projects helped to insure 2,062 small firms and 20,616 workers and dependents. Private foundations alone

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cannot be expected to solve the problem of the working uninsured. The RWJ Project, however, demonstrates the effectiveness of encouraging small businesses and insurers to join forces to broaden risk pools and reduce administrative costs.

No-frills Coverage and Expanded Access.—No-frills or "essential services" health insurance provides a basic health insurance package to consumers, free of State-mandated features that price many potential customers (e.g., small businesses) out of the health insurance market. States have sought to increase access to health insurance by exempting certain insurance policies from costly mandates, such as substance abuse treatment and chiropractic services. This lowers the price to an affordable level for many potential purchasers.

In 1990, the West Virginia legislature passed a law allowing the State Insurance Commissioner to develop a basic-benefits insurance plan for all residents. The Commissioner, in turn, has solicited the input of small businesses from around the State on the scope of the package's coverage.

In September 1990, Rhode Island implemented a 30-month demonstration project to aid small businesses in purchasing health insurance for their employees. Under the program, businesses with fewer than 25 employees, that had not offered health insurance in the two previous years, will be allowed to offer an "essential services" health insurance package that makes available the most necessary services, but excludes costly State mandates that small businesses claim price them out of the market.

Underwriting reforms in the States have focused on several common features. First, these reforms guarantee renewability of coverage, protecting groups and individuals within groups from having renewed insurance denied due to deteriorating health of the group or one of its members. Second, the reforms have restricted variation among premiums charged by a single carrier to various groups and individuals, and have limited the rates of annual increase that a carrier can impose on premiums.

Summary.—Ensuring the availability of health insurance coverage, promoting high quality care, and living on a limited budget are serious challenges to the States. As illustrated, many States have addressed these problems in imaginative ways. The Administration will continue to encourage States to test new and creative ideas and provide incentives to experiment with new initiatives, by allowing States flexibility that is not available under current law.

OTHER EXAMPLES OF STATE AND LOCAL INNOVATION

CRIME AND CORRECTIONS

Reducing Crowding in Prisons

Georgia has dealt with the problem of overcrowded prisons, including Federal court orders requiring less crowding, with an innovative system of sentencing options for misdemeanors and felonies. Public and judicial opinion in the State continues to favor full punishment for crime, and prison sentences remain the norm for violent criminals. But for other sentenced criminals, a continuum of punishments is now available. These include basic probation, supervised community service, intensive probation supervision, "diversion" centers, and short-term so-called "shock incarceration." Georgia has saved an estimated $150 million in five years as a result of this system.

Using Civil Penalties Against Criminals

A number of States are seeking to increase prosecutions of drug dealers by imposing taxes of various kinds and then prosecuting dealers for failure to pay the taxes. While the program is somewhat controversial, it is being used in one form or another by more than half the States. Some require a drug-stamp; others have enacted special excise taxes on the sale of illegal narcotics; another group imposes sales taxes on drug sales. In all cases, dealers who do not pay are subject to prosecution, with civil judgments often easier to obtain than criminal convictions.

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ENVIRONMENT

Variable Pricing for Garbage Collection

The city of Seattle has reduced the flow of solid waste through the imposition of variable pricing for garbage collection; the charge rises as the volume of garbage increases. Recycled materials incur no charge. Specifically, the city charges $13.75 a month to pick up 32-gallon trash containers, but the charge rises to $22.75 a month for 60-gallon containers. Households can reduce their charge, for example, by crushing boxes, cans and bottles to fit them in the smaller container, reducing the volume of material deposited in the City's landfills.

Purification of Septage Waste

A Massachusetts State agency, the Massachusetts Center of Excellence, has sponsored a demonstration in the town of Harwich on Cape Cod using a new technology, solar aquatics, to purify septage waste. Septage waste is the sludge-like material removed periodically from septic tanks. Early results are reported to be promising; high quality effluent is being produced at less than the cost of conventional treatment.

Negotiating New Landfills

A major problem for many States, particularly those with a relatively high population density, is obtaining community consent for the location of new landfills for solid waste, as old ones fill up. Wisconsin has developed an unusual system of mandatory local municipal and county government negotiating committees to deal with cases where landowners seek to create landfills. Failure to reach agreement leads potentially to outside arbitration by a State agency. Although the ultimate powers of local officials are reduced by this arrangement, so is their vulnerability to local voter hostility to new landfills. In nearly all cases, the negotiating committees have reached agreement on landfills without State intervention.

EDUCATION

Educational experiments are blossoming in virtually all of the States. The following are a few of many examples of innovation.

Providing Choices Among Schools

Milwaukee's Parental Choice Program for low-income children began operation in September 1990. This program permits up to 1,000 low-income families to send their children to private schools at State expense ($7,500 per student maximum). The program received high marks from families, but is being challenged in the courts on constitutional grounds. A recent random survey of 449 Milwaukeans found that 75 percent supported the program and over half believed that the program should be expanded to include private sectarian schools.

Minnesota provides an array of school choice programs. The postsecondary option program allows 11th and 12th graders in public schools to attend colleges, universities, and vocational schools. The high school graduation incentives and area learning centers' programs permit students between the ages of 12 and 21, who are not succeeding in school, to transfer to public schools in other districts. Under the open enrollment program, elementary and secondary students can transfer to public schools in other districts. Participants in all these programs express a high degree of satisfaction. To compete with the postsecondary option program, the first of these programs to be instituted, more high schools now offer advanced placement classes.

In Pennsylvania, the State Senate passed a landmark school choice proposal which would provide Pennsylvania families with a scholarship worth up to $900 if they were to select a private school or a public school located outside their assigned district. The measure is expected to be considered again this year. Grants through the Choice Grants for America's Children Act, as proposed by the President, would provide matching funds to Pennsylvania and other States, substantially increasing the likelihood that States could afford to undertake such important steps to reform education.

Indiana made progress toward school choice through the help of a business-backed coalition, COMMIT. The bill developed by the coalition would convert most State and local aid to scholarships for every school-age child. Families could choose among public and private (including sectarian) schools within the

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school district. The plan would be linked to new academic standards, school readiness strategies, and proposals for self-regulated schools.

In December, a California citizen's coalition called "EXCEL" received approval from the State Attorney General to gather signatures in favor of a 1992 ballot initiative to provide vouchers to all families in California. Families could choose public, private, or sectarian schools in any district.

"America 2000"—States as Laboratories

By the end of 1991, "STATE 2000" organizations had been launched in 30 States, one territory, and the District of Columbia. The education reform initiatives these States are undertaking vary, yet each has adopted the four common elements that make them an "America 2000" State. Specifically, these States have: (1) adopted the six national goals; (2) established a State-wide strategy for achieving the goals; (3) developed a report card for measuring the community's progress; and (4) demonstrated the State's readiness to create and support New American Schools.

Accountability and Assessment.—Since 1989, California has required an annual School Accountability Report Card for each school in the State, reporting on at least 13 different indicators of school operation and performance. The system will require performance-based tests scored by teachers rather than computers. The tests will be administered throughout the school year and will be closely tied to the State Board-adopted curriculum frameworks and standards.

School Performance Assessment Program.—The State of Maryland has developed the School for Success Program. Central to this program is a new performance system, the Maryland School Performance Assessment Program, which is designed to hold schools accountable for outcome results. The State-wide program is an authentic performance-based assessment in reading, writing, language usage, and mathematics in grades 3, 5, 8, and 11; it is part of a comprehensive outcome-based reform package. The objective of the assessment is to measure high quality education, not minimum competency, with State standards of excellence and satisfactory performance for each test to be reported in 1992.

School to Work Transition.—The Oregon legislature passed a major education reform bill in July 1991 that mandates a variety of changes in Oregon schools. One part of the initiative requires completion of a vigorous academic program in order to receive a certificate of advanced mastery in a field. The fields will include a variety of courses preparing students for college, technical degree programs, and employment after high school. The program chosen by the students within the field will include at least basic academic preparation to permit college entry, apprenticeships or internships, and experimental learning. The certificate of advanced mastery may take between two and five years and may include work at a community or technical college. When a student has graduated with a certificate, he or she will be prepared for entry into an occupational field.

School Performance.—Through the Pennsylvania School Performance Incentive Program, cash grants are awarded to schools that demonstrate significant improvement in math and reading achievement, dropout reduction, and college preparation. Decisions regarding grant-supported expenditures for educational improvement are made by teachers. Other State-supported efforts for teachers include Regional Lead Teacher Centers, which promote staff decisionmaking and collaboration.

Flexibility/Waiver Authority.—Increased flexibility through waivers is a major component of Target 2000, enacted in 1989 to promote school reform in South Carolina's schools. The mandated reform offers schools, which have met required standards, waivers from regulations and statutory provisions governing the States' Defined Minimum Program, Basic Skills Assessment Program, and Remedial/Compensatory Program. Schools that are eligible for waivers include those that have: (1) received school incentive awards twice since 1987, (2) met annual achievement standards for compensatory programs in reading and math, (3) exhibited no accreditation deficiencies, and (4) shown a school gain index value that is at or above the State average.

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MENTAL HEALTH

Providing Housing Choices for the Mentally Ill

Toledo, Ohio has had some success in finding housing for mentally ill persons by giving them a voice in choosing individualized support services, rather than being "placed" in facilities reserved for the mentally ill. The program has found housing for more than 500 people, about one-fifth of those with mental illnesses in the area, and most of those placed have lived in their new homes for more than a year.

Helping the Mentally Ill

The Colorado Consumer Case Management Aide program involves having mentally ill people provide services to other patients in the mental health system. Although a limited experiment involving about 100 persons during the five years of its existence, the program is breaking new ground. The trainees receive basic instruction in reading and writing so that they can maintain client records and learn counseling and communications skills. Successful participants earn college credits, and graduates receive certificates from a community college.

TRANSPORTATION

Improving Parking Enforcement

Chicago has begun to use advanced technology to solve the nearly universal urban problem of enforcing street parking restrictions. The system was so poor that a backlog of 17 million unpaid tickets accumulated in the period 1980–1990. This backlog had a face value of $420 million in fines. In addition, rampant illegal parking resulted in clogged traffic on local streets. The Chicago system provides a simpler means for motorists to contest their tickets by mail or in person and repeals the previous requirement that a complaint could be dismissed unless a police officer appeared at the hearing. The new system produced a 44 percent increase in parking meter revenues in the first six months, and increased the number of parking tickets paid in the year of issuance from 10 percent to 40 percent.

Improving Traffic Management

Anaheim, California has developed an innovative traffic management system aimed at reducing the congestion that occurs from sudden increases in traffic volume. The Traffic Management Center in Anaheim receives information from a variety of sources (e.g., the Anaheim Convention Center, the Police Department, and the State-operated Freeway Surveillance System), and uses the data to adjust traffic signal timing at 180 traffic lights. The Traffic Management Center also uses the data to make radio announcements and to flash information on overhead message signs. The result is less congestion, faster travel, less fuel consumption and reduced auto emissions.

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Advancing States as Laboratories:

21. Providing Federal Aid to State and Local Governments

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21. PROVIDING FEDERAL AID TO STATE AND LOCAL GOVERNMENTS[1]

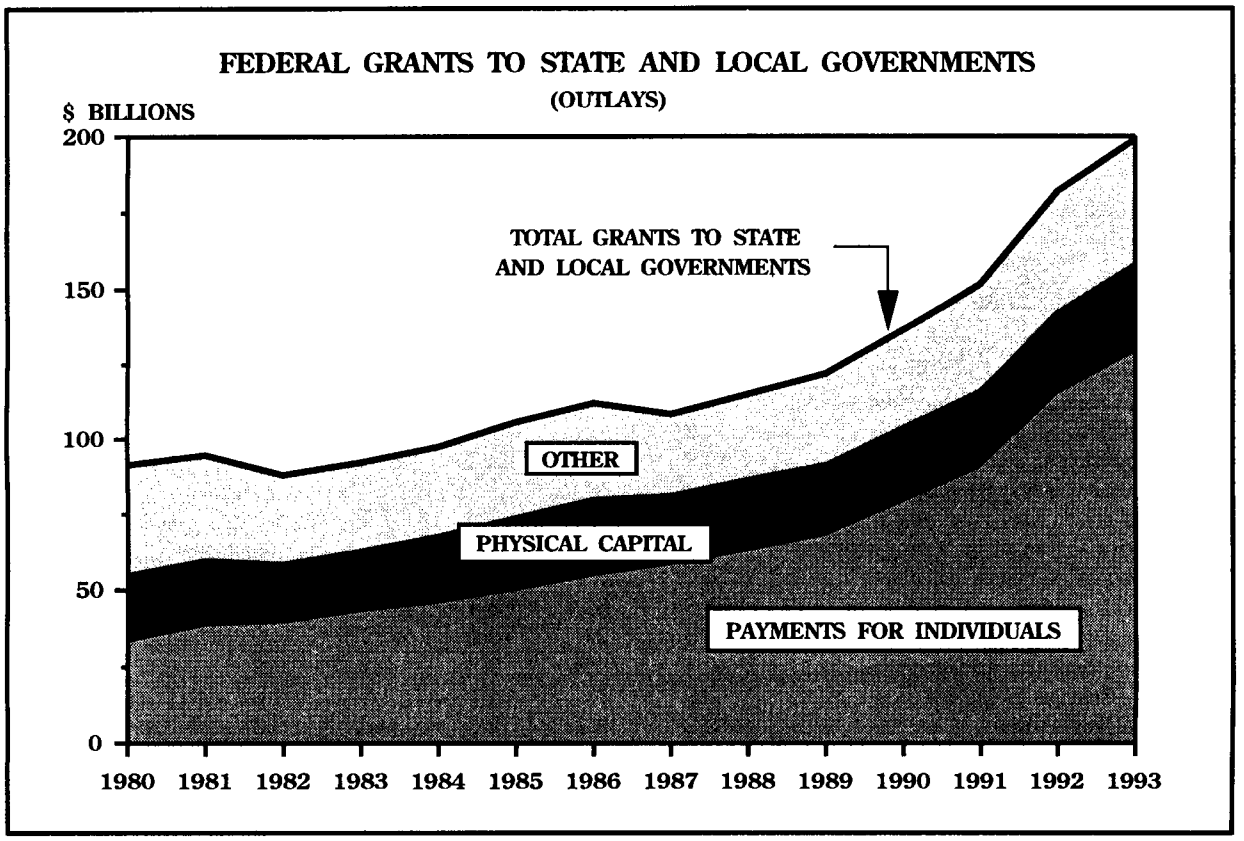
State and local governments have a vital constitutional role in providing government services. They have the major role in providing domestic public services, such as public education, law enforcement, public roads, water supply, and sewage treatment. The Federal Government contributes directly toward that role both by promoting a healthy economy and by providing grants, loans, and tax subsidies to State and local governments.

Federal grants help State and local governments finance programs covering most areas of domestic public spending, including income support, capital spending, and other assistance. Federal grant outlays were $152.0 billion in 1991. They are estimated to be $182.2 billion in 1992 and $199.1 billion in 1993.

The accompanying chart shows trends in outlays in major grant categories from 1980 to 1993. Grant outlays for payments for individuals are estimated to be 65 percent of total grants in 1993; for physical capital, 15 percent; and for all other grants, largely for education, training, and social services, 21 percent.

States and localities use loans and guarantees for a variety of purposes, including rural development and transportation. As a result of credit reform concepts enacted in the Federal Credit Reform Act of 1990, the subsidies for direct and guaranteed loans

[1] Federal aid to State and local governments is defined as the provision of resources by the Federal Government to support a State or local program of governmental service to the public. The three primary forms of aid are grants, loans, and tax expenditures.



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obligated in 1992 and later are recorded in the budget as budget authority and outlays. Therefore, the subsidies for loans to State and local governments are recorded as grants to these governments and included in this analysis in the grant totals. Direct and guaranteed loan subsidies to State and local governments are estimated to be $25 million in 1992 and $54 million in 1993.

Information on new credit reform concepts and other Federal credit activities appears in Part One, Chapter 13, "Identifying Long-Term Obligations and Reducing Underwriting Risks," and Appendix One, Chapter 3, "Federal Credit Programs."

Federal aid to State and local governments is also provided through tax expenditures. Tax expenditures are one of the means by which the Federal Government carries out public policy objectives; they can be considered alternatives to direct spending programs.

The two major tax expenditures benefiting State and local governments are the deductibility of most State and local taxes, except sales and excise taxes, and the exclusion of interest on State and local securities from Federal taxation. Federal aid to State and local governments through tax expenditures is estimated to be $58.2 billion in 1992 and $61.6 billion in 1993 on an outlay equivalent basis.

A detailed discussion of the measurement and definition of tax expenditures and a complete list of the amount of specific tax expenditures are in Part Two, Chapter 24, "Tax Expenditures." State and local tax expenditures are displayed separately at the end of Table 24–1 in that chapter.

FEDERAL GRANTS BY FUNCTION AND AGENCY

Table 21–1 shows a functional distribution of Federal grant outlays as proposed in this Budget. The functions with the largest amount of grants are health and income security, with combined estimated grant outlays of $132.6 billion or 67 percent of total grant outlays in 1993.

Table 21–2 shows the distribution of grants by agency. Grant outlays for the Department of Health and Human Services are estimated to be $116.2 billion in 1993, 58 percent of total grants, much more than any other agency.

Table 21–1. **FEDERAL GRANT OUTLAYS BY FUNCTION**

(In billions of dollars)

Function	Actual 1991	Estimate					
		1992	1993	1994	1995	1996	1997
National defense	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Energy	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Natural resources and environment	4.0	4.0	4.0	4.1	4.0	3.6	3.2
Agriculture	1.2	1.3	1.3	1.3	1.3	1.3	1.2
Transportation	19.9	21.3	22.3	23.4	22.5	22.6	22.5
Community and regional development	4.3	4.7	4.9	4.5	4.0	3.8	3.7
Education, training, employment and social services	26.0	28.7	29.9	31.5	31.8	32.2	32.6
Health	55.8	76.2	88.5	102.5	118.0	135.4	155.1
Income security	36.9	42.0	44.1	47.4	50.0	51.5	52.7
Veterans benefits and services	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Administration of justice	0.9	1.0	1.1	1.2	1.0	1.1	1.1
General government	2.2	2.3	2.3	3.6	2.3	3.1	2.3
Total outlays	152.0	182.2	199.1	220.1	235.5	255.1	275.2

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Table 21–2. **FEDERAL GRANT OUTLAYS BY AGENCY**
(In billions of dollars)

Agency	1991 Actual	Estimate	
		1992	1993
Department of Agriculture	12.8	14.2	14.6
Department of Commerce	0.3	0.3	0.3
Department of Education	12.4	14.3	15.1
Department of Energy	0.2	0.2	0.2
Department of Health and Human Services	80.8	103.6	116.2
Department of Housing and Urban Development	11.2	12.9	14.8
Department of the Interior	1.5	1.5	1.5
Department of Justice	0.8	0.8	0.9
Department of Labor	6.2	7.0	6.8
Department of Transportation	19.8	21.2	22.3
Department of the Treasury	0.5	0.5	0.5
Environmental Protection Agency	3.1	3.0	3.0
Federal Emergency Management Agency	0.7	0.8	0.9
Other agencies	1.8	1.8	1.9
Total	152.0	182.2	199.1

HISTORICAL PERSPECTIVES

In recent decades, Federal aid to State and local governments has become a major factor in the financing of certain government functions. The rudiments of the present system date back to the Civil War. The Morrill Act, passed in 1862, established the land grant colleges and instituted certain federally required standards, as is characteristic of the present grant system. Federal aid was later initiated for agriculture, highways, vocational education and rehabilitation, forestry, and public health. In the depression years, Federal aid was extended to meet income security and other social welfare needs. However, Federal grants did not become a significant factor in Federal Government expenditures until after World War II.

Table 21–3 displays trends in Federal grants to State and local governments. Section A shows the percentage distribution of Federal grants by function. Functions with a substantial amount of grants are shown separately. Grants in the functions for national defense, energy, veterans benefits and services, and the administration of justice are relatively small and are combined in the "other functions" line in the table.

Federal grants for transportation increased to 43 percent of all Federal grants in 1960 with initiation of aid to States to build the Interstate Highway System in the late 1950s.

By 1970 there had been significant increases in the relative share for education, training, employment, social services, and health (largely Medicaid).

In the early and mid-1970s, major new grants were created for natural resources and environment (construction of sewage treatment plants), community and regional development (community development block grants), and general government (general revenue sharing).

In the 1980s changes in the relative shares among functions reflect steady growth of grants for health (Medicaid) and income security and restraint in most other areas.

Section B of Table 21–3 shows the composition of grants divided into three major categories: payments for individuals, physical capital, and other grants. Grant outlays for payments for individuals, mainly in mandatory, or entitlement programs where the Federal government and the States share the

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Table 21–3. TRENDS IN FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS

(Outlays; dollar amounts in billions)

	Actual								Estimate					
	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
A. Percentage distribution of grants by function:														
Natural resources and environment	2%	2%	2%	5%	6%	4%	3%	3%	2%	2%	2%	2%	1%	1%
Agriculture	3	5	3	1	1	2	1	1	1	1	1	1	*	*
Transportation	43	38	19	12	14	16	14	13	12	11	11	10	9	8
Community and regional development	2	6	7	6	7	5	4	3	3	2	2	2	1	1
Education, training, employment, and social services	7	10	27	24	24	17	17	17	16	15	14	13	13	12
Health	3	6	16	18	17	23	32	37	42	44	47	50	53	56
Income security	38	32	24	19	20	26	26	24	23	22	22	21	20	19
General government	2	2	2	14	9	6	2	1	1	1	2	1	1	1
Other functions	*	1	1	2	1	1	1	1	1	1	1	1	1	1
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
B. Composition:														
Current dollars:														
Payments for individuals[1]	2.5	3.7	8.7	16.8	32.7	49.4	77.1	89.9	114.6	128.8	145.5	163.5	182.4	203.4
Physical capital[2]	3.3	5.0	7.0	10.9	22.5	24.8	25.7	26.5	28.1	29.4	28.6	29.1	29.1	30.5
Other grants	1.2	2.2	8.3	22.2	36.3	31.7	32.5	35.6	39.5	40.9	45.9	42.9	43.6	41.2
Total	7.0	10.9	24.1	49.8	91.5	105.9	135.4	152.0	182.2	199.1	220.1	235.5	255.1	275.2
Percentage of total grants:														
Payments for individuals[1]	35%	34%	36%	34%	36%	47%	57%	59%	63%	65%	66%	69%	71%	74%
Physical capital[2]	47	46	29	22	25	23	19	17	15	15	13	12	11	11
Other grants	17	20	34	45	40	30	24	23	22	21	21	18	17	15
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Constant (FY 1987) dollars:														
Payments for individuals[1]	9.0	12.5	24.7	35.1	46.3	53.0	67.4	75.0	93.0	101.3	110.9	120.7	130.5	141.0
Physical capital[2]	13.8	19.5	21.9	20.6	27.6	25.8	23.6	23.8	24.5	24.8	23.3	22.9	22.1	22.4
Other grants	6.4	9.8	26.7	49.6	53.7	34.2	28.7	30.1	32.4	32.4	35.2	31.7	31.1	28.3
Total	29.1	41.8	73.6	105.4	127.6	113.0	119.7	129.0	149.9	158.4	169.3	175.3	183.7	191.7
C. Total grants as a percent of:														
Federal outlays:														
Total	8%	9%	12%	15%	15%	11%	11%	11%	13%	13%	15%	15%	16%	16%
Domestic programs[3]	18%	18%	23%	22%	22%	18%	17%	17%	19%	20%	22%	22%	23%	23%
State and local expenditures	15%	16%	20%	24%	28%	23%	20%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gross domestic product	1%	2%	2%	3%	3%	3%	2%	3%	3%	3%	3%	3%	3%	3%
D. As a share of total State and local capital spending:														
Federal capital grants	25%	25%	25%	27%	37%	31%	21%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State and local own-source financing	75	75	75	73	63	69	79	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

N/A: Not available.
[1] For an identification of accounts in this category, see table 21–4, including its footnote.
[2] Excludes capital grants that are included as payments for individuals.
[3] Excludes national defense, international affairs, net interest, and undistributed offsetting receipts.

costs, have grown significantly as a percent of total grants. In 1980, they were 36 percent of the total, and by 1991 they had grown to 59 percent of the total. These grants are distributed through State or local governments to provide cash or in-kind benefits that constitute income transfers to individuals or families. The major grant in this category is Medicaid, which had outlays of $52.5 billion in 1991, increasing to an estimated $84.4 billion in 1993. Family support payments to States (AFDC), child nutrition programs, and housing assistance are also large grants in this category. All programs in this category are identified by footnote in the detailed Table 21–4, Federal Grants to State and Local Governments—Budget Authority and Outlays, at the end of this section.

Grants for physical capital assist States and localities with construction and other physical capital activities. The major capital grants are for highways, but there are also grants for airports, mass transit, sewage treatment plant construction, community de-

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velopment, and other facilities. Grants for physical capital were almost half of total grants in 1960, shortly after grants began for construction of the Interstate Highway System. The relative share of these outlays has declined, as payments for individuals and other social programs have grown since the mid-1960s. In 1991, grants for physical capital were 17 percent of total grants.

The other grants are primarily for education, training, employment, and social services. These grants increased to 34 percent of total grants by 1970, but declined to 23 percent of total grants in 1991.

Section B of Table 21–3 also shows these three categories in constant dollars. In constant FY 1987 dollars, total grants increased from $127.6 billion in 1980 to $129.0 billion in 1991, an average annual increase of 0.1 percent. From 1980 to 1991, payments for individuals grew from $46.3 billion to $75.0 billion, an average annual increase of 4.5 percent; grants for physical capital decreased from $27.6 billion to $23.8 billion, an average annual decrease of 1.3 percent, and other grants decreased from $53.7 billion to $30.1 billion, an average annual decrease of 5.1 percent.

Section C of Table 21–3 shows grants as a percent of Federal outlays, State and local expenditures, and gross domestic product. Grants have declined as a percent of total Federal outlays from 15 percent in 1980 to 11 percent in 1991 and, as a percent of Federal domestic programs, from 22 percent in 1980 to 17 percent in 1991.

As a percent of total State and local expenditures, grants have declined from 28 percent in 1980 to 20 percent in 1990.

Section D of Table 21–3 shows the relative contribution of physical capital grants in assisting States and localities with capital spending. Federal capital grants declined as a percent of State and local capital spending from 37 percent in 1980 to 21 percent in 1990, reflecting restraint in Federal spending and increased capital spending by States and localities financed from their own sources, such as taxes or borrowing.

OTHER INFORMATION ON FEDERAL AID TO STATE AND LOCAL GOVERNMENTS

Additional information regarding aid to State and local governments can be found in other parts of this budget.

- Discussions of major policy proposals, many of which affect aid to State and local governments, can be found throughout Part One.
- Major public physical capital investment programs providing Federal grants to State and local governments are described in Part Three, Chapter 29, "Physical and Other Capital Presentation."
- Data for summary and detailed grants to State and local governments can be found in many sections of the *Historical Tables,* to be published subsequently. Section 12 is devoted exclusively to grants to State and local governments. Additional information on grants can be found in Section 6 (Composition of Federal Government Outlays); Section 9 (Federal Government Outlays for Major Physical Capital Investment); Section 10 (Composition of Outlays for the Conduct of Research and Development and for the Conduct of Education and Training); Section 11 (Federal Government Payments for Individuals); and Section 15 (Total (Federal and State and Local) Government Finances).

In addition to the data in this budget, a number of other sources of information are available that use slightly different concepts of grants, provide State-by-State information, or provide information on how to apply for Federal aid.

- *Governmental Finances,* published annually by the Bureau of the Census in the Department of Commerce, provides data on public finances, including Federal aid to State and local governments.
- The *Survey of Current Business,* published monthly by the Bureau of Economic Analysis in the Department of Commerce, provides data on the national income and product accounts (NIPA), a broader statistical concept encompassing the entire economy. These accounts include data on

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Federal grants to State and local governments. Data using the NIPA concepts appear in this budget in Part Three, Chapter 27, "National Income and Product Account Presentation."

- *Budget Information for the States (BIS)* provides estimates of State funding allocations for the largest formula grant programs for the past, present, and budget year. These programs comprise approximately 80 percent of total Federal aid to State and local governments. The document is prepared by the Office of Management and Budget soon after the Budget is released.
- *Federal Expenditures by State* is a report prepared by the Bureau of the Census that shows Federal spending by State for grants and other spending for the most recently completed fiscal year.
- The *Consolidated Federal Funds Report (CFFR)* is an annual document that shows the distribution of Federal spending by State county areas and by local governmental jurisdictions. It is released by the Bureau of the Census in the Spring.
- The Federal Assistance Awards Data System (FAADS) provides computerized information about current grant funding. Data on all direct assistance awards are provided quarterly by the Bureau of the Census to the States and to the Congress.
- The *Catalog of Federal Domestic Assistance* is a primary reference source for communities wishing to apply for grants and other domestic assistance. The Catalog is prepared by the General Services Administration with data collected by the Office of Management and Budget and is available from the Government Printing Office. The basic edition of the Catalog is usually published in June and an update is generally published in December. It contains a detailed listing of grant and other assistance programs; discussions of eligibility criteria, application procedures, and estimated obligations; and related information.
- The *Federal Register* is published daily by the Government Printing Office and has current information on agencies that are accepting applications for specific programs. These notices also provide information on eligibility criteria and application procedures.

THE STATE AND LOCAL GOVERNMENT SECTOR OF THE NATIONAL INCOME AND PRODUCT ACCOUNTS

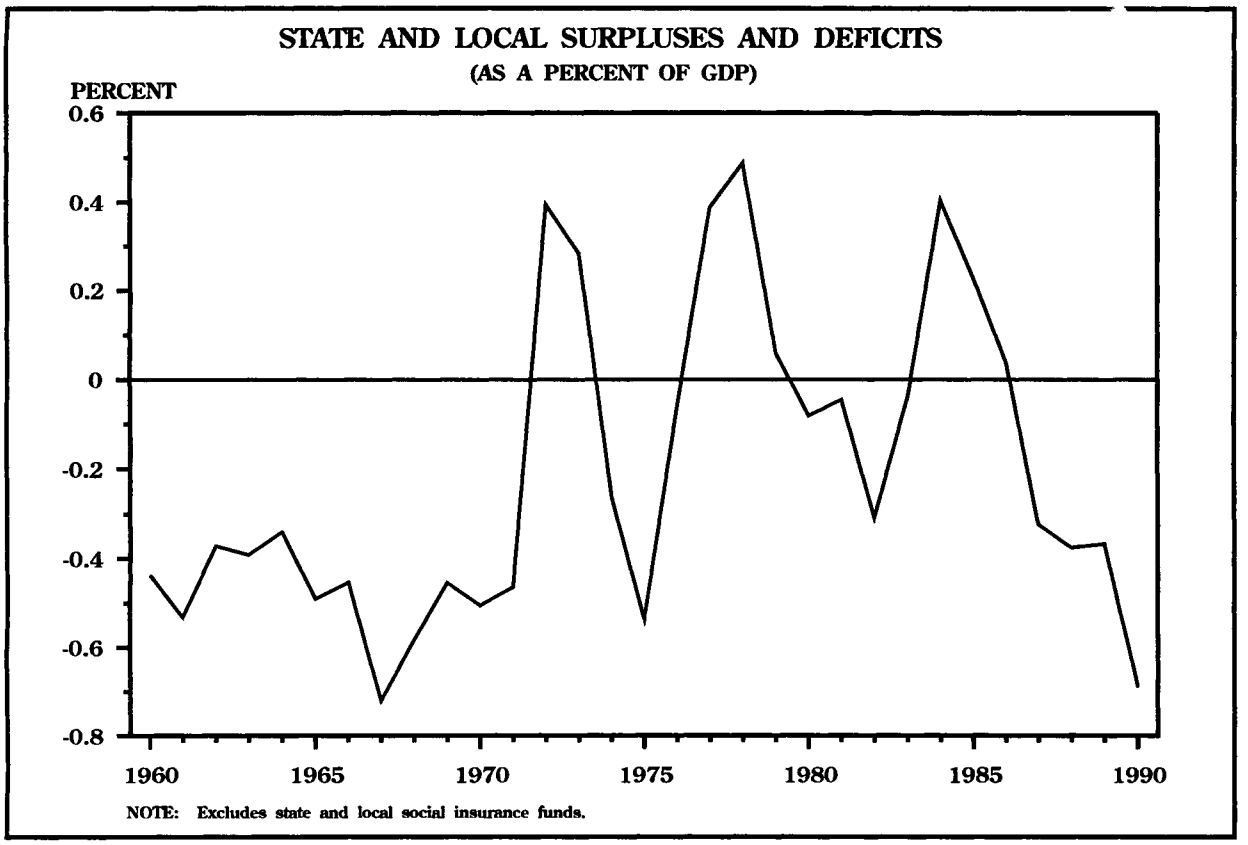
The national income and product accounts (NIPA) provide a comprehensive statistical description of the U.S. economy that includes State and local government receipts and expenditures. These data measure the transactions between the State and local government sector of the economy and other sectors.

There are three major differences between NIPA data and a government's own budgetary accounting for receipts and expenditures. First, purely financial transactions are excluded from NIPA data but are generally included in budgetary data. Second, a large number of transactions in the NIPA accounts are recorded on an accrual basis, while many governments show transactions on a cash basis. Third, NIPA consolidate total State and local transactions, whereas many governments separate their general fund from special funds. As a result of these differences, NIPA totals are not the same as a simple aggregate of these governments' budgets. However, the NIPA data do provide timely estimates of total State and local fiscal transactions not otherwise available and, if used with care, can provide helpful financial indicators.

NIPA State and Local Sector.—The following chart shows State and local operating account surpluses and deficits as a percent of GDP (gross domestic product), excluding the social insurance funds (primarily government employee pensions). The social insurance funds have been excluded because their surpluses are for future pension obligations and are not available for carrying out the general responsibilities of these governments. It is reasonable for the operating account to be in deficit because it includes capital expenditures, often financed through borrowing. The peaks and troughs in the operating account are largely the result of:

- changes in economic activity, which affect primarily receipts;

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- decisions regarding debt-financed capital spending; and
- changes in Federal aid.

The operating account was in deficit every year from 1955 to 1971. During the 1970s and 1980s it was frequently in surplus. In part, this change reflected the growth of Federal grants (rather than State and local borrowing) to finance new infrastructure.

- The surpluses in the early 1970s were largely the result of the initiation of general revenue sharing and strong economic growth.
- The low point in 1975 was largely the result of a recession.
- The surpluses in the latter 1970s were largely the result of the economic recovery, increases in anti-recession Federal grants, reductions in debt-financed capital spending, and general restraints in government spending exemplified by the passage of Proposition 13 in California in 1978.

The recession brought the account into deficit in 1980 and 1982, albeit quite small deficits relative to the 1955–71 period. As a result of the recession, States and localities reduced expenditures and increased taxes. These actions along with economic growth helped return the account to surplus for 1983–1986. The decline into deficit beginning in 1987 is due to increases by States and localities in capital spending financed by borrowing and to other factors, including the recession.

DETAILED FEDERAL AID TABLES

The following two tables present detailed Federal aid data for 1991, 1992, and 1993. Table 21–4, "Federal Grants to State and Local Governments—Budget Authority and Outlays," provides detailed budget authority and outlay data for grants. Table 21–5, "Credit Assistance to State and Local Governments," provides information on direct and guaranteed loans to State and local governments.

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Table 21–4. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1991 actual	1992 estimate	1993 estimate	1991 actual	1992 estimate	1993 estimate
NATIONAL DEFENSE:						
Department of Defense—Military:						
Military construction, Army National Guard	104	80	20	104	80	20
Federal Emergency Management Agency:						
Emergency management planning and assistance	103	105	91	80	102	94
Total, national defense	**207**	**185**	**111**	**185**	**182**	**114**
ENERGY:						
Department of Energy:						
Energy conservation	247	240	155	214	208	186
Department of Housing and Urban Development:						
Assistance for solar and conservation improvements	—	—	—	*	*	—
Tennessee Valley Authority:						
Tennessee Valley Authority fund	—	—	—	243	240	253
Total, energy	**247**	**240**	**155**	**457**	**448**	**439**
NATURAL RESOURCES AND ENVIRONMENT:						
Department of Agriculture:						
Resource conservation and development	6	7	—	22	25	24
Watershed and flood prevention operations	113	128	77	133	166	90
Forest research	—	—	—	1	1	1
State and private forestry	72	71	78	72	71	78
Department of Commerce:						
Operations, research, and facilities	172	212	138	126	130	99
Department of the Interior:						
Regulation and technology	48	48	52	32	33	51
Abandoned mine reclamation fund	149	135	130	164	123	145
Bureau of Reclamation loans program account	—	2	1	—	1	1
Resource management	7	—	—	9	1	—
Construction	2	*	—	3	2	1
Cooperative endangered species conservation fund	—	7	6	—	5	6
U.S. Fish and Wildlife Service miscellaneous permanent appropriations	173	183	149	145	160	166
Sport fish restoration	194	229	242	200	203	220
Urban park and recreation fund	20	5	—	*	5	9
Land acquisition and State assistance	34	20	56	27	45	48
Historic preservation fund	34	35	41	34	34	38
National Park Service miscellaneous permanent appropriations	*	*	*	*	*	*
Department of Transportation:						
National recreational trails trust fund	—	—	—	—	—	9
Environmental Protection Agency:						
Construction grants	2,100	2,400	2,500	2,389	2,199	2,159
Abatement, control, and compliance	480	559	498	357	474	459
Abatement, control, and compliance loan program account	—	17	—	—	2	8
Hazardous substance superfund	291	291	318	262	280	288
Leaking underground storage tank trust fund	53	62	71	63	61	62
Total, natural resources and environment	**3,946**	**4,412**	**4,358**	**4,040**	**4,022**	**3,962**
AGRICULTURE:						
Department of Agriculture:						
Cooperative State Research Service	391	434	416	380	404	392
Buildings and facilities	63	75	—	16	25	42
Extension Service	398	419	417	367	414	418
Payments to States and possessions	1	1	1	1	1	1
State mediation grants	—	4	2	—	3	3
Agricultural resource conservation demonstration guaranteed loan program account	—	4	4	—	4	4
Commodity Credit Corporation fund	288	299	227	288	299	227
Emergency food assistance program	170	165	165	168	168	165

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Table 21–4. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1991 actual	1992 estimate	1993 estimate	1991 actual	1992 estimate	1993 estimate
Total, agriculture	**1,312**	**1,401**	**1,232**	**1,220**	**1,317**	**1,251**
TRANSPORTATION:						
Department of Transportation:						
Railroad-highway crossings demonstration projects ..	17	20	16	4	6	8
Trust fund share of other highway programs	10	8	—	8	11	14
Baltimore-Washington Parkway	8	20	—	10	15	16
Highway-related safety grants	10	17	20	12	7	11
Motor carrier safety grants	60	65	76	62	63	70
Federal-aid highways	13,797	17,083	20,135	14,124	15,505	16,575
Miscellaneous appropriations	404	536	—	44	135	222
Miscellaneous highway trust funds	40	33	—	20	32	48
Miscellaneous safety programs	—	—	—	*	1	1
Highway traffic safety grants	126	126	171	134	129	139
Office of the Administrator	—	—	—	*	*	*
Local rail freight assistance	10	12	—	2	10	10
Mandatory passenger rail service payments	150	145	—	—	—	—
Conrail commuter transition assistance	5	14	—	5	3	19
Transit planning and research	—	—	29	—	—	7
Research, training, and human resources	2	6	—	2	5	3
Interstate transfer grants — transit	149	160	82	264	197	143
Washington metro	64	124	182	231	196	145
Formula grants	1,605	1,520	1,604	2,209	2,002	1,519
Discretionary grants	1,401	1,900	1,725	1,054	1,245	1,490
Miscellaneous expired accounts	—	—	—	57	50	36
Grants-in-aid for airports (Airport and airway trust fund	1,600	1,900	1,900	1,541	1,556	1,759
Research, development, test, and evaluation	—	—	—	—	—	*
Boat safety	35	35	35	35	35	35
Pipeline safety	5	7	7	5	6	6
Emergency preparedness grants	—	—	13	—	—	7
Washington Metropolitan Area Transit Authority:						
Interest payments	52	52	52	55	52	52
Total, transportation	**19,550**	**23,783**	**26,046**	**19,878**	**21,263**	**22,337**
COMMUNITY AND REGIONAL DEVELOPMENT:						
Department of Agriculture:						
Emergency community water assistance grants	8	8	—	1	9	6
Rural development grants	—	—	—	15	18	19
Rural water and waste disposal grants	300	350	300	125	160	208
Rural community fire protection grants	4	4	—	3	4	2
Rural development insurance fund program account	—	97	92	—	6	32
Rural development loan fund liquidating account	—	—	—	2	2	2
Distance learning and medical link programs	—	5	—	—	—	—
Department of Commerce:						
Economic development assistance programs	209	227	—	153	194	186
Miscellaneous appropriations	—	—	—	-*	—	—
Regional development programs	—	—	—	—	-*	—
Regional development commissions	—	—	—	-*	*	—
Department of Housing and Urban Development:						
Other assisted housing programs	2	—	—	88	78	—
Community development grants	3,213	3,400	2,900	2,976	3,125	3,339
Urban development action grants	7	-*	—	128	150	103
Rental rehabilitation grants	70	—	—	80	—	—
Supplemental assistance for facilities to assist the homeless	11	11	—	4	9	11
Revolving fund (liquidating programs)	—	—	—	2	121	79
New community assistance grants	—	—	—	—	*	—
Department of the Interior:						
Operation of Indian programs	24	53	60	17	53	60
Indian direct loan program account	—	3	—	—	3	—
Indian guaranteed loan program account	—	8	9	—	8	9
Appalachian Regional Commission:						
Appalachian regional development programs	164	184	94	157	111	127

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Table 21–4. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1991 actual	1992 estimate	1993 estimate	1991 actual	1992 estimate	1993 estimate
Federal Emergency Management Agency:						
Emergency management planning and assistance	18	21	15	15	17	12
Disaster relief	—	939	248	482	589	691
Neighborhood Reinvestment Corporation:						
Payment to the Neighborhood Reinvestment Corporation	26	32	28	26	28	30
Total, community and regional development	**4,057**	**5,343**	**3,746**	**4,273**	**4,685**	**4,917**
EDUCATION, TRAINING, EMPLOYMENT, AND SOCIAL SERVICES:						
Department of Commerce:						
Endowment for children's educational television	—	2	—	—	—	—
Public telecommunications facilities, planning, and construction	22	23	—	20	21	26
Department of Education:						
Indian education	69	70	73	59	66	70
Impact aid	771	760	532	747	794	614
Chicago litigation settlement	—	—	—	10	12	12
Compensatory education for the disadvantaged	6,197	6,676	6,803	5,193	6,146	6,578
School improvement programs	1,421	1,469	1,522	1,243	1,570	1,529
Educational excellence	—	100	768	—	12	160
Bilingual and immigrant education	157	185	193	148	172	180
Special education	2,271	2,621	2,710	2,006	2,349	2,624
Rehabilitation services and disability research	1,740	1,908	1,968	1,751	1,884	1,941
American printing house for the blind	6	6	6	8	6	6
Vocational and adult education	1,192	1,363	1,409	1,038	1,024	1,156
Student financial assistance [1]	64	72	50	60	85	43
Higher education	24	25	294	19	21	56
College housing and academic facilities program account	—	—	—	—	—	*
Libraries	132	130	35	132	162	103
Education research, statistics, and improvement	—	36	35	—	4	29
Department of Health and Human Services, except Social Security:						
Selected community services block grant act programs	436	437	5	420	453	149
Interim assistance to States for legalization	271	—	300	825	451	375
Social services block grant	2,800	2,800	2,800	2,822	2,785	2,800
ACF service programs	1,602	1,763	2,031	2,920	3,389	3,775
Payments to States for foster care and adoption assistance	2,584	2,614	2,989	2,120	2,500	2,835
Department of Labor:						
Training and employment services	3,201	3,066	3,225	2,985	3,145	3,191
Community service employment for older Americans	86	87	75	79	84	85
State unemployment insurance and employment service operations	25	24	27	-25	24	24
Unemployment trust fund	1,059	1,099	1,066	1,045	1,086	1,081
Federal unemployment benefits and allowances	71	72	—	51	66	49
Corporation for Public Broadcasting:						
Public broadcasting fund	299	327	319	299	327	319
Institute of Museum Services:						
Institute of Museum Services	6	6	7	6	6	7
National Endowment for the Arts:						
National Endowment for the Arts	45	44	49	38	45	46
Total, education, training, employment, and social services	**26,552**	**27,785**	**29,291**	**26,020**	**28,691**	**29,861**
HEALTH:						
Department of Agriculture:						
Food Safety and Inspection Service salaries and expenses	38	39	39	38	39	39

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Table 21–4. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1991 actual	1992 estimate	1993 estimate	1991 actual	1992 estimate	1993 estimate
Department of Health and Human Services, except Social Security:						
Health resources and services [1]	1,352	1,532	1,751	1,112	1,355	1,577
Disease control, research and training	346	465	496	281	375	457
Alcohol, drug abuse, and mental health [1]	1,810	1,923	2,044	1,744	1,815	1,963
Grants to States for Medicaid [1]	53,393	72,503	84,396	52,533	72,503	84,396
Department of Labor:						
Occupational Safety and Health Administration salaries and expenses	72	73	70	70	71	69
Mine Safety and Health Administration salaries and expenses	6	6	—	6	6	—
Total, health	**57,018**	**76,540**	**88,796**	**55,783**	**76,163**	**88,500**
INCOME SECURITY:						
Department of Agriculture:						
Funds for strengthening markets, income, and supply (section 32) [1]	363	406	565	439	484	450
Supervisory and technical assistance grants	—	2	—	—	1	1
Rural housing preservation grants [1]	23	23	10	10	9	10
Special milk program [1]	19	22	15	19	21	21
Food donations programs for selected groups [1]	228	265	256	243	258	255
Food stamp program [1]	1,415	1,538	1,589	1,406	1,611	1,584
Special supplemental food program for women, infants, and children [1]	2,345	2,595	2,833	2,275	2,607	2,818
Commodities supplemental food program [1]	82	90	90	74	95	90
State child nutrition payments [1]	5,438	5,916	6,322	5,399	5,958	6,290
Nutrition assistance for Puerto Rico [1]	963	1,002	1,051	965	1,002	1,051
Department of Health and Human Services, except Social Security:						
Family support payments to States [1]	13,794	15,201	15,273	13,520	15,114	15,303
Low income home energy assistance [1]	1,610	1,500	1,065	1,742	1,143	674
Refugee and entrant assistance [1]	366	366	182	228	331	227
Payments to States for AFDC work programs	1,000	1,000	1,000	546	832	885
Payments to States for day care assistance [1]	732	825	850	—	574	787
Payments to States from receipts for child support	*	—	—	*	*	—
Department of Housing and Urban Development:						
Subsidized housing programs [1]	4,241	2,609	3,413	5,226	5,523	5,916
Congregate services program [1]	10	1	—	4	8	8
Assistance for renewal of expiring Section 8 subsidy [1]	4,906	6,483	6,326	240	1,114	2,116
Section 8 moderate rehabilitation, single room occupancy	105	105	—	*	2	14
Homeownership and opportunity for people everywhere grants [1]	—	361	1,010	—	7	118
Payments for operation of low-income housing [1]	2,175	2,450	2,282	2,004	2,196	2,271
Drug elimination grants for low-income housing [1]	150	165	165	*	99	182
Low-rent public housing—loans and other expenses [1]	150	100	50	313	226	173
Emergency shelter grants program [1]	73	73	17	60	77	67
Transitional housing for the homeless program [1]	150	150	204	56	73	75
Shelter plus care [1]	—	111	266	—	9	43
Home investment partnerships program	—	1,500	700	—	30	269
Safe havens	—	—	50	—	—	20
Department of Labor:						
Unemployment trust fund	2,134	2,476	2,381	1,954	2,476	2,316
Federal Emergency Management Agency:						
Emergency food and shelter program [1]	134	134	100	133	134	100
Total, income security	**42,607**	**47,471**	**48,065**	**36,856**	**42,013**	**44,133**
VETERANS BENEFITS AND SERVICES:						
Department of Veterans Affairs:						
Medical care [1]	99	123	149	99	123	149
Grants for the construction of State extended care facilities [1]	70	85	40	39	46	60

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Table 21–4. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1991 actual	1992 estimate	1993 estimate	1991 actual	1992 estimate	1993 estimate
Grants for the construction of State veterans cemetaries	4	5	8	3	8	8
Total, veterans benefits and services	**173**	**213**	**197**	**141**	**178**	**217**
ADMINISTRATION OF JUSTICE:						
Department of Housing and Urban Development:						
Fair housing activities	12	13	12	11	12	13
Department of Justice:						
Assets forfeiture fund	267	247	257	267	247	257
National Institute of Corrections	3	3	3	3	3	3
Justice assistance	620	624	524	397	432	550
Crime victims fund	125	128	144	105	119	137
Department of the Treasury:						
Customs forfeiture fund	—	—	—	119	120	120
Equal Employment Opportunity Commission:						
Salaries and expenses	24	25	25	24	25	25
State Justice Institute:						
Salaries and expenses	11	12	—	13	13	13
Total, administration of justice	**1,063**	**1,051**	**965**	**940**	**971**	**1,118**
GENERAL GOVERNMENT:						
Department of Agriculture:						
Forest Service permanent appropriations	334	325	323	330	328	324
Department of Defense—Civil:						
Corps of Engineers permanent appropriations	6	6	6	7	6	6
Department of Energy:						
Payments to States under the Federal Power Act	2	2	3	3	2	3
Department of the Interior:						
Payments in lieu of taxes	104	104	105	100	104	105
Bureau of Land Management miscellaneous permanent appropriations	114	100	103	77	133	103
Mineral leasing and associated payments	480	420	412	480	420	412
National wildlife refuge fund	18	19	21	18	19	21
Administration of Territories	101	87	57	69	56	38
Trust Territory of the Pacific Islands	48	24	16	22	27	17
Payments to the United States Territories, fiscal assistance	64	78	81	64	78	81
Department of the Treasury:						
Internal revenue collections for Puerto Rico	272	272	272	272	272	272
Miscellaneous permanent appropriations	106	141	142	111	141	142
Commission on National and Community Service:						
Salaries and expenses	55	73	73	—	38	57
District of Columbia:						
Federal payment to the District of Columbia	672	700	688	671	690	698
Total, general government	**2,376**	**2,352**	**2,302**	**2,224**	**2,313**	**2,279**
Total, grants	**159,106**	**190,777**	**205,264**	**152,017**	**182,246**	**199,128**

* $500 thousand or less.
[1] Programs included in the "grants for payments to individuals" category shown in Table 21–3.

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Table 21–5. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS**

(in millions of dollars)

Function, agency and program	1991 Actual	1992 Estimate	1993 Estimate
Direct Loans			
Natural resources and environment:			
Department of the Interior:			
Bureau of Reclamation loans, liquidating:			
Loan disbursements	4	4	—
Change in outstandings	*3*	*2*	*-3*
Outstandings	**98**	**100**	**97**
Emergency fund, liquidating:			
Change in outstandings	*-1*	*-1*	*-1*
Outstandings	**9**	**8**	**8**
Environmental Protection Agency:			
Abatement, control, and compliance, liquidating:			
Loan disbursements	19	26	17
Change in outstandings	*12*	*16*	*6*
Outstandings	**111**	**127**	**133**
Total, natural resources and environment:			
Loan disbursements	23	31	17
Change in outstandings	*15*	*17*	*2*
Outstandings	**218**	**235**	**238**
Commerce and housing credit:			
Department of Agriculture:			
Rural housing insurance fund (FmHA), liquidating:			
Loan disbursements	30	26	4
Change in outstandings	*19*	*14*	*-8*
Outstandings	**453**	**467**	**459**
Transportation:			
Department of Transportation:			
Right of way revolving fund, liquidating:			
Loan disbursements	55	42	42
Change in outstandings	*17*	—	—
Outstandings	**110**	**110**	**110**
Miscellaneous expired accounts (WMATA), liquidating:			
Change in outstandings	*	—	—
Outstandings	**177**	**177**	**177**
Total, transportation:			
Loan disbursements	55	42	42
Change in outstandings	*17*	—	—
Outstandings	**287**	**287**	**287**
Community and regional development:			
Department of Agriculture:			
Rural development insurance fund (FmHA), liquidating:			
Loan disbursements	385	410	267
Change in outstandings	*262*	*254*	*202*
Outstandings	**3,911**	**4,166**	**4,367**
Department of Interior:			
BIA revolving fund, liquidating:			
Loan disbursements	5	1	—
Change in outstandings	*1*	*-2*	*-4*
Outstandings	**58**	**55**	**52**
BIA-Indian loan guaranty and insurance fund, liquidating:			
Loan disbursements	*	—	—
Change in outstandings	*	*	*
Outstandings	**8**	**8**	**7**
Total, community and regional development:			
Loan disbursements	390	411	267
Change in outstandings	*263*	*252*	*198*
Outstandings	**3,977**	**4,228**	**4,427**

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Table 21–5. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS—Continued**

(in millions of dollars)

Function, agency and program	1991 Actual	1992 Estimate	1993 Estimate
Education:			
Department of Education:			
Guaranteed student loans, liquidating:			
Change in outstandings	*-4*	*-10*	—
Outstandings	**46**	**37**	**37**
College housing loans, liquidating:			
Loan disbursements	9	9	8
Change in outstandings	*-10*	*-6*	*-8*
Outstandings	**284**	**278**	**270**
College housing and academic facilities, liquidating:			
Loan disbursements	10	13	11
Change in outstandings	*10*	*13*	*10*
Outstandings	**33**	**46**	**56**
Total, education:			
Loan disbursements	19	22	19
Change in outstandings	*-4*	*-3*	*2*
Outstandings	**363**	**360**	**363**
Health:			
Department of Health and Human Services:			
Medical facility guarantee and loan fund, liquidating:			
Change in outstandings	—	—	*-1*
Outstandings	**14**	**14**	**13**
General purpose fiscal assistance:			
Other independent agencies:			
Loans to the District of Columbia, liquidating:			
Change in outstandings	*-35*	*-37*	*-39*
Outstandings	**584**	**547**	**508**
Grand total, direct loans:			
Loan disbursements	517	533	349
Change in outstandings	*274*	*243*	*155*
Outstandings	**5,895**	**6,138**	**6,294**
Guaranteed Loans			
Community and regional development:			
Department of Agriculture:			
Rural development insurance fund (FmHA), liquidating:			
Change in outstandings	*-22*	*-25*	*-33*
Outstandings	**273**	**248**	**215**
Department of the Interior:			
BIA, Indian loans, liquidating:			
Loan disbursements	1	34	—
Change in outstandings	*-10*	*29*	*-5*
Outstandings	**56**	**85**	**80**
Total, community and regional development:			
Loan disbursements	1	34	—
Change in outstandings	*-32*	*4*	*-38*
Outstandings	**329**	**333**	**295**
Income security:			
Department of Housing and Urban Development:			
Low-rent public housing, liquidating:			
Change in outstandings	*-209*	*-300*	*-325*
Outstandings	**5,253**	**4,953**	**4,628**
Grand total, guaranteed loans:			
Loan disbursements	1	34	—
Change in outstandings	*-241*	*-296*	*-363*
Outstandings	**5,582**	**5,287**	**4,924**

* $500 thousand or less.

[1] Only direct loans are included in budget outlays. Guaranteed loans are non-Federal loans guaranteed by the Federal Government. For a discussion of credit in the budget, see Part One, Chapter 13, "Identifying Long-Term Obligations and Reducing Underwriting Risks."

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